Tekelec EAGLE® 5 Integrated Signaling System

Release 40.0

Database Administration Manual - Global Title Translation

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Patents

This product is covered by one or more of the following U.S. and foreign patents:
U.S. Patent Numbers:
5,732,213; 5,953,404; 6,115,746; 6,167,129; 6,324,183; 6,327,350; 6,456,845; 6,606,379; 6,639,981; 6,647,113; 6,662,017; 6,735,441; 6,745,041; 6,765,990; 6,795,546; 6,819,932; 6,836,477; 6,839,423; 6,885,872; 6,901,262; 6,914,973; 6,940,866; 6,944,184; 6,954,526;6,954,794; 6,959,076; 6,965,592; 6,967,956; 6,968,048; 6,970,542; 6,987,781; 6,987,849; 6,990,089; 6,990,347; 6,993,038; 7,002,988; 7,020,707; 7,031,340; 7,035,239; 7,035,387; 7,043,000; 7,043,001; 7,043,002; 7,046,667; 7,050,456; 7,050,562; 7,054,422; 7,068,773; 7,072,678; 7,075,331; 7,079,524; 7,088,728; 7,092,505; 7,108,468; 7,110,780; 7,113,581; 7,113,781; 7,117,411; 7,123,710; 7,127,057; 7,133,420; 7,136,477; 7,139,388; 7,145,875; 7,146,181; 7,155,206; 7,155,243; 7,155,505; 7,155,512; 7,181,194; 7,190,702; 7,190,772; 7,190,959; 7,197,036; 7,206,394; 7,215,748; 7,219,264; 7,222,192; 7,227,927; 7,231,024; 7,242,695; 7,254,391; 7,260,086; 7,260,207; 7,283,969; 7,286,516; 7,286,647; 7,286,839; 7,295,579; 7,299,050; 7,301,910; 7,304,957; 7,318,091; 7,319,857; 7,327,670
Foreign Patent Numbers:
EP1062792; EP1308054; EP1247378; EP1303994; EP1252788; EP1161819; EP1177660; EP1169829; EP1135905; EP1364520; EP1192758; EP1240772; EP1173969; CA2352246

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Chapter 1

Introduction

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- *Scope and Audience Page 2*
- *Manual Organization Page 2*
- *Documentation Admonishments Page 3*
- *Customer Care Center Page 4*
- *Emergency Response Page 6*
- *Related Publications Page 6*
- *Documentation Availability, Packaging, and Updates Page 7*
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- *EAGLE 5 ISS Database Partitions Page 8*
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Chapter 1, Introduction, contains an overview of the features described in this manual, considerations when upgrading from the Global Title Translation (GTT) feature to the Enhanced Global Title Translation (EGTT) feature, general information about the database, and the organization of this manual.

Overview

The Database *Administration Manual* – Global Title Translation describes the procedures used to configure the EAGLE 5 ISS and its database to implement these features:

- Global Title Translation
- Enhanced Global Title Translation
- Variable-Length Global Title Translation
- Advanced GT Modification
- Intermediate GTT Load Sharing
- ANSI-ITU-China SCCP Conversion
- Flexible GTT Load Sharing
- Origin-Based SCCP Routing
- Hex Digit Support for GTT
- Weighted GTT Load Sharing
- Transaction-Based GTT Load Sharing.
- SCCP Loop Detection

Note: Before enabling any of these features, make sure you have purchased the feature to be turned on. If you are not sure whether you have purchased the feature to be turned on, contact your Tekelec Sales Representative or Account Representative.

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

It is possible for two or more users to make changes to the same database element at any time during their database administration sessions. It is strongly recommended that only one user at a time make any changes to the database.

Scope and Audience

This manual is intended for database administration personnel or translations personnel responsible for configuring the EAGLE 5 ISS and its database to implement the Global Title Translation feature and the related features shown in the *Overview* on page 2 section.

Manual Organization

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

This document is organized into the following sections.

Introduction on page 1 contains an overview of the features described in this manual, considerations when upgrading from the Global Title Translation (GTT) feature to the Enhanced Global Title Translation (EGTT) feature, general information about the database, and the organization of this manual.

Global Title Translation (GTT) Overview on page 11 describes the Global Title Translation feature and the procedures common to both the Global Title Translation (GTT) and Enhanced Global Title Translation (EGTT) features. This chapter also describes the Variable-Length Global Title Translation (VGTT), the Advanced GT Modification, Intermediate GTT Load Sharing (IGTTLS), ANSI-ITU-China SCCP Conversion, Flexible GTT Load Sharing, Origin-Based SCCP Routing, Hex Digit Support for GTT, Weighted GTT Load Sharing Transaction-Based GTT Load Sharing, and , and SCCP Loop Detection features as they apply to both global title translation and enhanced global title translation.

Global Title Translation (GTT) Configuration on page 467 contains the procedures specific to configure the global title translation feature.

Enhanced Global Title Translation (EGTT) Configuration on page 569 contains the procedures specific to configure the enhanced global title translation feature.

Controlled Feature Activation Procedures on page 749 describes the procedures necessary to activate and deactivate features (features that require a feature access key to be activated) contained in this manual.



CAUTION: If only the Global Title Translation feature is on, only the procedures in Chapters 2, 3, and Appendix A can be performed. If the Enhanced Global Title Translation feature is on, only the procedures in Chapters 2, 4, and Appendix A can be performed.

Documentation Admonishments

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

Table 1: Admonishments

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

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

After 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.

The Tekelec Customer Care Center is available 24 hours a day, 7 days a week at the following locations:

Tekelec - Global

Email (All Regions): *support.tekelec.com*

- **USA and Canada**

  Phone:

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

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

  TAC Regional Support Office Hours:

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

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- **Columbia**

  Phone:

  01-800-912-0537

- **Dominican Republic**

  Phone:

  1-888-367-8552

- **Mexico**

  Phone:

  001-888-367-8552

- **Peru**

  Phone:

  0800-53-087

- **Puerto Rico**

  Phone:

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

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  - **Software Solutions**

    Phone:

    +33 3 89 33 54 00

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  Phone:

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  TAC Regional Support Office Hours:

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Emergency Response

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

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

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

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

Related Publications

For information about additional publications that are related to this document, refer to the *Related Publications* document. The *Related Publications* document is published as a part of the *Release Documentation* and is also published as a separate document on the Tekelec Customer Support Site.

Documentation Availability, Packaging, and Updates

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

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

The electronic file of each manual is also available from the Tekelec Customer Support site. 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 six 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.

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.

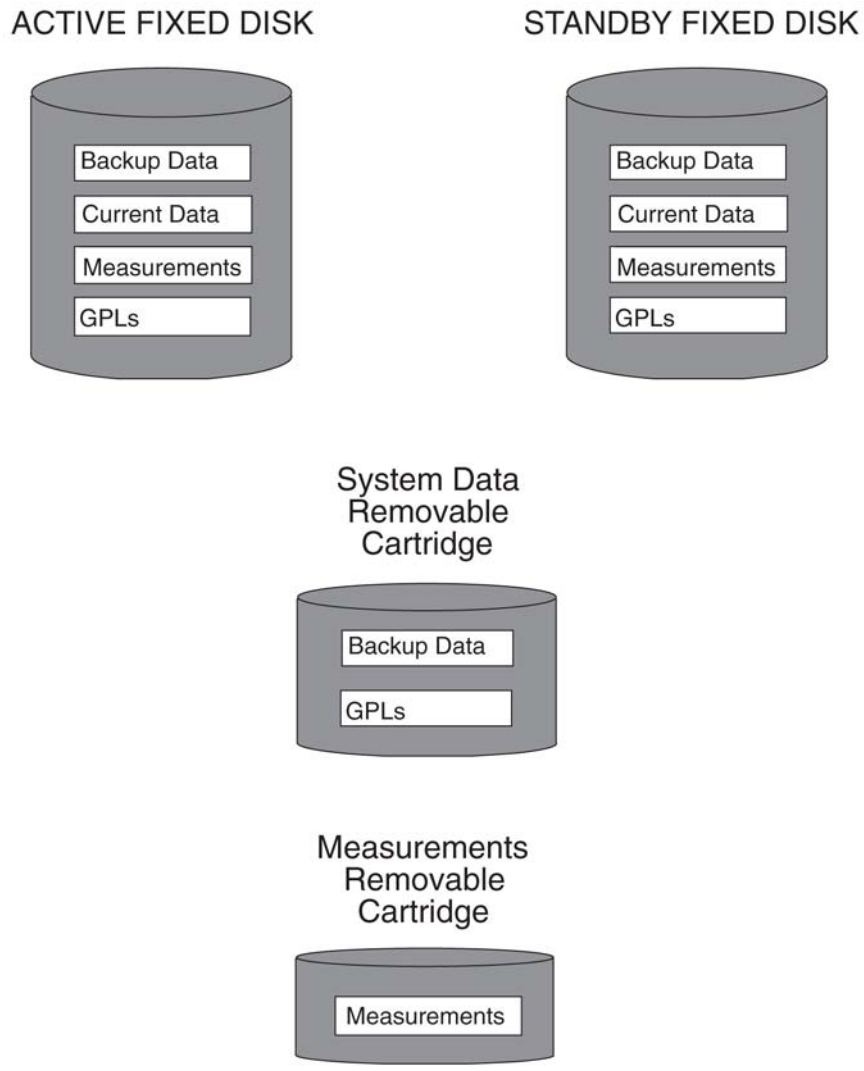
The TDM contains the fixed disk drive, the terminal processor for the 16 serial I/O ports and interfaces to the MDAL (maintenance disk and alarm) card which contains the removable cartridge drive and alarm logic. There is only one MDAL card in the maintenance and administration subsystem and it is shared 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: EAGLE 5 ISS Database Partitions* on page 8.

Figure 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* on page 4.

Locate Product Documentation on the Customer Support Site

Access to Tekelec's Customer Support site is restricted to current Tekelec customers only. This section describes how to log into the Tekelec Customer Support site and locate a document. Viewing the document requires Adobe Acrobat Reader, which can be downloaded at www.adobe.com.

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

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

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

Chapter 2

Global Title Translation (GTT) Overview

Topics:

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- *Global Title Translation Feature Page 13*
- *Enhanced Global Title Translation Feature Page 16*
- *Variable-length Global Title Translation Feature Page 20*
- *Advanced GT Modification Feature Page 22*
- *Intermediate GTT Load Sharing Feature Page 24*
- *ANSI-ITU-China SCCP Conversion Feature Page 24*
- *Support of SCCP XUDT Messages Page 27*
- *In-Sequence Delivery of Class 1 UDT Messages Page 28*
- *Flexible GTT Load Sharing Page 29*
- *Origin-Based SCCP Routing Page 33*
- *Hex Digit Support for GTT Page 39*
- *Weighted GTT Load Sharing Page 42*
- *Transaction-Based GTT Load Sharing Page 49*
- *SCCP Loop Detection Page 54*
- *Upgrading from Global Title Translation (GTT) to Enhanced Global Title Translation (EGTT) Page 55*
- *SCCP Overview Page 57*
- *GTT Configuration Page 70*
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- *Adding a Service Module Page 76*
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- *Adding a Mapped SS7 Message Translation Type Page 93*
- *Removing a Mapped SS7 Message Translation Type Page 96*

Chapter 2, Global Title Translation (GTT) Overview, describes the Global Title Translation feature and the procedures common to both the Global Title Translation (GTT) and Enhanced Global Title Translation (EGTT) features. This chapter also describes the features shown in the *Overview* on page 2 section.

- *Changing a Mapped SS7 Message Translation Type Page 98*
- *Adding a Concerned Signaling Point Code Page 100*
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- *Provisioning a Solitary Mated Application Page 112*
- *Provisioning a Dominant Mated Application Page 142*
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- *Changing the Attributes of a Loopset Page 453*
- *Configuring the ANSI to ITU-N SCCP Conversion Option Page 463*

Introduction

This chapter describes the Global Title Translation (GTT) and the Enhanced Global Title Translation (EGTT) features and these optional add-on features: the Variable-length Global Title Translation feature, the Global Title Modification feature, the Intermediate GTT Load Sharing feature, and the ANSI-ITU-China SCCP Conversion feature. This chapter also contains the procedures that are common to configuring either the Global Title Translation (GTT) or the Enhanced Global Title Translation (EGTT) features.

To find out about the differences between the Global Title Translation (GTT) feature and the Enhanced Global Title Translation (EGTT) feature, refer to the *Upgrading from Global Title Translation (GTT) to Enhanced Global Title Translation (EGTT)* on page 55 section.



CAUTION: The Enhanced Global Title Translation (EGTT) feature overrides the Global Title Translation (GTT) feature when the EGTT feature is enabled with the `chg-feat:egtt=on` command. The override causes an automatic update of the database and the rejection of GTT feature commands when entered. Be careful not to enable the EGTT feature accidentally when enabling the GTT feature. Once a feature is enabled, it cannot be disabled.

Note:

1. Before enabling the Global Title Translation (GTT) feature, make sure you have purchased this feature. If you are not sure whether you have purchased the GTT feature, contact your Tekelec Sales Representative or Account Representative.
2. The GTT feature has to be enabled but not configured for the Enhanced Global Title Translation (EGTT) feature. For more details on configuring the EGTT feature, refer to *Enhanced Global Title Translation (EGTT) Configuration* on page 569.

Global Title Translation Feature

The Global Title Translation (GTT) feature is designed for the signaling connection control part ((SCCP) of the SS7 protocol. The EAGLE 5 ISS uses this feature to determine to which service database to send the query message when a Message Signaling Unit (MSU) enters the EAGLE 5 ISS and more information is needed to route the MSU.

If an MSU enters the EAGLE 5 ISS and more information is needed to route the MSU, the SCCP of the SS7 protocol sends a query to a service database to obtain the information. The EAGLE 5 ISS uses the GTT feature for the SCCP to determine which service database to send the query messages to. These service databases are also used to verify calling card numbers and credit card numbers. The service databases are identified in the SS7 network by a point code and a subsystem number.

The GTT feature uses global title address (GTA) information to determine the destination of the MSU. The translation type (TT) indicates which global title translation table is used to determine the routing to a particular service database. Each global title translation table includes the point code (pc) of the node containing the service database, the subsystem number (ssn) identifying the service database on that node, and a routing indicator (ri). The routing indicator determines if

further global title translations are required. GTA and TT are contained in the called party address (CDPA) field of the MSU.

The global title translation feature changes the destination point code and the origination point code in the routing label. The global title information is not altered. The routing label is changed to indicate the new destination point code retrieved from the global title translation and the origination point code is set to the EAGLE 5 ISS's point code.

Depending on how the global title translation data is configured, the routing indicator, the subsystem number, or the translation type in the called party address may also be changed by the global title translation feature. *Figure 2: ANSI and ITU MSU Fields affected by the Global Title Translation Feature* on page 14 shows the message fields, the gray shaded areas in *Figure 2: ANSI and ITU MSU Fields affected by the Global Title Translation Feature* on page 14, affected by global title translation.

Figure 2: ANSI and ITU MSU Fields affected by the Global Title Translation Feature

ANSI MSU (ANSI Message Signal Unit)

BSN FSN LI	SIO xx xx xxxx NIC PRI SI	SIF			
		Routing Label DPC OPC SLS NCM NC NI NCM NC NI xx		CGPA Length Address Indicator (x x xxxx x x) Subsystem Point Code (NCM NC NI)	CDPA Length Address Indicator (x RI xxxx xx) Subsystem Point Code (NCM NC NI) Address (Translation Type) (Digits)

ITU-I MSU (ITU International Message Signal Unit)

BSN FSN LI	SIO xx xx xxxx NIC PRI SI	SIF			
		Routing Label DPC OPC SLS ID AREA ZONE ID AREA ZONE xx		CGPA Length Address Indicator (x x xxxx x x) Subsystem Point Code (ID AREA ZONE)	CDPA Length Address Indicator (x RI xxxx xx) Subsystem Point Code (ID AREA ZONE) Address (Translation Type) (Digits)

14-Bit ITU-N MSU (14-Bit ITU National Message Signal Unit)

BSN FSN LI	SIO xx xx xxxx NIC PRI SI	SIF			
		Routing Label DPC OPC SLS NPC NPC xx		CGPA Length Address Indicator (x x xxxx x x) Subsystem Point Code (NPC)	CDPA Length Address Indicator (x RI xxxx xx) Subsystem Point Code (NPC) Address (Translation Type) (Digits)

24-Bit ITU-N MSU (24-Bit ITU National Message Signal Unit)

BSN FSN LI	SIO xx xx xxxx NIC PRI SI	SIF			
		Routing Label DPC OPC SLS MSA SSA SP MSA SSA SP xx		CGPA Length Address Indicator (x x xxxx x x) Subsystem Point Code (SP SSA MSA)	CDPA Length Address Indicator (x RI xxxx xx) Subsystem Point Code (SP SSA MSA) Address (Translation Type) (Digits)

The GTT feature allows global title translation on global title addresses of fixed length. There are three optional add-on features that enhance the funtionality of the global title translation feature:

- The Variable-length Global Title Translation feature (VGTT) feature allows global title translation on global title addresses of varying length. For more information on this feature, refer to the section *Variable-length Global Title Translation Feature* on page 20.

- The Advanced GT Modification feature allows the EAGLE 5 ISS to modify other fields of an MSU in addition to the translation type when the MSU requires further global title translation and the translation type is to be replaced. For more information about this feature, refer to the section *Advanced GT Modification Feature* on page 22.
- The ANSI-ITU-China SCCP Conversion Feature converts SCCP messages between the ANSI and ITU formats. For more information about this feature, refer to the section *ANSI-ITU-China SCCP Conversion Feature* on page 24.

The EAGLE 5 ISS supports:

- 269,999, 400,000, or 1,000,000 global title translations. The system default is 269,999 global title translations. This quantity can be increased to 400,000 by enabling the feature access key for part number 893-0061-01, or to 1,000,000 by enabling the feature access key for part number 893-0061-10. For more information on enabling these feature access keys, refer to the *Enabling the XGTT Table Expansion Feature* on page 762 procedure.
- a maximum of 200,000 global title translations assigned to a translation type.
- 512 translation types, 256 translation types for ANSI MSUs, and 256 translation types for ITU MSUs.
- 1024, 2000, or 3000 remote point codes (mated applications), with up to 10 subsystems at each point code. The system default is 1024 mated applications. This quantity can be increased to 2000 by enabling the feature access key for part number 893-0077-01, or to 3000 by enabling the feature access key for part number 893-0077-10. For more information on enabling these feature access keys, refer to the *Enabling the XMAP Table Expansion Feature* on page 771 procedure.

The GTT feature requires one of the following cards:

- Translation Services Module (TSM)
- Database Services Module (DSM)
- EAGLE 5-Service Module 4GB (E5-SM4G)

For more information on these cards, refer to the *Adding a Service Module* on page 76 procedure or to the *Hardware Manual* - EAGLE *5* ISS .

Enhanced Global Title Translation Feature

The Enhanced Global Title Translation (EGTT) feature is designed for the signaling connection control part (SCCP) of the SS7 protocol. The EAGLE 5 ISS uses this feature to determine to which service database to send the query message when a Message Signaling Unit (MSU) enters the EAGLE 5 ISS and more information is needed to route the MSU.

If an MSU enters the EAGLE 5 ISS and more information is needed to route the MSU, the SCCP of the SS7 protocol sends a query to a service database to obtain the information. The EAGLE 5 ISS uses the EGTT feature for the SCCP to determine which service database to send the query messages to. The service databases are identified in the SS7 network by a point code and a subsystem number.

The EGTT feature uses global title information (GTI) to determine the destination of the MSU. The EAGLE 5 ISS supports ANSI GTI format 2 and ITU GTI formats 2 and 4. The GTI is contained in the called party address (CDPA) field of the MSU. For ITU GTI format 4, the GTI is made up of the Numbering Plan (NP), Nature of Address Indicator (NAI), and Translation Type (TT) selectors.

The EGTT feature allows global title translation on global title addresses of fixed length. There are three optional add-on features that enhance the funtionality of the enhanced global title translation feature:

- The Variable-length Global Title Translation feature (VGTT), allows global title translation on global title addresses of varying length. For more information on this feature, refer to section *Variable-length Global Title Translation Feature* on page 20.
- The Advanced GT Modification feature allows the EAGLE 5 ISS to modify other fields of an MSU in addition to the translation type when the MSU requires further global title translation and the translation type is to be replaced. For more information about this feature, refer to the section *Advanced GT Modification Feature* on page 22.
- The ANSI-ITU-China SCCP Conversion Feature converts SCCP messages between the ANSI and ITU formats. For more information about this feature, refer to the section *ANSI-ITU-China SCCP Conversion Feature* on page 24.

The EGTT feature requires one of the following cards:

- Translation Services Module (TSM)
- Database Services Module (DSM)
- EAGLE 5-Service Module 4GB (E5-SM4G)

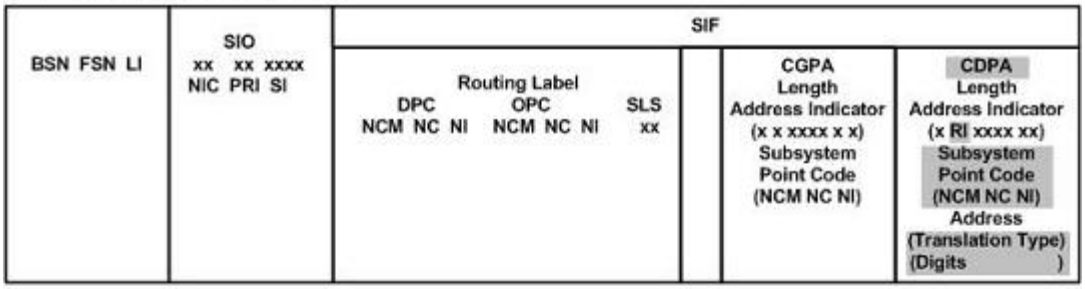
For more information on these cards, refer to the *Adding a Service Module* on page 76 procedure or to the *Hardware Manual* - EAGLE *5* ISS .

Inclusion of SSN in the CDPA

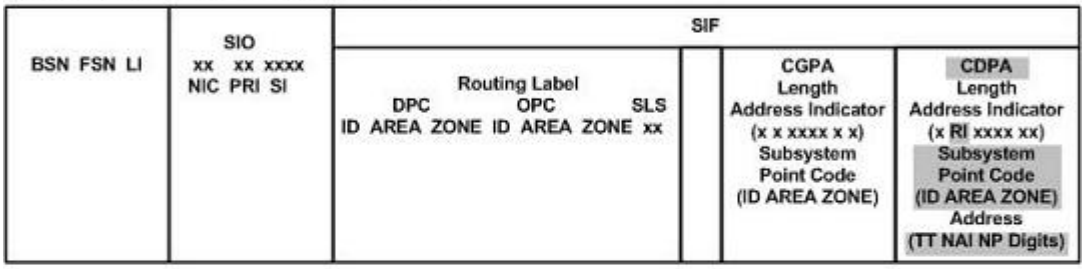
When the obtained translation data contains a subsystem, the translated SSN is placed in the SCCP CDPA before the message is sent to the next node. However, when no SSN is present in the CDPA, this insertion applies to ITU messages only. ANSI messages that do not contain an SSN in the CDPA will be rejected. *Figure 3: ANSI and ITU MSU Fields affected by the Enhanced Global Title Translation Feature* on page 17 shows the message fields, the gray shaded areas in *Figure 3: ANSI and ITU MSU Fields affected by the Enhanced Global Title Translation Feature* on page 17, affected by enhanced global title translation.

Figure 3: ANSI and ITU MSU Fields affected by the Enhanced Global Title Translation Feature

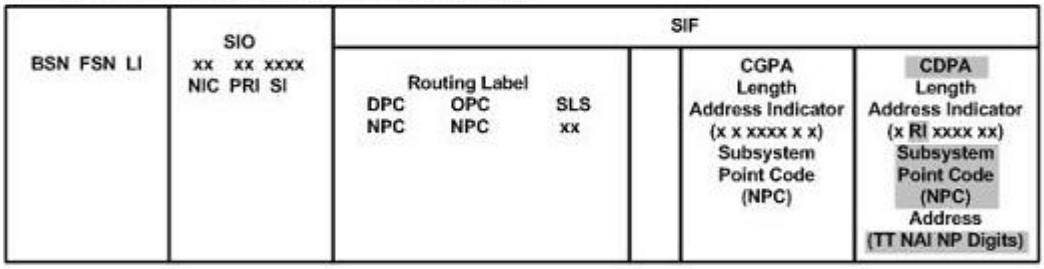
ANSI MSU (ANSI Message Signal Unit)



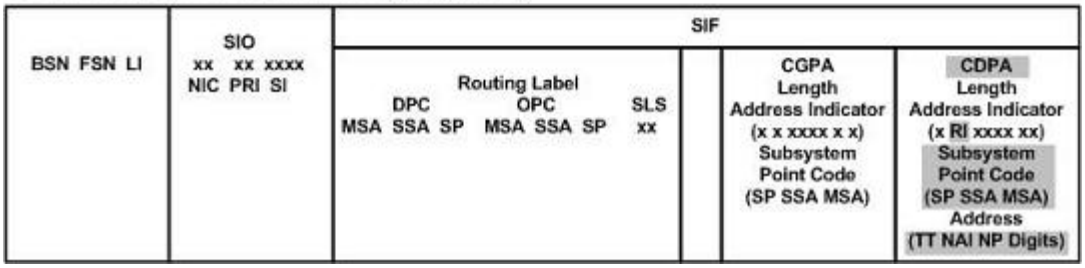
ITU-I MSU (ITU International Message Signal Unit)



14-Bit ITU-N MSU (14-Bit ITU National Message Signal Unit)



24-Bit ITU-N MSU (24-Bit ITU National Message Signal Unit)



Inclusion of OPC in the CGPA

When an ITU unitdata (UDT) message does not have a point code (PC) present in the CGPA, and the CGPA route indicator (RI) is set to "Route on SSN", the EGTT feature will insert the OPC from the Message Transfer Part (MTP) routing label into the CGPA before sending the message to the next node. The insertion does not apply to ANSI GTT processing.

Deletion of GT

The EGTT feature allows a Global Title (GT) in the CDPA to be deleted. For example, when the result of a GTT performed by the EAGLE 5 ISS is set to "Route on SSN", there may be some end nodes that do not want to receive the GT information in the CDPA. The enhancement provides an option on a per translation basis (for both ANSI and ITU) to allow the GT to be deleted (`ent-gta:gta=000:ri=ssn:ccgt=yes` command). The option is not valid when the result of the GT is the EAGLE 5 ISS's point code and local SSN.

New Commands

The EGTT feature introduces three new command sets:

- GTTSET commands
  - `ENT-GTTSET` – Enter GTT Set
  - `CHG-GTTSET` – Change GTT Set
  - `DLT-GTTSET` – Delete GTT Set
  - `RTRV-GTTSET` – Retrieve GTT Set
- GTTSEL commands
  - `ENT-GTTSEL` – Enter GTT Selector
  - `CHG-GTTSEL` – Change GTT Selector
  - `DLT-GTTSEL` – Delete GTT Selector
  - `RTRV-GTTSEL` – Retrieve GTT Selector
- GTA commands
  - `ENT-GTA` – Enter Global Title Address
  - `CHG-GTA` – Change Global Title Address
  - `DLT-GTA` – Delete Global Title Address
  - `RTRV-GTA` – Retrieve Global Title Address

GTT Set Commands

The GTT Set commands are used to provision new sets of GTTs, linking GTT Selector (-GTTSEL) and Global Title Address (-GTA) commands. This set of commands provides greater flexibility when provisioning the type of messages that require Global Title Translation. There are no SEAS equivalents for these commands.

GTT Selector Commands

The GTT Selector commands are used to provision new selectors for global title translation. Together with the GTT Set commands, these commands replace the Translation Type (-TT) commands, providing greater flexibility when provisioning the type of messages that require Global Title Translation. There are no SEAS equivalents for these commands.

GTA Commands

GTA commands are used to provision GTTs using the new selectors for GTT.

The EAGLE 5 ISS supports

- a maximum of 950 GTT sets
- a maximum of 200,000 global title addresses per GTT set
- 269,999, 400,000, or 1,000,000 global title addresses. The system default is 269,999 global title addresses. This quantity can be increased to 400,000 by enabling the feature access key for part number 893-0061-01, or to 1,000,000 by enabling the feature access key for part number 893-0061-10. For more information on enabling these feature access keys, refer to the *Enabling the XGTT Table Expansion Feature* on page 762 procedure.
- a maximum of 20,992 GTT selectors
  - 256 ANSI selectors
  - 256 ITU selectors with GTI=2
  - 20,480 ITU selectors with GTI=4 (256 TTs * 16 NPs per TT * 5 NAIs per NP)
- 1024, 2000, or 3000 remote point codes (mated applications), with up to 10 subsystems at each point code. The system default is 1024 mated applications. This quantity can be increased to 2000 by enabling the feature access key for part number 893-0077-01, or to 3000 by enabling the feature access key for part number 893-0077-10. For more information on enabling these feature access keys, refer to the *Enabling the XMAP Table Expansion Feature* on page 771 procedure.

Variable-length Global Title Translation Feature

The Variable-length Global Title Translation feature (VGTT) allows global title translation on global title addresses of varying length. The Variable-length Global Title Translation feature must be enabled with the`chg-feat` command.

VGTT and Global Title Translation

If the Variable-Length Global Title Translation (VGTT) feature is on, shown the entry `VGTT = on`, in the `rtrv-feat` command output, up to 10 different length global title addresses can be assigned to a translation type. The length of the global title address is only limited by the range of values for the `gta` and `egta` parameters of the `ent-gtt` and `chg-gtt` commands, 1 to 21 digits, and by the global title addresses already assigned to the translation type. The `ndgt` parameter of the `ent-tt` command has no effect on the length of the global title address and cannot be used. If the `ndgt` parameter is specified with the `ent-tt` command and the VGTT feature is on, the `ent-tt` command is rejected with this message.

```
E4011 Cmd Rej: NDGT parameter is invalid for VGTT
```

As global title addresses of different lengths are assigned to a specific translation type, these lengths are displayed in the `NDGT` field of the `rtrv-tt` command output, as shown in the following example.

```
rlghncxa03w 07-05-25 09:57:31 GMT  EAGLE5 37.0.0
TYPEA      TTN        NDGT
1          lidb       6, 12, 15
2          c800       10
3          d700       6

ALIAS      TYPEA
50         3
65         3
```

```
TYPEI      TTN        NDGT
105        itudb      8

ALIAS      TYPEI
7          105

TYPEN      TTN        NDGT
120        dbitu      7

ALIAS      TYPEN
8          120
```

In this example of the `rtrv-tt` command output, the ANSI translation type 1 contains three different length global title addresses; global title addresses containing 6 digits, 12 digits, and 15 digits.

When the VGTT feature is on, and the last global title address of a particular length is deleted for the specified translation type, then that length is no longer supported. That length is not displayed in the `NDGT` field of the `rtrv-tt` command output. For example, if the last 6-digit global title address is deleted from ANSI translation type 1 (from the previous example), the `NDGT` field of the `rtrv-tt` command shows only the numbers 12 and 15 in the `NDGT` field indicating that ANSI translation type 1 contains only 12- and 15-digit global title addresses.

If the translation type has 10 different length global title addresses assigned to it, and another global title address is specified for the translation type, the length of the global title address being added to the translation type must be the same as one of the 10 lengths already assigned to the translation type. If the length of the global title address does not match one of the 10 lengths already assigned to the translation type, the `ent-gtt` command is rejected with this message.

```
E2958 Cmd Rej: No more than 10 GTA lengths supported per TT for VGTT
```

If the translation type has less than 10 different length global title addresses assigned to it, and another global title address is specified for the translation type, the length of the global title address can be from one to 21 digits and does not have to match the length of the other global title addresses assigned to the translation type.

If the Variable-Length Global Title Translation (VGTT) feature is off, shown the entry `VGTT = off`, the global title address length must be equal to the number of digits specified by the given translation type. The length of the global title address can be verified with the `rtrv-tt` command.

This feature requires that a service module is installed in the EAGLE 5 ISS. *Table 12: Service Module and Feature Combinations* on page 76 shows the type of service modules that can be used depending on which features are on or enabled.

VGTT and Enhanced Global Title Translation

If the Variable-Length Global Title Translation (VGTT) feature is on, shown the entry `VGTT = on`, in the `rtrv-feat` command output, up to 10 different length global title addresses can be assigned to a GTT set name. The length of the global title address is only limited by the range of values for the `gta` and `egta` parameters for the `ent-gta` and `chg-gta` commands, 1 to 21 digits, and by the global title addresses already assigned to the translation type. The `ndgt` parameter of the `ent-gttset` command has no effect on the length of the global title address and cannot be used. If the `ndgt` parameter is specified with the `ent-gttset` command and the VGTT feature is on, the `ent-gttset` command is rejected with this message.

```
E4011 Cmd Rej: NDGT parameter is invalid for VGTT
```

As global title addresses of different lengths are assigned to a specific translation type, these lengths are displayed in the NDGT field of the rtrv-gttset command output, as shown in the following example.

```
rlghncxa03w 07-05-07 00:30:31 GMT EAGLE5 37.0.0
GTTSN     NETDOM  NDGT
lidb      ansi    3, 7, 10
t800      ansi    6
si000     itu     15
imsi      itu     15
abcd1234  itu     12
```

In this example of the rtrv-gttset command output, the GTT set lidb contains three different length global title addresses; global title addresses containing 3 digits, 7 digits, and 10 digits.

When the VGTT feature is on, and the last global title address of a particular length is deleted for the specified GTT set name, then that length is no longer supported. That length is not displayed in the NDGT field of the rtrv-gttset command output. For example, if the last 7-digit global title address is deleted from GTT set lidb (from the previous example), the NDGT field of the rtrv-gttset command shows only the numbers three and 10 in the NDGT field indicating that GTT set lidb contains only 3- and 10-digit global title addresses.

If the translation type has 10 different length global title addresses assigned to it, and another global title address is specified for the GTT set name, the length of the global title address being added to the GTT set name must be the same as one of the 10 lengths already assigned to the GTT set name. If the length of the global title address does not match one of the 10 lengths already assigned to the GTT set name, the ent-gta command is rejected with this message.

```
E2959 Cmd Rej: No more than 10 GTA lengths supported per GTTSET for VGTT
```

If the GTT set name has less than 10 different length global title addresses assigned to it, and another global title address is specified for the GTT set name, the length of the global title address can be from one to 21 digits and does not have to match the length of the other global title addresses assigned to the GTT set name.

If the Variable-Length Global Title Translation (VGTT) feature is off, shown the entry VGTT = off, the global title address length must be equal to the number of digits specified by the given GTT set name. The length of the global title address can be verified with the rtrv-gttset command.

This feature requires that a service module is installed in the EAGLE 5 ISS. *Table 12: Service Module and Feature Combinations* on page 76 shows the type of a service module that can be used depending on which features are on or enabled.

Advanced GT Modification Feature

This feature allows the EAGLE 5 ISS to modify other fields of an MSU in addition to the translation type when the MSU requires further global title translation and the translation type is to be replaced.

The numbering plan, nature of address indicator, and the prefix or suffix digits, but not both the prefix and suffix digits, in the called party address or calling party address portion of outbound MSUs can be changed with this feature to make the MSU more compatible with the network that the MSU is being sent to and to ensure that the MSU is routed correctly. These changes are made after the global title translation process, but before the MSU is routed to its destination.

This feature requires that service modules are installed in the EAGLE 5 ISS. *Table 12: Service Module and Feature Combinations* on page 76 shows the type of service modules that can be used depending on which features are on or enabled.

For the EAGLE 5 ISS to be able to make these changes to the called party address or calling party address portion of the MSU, the one of the Advanced GT Modification features shown in the following list must be enabled with the `enable-ctrl-feat` command.

- 893021801 - AMGTT - provides GT modification to both the called party address and the calling party address of SCCP messages. This part number can be specified only if no Advanced GT Modification feature is currently enabled.
- 893021802 - AMGTT CdPA Only - provides GT modification to the called party address of SCCP messages only. This feature and its part number is shown in the `rtrv-ctrl-feat` output only if the MGTT feature from previous releases was turned on when the Eagle 5 ISS was upgraded to the release containing the Advanced GT Modification feature. This part number cannot be specified with the `enable-ctrl-feat` command.
- 893021803 - AMGTT CgPA Upgrade - provides GT modification to the calling party address and called party address of SCCP messages. This part number can be specified only if the AMGTT CdPA Only feature (part number 893021802) is enabled.

Perform the *Activating the Advanced GT Modification Feature* on page 846 procedure to enable the Advanced GT Modification feature.

After the Advanced GT Modification feature has been enabled, the parameters shown in the following list must be specified with either the `ent-gtt` or `chg-gtt` commands (for the GTT feature), or either the `ent-gta` or `chg-gta` commands (for the EGTT feature) to modify the calling party address or called party address of the SCCP message.

- `nnp` – The new numbering plan
- `nnai` – The new nature of address indicator
- `npdd` – The number of digits to be deleted from the beginning of the Global Title Address digits (the prefix digits)
- `npds` – The digits that are being substituted for the prefix digits
- `nsdd` – The number of digits to be deleted from the end of the Global Title Address digits (the suffix digits)
- `nsds` – The digits that are being substituted for the suffix digits
- `cggtmod` - The calling party GT modification indicator. This parameter specifies whether or not calling party global title modification is required. This parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled. The `cggtmod` parameter can also be specified for when provisioning a linkset to indicate that calling party global title modification is required for SCCP traffic on the linkset.

To use these parameters, perform one of these procedures:

- *Adding a Global Title Translation* on page 480
- *Changing a Global Title Translation* on page 524
- *Adding Global Title Address Information* on page 617
- *Changing Global Title Address Information* on page 681.

Intermediate GTT Load Sharing Feature

This feature allows GTT traffic between multiple nodes to be load shared when intermediate global title translation (routing indicator in the message is GT) is being performed. A mated relay node (MRN) group is provisioned in the database to identify the nodes that the traffic is load shared with, and the type of routing, either dominant, load sharing, or combined dominant/load sharing. This load sharing is performed after intermediate global title translation is performed on the message. For more information, refer to the *Provisioning MRN Entries* on page 310 procedure.

ANSI-ITU-China SCCP Conversion Feature

Since some ANSI and ITU SCCP parameters are incompatible in format or coding, this feature provides a method for the EAGLE 5 ISS to convert these SCCP parameters in UDT and UDTS messages. Other types of SCCP messages (for example, XUDTS) are not supported and are discarded.

A specialized SCCP/TCAP conversion, introduced in EAGLE 5 ISS release 22.2 and used only in the Korean market, does not support this feature. The ANSI-ITU-China SCCP Conversion feature cannot be used with the EAGLE 5 ISS release 22.2 SCCP and TCAP Conversion features.

The ANSI-ITU-China SCCP Conversion feature provides a generic capability to correctly format and decode/encode these SCCP messages:

- UDT and UDTS messages - includes SCMG messages, which are a specialized form of UDT messages
- MTP routed SCCP messages
- GT routed SCCP messages.

This feature also provides SCCP management (SCMG) across network type boundaries. For example, concerned signaling point codes for a mated application may be of a different network type than the primary point code of the mated application.

Advanced GT Modification

The Advanced GT Modification feature allows the deletion or substitution of digits from the beginning (prefix digit modification) or the end (suffix digit modification) of the global title address in either the called party address or the calling party address of the MSU. Prefix and suffix digit modifications are mutually exclusive on a GTT (if the Advanced GT Modification feature is enabled and the EGTT feature is not on) or GTA (if the EGTT feature is on and Advanced GT Modification feature is enabled) entry. If the Advanced GT Modification feature is enabled, each GTT or GTA entry can specify either prefix or suffix digit modification, but not both. Refer to the *Advanced GT Modification Feature* on page 22 section for more information on the Advanced GT Modification feature.

ANSI-ITU-China SCCP Conversion Feature Configuration

This feature requires that service modules are present in the EAGLE 5 ISS. *Table 12: Service Module and Feature Combinations* on page 76 shows the type of service modules that can be used depending on which features are on or enabled.

The ANSI-ITU-China SCCP Conversion feature must be enabled with the `enable-ctrl-feat` command, and turned on with the `chg-ctrl-feat` command. Perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure to enable and turn on the ANSI-ITU-China SCCP Conversion feature.

The concerned signaling point code (CSPC) group configuration has been changed to allow CSPC groups to contain ANSI (`pc/pca`), ITU-I or ITU-I spare (`pci`), and either 14-bit ITU-N or 14-bit ITU-N spare (`pcn`), or 24-bit ITU-N (`pcn24`) point codes. A CSPC group cannot contain both 14-bit and 24-bit ITU-N point codes. Concerned signaling point code groups are configured in the *Adding a Concerned Signaling Point Code* on page 100 procedure.

The format of the point codes in the CSPC group assigned to a mated application, specified with the `grp` parameter, must be the same as the primary point code specified with the `ent-map` or `chg-map` commands only if the ANSI-ITU-China SCCP Conversion feature is not enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types, and the network type of the CSPC group can be different from the network type of the primary point code of the mated application. Mated applications are configured in these procedures:

- *Provisioning a Solitary Mated Application* on page 112
- *Provisioning a Dominant Mated Application* on page 142
- *Provisioning a Load Shared Mated Application* on page 189
- *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223
- *Changing a Mated Application* on page 278.

The conversion of ANSI and ITU SCCP messages is performed according to the options in the STP Options table, and by the entries contained in the default GT conversion table.

There are five options in the STP Options table that control how this feature works.

`:cnvcgda` – The CGPA point code in ANSI SCCP messages are discarded if the point code or alias point code of the destination network type is not defined.

`:cnvcgdi` – The CGPA point code in ITU-I SCCP messages are discarded if the point code or alias point code of the destination network type is not defined.

`:cnvcgdn` – The CGPA point code in ITU-N SCCP messages are discarded if the point code or alias point code of the destination network type is not defined.

`:cnvcgdn24` – The CGPA point code in ITU-N24 SCCP messages are discarded if the point code or alias point code of the destination network type is not defined.

`:gtcnvdflt` – SCCP messages are routed using system defaults when an appropriate entry is not found in the Default GT Conversion Table.

The values for these options are either `yes` or `no`. If these options are set to `yes`, the actions defined by these options will be performed. These options are configured using the `chg-stpopts` command in *Changing the ANSI-ITU-China SCCP Conversion Options* on page 428 the *Changing the ANSI-ITU-China SCCP Conversion Options* on page 428 procedure.

The Default GT Conversion Table contains the following items:

- The direction that the conversion takes place: ANSI to ITU, ITU to ANSI, or both directions.
- The global title indicator types being converted.
  - ANSI GTI type 2 to ITU GTI type 2
  - ANSI GTI type 2 to ITU GTI type 4
- The ANSI translation type
- The ITU translation type
- The numbering plan
- The nature of address indicator

The Default GT Conversion Table also provides for the provisioning of prefix or suffix address digit modification (refer to the *Advanced GT Modification* on page 24 section and the *Advanced GT Modification Feature* on page 22 section). The Default GT Conversion Table is configured using either the `ent-gtcnv` command to add new entries to the Default GT Conversion Table (refer to the *Adding a GT Conversion Table Entry* on page 399 procedure), or the `chg-gtcnv` command to change existing entries in the Default GT Conversion Table (refer to the *Changing a GT Conversion Table Entry* on page 415 procedure).

The called party/calling party address indicator bit that is used when performing ANSI to ITU-N SCCP conversion is configured with the `chg-sccpopts` command. Perform the *Configuring the ANSI to ITU-N SCCP Conversion Option* on page 463 procedure to select which called party/calling party address indicator bit will be used.

Without the ANSI-ITU-China SCCP Conversion feature enabled, the domain of a GTT set must be the same as the domain of the GTI value of the GTT selectors. For example, an ANSI GTT set can be assigned to only ANSI GTT selectors and an ITU GTT set can be assigned to only ITU GTT selectors. When the ANSI-ITU-China SCCP Conversion feature is enabled a GTT set to be assigned to GTT selectors in both domains. This accomplished by creating a GTT set with the network domain of CROSS, a cross-domain GTT set. This allows the provisioning a single cross-domain GTT set with one set of GTA data and assign the cross-domain GTT set to multiple GTT selectors, regardless of their domain. The result is a GTT set that contains GTA data that can be used to translate both ANSI and ITU messages. Provisioning of the cross-domain GTT set is performed with the `ent-gttset` command. The EAGLE 5 ISS can contain more than one cross-domain GTT set. If the domain of the GTT set is either ANSI or ITU, the domain of a GTT set must be the same as the domain of the GTT selector. The domain of the GTT set can be changed from an ANSI GTT set or ITU GTT set to a cross-domain GTT set using the `chg-gttset` command. The EGTT feature must be turned on and the ANSI-ITU-China SCCP Conversion feature must be enabled to provision a cross-domain GTT set.

Alias Point Codes

For MTP routed SCCP messages, the message's DPC, OPC and CDPA must have alias point codes. The message's DPC, which is an alias, is converted to its true point code. The OPC is converted to its alias of the same network type as the DPC's true point code. If the message contains a CGPA PC, either it must have an alias of the same network type as the new DPC, or the Discard CGPA PC option for the original network type must be on.

For SCCP messages which receive GTT by the EAGLE 5 ISS, the message's DPC, OPC and CDPA are not converted and thus may not need alias point codes. The message's DPC is a result of GTT translation does not need conversion. The OPC is the EAGLE 5 ISS's OPC of the same network type as the DPC's network. If the message contains a CGPA PC, either it must have an alias of the same network type as the new DPC, or the Discard CGPA PC option for the original network type must be on.

For through-switched SCCP management messages, the message's DPC, OPC, and affected point code must have an alias of the destination network type.

For EAGLE 5 ISS originated SCCP messages, a mated application's PC(s) must have aliases of the same network types as the concerned point code group's PC(s).

Alias point codes are configured using the "Adding a Destination Point Code" procedure, for adding a new destination point code with an alias point code, or the "Changing a Destination Point Code" procedure, for changing the alias point code value for an existing destination point code. The "Adding a Destination Point Code" and "Changing a Destination Point Code" procedures are found in Chapter 2, Configuring Destination Tables in the Database *Administration Manual - SS7* .

Support of SCCP XUDT Messages

The Support of SCCP XUDT Messages feature allows the global title translation feature and the following SCCP services to process XUDT messages.

- G-FLEX – supported for segmented or non-segmented XUDT messages. G-Flex Map Layer Routing only supports non-segmented XUDT messages.
- INP – Message Relay service supports segmented and non-segmented XUDT messages. Call related query service (INP-QS) only supports non-segmented XUDT messages.
- G-PORT MNP - XUDT response generation (that is, XUDT SRI_ack), when an XUDT SRI message is received, is supported if the SRI is not segmented. G-PORT treats any segmented message (SRI or non-SRI) as a non-SRI message and message relay is performed on the message. G-PORT Message Relay is supported for all non-SRI messages, including segmented and non-segmented, Class 0 and Class 1.
- A-PORT MNP - XUDT response generation, when an XUDT LocationRequest message is received, is supported if the XUDT message is not segmented. A-PORT treats any segmented message as a non-LocationRequest message and message relay is performed on the message. A-PORT Message Relay is supported for all non-LocationRequest messages, including segmented and non-segmented, Class 0 and Class 1.
- EAGLE 5 ISS's IS-41 to GSM Migration - XUDT response generation, when an XUDT/ GSM SRI, XUDT GSM SRI_for_SM, XUDT IS-41 LocationRequest, and XUDT IS-41 SMSRequest is received is supported if the message received by the EAGLE 5 ISS is not segmented. If the messages are segmented, the EAGLE 5 ISS performs message relay.
- GSM MAP Screening/Enhanced GSM MAP Screening - GSM MAP Screening (GMS) and Enhanced GSM MAP Screening (EGMS) supports screening on non-segmented XUDT messages, but does not support screening on segmented XUDT messages. If a segmented XUDT message is received on a linkset which has GMS or EGMS activated, GMS/EGMS is bypassed for that message, even if the parameters in the message match the provisioned screening rules. The SCCP processing of the message continues.
- Intermediate GTT Loadsharing - Class 0 and Class 1 SCCP XUDT messages are supported.
- Prepaid SMS Intercept (PPSMS) supports only non-segmented XUDT messages.
- MNP Check for MO SMS (MNPSMS) supports only non-segmented XUDT messages.

The following features do not support this feature:

- North American Local Number Portability (LNP)
- ANSI-ITU SCCP Conversion

- GSM Equipment Identity Register (EIR)

XUDT messages can be screened by Gateway Screening and all gateway screening stop actions can be applied to XUDT messages.

In-Sequence Delivery of Class 1 UDT Messages

The In-Sequence Delivery of Class 1 UDT Messages provides for the sequencing for both UDT and XUDT Class 1 MSUs. All UDT/XUDT Class 1 messages are routed out of the EAGLE 5 ISS in the same order that they were received by the EAGLE 5 ISS. To enable the sequencing of UDT/XUDT Class 1 messages, the `class1seq` parameter value of the `chg-sccpopts` command is set to `on`.

When the `class1seq` parameter value is `on`, load sharing of these messages is performed in the dominant mode, overriding the load sharing configuration in the MAP and MRN tables. Delivering the UDT/XUDT Class 1 ITU messages in sequence is guaranteed only if the `randsls` parameter value of the `chg-stpopts` command is either `off` or `class0`. If you wish to guarantee delivering these messages in sequence, the `class1seq=on` and the `randsls=all` parameters should not be used together in the EAGLE 5 ISS. The value of the `randsls` parameter is shown in the `rtrv-stpopts` command.

When the `class1seq` parameter value is `off`, load sharing of the UDT/XUDT Class 1 messages is performed using the load sharing configuration in the MAP and MRN tables. The delivery of the UDT/XUDT Class 1 messages in sequence is not guaranteed.



CAUTION:

If the `randsls` parameter value of the `chg-stpopts` command is `all`, thus activating the Random SLS feature for ITU Class 1 SCCP messages, the UDT/XUDT Class 1 messages are not delivered in sequence. To ensure that Class 1 UDT/XUDT messages are delivered in sequence, the `randsls` parameter value should be set to either `off` or `class0`.



CAUTION:

However, if the `randsls` parameter value of the `chg-stpopts` command is `all`, Class 1 UDT/XUDT messages are load shared across equal cost destinations by the Weighted SCP Load Balancing and Intermediate Global Title Load Sharing (IGTTLS) features. If the `randsls` parameter value of the `chg-stpopts` command is either `off` or `class0`, load sharing for all Class 1 SCCP messages is supported only in the dominant mode.

If the messages are not in the correct sequence when they arrive at the EAGLE 5 ISS, they are not delivered to the next node in the correct sequence. The EAGLE 5 ISS does not perform message re-sequencing for messages that are received out of sequence, because the EAGLE 5 ISS is a transit node. Message re-sequencing is the responsibility of the originating and destination nodes.

GT-routed Class 0 UDT/XUDT messages are not sequenced, therefore, the EAGLE 5 ISS does not guarantee routing these messages out of the EAGLE 5 ISS in the same order that they were received.

Flexible GTT Load Sharing

Flexible GTT Load Sharing provides more flexible GTT load sharing arrangements for GTT traffic. There are two parts to Flexible GTT Load Sharing; Flexible Intermediate GTT Load Sharing applied to GTT traffic requiring intermediate global title translation, and Flexible Final GTT Load Sharing applied to traffic requiring final global title translation. Flexible Intermediate GTT Load Sharing and Flexible Final GTT Load Sharing are discussed in the following sections.

Flexible Intermediate GTT Load Sharing

Flexible Intermediate GTT Load Sharing provides more flexible GTT load sharing arrangements for GTT traffic requiring intermediate global title translation (the routing indicator in the message is GT) than the load sharing arrangements provided by the Intermediate GTT Load Sharing feature. For the EAGLE 5 ISS to perform Flexible Intermediate GTT Load Sharing, the Flexible GTT Load Sharing and Intermediate GTT Load Sharing features must be enabled and turned on.

With the Intermediate GTT Load Sharing feature enabled and turned on and the Flexible GTT Load Sharing feature not enabled, the EAGLE 5 ISS load shares post-GTT destinations when intermediate global title translation is being performed through the use of the MRN table. The destination point codes in the MRN table can appear in the MRN table only once. The MRN table contains groups of point codes with a maximum of 32 point codes in each group. This arrangement allows only one set of relationships to be defined between a given point code and any other point codes in the MRN group. All global title addresses in the GTT table that translate to a point code in the given MRN group will have the same set of load sharing rules applied.

For example, the following point codes and relative cost values are provisioned in the MRN table.

```
PC              RC
005-005-005     10
006-001-001     10
006-001-002     10
006-001-003     10
006-001-004     10
006-001-005     10
006-001-006     10
006-001-007     10
```

When the point code in the intermediate global title translation is translated to 005-005-005, all traffic routed using the global title addresses in the global title translations containing this point code are load shared equally, no matter what the global title address is.

With the Intermediate GTT Load Sharing and the Flexible GTT Load Sharing features are enabled and turned on, allowing Flexible Intermediate GTT Load Sharing to be performed, the intermediate GTT load sharing arrangements are determined by:

- the MRN set assigned to the global title translation.
- the translated point code in the message assigned to the global title translation.
- the global title address in the message assigned to the global title translation.

When a global title address in a global title translation is translated to a point code, the MRN set assigned to the global title translation, and containing the translated point code, determines how load sharing is applied to the traffic for this global title translation.

An MRN set is a group of point codes in the MRN table defining the GTT load sharing rules that are applied to a global title translation. The method of load sharing is determined by the relative cost (RC) value assigned to each point code in the MRN set. There are three types of load sharing that can be performed: dominant, load shared, or combined dominant/load shared.

All the point codes in a dominant MRN set have different relative cost values. The translated point code in the message is the preferred point code that the message is routed on. The relative cost value assigned to the preferred point code does not have to be the lowest value in the MRN set. All traffic is routed to the preferred point code, if it is available. If the preferred point code becomes unavailable, the traffic is routed to highest priority alternate point code that is available. When the preferred point code becomes available again, the traffic is then routed back to the preferred point code.

All the point codes in a load shared MRN set have the same relative cost value. Traffic is shared equally between the point codes in this type of MRN set.

A combined dominant/load shared MRN set is a combination of the dominant and load sharing MRN sets. At least one of the point codes in this MRN set has the same relative cost value as the relative cost value as the primary point code. The rest of the point codes in this MRN set have a different relative cost value that is higher than the value of the primary point code, but the relative cost values assigned to these point codes are the same. The traffic is shared equally between the point codes with the lowest relative cost values. If these point codes become unavailable, the traffic is routed to the other point codes in the MRN set and shared equally between these point codes.

With the Flexible GTT Load Sharing feature enabled, the same point code can be assigned to multiple MRN sets. The relative cost value of this point code in each MRN set can be different.

For example, the point code 002-002-002 is assigned to three MRN sets. In MRN set 1, point code 002-002-002 is the primary point code in a dominant MRN set with a relative cost value of 10. In MRN set 2, point code 002-002-002 is one of eight point codes in a load shared MRN set, each with a relative cost value of 20. In MRN set 3, point code 002-002-002 is assigned the relative cost value of 30 in a combined dominant/load shared MRN set whose primary point code is 004-004-004 with a relative cost value of 20.

MRN set 1 is assigned to a global title translation containing the global title address of 9195551212. When the point code in this intermediate global title translation is translated to 002-002-002, point code 002-002-002 handles all the traffic for this intermediate global title translation until it becomes unavailable. When point code 002-002-002 becomes unavailable, the next point code in this dominant MRN set handles the traffic until this point code becomes unavailable, or until point code 002-002-002 becomes available again.

MRN set 2 is assigned to a global title translation containing the global title address of 8285551212. When the point code in this intermediate global title translation is translated to 002-002-002, the traffic for this intermediate global title translation is shared equally among all members of the MRN set.

MRN set 3 is assigned to a global title translation containing the global title address of 3365551212. When the point code in this intermediate global title translation is translated to 002-002-002, the traffic for this intermediate global title translation is shared equally among all members of the MRN set with the relative cost value of 20. When all of these point codes become unavailable, the traffic is shared equally among all the point codes with the relative cost value of 30, including point code 002-002-002.

By allowing a point code to be assigned to multiple MRN sets, and by assigning an MRN set to a specific global title address, different load sharing arrangements can be made based on the global title address of the global title translation and the translated point code.

The same MRN set can be assigned to multiple global title translations.

For the EAGLE 5 ISS to perform Flexible Intermediate GTT Load Sharing, the Flexible GTT Load Sharing feature must be enabled with the `enable-ctrl-feat` command, and turned on with the `chg-ctrl-feat` command. Perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure to enable and turn on the Flexible GTT Load Sharing feature. The Intermediate GTT Load Sharing feature must also be enabled with the `enable-ctrl-feat` command, and turned on with the `chg-ctrl-feat` command. Perform the *Activating the IGTTLS feature* on page 750 procedure to enable and turn on the Intermediate GTT Load Sharing feature.

The Flexible GTT Load Sharing feature can also be turned off with the `chg-ctrl-feat` command. If the Flexible GTT Load Sharing feature is turned off, and the Intermediate GTT Load Sharing feature enabled and turned on, provisioning for Flexible Intermediate GTT Load Sharing can be performed with the `ent-mrn`, `dlt-mrn`, `chg-mrn`, and `rtrv-mrn` commands. The EAGLE 5 ISS will not perform Flexible Intermediate GTT Load Sharing on GTT traffic requiring intermediate global title translation. Perform the *Turning the Flexible GTT Load Sharing Feature Off* on page 795 procedure to turn off the Flexible GTT Load Sharing feature.

Flexible Final GTT Load Sharing

Flexible Final GTT Load Sharing provides more flexible GTT load sharing arrangements for GTT traffic requiring final global title translation (the routing indicator in the message is SSN) than the load sharing arrangements provided by the mated applications without the Flexible GTT Load Sharing feature enabled. For the EAGLE 5 ISS to perform Flexible Final GTT Load Sharing, the Flexible GTT Load Sharing feature must be enabled and turned on.

With the Flexible GTT Load Sharing feature not enabled, the EAGLE 5 ISS load shares post-GTT destination point codes and subsystems when final global title translation is being performed by using the mated application (MAP) table. The destination point codes and subsystems in the MAP table can appear in the MAP table only once. The MAP table contains groups of point codes with a maximum of 32 point codes and subsystems in each group. This arrangement allows only one set of relationships to be defined between a given point code and subsystem and any other point codes and subsystems in the MAP group. All global title addresses in the GTT table that translate to a point code and subsystem in the given MAP group will have the same set of load sharing rules applied.

For example, the following point codes, subsystems, and relative cost values are provisioned in the MAP table.

```
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
005-005-005               251 10  SHR --- --- grp01    OFF
             006-001-001  254 10  SHR --- --- grp01    OFF
             006-001-002  254 10  SHR --- --- grp01    OFF
             006-001-003  254 10  SHR --- --- grp01    OFF
             006-001-004  254 10  SHR --- --- grp01    OFF
             006-001-005  254 10  SHR --- --- grp01    OFF
             006-001-006  254 10  SHR --- --- grp01    OFF
             006-001-007  254 10  SHR --- --- grp01    OFF
```

When the point code and subsystem in the final global title translation is translated to 005-005-005, subsystem 251, all traffic routed using the global title addresses in the final global title translations containing this point code and subsystyem are load shared equally, no matter what the global title address is.

With the Flexible GTT Load Sharing feature enabled and turned on, allowing Flexible Final GTT Load Sharing to be performed, the GTT load sharing arrangements are determined by:

- the MAP set assigned to the final global title translation.
- the translated point code and subsystem.
- the global title address in the message assigned to the global title translation.

When a global title address in a final global title translation is translated to a point code and subsystem, the MAP set assigned to the final global title translation containing the translated point code and subsystem, determines how load sharing is applied to the traffic for this final global title translation.

An MAP set is a group of point codes and subsystems in the MAP table defining the GTT load sharing rules that are applied to a final global title translation. The method of load sharing is determined by the relative cost (RC) value assigned to each point code and subsystem in the MAP set. There are four types of load sharing that can be performed: solitary, dominant, load shared, or combined dominant/load shared.

A solitary MAP set contains only one point code and subsystem and no mate point codes and subsystems. Traffic can be routed only to this point code and subsystem.

All the point codes in a dominant MAP set have different relative cost values. The translated point code and subsystem in the message is the preferred point code and subsystem that the message is routed on. The relative cost value assigned to the preferred point code and subsystem does not have to be the lowest value in the MAP set. All traffic is routed to the preferred point code and subsystem, if it is available. If the preferred point code and subsystem become unavailable, the traffic is routed to highest priority alternate point code and subsystem that is available. When the preferred point code and subsystem become available again, the traffic is then routed back to the preferred point code and subsystem.

All the point codes and subsystems in a load shared MAP set have the same relative cost value. Traffic is shared equally between the point codes and subsystems in this type of MAP set.

A combined dominant/load shared MAP set is a combination of the dominant and load sharing MAP sets. At least one of the point codes and subsystems in this MAP set has the same relative cost value as the relative cost value as the primary point code and subsystem. The rest of the point codes and subsystems in this MAP set have a different relative cost value that is higher than the value of the primary point code and subsystem, but the relative cost values assigned to these point codes and subsystems are the same. The traffic is shared equally between the point codes and subsystems with the lowest relative cost values. If these point codes and subsystems become unavailable, the traffic is routed to the other point codes and subystems in the MAP set and shared equally between these point codes and subsystems.

With the Flexible GTT Load Sharing feature enabled, the same point code and subsystem can be assigned to multiple MAP sets. The relative cost value of this point code and subsystem in each MAP set can be different.

For example, the point code 002-002-002, subsystem 254, is assigned to three MAP sets. In MAP set 1, point code 002-002-002, subsystem 254, is the primary point code and subsystem in a dominant MAP set with a relative cost value of 10. In MAP set 2, point code 002-002-002, subsystem 254, is one of eight point codes and subsystems in a load shared MAP set, each with a relative cost value of 20. In MAP set 3, point code 002-002-002, subsystem 254, is assigned the relative cost value of 30 in a combined dominant/load shared MAP set whose primary point code and subsystem is 004-004-004, subsystem 200, with a relative cost value of 20.

MAP set 1 is assigned to a global title translation containing the global title address of 9195551212. When the point code and subsystem in this final global title translation is translated to 002-002-002, subsystem 254, this point code and subsystem handles all the traffic for this final global title

translation until it becomes unavailable. When point code 002-002-002, subsystem 254, becomes unavailable, the next point code and subsystem in this dominant MAP set handles the traffic until this point code and subsystem become unavailable, or until point code 002-002-002, subsystem 254, becomes available again.

MAP set 2 is assigned to a global title translation containing the global title address of 8285551212. When the point code and subsystem in this final global title translation is translated to 002-002-002, subsystem 254, the traffic for this final global title translation is shared equally among all members of the MAP set.

MAP set 3 is assigned to a global title translation containing the global title address of 3365551212. When the point code and subsystem in this final global title translation is translated to 002-002-002, subsystem 254, the traffic for this final global title translation is shared equally among all members of the MAP set with the relative cost value of 20. When all of these point codes and subsystems become unavailable, the traffic is shared equally among all the point codes and subsystems with the relative cost value of 30, including point code 002-002-002, subsystem 254.

By allowing a point code and subsystem to be assigned to multiple MAP sets, and by assigning an MAP set to a specific global title address, different load sharing arrangements can be made based on the global title address of the global title translation and the translated point code and subsystem.

The same MAP set can be assigned to multiple global title translations.

For the EAGLE 5 ISS to perform Flexible Final GTT Load Sharing, the Flexible GTT Load Sharing feature must be enabled with the `enable-ctrl-feat` command, and turned on with the `chg-ctrl-feat` command. Perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure to enable and turn on the Flexible GTT Load Sharing feature.

The Flexible GTT Load Sharing feature can also be turned off with the `chg-ctrl-feat` command. If the Flexible GTT Load Sharing feature is turned off, provisioning for Flexible Final GTT Load Sharing can be performed with the `ent-map`, `dlt-map`, `chg-map`, and `rtrv-map` commands. The EAGLE 5 ISS will not perform Flexible Final GTT Load Sharing on GTT traffic requiring final global title translation. Perform the *Turning the Flexible GTT Load Sharing Feature Off* on page 795 procedure to turn off the Flexible GTT Load Sharing feature.

Origin-Based SCCP Routing

The Origin-Based SCCP Routing feature provides additional options for routing SCCP messages. Without the Origin-Based SCCP Routing feature enabled, the routing of SCCP messages is based only on the called party address fields in the message. With the Origin-Based SCCP Routing feature enabled, SCCP messages can be routed based on the called party address (CdPA), the calling party address (CgPA), CgPA point code, CgPA subsystem number, or originating point code (OPC) fields in the message.

Origin-Based SCCP Routing provides three modes of global title translation:

- CdPA global title translation
- CgPA global title translation
- Advanced CdPA global title translation.

The CgPA global title translation and Advanced CdPA global title translation modes are performed only if the Origin-Based SCCP Routing feature is enabled and turned on. The CdPA global title

translation mode is performed whether or not the Origin-Based SCCP Routing feature is enabled and turned on.

The CdPA global title translation mode is based on the CdPA global title address, translation type, and global title indicator in the incoming message. If the global title indicator value in the message is 4, the CdPA numbering plan and nature of address indicator is also used in the CdPA global title translation mode.

The CgPA global title translation mode is based on the following parameters in the incoming message:

- CgPA global title address, translation type, global title indicator, and subsystem number in the incoming message. If the global title indicator value in the message is 4, the CgPA numbering plan and nature of address indicator is also used in the CgPA global title translation mode.
- CgPA point code, translation type, global title indicator, and subsystem number in the incoming message. If the global title indicator value in the message is 4, the CgPA numbering plan and nature of address indicator is also used in the CgPA global title translation mode.

The Advanced CdPA global title translation mode is based on these parameters in the incoming message:

- The CdPA global title address
- The CgPA global title address, or CgPA point code, or Selector ID. If the Selector ID is used in the Advanced CdPA global title translation mode, the CgPA translation type and CgPA global title indicator are also used in the Advanced CdPA global title translation mode if the CgPA global title indicator value is not 0. If the CgPA GTI value is 0, then the CGPC GTT set name shown in either the `DFLTCGPCASN` field (for an ANSI message) of the `rtrv-sccpopts` output, or the `DFLTCGPCISN` field (for an ITU message) of the `rtrv-sccpopts` output is used to determine the global title translation performed on the message.
- The CgPA subsystem number
- The OPC from the MTP Routing Label
- The CdPA translation type
- The CdPA global title indicator
- If the global title indicator value in the message is 4, the CdPA numbering plan and nature of address indicator is also used in the Advanced CdPA global title translation mode and in the CgPA global title translation mode.

GTT Mode Hierarchy

The GTT mode hierarchy determines the preference of GTT modes used by the global title translation process on an incoming message. The global title translation process starts with the first GTT mode of the GTT hierarchy. If the translation was found there, the global title translation process is stopped. If the translation was not found in this first GTT mode, the global title translation process tries to find a translation in the next GTT mode of the hierarchy. The GTT mode hierarchies are shown in the following list.

1. CdPA only
2. Advanced CdPA, CdPA
3. CgPA, Advanced CdPA, CdPA
4. Advanced CdPA, CgPA, CdPA
5. Advanced CdPA, CdPA, CgPA
6. CgPA, CdPA
7. CdPA, CgPA

8. CgPA only.

For example, GTT hierarchy 3 (CgPA, Advanced CdPA, CdPA) is selected for the global title translation process. When an incoming message is processed, the CgPA global title translation information is searched first, starting with a search in GTT selector table for CgPA selectors. If no match is found, the advanced CdPA global title translation information is searched next, including a search in GTT selector for CdPA selectors. If no match is found, the CdPA global title translation information is searched. If a match is still not found, the message is handled as a failed GTT lookup and the appropriate action is taken. When a match is found, the global title translation process is stopped and the message is processed according to the global title translation routing data.

The GTT mode hierarchy can be configured on a system wide basis and on a per linkset basis. The system wide option is configured using the `dfltgttmode` parameter of the `chg-sccpopts` command and is used to define the default GTT mode hierarchy value for all linksets by default. Each linkset can be configured to use one of the GTT mode hierarchies using the `gttmode` parameter of either the `ent-ls` or `chg-ls` command. The linkset option overrides the system default GTT mode value for only that linkset. If the `gttmode` parameter is not specified for a specific linkset, the system default GTT mode hierarchy is assigned to the linkset.

CdPA GTT Mode

The GTT functionality in previous releases of the EAGLE 5 ISS is now the CdPA GTT mode. The CdPA translation type and global title indicator in the incoming messages are used to select the GTT table (GTT set) used to process the message. If the global title indicator value in the message is 4, the CdPA numbering plan and nature of address indicator are also used to select the GTT table used to process the message. Once the GTT table is selected, the CdPA global title address determines how the message is translated.

Advanced CdPA GTT Mode

The Advanced CdPA GTT mode provides greater flexibility to route SCCP messages. The following types of translations can be performed.

- CdPA GTA translation, along with either one or both of the following types of translations:
- CgPA GTA or CgPA point code translation identified by a pre-provisioned GTT set in the CdPA translation or by a search in GTT selector table using the SELID value from the CdPA translation along with other CgPA selectors, with or without a subsequent CgPA subsystem number translation. The CgPA GTA, CgPA point code, and SELID translations are mutually exclusive.
- OPC translation, with or without a subsequent CgPA subsystem number translation.

The translations are executed in a predefined order as displayed in the previous list and cannot be changed.

You can choose which of the following additional translations can be applied on top of the mandatory CdPA GTA translation:

- CgPA GTA translation only
- CgPA GTA and CgPA subsystem number translation
- CgPA point code translation only
- CgPA point code and CgPA subsystem number translation
- Translation based on the SELID
- CgPA GTA and OPC translation
- CgPA GTA, OPC, and CgPA subsystem number translation

- CgPA point code and OPC translation
- CgPA point code, OPC, and CgPA subsystem number translation
- SELID and OPC translation
- SELID, OPC, and CgPA subsystem number translation
- OPC translation only.
- OPC and CgPA subsystem number translation

Note: The CdPA global title indicator is always validated before GTT starts processing SCCP messages. The CgPA global title indicator is not validated, which means, that when a subsequent lookup in the Advanced CdPA GTT mode is based on the SELID value, the attempt to find a CgPA GTT set in GTT selector table may fail because of an invalid or unsupported CgPA global title indicator in the incoming message.

CgPA GTT Mode

The CgPA GTT mode offers two options for translating and routing SCCP messages, the CgPA GTA translation with or without a subsequent CgPA subsystem number translation, or the CgPA point code translation with or without a subsequent CgPA subsystem number translation search. The CgPA GTA and CgPA point code are mutually exclusive.

When CgPA global title translation performs a lookup in the GTT selector table, two new selectors, the CgPA subsystem number and SELID, are always members of the selectors. If CgPA global title translation performs a lookup in the GTT selector table as a part of Advanced CdPA global title translation because the SELID is specified in the CdPA entry, the only GTT selector match that will be found is the entry with this particular SELID. If CgPA global title translation performs a lookup in the GTT selector table in the CgPA GTT mode, the only GTT selector match that will be found is the entry with the SELID value equal to `NONE`.

The CgPA subsystem number for GTT selector lookups is used differently. If the MSU contains a CgPA subsystem number, then the first and the best match that will be found is the entry with this particular CgPA subsystem number. If the MSU does not have a CgPA subsystem number or if the match for a specific CgPA subsystem number was not found, CgPA global title translation attempts to find a GTT selector entry with the CgPA subsystem number equal to `ANY`, along with the rest of the selectors.

If the CgPA GTI value is 0, then the CGPC GTT set name shown in either the `DFLTCGPCASN` field (for an ANSI message) of the `rtrv-sccpopts` output, or the `DFLTCGPCISN` field (for an ITU message) of the `rtrv-sccpopts` output is used to determine the global title translation performed on the message. The `DFLTCGPCASN` and `DFLTCGPCISN` fields are provisioned using the `chg-sccpopts` command in the *Changing the Default GTT Mode Options* on page 743 procedure.

Note: The CdPA global title indicator is always validated before global title translation starts processing SCCP messages, even when the GTT mode is CgPA and the CdPA data is not used by global title translation. The CgPA global title indicator is not validated, which means, that the attempt to find a CgPA GTT set in the GTT selector table may fail because of an invalid or unsupported CgPA global title indicator in the incoming MSU.

Interaction with the Advanced GT Modification Feature

Any kind of SCCP translation (CdPA GTA, CgPA GTA, CgPA PC, OPC, SSN) can be provisioned with Advanced GT Modification data. This Advanced GT Modification data will be applied to a CdPA GTA if it exists, or to a CgPA GTA if it exists. If the CdPA or CgPA part of the message under translation does not contain a GTA, the Advanced GT Modification data from this translation

will be ignored. The CgPA GTA is modified only if it is provisioned in a CdPA GTA set. If the CgPA GTA is provisioned in a CgPA GTA set, the CgPA GTA is not modified. The only exception to this is discussed in the *Interaction with the ANSI-ITU-China SCCP Conversion Feature* on page 37 section.

Interaction with the ANSI-ITU-China SCCP Conversion Feature

When the ANSI-ITU-China SCCP Conversion feature attempts to perform a global title translation lookup on the CgPA in the message, the GTT hierarchy of the incoming linkset is ignored. The EAGLE 5 ISS performs a CdPA only global title translation using the CgPA data. The selectors from the CgPA part are used to find a CdPA GTA set in the GTT selector table, and the CgPA global title address is used to find a translation in the CdPA GTA set.

Interaction with MPS-based features

The messages from the MPS-based services are processed by global title translation using the GTT mode assigned to the linkset on which these messages arrived at the EAGLE 5 ISS.

GTT for EAGLE 5 ISS-generated MSUs

UDTS messages and responses generated by the EAGLE 5 ISS and the required global title translation are processed in the CdPA GTT mode only.

Wildcard Provisioning for the OPC and CgPA Point Code

Origin-Based SCCP Routing allows for the use of wildcards (asterisks) as values for an ANSI OPC or ANSI CgPA point code.

For example, the point code value 12-*-* indicates that any ANSI point code containing with the network indicator value 12, regardless of the network cluster and network cluster member values in the ANSI point code, is considered a match.

The point code value 12-34-* indicates that any ANSI point code containing the network indicator value 12 and the network cluster value 34, regardless of the network cluster member value in the ANSI point code, is considered a match.

When searches for ANSI point codes are performed, the search order tries to find the best possible match. For example, the incoming message contains the ANSI point code 12-24-25. The search mechanism first searches for the point code value 12-34-25 in the global title translation tables. If that search fails, the search mechanism searches for the point code value 12-34-* in the global title translation tables. If that search fails, the search mechanism searches for the point code value 12-*-* in the global title translation tables.

An ANSI OPC or ANSI CgPA point code value containing all asterisks is not allowed. Asterisks cannot be used for ITU point codes.

The Cluster Routing and Management Diversity or Network Routing features do not have to turned on to use asterisks for the ANSI OPC or ANSI CgPA point code value.

Hardware Requirements

To enable the Origin-Based SCCP Routing feature, the EAGLE 5 ISS cannot contain any TSMs running the SCCP application. All TSMs running the SCCP application must be replaced with DSMs or E5-SM4G cards running the VSCCP application.

Provisioning the Origin-Based SCCP Routing Feature

To provision the Origin-Based SCCP Routing feature, perform these steps.

1. Turn the GTT and EGTT features on using the `chg-feat` command. Add the required DSMs or E5-SM4G cards to the database using the `ent-card` command. Perform the *Adding a Service Module* on page 76 procedure.
2. Enable the Origin-Based SCCP Routing feature using the `enable-ctrl-feat` command. Perform the *Activating the Origin-Based SCCP Routing Feature* on page 797procedure.

   Note: The Origin-Based SCCP Routing feature can be turned on in this step using the `chg-ctrl-feat` command. If the Origin-Based SCCP Routing feature is not turned on in this step, provisioning for the Origin-Based SCCP Routing feature can still be performed. When the provisioning is completed, the Origin-Based SCCP Routing feature can be turned on. The Origin-Based SCCP Routing feature will not work until the feature is turned on either in this step or step 9.

3. Change the system wide default GTT mode, if desired, using the `chg-sccpopts` command. Perform the *Changing the Default GTT Mode Options* on page 743 procedure.
4. Provision the required destination point codes, linksets, signaling links, and routes, by performing these procedures in the Database *Administration Manual* - SS7 .

   - Destination Point Codes – Adding a Destination Point Code procedure in the Database *Administration Manual* - SS7 .
   - Linksets – Perform one of these procedures depending on the type of linkset.
     - SS7 Linkset – Adding an SS7 Linkset procedure in the Database *Administration Manual* - SS7
     - X.25 Linkset – Adding an X.25 Linkset procedure in the Database *Administration Manual* - *Features*
     - IP Gateway Linkset – Configuring an IPGWx Linkset procedure in the Database *Administration Manual* - IP7 *Secure Gateway*

       Note: If you wish to use a GTT mode hierarchy for the linkset other than the system default GTT mode hierarchy, specify the `gttmode` parameter when provisioning the linkset.

   - Signaling Links – Perform one of these procedures depending on the type of signaling link.
     - A low-speed SS7 signaling link – Adding an SS7 Signaling Link procedure in the Database *Administration Manual* - SS7
     - An E1 signaling link – Adding an E1 Signaling Link procedure in the Database *Administration Manual* - SS7
     - A T1 signaling link – Adding a T1 Signaling Link procedure in the Database *Administration Manual* - SS7
     - An ATM signaling link – Adding an ATM High-Speed Signaling Link procedure in the Database *Administration Manual* - SS7
     - An X.25 signaling link – Adding an X.25 Signaling Link procedure in the Database *Administration Manual* - *Features*
     - An IP signaling link – Adding an IP Signaling Link procedure in the Database *Administration Manual* - IP7 *Secure Gateway*
   - Routes – Perform one of these procedures in the Database *Administration Manual* - SS7 depending on the type of route.

- A route containing an SS7 DPC – Adding a Route Containing an SS7 DPC procedure
- A route containing a cluster point code – Adding a Route Containing a Cluster Point Code procedure
- A route containing an IPGWx Linkset – Adding a Route Containing an IPGWx Linkset procedure
- A route containing an X.25 DPC – Adding a Route Containing an X.25 DPC procedure

5. Provision the required GTT sets using the `ent-gttset` command. Perform the *Adding a GTT Set* on page 570 procedure.
6. Provision the required GTT translations using the `ent-gta` command. Perform the *Adding Global Title Address Information* on page 617 procedure.

   Note: The command line on the terminal can contain up to 150 characters. If the parameters and values specified with the `ent-gta` command are too long to fit on the `ent-gta` command line, perform the `chg-gta` command to complete adding the GTA entry. If the parameters and values specified with the `chg-gta` command are too long to fit on the `chg-gta` command line, perform the `chg-gta` command as many times as necessary to complete the GTA entry.
7. Provision the required GTT selectors using the `ent-gttsel` command. Perform the *Adding a GTT Selector* on page 593 procedure.
8. Change the default ANSI CGPC GTT set name or default ITU CGPC GTT set name, if desired, using the `chg-sccpopts` command. Perform the *Changing the Default GTT Mode Options* on page 743 procedure.
9. Turn the Origin-Based SCCP Routing feature on using the `chg-ctrl-feat` command. Perform the *Activating the Origin-Based SCCP Routing Feature* on page 797 procedure.

Hex Digit Support for GTT

The Hex Digit Support for GTT feature, when enabled, allows the EAGLE 5 ISS to process incoming messages that contain either decimal (0-9) or hexadecimal digits (0-9, a-f, A-F) in the global title address in the called party address field of the messages.

If the Hex Digit Support for GTT feature is enabled and the Origin-Based SCCP Routing feature is enabled and turned on, the EAGLE 5 ISS can process messages containing decimal or hexadecimal digits in the global title address in either the calling party address or the called party address fields of the messages, depending on the GTT hierarchy that is used to process the messages. For more information on the Origin-Based SCCP Routing feature, refer to the *Origin-Based SCCP Routing* on page 33 section.

With the Hex Digit Support for GTT feature enabled, hexadecimal digits can be specified for the `gta` and `egta` parameters of the `ent-gtt`, `chg-gtt`, `ent-gta`, and `chg-gta` commands. If the Advanced GT Modification feature is enabled, hexadecimal digits can be specified for the values of the prefix and suffix deletion digit parameters (`npds` and `nsds`) of the `ent-gtt`, `chg-gtt`, `ent-gta`, and `chg-gta` commands. For more information on the Advanced GT Modification feature, refer to the *Advanced GT Modification Feature* on page 22 section.

If the ANSI-ITU-China SCCP Conversion feature is enabled, hexadecimal digits can be specified for the values of the prefix and suffix deletion digit parameters (`npds` and `nsds`) of the `ent-gtcnv` or `chg-gtcnv` commands. For more information on the ANSI-ITU-China SCCP Conversion feature, refer to the *ANSI-ITU-China SCCP Conversion Feature* on page 24 section.

After the Hex Digit Support for GTT feature is enabled, any existing range entries for global title addresses are treated as a range of hexadecimal values instead of a range of decimal values. For example, the database contains an entry that contains the range of global title addresses from 20 to 30. With the Hex Digit Support for GTT feature not enabled, this translation would match MSUs containing the global title addresses 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, and 30. With the Hex Digit Support for GTT feature enabled, this translation would match MSUs containing the global title addresses 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 2A, 2B, 2C, 2D, 2E, 2F, and 30. Translations containing a single entry for the global title address are not changed.

If you wish to have different translated data for hexadecimal digits, the existing range entry can be split into 3 entries as follows in *Table 2: Hex Digit Range Example* on page 40.

Table 2: Hex Digit Range Example

GTA=20	EGTA=29	with existing translation data
GTA=2A	EGTA=2F	with user specified translation data
GTA=30		with existing translation data

Hexadecimal digits cannot be used as a value for the `gta` parameter for the `ent-gws-redirect` and `chg-gws-redirect` commands.

Hexadecimal digits can be used as values for GSM MAP screening entries only if the Enhanced GSM MAP Screening feature is enabled.

Provisioning the Hex Digit Support for GTT Feature

To provision the Hex Digit Support for GTT feature, perform these steps.

1. Turn the GTT feature on using the `chg-feat` command. Add the required service modules to the database using the `ent-card` command. Perform the *Adding a Service Module* on page 76 procedure. If Enhanced Global Title Translation will be used, turn the EGTT feature on using the `chg-feat` command.
2. Enable the Hex Digit Support for GTT feature using the `enable-ctrl-feat` command. Perform the *Activating the Hex Digit Support for GTT Feature* on page 806 procedure.

   Note: Once this feature is enabled, the feature is also turned on. The `chg-ctrl-feat` cannot be used to turn this feature on. Once this feature is enabled, the feature cannot be turned off.

3. Provision the required destination point codes, linksets, signaling links, and routes, by performing these procedures.

   - Destination Point Codes - Adding a Destination Point Code procedure in the *Database Administration Manual - SS7*.
   - Linksets - Perform one of these procedures depending on the type of linkset.
     - SS7 Linkset - Adding an SS7 Linkset procedure in the *Database Administration Manual - SS7*
     - X.25 Linkset - Adding an X.25 Linkset procedure in the *Database Administration Manual - Features*
     - IP Gateway Linkset - Configuring an IPGWx Linkset procedure in the *Database Administration Manual - IP7 Secure Gateway*
   - Signaling Links - Perform one of these procedures depending on the type of signaling link.

- A low-speed SS7 signaling link - Adding an SS7 Signaling Link procedure in the *Database Administration Manual - SS7*
- An E1 signaling link - Adding an E1 Signaling Link procedure in the *Database Administration Manual - SS7*
- A T1 signaling link - Adding a T1 Signaling Link procedure in the *Database Administration Manual - SS7*
- An ATM signaling link - Adding an ATM High-Speed Signaling Link procedure in the *Database Administration Manual - SS7*
- An X.25 signaling link - Adding an X.25 Signaling Link procedure in the *Database Administration Manual - Features*
- An IP signaling link - Adding an IP Signaling Link procedure in the *Database Administration Manual - IP7 Secure Gateway*

- Routes - Perform one of these procedures in the *Database Administration Manual - SS7* depending on the type of route.
  - A route containing an SS7 DPC - Adding a Route Containing an SS7 DPC procedure
  - A route containing a cluster point code - Adding a Route Containing a Cluster Point Code procedure
  - A route containing an IPGWx Linkset - Adding a Route Containing an IPGWx Linkset procedure
  - A route containing an X.25 DPC - Adding a Route Containing an X.25 DPC procedure

Note: If only the GTT feature was turned on in step 1, perform steps 4 and 5. If the EGTT feature was turned on in step 1, skip steps 4 and 5 and perform steps 6, 7, and 8.

4. Provision the required translation types using the `ent-tt` command. Perform the *Adding a Translation Type* on page 468 procedure.
5. Provision the required global title translations using the `ent-gtt` command. Perform the *Adding a Global Title Translation* on page 480 procedure.

   Note: After the required global title translations have been provisioned in step 5, skip steps 6, 7, and 8.

6. Provision the required GTT sets using the `ent-gttset` command. Perform the *Adding a GTT Set* on page 570 procedure.
7. Provision the required GTT translations using the `ent-gta` command. Perform the *Adding Global Title Address Information* on page 617 procedure.

   Note: The command line on the terminal can contain up to 150 characters. If the parameters and values specified with the `ent-gta` command are too long to fit on the `ent-gta` command line, perform the `chg-gta` command to complete adding the GTA entry. If the parameters and values specified with the `chg-gta` command are too long to fit on the `chg-gta` command line, perform the `chg-gta` command as many times as necessary to complete the GTA entry.

8. Provision the required GTT selectors using the `ent-gttsel` command. Perform the *Adding a GTT Selector* on page 593 procedure.

Weighted GTT Load Sharing

The default behavior of the EAGLE 5 ISS for performing load sharing between nodes with the same relative cost is to perform the load sharing in a round-robin fashion. A limitation of this design is that all destinations have equal processing power and should receive an equal load. However, as new hardware is added to load-sharing groups, the load-sharing groups may have different processing capabilities. Customization of the load-sharing group would allow the traffic load to be distributed on the individual characteristics of each destination.

Another default behavior of the EAGLE 5 ISS is to route traffic to a load-shared group if any member of that group with the relative cost value is available. Depending on the traffic, this can overwhelm and congest a node, even though other nodes at different relative cost values could have handled the traffic.

Both of these scenarios can be solved with the Weighted GTT Load Sharing feature, which allows unequal traffic loads to be provisioned in mated application (MAP) and mated relay node (MRN) load sharing groups.

The MAP and MRN load sharing groups can be MAP or MRN load sharing groups without the Flexible GTT Load Sharing enabled, or MAP or MRN sets with the Flexible GTT Load Sharing feature enabled. Weighted GTT Load Sharing can be applied to only load shared or combined dominant/load shared MAP or MRN groups, and cannot be applied to solitary mated applications, or dominant MAP or MRN groups.

This feature also allows provisioning control over load sharing groups so that if insufficient capacity within the load sharing group is available, the load sharing group is not used.

Weighted GTT Load Sharing provides two controls for GTT traffic distribution through either the MAP or MRN groups:

- Individual weighting for each entity in a relative cost (RC) group
- In-Service threshold for each RC group

An RC group is a group of entries in either a MAP group or an MRN group that have the same relative cost value. An entity is either a point code entry in the MRN table or a point code and subsystem number entry in the MAP table.

A MAP group or MRN group can also be referred to as an entity set.

Weighted GTT Load Sharing can be applied to only load shared or combined dominant/load shared MAP or MRN groups, and cannot be applied to solitary mated applications, or dominant MAP or MRN groups.

Individual Weighting

Individual weighting is a method for assigning a different load capacity to each member of an RC group. Each entity is assigned a weight from 1 to 99 and receives a percentage of the traffic equal to its weight relative to the RC group's total weight. To calculate the percentage of traffic that a particular entity receives within its RC group (assuming all nodes are active and available for traffic), use the following equation:

% of traffic for the entity = (weight value assigned to the entity/RC group weight) x 100%

Note: With round-robin load-sharing, there is a concept of the preferred entity. The preferred entity is the outcome of GTT. It is the first entity used for load-sharing after initialization, and is

the primary entity for Class 1 SCCP Sequenced traffic. When weights are applied, no entity has any preference over another based on GTT information. Distribution is based on the RC group chosen by GTT, not the specific entity.

Individual Weighting Example

Table 3: RC Group Weight Example on page 43 shows how weighting affects traffic delivery. Entity A has a weight of 40 and the total RC group weight is 110, entity A receives 36% of the traffic. Entity C is has a weight of 10 and receives only 9% of the traffic for this group. The total group weight is the sum of the individual weight values assigned to each entity in the group.

Note: In order to maintain 100% for the RC group, some rounding may occur. This rounding error will always be ± 1%.

Table 3: RC Group Weight Example

Entity	RC	Weight	RC Group Weight	Percentage of Traffic
A	10	40	110	(40 / 110) * 100% = 36%
B	10	30		(30 / 110) * 100% = 27%
C	10	10		(10 / 110) * 100% = 9%
D	10	30		(30 / 110) * 100% = 28%

If all entities in an RC group have the same weight, the outbound traffic pattern provides equal distribution. For weighted load shared or weighted combined load shared MRN or MAP groups with In-Sequence Class 1 SCCP option on, In-Sequence Class 1 SCCP traffic is routed using the provisioned data as the initial method of routing and dynamic data (if the entity selected by provisioned data is prohibited) as the secondary method of routing. This allows all Class 1 traffic to be delivered to the same destination, and the traffic routing is affected unless the original destination changes status. If Transaction-Based GTT Load Sharing is not turned on, then the Weighted GTT Load Shared MSU Key is used. This provides a consistent MSU Key for the Class 1 SCCP traffic based on MTP parameters.

An MSU Key is a value calculated from parameters of an MSU that allows the MSU to be assigned to an entity within an RC group. An MSU Key always maps to the same entity until there is a status change to the MAP or MRN group.

In-Service Threshold

The in-service threshold defines the minimum percentage of weight that must be available for an RC group to be considered available. If the percentage of the available weight is less than the in-service threshold, then the entire RC group is considered unavailable for traffic. If the percentage of the available weight is equal to or greater than the in-service threshold, then the RC group is considered available, and traffic can be sent to any available entity in the RC group. The in-service threshold helps to prevent congestion when only a small portion of the RC group is available.

The in-service threshold has an initial value of 1%, and has a range of values from 1% to 100%. Current round-robin load sharing has an in-service threshold value of 1%, where if any entity in an RC group is available, it is always used.

The group weight that must be available to carry traffic (the required group weight) is determined by multiplying the total group weight (the sum of the individual weight values assigned to each entity in the group) by the in-service threshold value, expressed as a percentage. For example, if the RC group weight is 110, and the in-service threshold is 75%, the required group weight is 82.

An RC group can be in one of three states: Available, Prohibited, and Threshold-Prohibited. These states are determined by comparing the required RC group weight to the weight of the entities that are actually available for traffic, the entity available weight.

If the state of the entity in the RC group is Available, the entity available weight is the weight value assigned to the entity. If the state of the entity in the RC group is either Congested or Prohibited, the entity available weight is 0. The sum of all entity available weights in the RC group is the RC group available weight. *Table 4: RC Group In-Service Threshold States* on page 44 shows how the states of the RC group are determined.

Table 4: RC Group In-Service Threshold States

RC Group State	Description
Available	The RC group available weight is greater than or equal to the Required RC group weight. Traffic can routed to the RC group in all circumstances.
Prohibited	All entities in the RC group are prohibited (the RC group Available Weight = 0). No traffic can be routed to this RC group.
Threshold-Prohibited	At least one entity in the RC group is not prohibited, but RC group available weight is less than the required RC group weight. Even if the RC group available weight is 0, if one entity is congested, then the state of the RC group is Threshold-Prohibited. Normally, no traffic is routed to this RC group. The Transaction-based GTT Load Sharing and the SCCP Class 1 Sequencing features may route traffic to this group if the primary node is congested. Instead of moving this transaction-based traffic to another node and then back quickly when the congestion abates, routing will continue to the primary node.

In-Service Threshold Example

In the example shown in *Table 5: In-Service Threshold Example* on page 45, the RC group consisting of entities A, B, C, and D does not have sufficient available weight for the group (70 is less than 82), and therefore the RC group is considered Threshold-Prohibited. This RC group is unavailable for traffic.

The RC group consisting of entities E and F does have sufficient available weight for the group, and the RC group is considered Available.

The RC group consisting of entities G and H is Prohibited, since both entities G and H are Prohibited.

The RC group consisting of entities I and J is Threshold-Prohibited, since entity I is Congested. In order for the RC group status to be Prohibited, all entities in the RC group must be Prohibited. Non-Transaction-Based GTT Load Sharing traffic is not routed to the RC group.

If the Transaction-Based GTT Load Sharing feature is enabled and turned on, or SCCP Class 1 Sequencing is used, then traffic can be routed to entity I if that is the primary entity for the traffic (traffic would be routed if entity I was Available.

Table 5: In-Service Threshold Example

Entity	RC	Weight	RC Group Weight	In-Service Threshold	Required RC Group Weight	Entity Status	Entity Available Weight	RC Group Available Weight	RC Group In-Service Threshold Status
A	10	40	110	75%	82	Available	40	70	Threshold - Prohibited
B	10	30				Prohibited	0		
C	10	10				Prohibited	0		
D	10	30				Available	30		
E	20	30	40	100%	40	Available	30	40	Available
F	20	10				Available	10		
G	30	20	70	50%	35	Prohibited	0	0	Prohibited
H	30	50				Prohibited	0		
I	40	25	50	50%	25	Congested	0	0	Threshold - Prohibited
J	40	25				Prohibited	0		

Load-Sharing Groups

Weighted GTT Load-Sharing can be applied to only load shared mated application or MRN groups, or combined dominant/load shared mated application or MRN groups.

A load shared MAP or MRN group is a MAP or MRN group containing entries whose RC (relative cost) values are equal.

When Weighted GTT Load Sharing is applied to load shared MAP or MRN groups, traffic is distributed among the entities according to:

- Entity Status – traffic is only routed to an entity if the entity is considered Available.
- Entity Available Weight – the entity receives a percentage of the traffic determined by its weight relative to the total available weight of the RC group.
- RC group status - refer to *Table 4: RC Group In-Service Threshold States* on page 44.
- Available RC group weight – The sum of all entity available weights in the RC group.

LOAD Shared Table shows an example of Weighted GTT Load Sharing applied to a load shared MAP or MRN group.

Table 6: Load Shared Group with Weighted GTT Load Sharing Example

Entity	RC	Weight	RC Group Weight	In-Service Threshold	Required RC Group Weight	Entity Status
A	10	40	110	50%	55	Available
B	10	30				Prohibited
C	10	10				Available
D	10	30				Available

Entity	Entity Available Weight	RC Group Available Weight	RC Group In-Service Threshold Status	MAP or MRN Group Status	Current Load %
A	40	80	Available	Available	50%
B	0				0
C	10				13%
D	30				37%

All entities in the load shared group are in the same RC group, so if the RC group is unavailable for traffic, all traffic is discarded.

A combined dominant/load shared MAP or MRN group is a MAP or MRN group containing a minimum of two entries whose RC (relative cost) values are equal and a minimum of one entry whose RC value is different.

When Weighted GTT Load Sharing is applied to combined dominant/load shared MAP or MRN groups, traffic is distributed among the entities according to:

- Entity Status – traffic is only routed to an entity if the entity is considered Available.

- Entity Available Weight – the entity receives a percentage of the traffic determined by its weight relative to the total available weight of the RC group.
- RC group status - refer to *Table 4: RC Group In-Service Threshold States* on page 44.
- Available RC group weight – The sum of all entity available weights in the RC group.
- MRN or MAP Group Status – the MRN or MAP group must be considered Available in order to route traffic

Combined TABLE shows an example of a weighted combined load shared group.

Based on the results of global title translation, traffic is routed to one of the RC groups in the weighted combined load shared group. If that RC group is unavailable for traffic, the RC group with the next highest cost that is available for traffic is used to route the traffic. If a higher cost RC group is being used to route traffic, and a lower cost RC group becomes available, the lower cost RC group is then used to route the traffic.

The status of the combined dominant/load shared group is based on the status of the RC groups that make up the combined dominant/load shared group. If the status of any RC group is Available, then the status of the combined dominant/load shared group is Available. If no RC group is available for traffic, but the status of at least one of the RC groups is Threshold-Prohibited, then the status of the combined dominant/load shared group is Threshold-Prohibited. If the status of all the RC groups is Prohibited, then the status of the combined dominant/load shared group is prohibited.

Table 7: Combined Dominant/Load Shared Group with Weighted GTT Load Sharing Example

Entity	RC	Weight	RC Group Weight	In-Service Threshold	Required RC Group Weight	Entity Status
A	10	40	110	75%	82	Available
B	10	30				Prohibited
C	10	10				Prohibited
D	10	30				Available
E	20	30	40	100%	40	Available
F	20	10				Available
G	30	10	10	1%	1	Available
Entity	**Entity Available Weight**	**RC group Available Weight**	**RC group In-Service Threshold Status**	**MRN or MAP Group Status**	**Current Load %**	

Entity	RC	Weight	RC Group Weight	In-Service Threshold	Required RC Group Weight	Entity Status
A	40	70	Threshold - Prohibited	Available	0	
B	0				0	
C	0				0	
D	30				0	
E	30	40	Available		75%	
F	10				25%	
G	10	10	Available		100%	
Note: The Current Load % column shows the percentage of traffic each entity in the RC group handles.						

MSU Routing under Congestion

For Transaction-Based GTT Load Sharing or SCCP Class 1 Sequenced traffic, the original destination of the traffic must be maintained under congestion. Diverting traffic during congestion can lead to invalid transaction states, and the originator is not informed of any problem. If a congested node is selected, then traffic is routed to that node. If the message is discarded, then a UDTS is generated so the originator is informed of a problem. If the node is prohibited, then the selection of an alternate node is acceptable. This action is equivalent to the action performed when the `mrc=no` parameter is specified with either the `ent-map` or `chg-map` commands.

For all other traffic, rerouting this traffic away from a congested node is acceptable, since no sequencing or state information needs to be maintained. This can be accomplished by considering a congested entity as Unavailable (thus, its available weight is 0). The congested node receives no traffic. The state of the RC group may transition from Available to Threshold-Prohibited. This action is equivalent to the action performed when the `mrc=yes` parameter is specified with either the `ent-map` or `chg-map` commands.

Provisioning the Weighted GTT Load Sharing Feature

To provision the Weighted GTT Load Sharing feature, perform these steps.

1. Turn the GTT and EGTT features on using the `chg-feat` command. Add the required DSMs or E5-SM4G cardsto the database using the `ent-card` command. Perform the *Adding a Service Module* on page 76 procedure.
2. Enable the Weighted GTT Load Sharing feature using the `enable-ctrl-feat` command and turn the Weighted GTT Load Sharing feature on using the `chg-ctrl-feat` command. Perform the *Activating the Weighted GTT Load Sharing Feature* on page 813 procedure.
3. Provision load shared or combined dominant/load shared MRN groups with the `ent-mrn` and `chg-mrn` commands. To provision the MRN groups, the Intermediate GTT Load Sharing feature must be enabled with the `enable-ctrl-feat` command and turned on with the `chg-ctrl-feat` command. Perform the *Activating the IGTTLS feature* on page 750 procedure. Once the Intermediate GTT Load Sharing feature is enabled and turned on, perform the *Provisioning MRN Entries* on page 310 procedure.

4. Provision load shared or combined dominant/load shared MAP groups with the `ent-map` and `chg-map` commands. Perform one of these procedures:
   - *Provisioning a Solitary Mated Application* on page 112.
   - *Provisioning a Dominant Mated Application* on page 142 .
   - *Provisioning a Load Shared Mated Application* on page 189 .
   - *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223 .

Transaction-Based GTT Load Sharing

Transaction-Based GTT Load Sharing allows messages with the same transaction parameters (TCAP, SCCP, MTP, or ENHMTP parameters) to be routed to the same destination within an entity set. An entity set is a group of entities that are used to determine the proper destination of a post-GTT message. This group of entities can be one of the following:

- A mated application (MAP) group
- A mated relay node (MRN) group
- A mated application set (MAPSET), if the Flexible GTT Load Sharing feature is enabled
- A mated relay node set (MRNSET), if the Flexible GTT Load Sharing feature is enabled.

This feature applies to the following types of SCCP messages:

- UDT/UDTS class 0 messages
- UDT/UDTS class 1 messages
- XUDT/XUDTS class 0 messages
- XUDT/XUDTS class 1 messages.

UDT/UDTS and XUDT/XUDTS messages are loadshared using a key derived from these elements in the message.

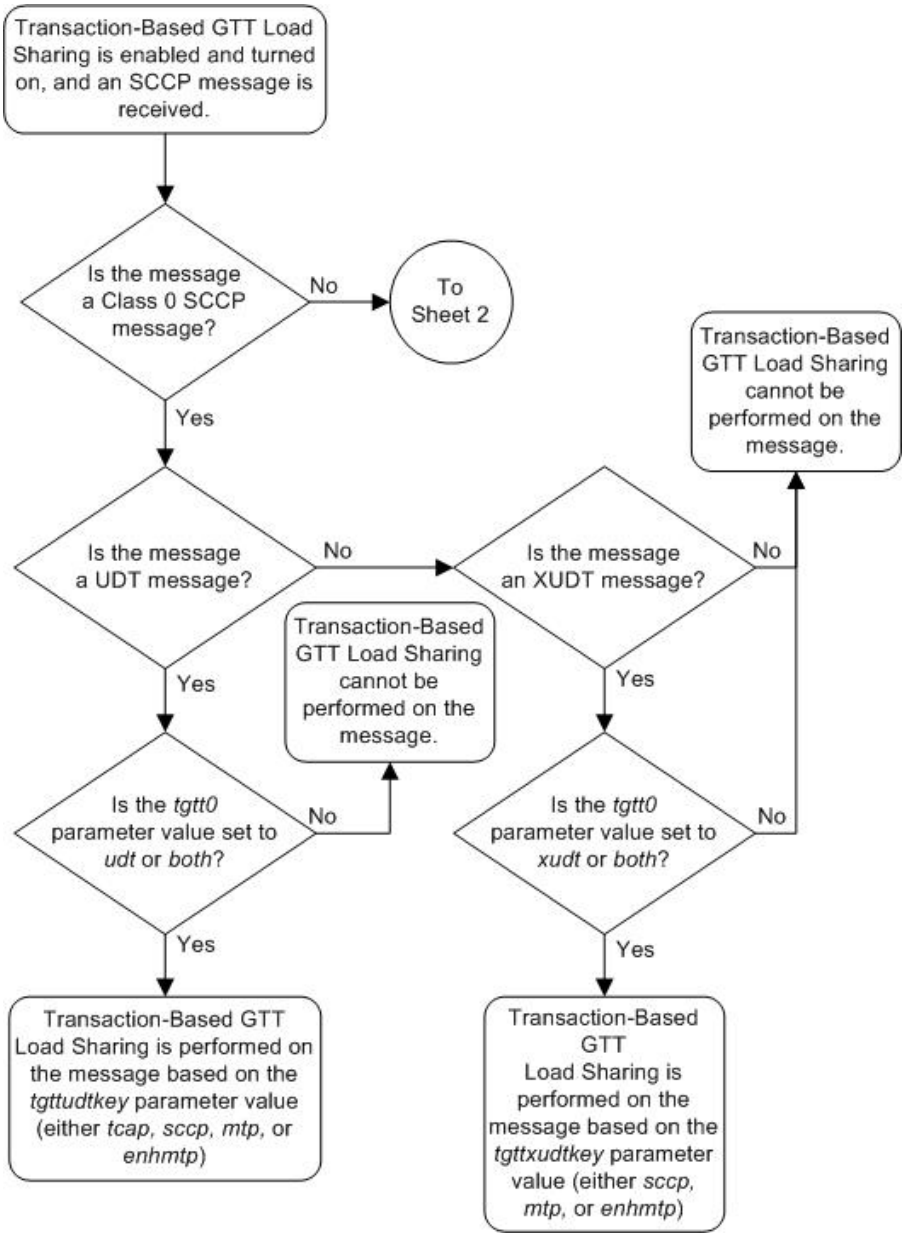
- MTP parameters - the first 3 bytes of the incoming OPC and 1 byte of the SLS.
- SCCP parameters - the last 4 bytes of the global title address field of the called party address.
- TCAP parameter - the TCAP Transaction ID in the messages.
- Enhanced MTP parameter - a combination of the SLS and the incoming OPC values.

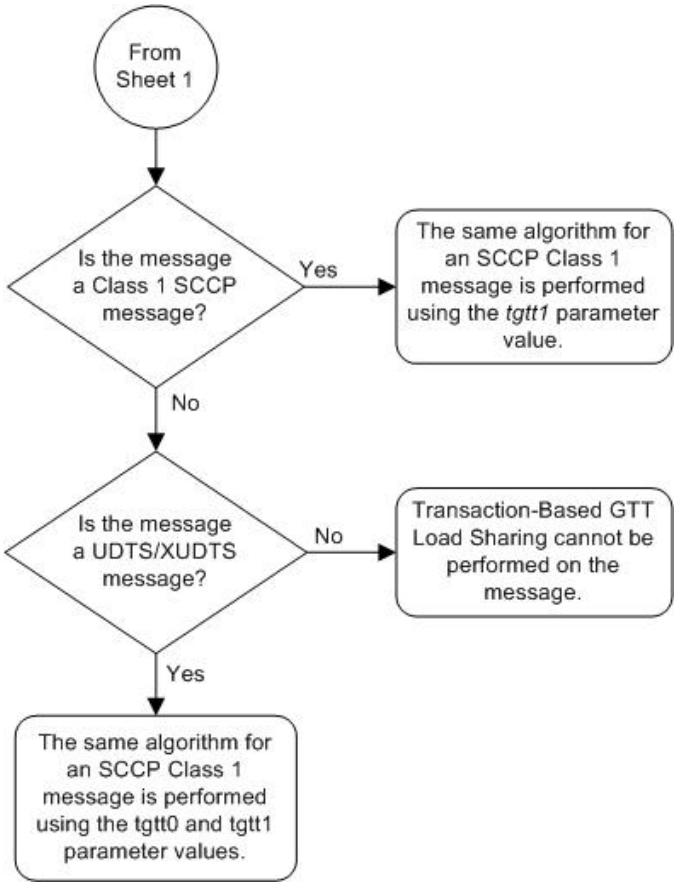
The parameters used for Transaction-Based GTT Load Sharing are selected using the `chg-sccpopts` command. These parameters are:

- `:tgtt0` – enable or disable Transaction-Based GTT Load Sharing for SCCP Class 0 UDT, UDTS, XUDT, or XUDTS messages.
- `:tgtt1` – enable or disable Transaction-Based GTT Load Sharing for SCCP Class 1 UDT, UDTS, XUDT, or XUDTS messages.
- `:tgttudtkey` – the Transaction Parameter for the incoming UDT or UDTS messages.
- `:tgttxudtkey` – the Transaction Parameter for the incoming XUDT or XUDTS messages.

Figure 4: Transaction-Based GTT Load Sharing SCCP Options on page 49 describes how the Transaction-Based GTT Load Sharing SCCP options are used.

Figure 4: Transaction-Based GTT Load Sharing SCCP Options


Transaction-Based GTT Load Sharing is enabled and turned on, and an SCCP message is received.
Is the message a Class 0 SCCP message?
No
To Sheet 2
Yes
Is the message a UDT message?
No
Is the message an XUDT message?
No
Transaction-Based GTT Load Sharing cannot be performed on the message.
Yes
Transaction-Based GTT Load Sharing cannot be performed on the message.
Yes
Is the tgtt0 parameter value set to udt or both?
No
Is the tgtt0 parameter value set to xudt or both?
No
Yes
Yes
Transaction-Based GTT Load Sharing is performed on the message based on the tgttudtkey parameter value (either tcap, sccp, mtp, or enhmtp)
Transaction-Based GTT Load Sharing is performed on the message based on the tgttxudtkey parameter value (either sccp, mtp, or enhmtp)



For more information on provisioning the Transaction-Based GTT Load Sharing option parameters, refer to the *Changing the Transaction-Based GTT Load Sharing Options* on page 439 procedure.

Only load shared and combined dominant/load shared entity sets are used to determine the routing for messages that are processed by the Transaction-Based GTT Load Sharing feature.

Using a load shared entity set, the entire entity set is a part of one RC group and the messages are load-shared based on the Transaction Parameter in the entities in the entity set. If none of the entities in the entity set are available for routing, then the message is discarded and a UDTS/XUDTS message is generated if "Return on Error" is set in the SCCP message. A UIM is generated indicating that the message has been discarded.

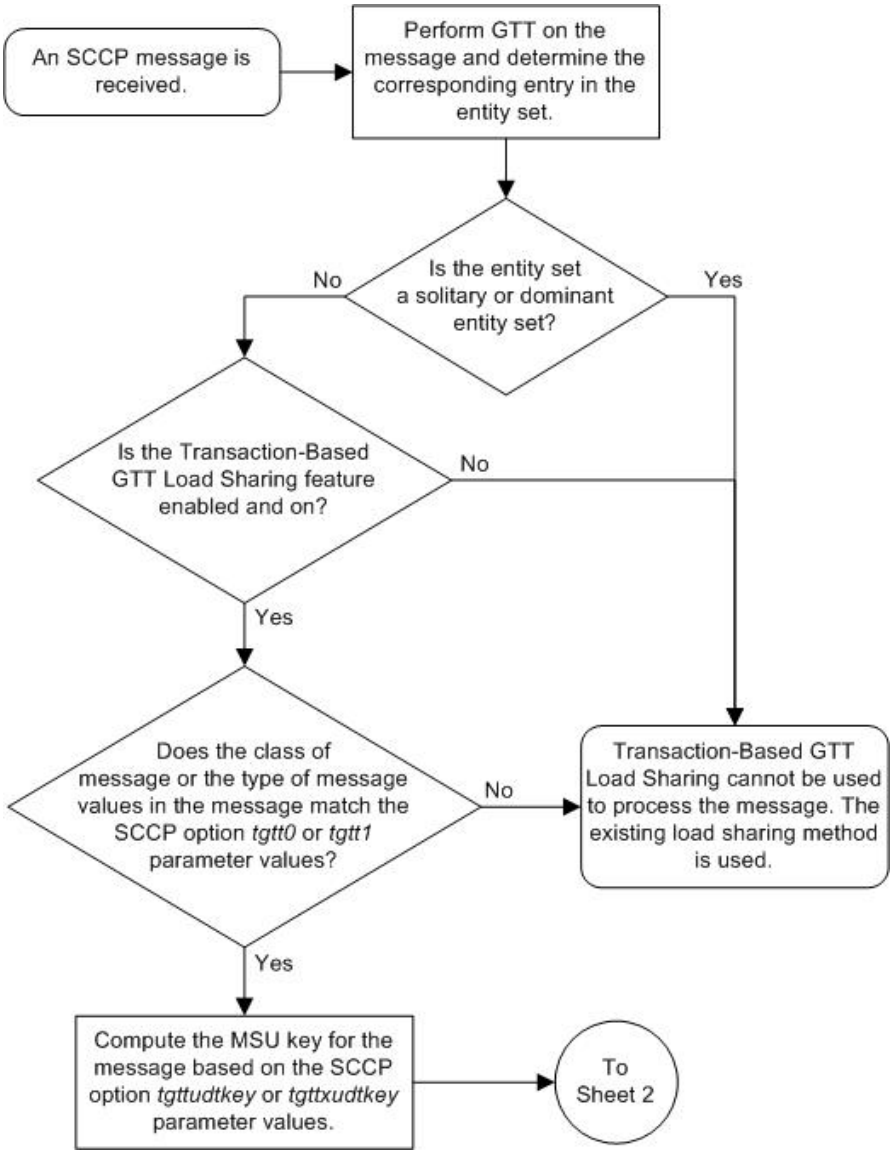
Using a combined dominant/load shared entity set, the RC group containing the point code, or point code and SSN, obtained as a result of the global title translation process is used to determine how the message is routed. If none of the entities in this RC group are available for routing, the next higher cost RC group is chosen. This is repeated until an entity in an entity set is available for routing. When an entity is found that is available for routing, the message is routed according to the criteria in that entity. If none of the entities in the entity set are available for routing, the message is discarded. A UDTS/XUDTS message is generated if “Return on Error” is set in the SCCP message. A UIM is generated indicating that the message has been discarded.

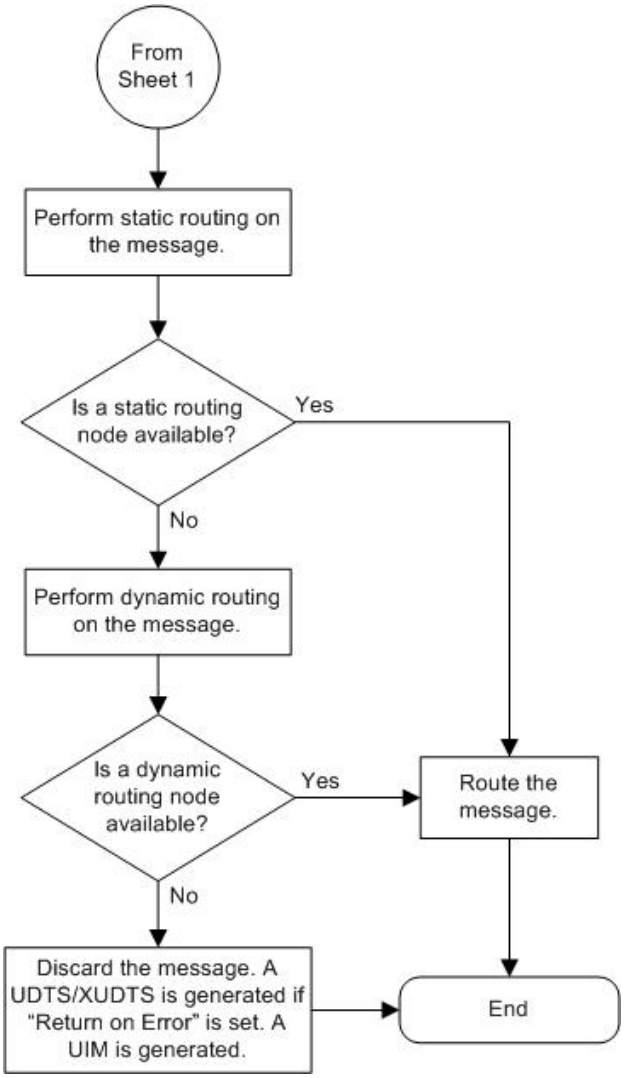
Once the MSU key is generated, it is passed to to the Weighted GTT Load Sharing mode entity sets to determine how the message will be routed. If the Weighted GTT Load Sharing feature is active and weights have been assigned to the entity set, the Weighted GTT Load Sharing feature

uses these weights to determine how to route the message. If no weights have been assigned to the entity set, then each RC group in the entity set is considered to be equally weighted.

Static routing is performed on all the messages that the Transaction-Based GTT Load Sharing feature has assigned an MSU key. Static routing always assigns and MSU key to the same node within an RC group. If static routing does not provide an available entity for routing the message, dynamic routing is used to find an available entity for routing the message. *Figure 5: Message Routing using Transaction-Based GTT Load Sharing* on page 52 illustrates this process.

Figure 5: Message Routing using Transaction-Based GTT Load Sharing





Provisioning the Transaction-Based GTT Load Sharing Feature

To provision the Transaction-Based GTT Load Sharing feature, perform these steps.

1. Turn the GTT and EGTT features on using the `chg-feat` command. Add the required DSMs or E5-SM4G cards to the database using the `ent-card` command. Perform the *Adding a Service Module* on page 76 procedure.
2. Enable the Transaction-Based GTT Load Sharing feature using the `enable-ctrl-feat` command. Perform the *Activating the Transaction-Based GTT Load Sharing Feature* on page 821 procedure.

   Note: The Transaction-Based GTT Load Sharing feature can be turned on in this step using the `chg-ctrl-feat` command. If the Transaction-Based GTT Load Sharing feature is not turned on in this step, provisioning for the Transaction-Based GTT Load Sharing feature can still be performed. When the provisioning is completed, the Transaction-Based GTT Load Sharing feature can be turned on. The Transaction-Based GTT Load Sharing feature will not work until the feature is turned on either in this step or step 4.

3. Change the Transaction-Based GTT Load Sharing options, if desired, using the `chg-sccpopts` command. Perform the *Changing the Transaction-Based GTT Load Sharing Options* on page 439 procedure.
4. Turn the Transaction-Based GTT Load Sharing feature on using the `chg-ctrl-feat` command. Perform the *Activating the Transaction-Based GTT Load Sharing Feature* on page 821 procedure.

SCCP Loop Detection

This feature detects SCCP looping of UDT/UDTS and XUDT/XUDTSmessages. The SCCP Loop Detection feature requires a feature access key (FAK) for part number 893-0165-01 to enable the feature.

Normally, an STP sends GTT messages to the capability point codes (CPCs) of mated nodes for load sharing. However, approach can result in SCCP looping if the destination point code is the same as the originating point code or the point code of any intermediate in the network.

This looping can be resolved by eliminating the use of CPCs and verifying at an intermediate STP whether the OPC of the incoming MSU is the same as the true point code (TPC) of the DPC after GTT. However. CPCs are often used to implement LNP in addition to the SCCP.

The SCCP Loop Detection feature resolves the looping issue by providing a correlation between the MTP-designated TPCs/secondary point codes (SPCs) and the CPCs for all concerned STPs.

The SCCP Loop Detection feature is provisioned by configuring the Loopset Table and adding a loopset to a to a Global Title Translation.

The loopset commands define the correlation between MTP-designated point codes and the capability point codes of the STPs that detect SCCP looping. The GTT commands allow the administration, deletion, and retrieval of loopset table entries for a particular Global Title Translation.

The SCCP Loop Detection feature operates in Regular or Discard modes. In the Regular (default) mode, the SCCP Loop Detection Feature generates a UIM when it detects SCCP looping but does not discard the MSU. This UIM allows the operator to capture and verify MSUs throughout the system for SCCP looping. In the Discard mode, the SCCP Loop Detection feature generates a UIM when it detects SCCP looping and discards the MSU.

Provisioning the SCCP Loop Detection Feature

1. Enable the SCCP Loop Detection feature using the `enable-ctrl-feat` command. Perform the *Activating the SCCP Loop Detection Feature* on page 830 procedure.

   Note: The SCCP Loop Detection feature can be turned on in this step using the `chg-ctrl-feat` command. If the SCCP Loop Detection feature is not turned on in this step, provisioning for the SCCP Loop Detection feature can still be performed. When the provisioning is completed, the SCCP Loop Detection feature can be turned on. The SCCP Loop Detection feature will not work until the feature is turned on in this step.

2. Provision the loopset table using the `ent-loopset` command. Perform the *Adding a Loopset* on page 442 procedure.
3. Add a loopset to the global title translation using the `ent-gtt` or `ent-gta` commands. Perform the *Adding a Global Title Translation* on page 480 procedure or the *Adding Global Title Address Information* on page 617 procedure.

Upgrading from Global Title Translation (GTT) to Enhanced Global Title Translation (EGTT)

The Enhanced Global Title Translation (EGTT) feature provides enhancements to existing global title translation functions and automatically updates the database when the EGTT feature is turned on. Turning on the EGTT feature overrides the Global Title Translation (GTT) feature. This section provides a high-level summary of feature enhancements, the upgrade process, and upgrade considerations for the GTT and EGTT features.

Note: Before upgrading to and/or turning on a new feature, make sure you have purchased the feature to be upgraded to and/or turned on. If you are not sure whether you have purchased the feature, contact your Tekelec Sales Representative or Account Representative.

Enhancements

The Enhanced Global Title Translation (EGTT) feature provides enhancements to existing global title translation functions:

- Increased number of selectors
- For ITU networks, addition of the translated subsystem number (SSN) in the called party address (CDPA) when octet is not equipped
- For ITU networks, inclusion of the originating point code (OPC) in the calling party address (CGPA)
- Capability to delete the global title (GT) in the called party address (CDPA)
- GTAs can be added offline to the EAGLE 5 ISS if the GTT set has not yet been assigned to a GTT selector.
- Aliasing is replaced by assigning multiple GTT selectors to an existing GTT set.
- Automatic upgrade of the database when the EGTT feature is turned on.

Upgrade Considerations

Enabling the Enhanced Global Title Translation (EGTT) feature overrides the Global Title Translation (GTT) feature. The GTT Selector, GTT Set, and GTA commands replace the Translation Type (-TT) and Global Title Translation (-GTT) commands, which are no longer accepted and create error messages when entered. The SEAS equivalent of these commands will be maintained, mapping to ANSI with GTI of 2.

The following commands will be rejected when the EGTT feature is turned on:

- `ENT-TT` – Enter Translation Type
- `CHG-TT` – Change Translation Type
- `DLT-TT` – Delete Translation Type
- `RTRV-TT` – Retrieve Translation Type
- `ENT-GTT` – Enter Global Title Translation
- `CHG-GTT` – Change Global Title Translation
- `DLT-GTT` – Delete Global Title Translation
- `RTRV-GTT` – Retrieve Global Title Translation

  Note: When the EGTT feature is turned on, all data previously provisioned with the obsolete commands will be maintained.

The following commands will be turned on when the EGTT feature is turned on:

- `ENT-GTTSET` – Enter GTT Set
- `CHG-GTTSET` – Change GTT Set
- `DLT-GTTSET` – Delete GTT Set
- `RTRV-GTTSET` – Retrieve GTT Set
- `ENT-GTTSEL` – Enter GTT Selector
- `CHG-GTTSEL` – Change GTT Selector
- `DLT-GTTSEL` – Delete GTT Selector
- `RTRV-GTTSEL` – Retrieve GTT Selector
- `ENT-GTA` – Enter Global Title Address
- `CHG-GTA` – Change Global Title Address
- `DLT-GTA` – Delete Global Title Address
- `RTRV-GTA` – Retrieve Global Title Address

GTT Set Commands

GTT Set commands are used to provision new sets for global title translation, linking GTT Selector (-GTTSEL) and Global Title Address (-GTA) commands. This set of commands provides greater flexibility when provisioning the type of messages that require global title translation. There are no SEAS equivalents for these commands.

GTT Selector Commands

GTT Selector commands are used to provision new selectors for global title translation. Together with the GTT Set commands, they replace the Translation Type (-TT) commands, providing greater flexibility when provisioning the type of messages that require global title translation. There are no SEAS equivalents for these commands.

GTA Commands

GTA commands are used to provision GTTs using the new selectors for GTT. These commands replace the Global Translation Type (-GTT) commands.

Upgrade Process

When existing systems are upgraded from the GTT feature to the EGTT feature, the GTT_TBT table is converted to the GTT Selector and GTT Set tables using the data present in the GTT_TBT table. Set names are automatically picked for each entry in the GTT_TBT table, unless a TT Name is already provided. ANSI translation types are converted as is and given the GTI of 2. ITU translation types are converted to use two separate entries, one with the GTI of 2 and the other with the GTI of 4. During the conversion, DFLT (default) is assigned to the NP and NAI parameters for the GTI 4 entries. These values can then be changed to more specific values with the `ent-gttsel` command.

Aliases versus Selectors

One of the important differences between the GTT and EGTT features is the more flexible creation and use of “aliases”, which are replaced by selectors in the EGTT feature. Global title translation data can be built before bringing it into service and the service to existing global titles remains uninterrupted by allowing selector values to be changed instead of having to be deleted.

The flexibility in assigning selectors to sets of global title translation data is shown in *Table 8: Use of Aliases in GTT Selector Table* on page 57 in the reuse of the selector for setint000. In this example, you can break up GTT selectors into more specific entries (other than `dflt`) without having to delete the entire GTT data set for a selector.

GTT data can be built without being used until a link is added to a selector (specifying `GTTSN` with the `CHG-GTTSEL` command). At the same time, selectors can be changed without affecting existing global titles.

Table 8: Use of Aliases in GTT Selector Table on page 57 shows an alias entry, GTII=4, TT=0, NP=E164, NAI=INTL, added to the same GTT set *setint000* as several other selectors.

Table 8: Use of Aliases in GTT Selector Table

GTIA	TT	NP	NAI	GTTSN
2	1	---	---	setans001
2	9	---	---	lidb
2	10	---	---	t800
2	253	---	---	t800
GTII	TT	NP	NAI	GTTSN
4	0	DFLT	DFLT	setint000
2	0	---	---	setint000
4	9	DFLT	DFLT	IMSI
2	9	---	---	IMSI
4	18	DFLT	DFLT	IMSI
2	18	---	---	IMSI
4	0	E164	INTL	setint000

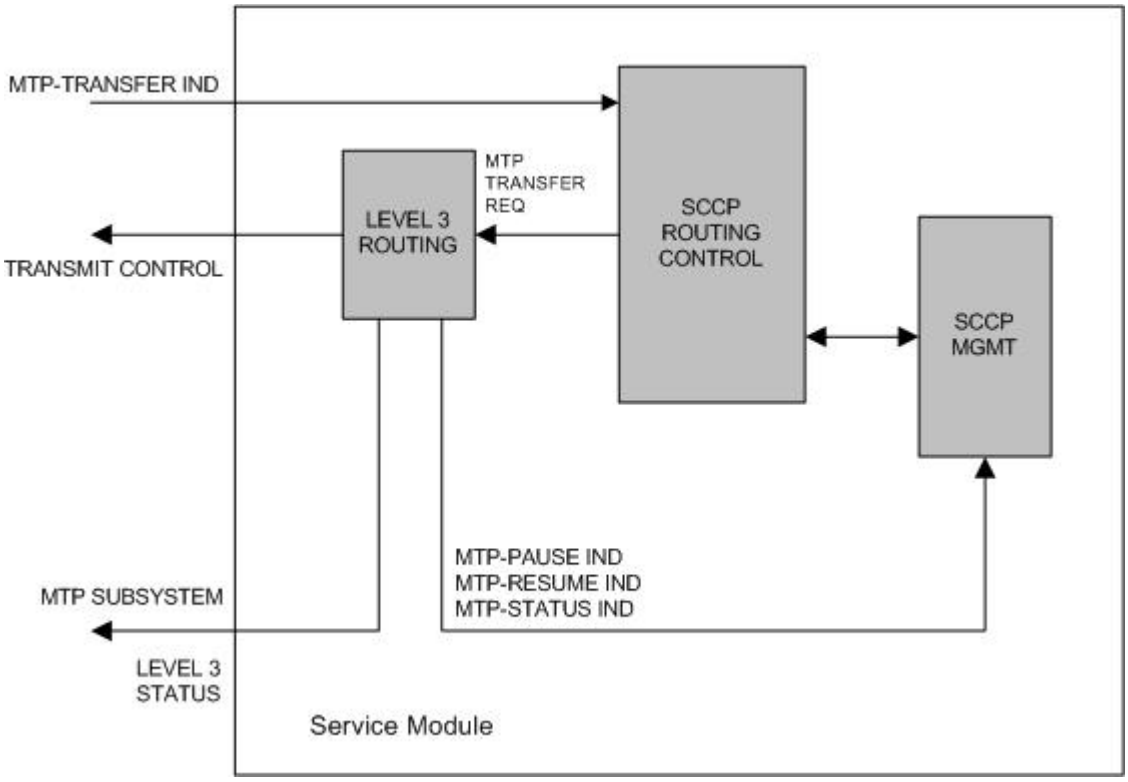
SCCP Overview

The signaling connection control part (SCCP) is divided into two functions:

- SCCP Routing Control
- SCCP Management

Figure 6: Logical View of SCCP Subsystems on page 57 shows the relationship of these two functions.

Figure 6: Logical View of SCCP Subsystems



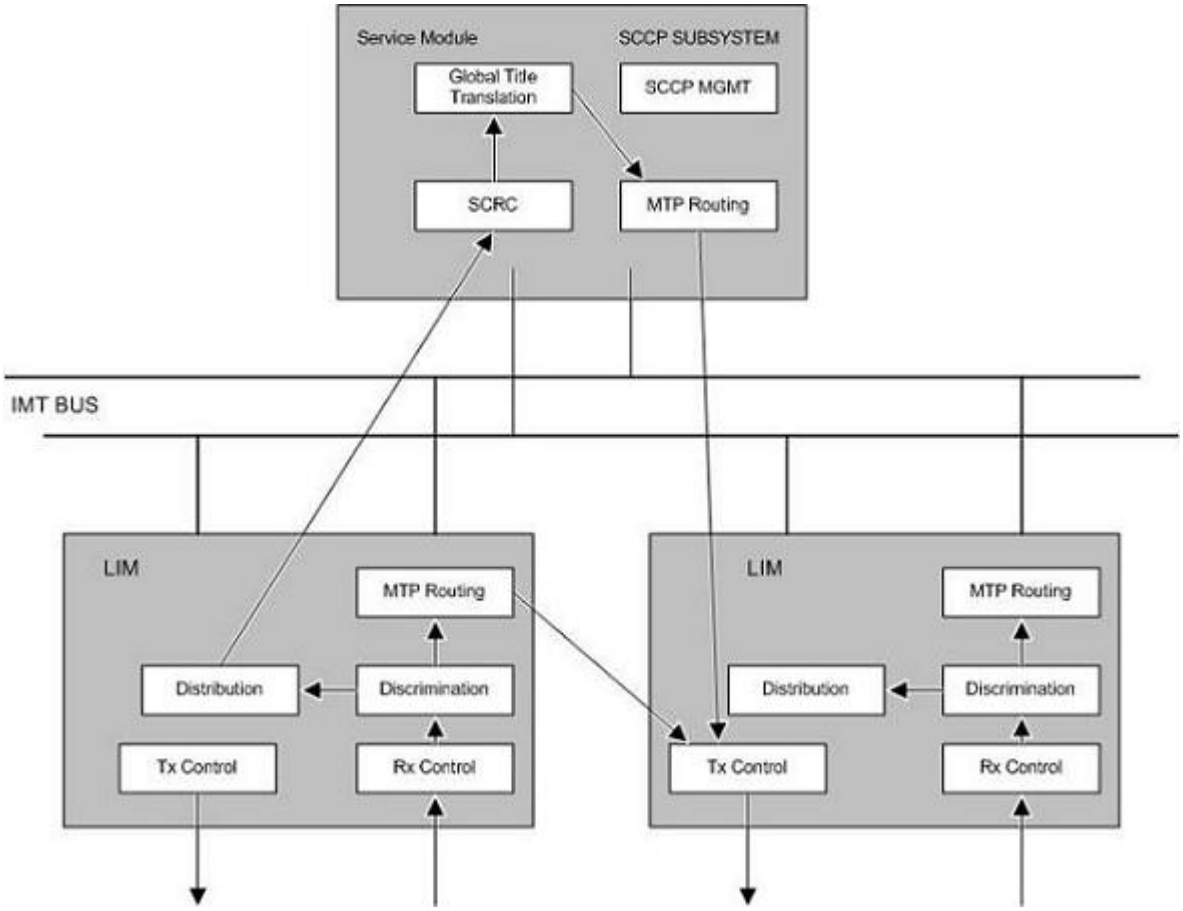
SCCP Routing Control

SCCP routing control receives messages from other nodes in the network via the MTP-Transfer indication.

A load balancing function assigns each LIM to a service module to distribute the SCCP traffic among the available service modules. When a LIM receives an SCCP message that is destined for the EAGLE 5 ISS, it sends the message to the service module assigned to that LIM. If that LIM does not have a service module assigned to it, the LIM discards the SCCP message. If no service modules are equipped or available, the SCCP message is discarded and the LIM transmits a User Part Unavailable MSU to the sending node.

When a LIM receives an SCCP message that is destined for another node, the LIM performs MTP routing and the SCCP message is not sent to the service module. *Figure 7: SCCP Message Flow through the EAGLE 5 ISS* on page 58 shows the message flow for an SCCP message destined for the EAGLE 5 ISS and for an SCCP message destined for another node.

Figure 7: SCCP Message Flow through the EAGLE 5 ISS



When SCCP receives a message from MTP, it checks the routing indicator in the called party address. There are two types of routing shown by the called party address routing indicator.

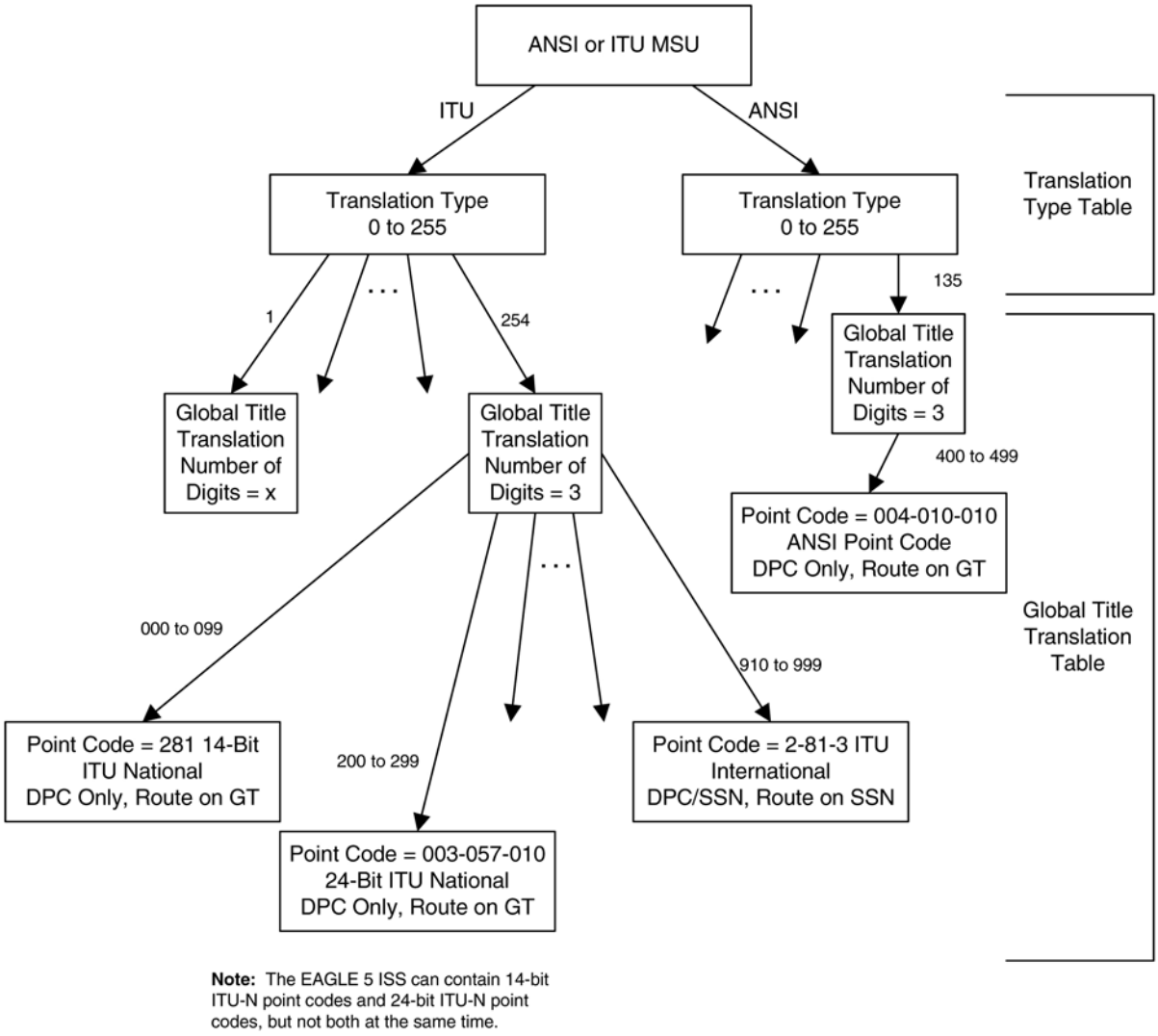
1. Subsystem (ssn) – This indicates the message is destined for a subsystem at this node. For the EAGLE 5 ISS, the only valid local subsystem is SCCP management (ssn = 1). If the LNP feature is enabled, the EAGLE 5 ISS contains an LNP subsystem which can be numbered from 2 to 255. The LNP subsystem number can be configured with the Adding a Subsystem Application procedure in the LNP *Feature Activation Guide*.
2. Global Title (gt) – This indicates that global title translation is required. The EAGLE 5 ISS performs the translation, determines the new DPC for the message, and routes the message to that DPC.

Global Title Translation Function

Interaction with the Global Title Translation (GTT) Feature

The SCCP routing function control uses two tables to perform global title translation: the translation type table and the global title translation table. *Figure 8: Example of Using Translation Type and Global Title Translation Tables* on page 59 shows how these tables are organized.

Figure 8: Example of Using Translation Type and Global Title Translation Tables



The translation type table is used by SCCP to determine which global title translation table to access. This allows translation tables to be customized to the type of translations that need to be performed, (for example, 6 digit, 800, etc.). The translation block is accessed by using the translation type in the called party address and the network type of the MSU (ANSI or ITU) as an index within the table. Each entry points to the start of a global title translation table.

The translation type table is configured by the `ent-tt` command. For more information on the `ent-tt` command, refer to the *Commands Manual*.

Each translation type entry in the translation type table contains these fields:

- name of translation type (optional) (8 bytes)
- number of digits (1 byte)
- alias translation type (2 bytes)
- pointer to translation table (4 bytes)
- network type (1 byte)

The global title translation table is used by SCCP to map a global title address to an SS7 network address so that the SCCP message can be routed to its destination. The global title translation table is configured by the `ent-gtt` or `chg-gtt` commands. For more information on the `ent-gtt` or `chg-gtt` commands, refer to the *Commands Manual*.

Each global title translation entry in the global title translation table contains these fields:

- Global title address low value (up to 21 digits) (11 bytes)
- Global title address high value (up to 21 digits) (11 bytes)
- Destination point code (may be an ANSI, ITU national, or ITU international point code) (4 bytes)
- Field that contains either a subsystem number (for route on SSN translation results only) (1 byte) or a new translation type (for new GT translation result only) (1 byte)
- Translation result consisting of one of these conditions (1 byte):
  - Translate on the DPC only, route on GT (subsequent global title translation required)
  - Translate on the DPC only, route on SSN
  - Translate on the DPC and SSN, route on GT (subsequent global title translation required)
  - Translate on the DPC and SSN, route on SSN
  - Translate on new GT (subsequent global title translation required)

The translation result determines what data in the message is replaced. The DPC in the routing label is always replaced after the SCCP message is translated. If a point code exists in the called party address, it is also replaced. The subsystem number or the translation type in the called party address can be replaced, but neither have to be replaced. The routing indicator in the called party address can be set to "route on SSN," or can remain set to "route on GT." *Table 9: MSU Fields Modified by Global Title Translation* on page 61 shows which fields in the MSU are modified for each translation result.

Table 9: MSU Fields Modified by Global Title Translation

Translation result	Routing Label DPC replaced	CDPA SSN replaced	CDPA routing indicator replaced	CDPA translation type replaced	CDPA PC replaced (if it already exists)
Translate on DPC only, route on GT	yes	no	no – remains set to route on GT	Can be replaced (See note)	yes
Translate on DPC only, route on SSN	yes	no	yes – set to route on SSN	no	yes
Translate on DPC and SSN, route on GT	yes	yes	no – remains set to route on GT	no	yes

Translation result	Routing Label DPC replaced	CDPA SSN replaced	CDPA routing indicator replaced	CDPA translation type replaced	CDPA PC replaced (if it already exists)
Translate on DPC and SSN, route on SSN	yes	yes	yes – set to route on SSN	no	yes
Translate on new GT	yes	no	no – remains set to route on GT	yes	yes
Note: The CDPA translation type can be replaced when translating on the DPC only and routing on GT only if the ANSI-ITU-China SCCP Conversion feature is enabled. If the ANSI-ITU-China SCCP Conversion feature is not enabled when translating on the DPC only and routing on GT, the CDPA translation type cannot be replaced.					

Route on GT

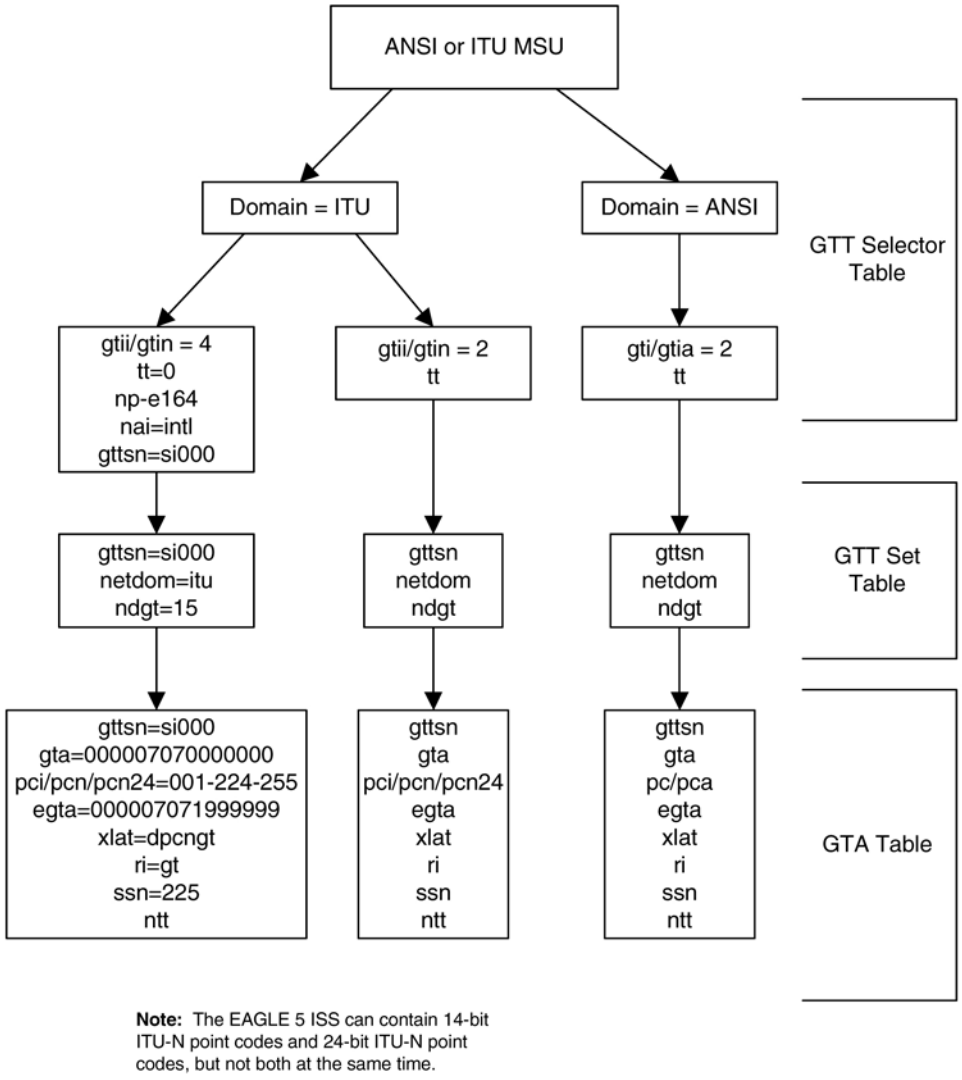
The "Route on GT" translate indicator (subsequent global title translation required) represents the need for a second translation after the initial one.

This need is indicated by the routing bit being set to "route on GT." In this case, the remote point code table is not checked for status of the subsystem number. Instead, the MSU is sent directly to MTP for routing to the translated point code. If the point code is inaccessible, the MSU is discarded, and a UDTS (unitdata service) message is generated if the return on error option is set.

Interaction with the Enhanced Global Title Translation (EGTT) Feature

The SCCP routing function control uses three tables to perform global title translation: the GTT Selector table, the GTT Set table, and the global title address (GTA) table. The GTT Set table together with the GTT Selector table is used by the SCCP to determine which GTA table to access. This allows translation tables to be customized to the type of translations that need to be performed.

Figure 9: Example of Using GTT Selector, GTT Set, and GTA Tables



Note: The EAGLE 5 ISS can contain 14-bit ITU-N point codes and 24-bit ITU-N point codes, but not both at the same time.

The GTT Set table is configured by the `ent-gttset` command; the GTT Selector table is configured by the `ent-gttsel`. For more information on this command, refer to the *Commands Manual*.

Each GTT Set table contains these fields:

- GTT Set name
- Network domain name
- Number of digits

Each GTT Selector table contains these fields:

- GTT Set name
- The global title indicator (GTI). The GTI defines the domain as
  - `gti` and `gtia` (ANSI) with GTI=2
  - `gtii` (ITU international) with GTI=2 or GTI=4, and
  - `gtin` (ITU national) with GTI=2 or GTI=4.

    The global title indicator is made up of the:

- name of the global title translation type (TT); and the
- numbering plan (NP) or numbering plan value (NPV) if GTI=4; and the
- nature of address indicator (NAI) or nature of address indicator value (NAIV) if GTI=4.

Note: Both the numbering plan and nature of address indicator parameters can be specified by supplying either a mnemonic or an explicit value. At no time may both the mnemonic and the explicit value be specified at the same time for the same parameter.

The GTA table is used by the SCCP to map a global title address to an SS7 network address so that the SCCP message can be routed to its destination. The GTA table is configured by the `ent-gta` or `chg-gta` commands. For more information on the `ent-gta` or `chg-gta` commands, refer to the *Commands Manual*.

Each global title address entry in the GTA table contains these fields:

- GTT Set name
- Start of the global title address (up to 21 digits)
- End of the global title address (up to 21 digits)
- Destination point code (may be an ANSI, ITU national, or ITU international point code)
- Translated subsystem number
- Translate indicator
- Cancel Called Global Title indicator
- Routing indicator (translation results)
  - Translate on the DPC only, route on GT (subsequent global title translation required)
  - Translate on the DPC only, route on SSN
  - Translate on the DPC and SSN, route on GT (subsequent global title translation required)
  - Translate on the DPC and SSN, route on SSN
  - Translate on new GT (subsequent global title translation required)

The translation result determines what data in the message is replaced. The DPC in the routing label is always replaced after the SCCP message is translated. If a point code exists in the called party address, it is also replaced. The subsystem number or the translation type in the called party address can be replaced, but neither have to be replaced. The routing indicator in the called party address can be set to "route on SSN" or can remain set to "route on GT." *Table 10: MSU Fields Modified by Enhanced Global Title Translation* on page 64 shows which fields in the MSU are modified for each translation result.

Table 10: MSU Fields Modified by Enhanced Global Title Translation

Translation result	Routing Label DPC replaced	CDPA SSN modified	CDPA routing indicator replaced	CDPA translation type replaced	CDPA PC replaced (if it already exists)	GT Deleted
Translate on DPC only, route on GT	yes	no	no – remains set to route on GT	Can be replaced (See note)	yes	no

Translation result	Routing Label DPC replaced	CDPA SSN modified	CDPA routing indicator replaced	CDPA translation type replaced	CDPA PC replaced (if it already exists)	GT Deleted
Translate on DPC only, route on SSN	yes	no	yes – set to route on SSN	no	yes	yes
Translate on DPC and SSN, route on GT	yes	yes	no – remains set to route on GT	no	yes	no
Translate on DPC and SSN, route on SSN	yes	yes	yes – set to route on SSN	no	yes	yes
Translate on new GT	yes	no	no – remains set to route on GT	yes	yes	no

Note: The CDPA translation type can be replaced when translating on the DPC only and routing on GT only if the ANSI-ITU-China SCCP Conversion feature is enabled. If the ANSI-ITU-China SCCP Conversion feature is not enabled when translating on the DPC only and routing on GT, the CDPA translation type cannot be replaced.

Route on GT

The "Route on GT" translate indicator (subsequent global title translation required) represents the need for a second translation after the initial one.

This need is indicated by routing being set to "route on GT." In this case, the remote point code table is not checked for status of the subsystem number. Instead, the MSU is sent directly to MTP for routing to the translated point code. If the point code is inaccessible, the MSU is discarded, and a UDTS (unitdata service) message is generated if the return on error option is set.

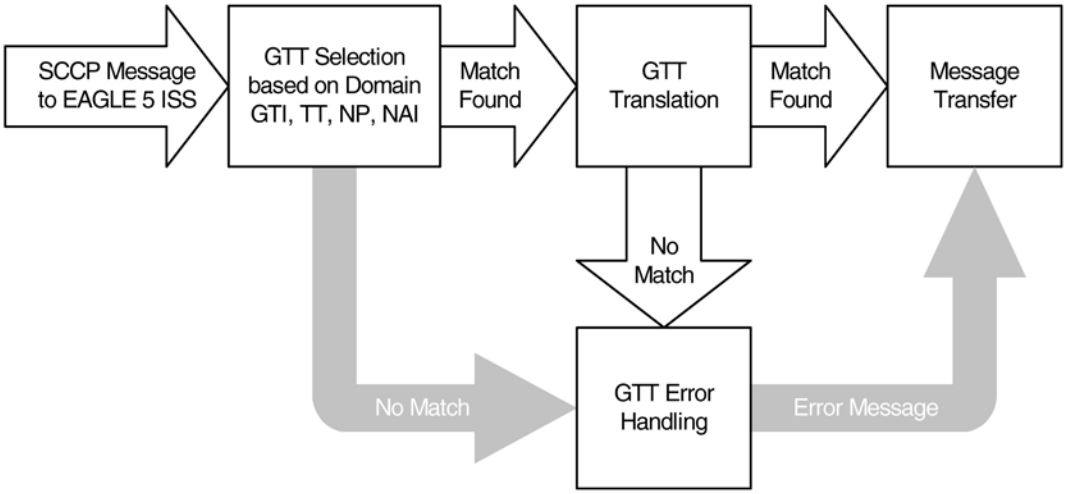
1. If an MSU enters the EAGLE 5 ISS and more information is needed to route the MSU (route-on-gt), the signaling connection control part (SCCP) of the SS7 protocol sends a query to a service database to obtain the information. The EAGLE 5 ISS uses the Enhanced Global Title Translation (EGTT) feature of SCCP to determine which service database to send the query messages to.
2. The EGTT feature uses global title information (GTI) to determine the destination of the MSU. The GTI is contained in the called party address (CDPA) field of the MSU. For `gti=4`, the GTI is made up of the Numbering Plan (NP), Nature of Address Indicator (NAI), and Translation Type (TT) selectors.

3. The EGTT feature does a Selector Table lookup based on the selector information extracted. If a match is found, then EGTT is performed on the message. If no match is found in the selector table for this entry, then EGTT performs SCRC error handling on the message.
4. The EGTT feature decodes the GTAI digits and compares the GTAI length with the fixed number of digits specified in the `ndgt` parameter of the `ent-gttsel` command and expected by the translator. If the number of digits received in the CDPA is more than the number of digits specified in the `ndgt` parameter, then the EGTT feature considers the leading `ndgt` digits to perform the translation. If the number of digits received in the CDPA is less than the number of digits specified in the `ndgt` parameter, then EGTT discards the message and initiates the SCRC error handling.

   Note: If the optional Variable-length Global Title Translation (VGTT) feature is enabled, the EGTT feature allows enhanced global title translation on global title addresses of varying length. For more information about this feature, refer to section *Variable-length Global Title Translation Feature* on page 20.

5. The EGTT feature uses the number of digits received in the CDPA to perform the Translation Table lookup. If a match is found in the database, the translation data associated with this entry is used to modify the message and the resultant message is routed to the next node. If the CDPA GTAI digits are not found in the database, then standard SCRC error handling is performed on this message. Refer to *Figure 10: EGTT Process* on page 66.

Figure 10: EGTT Process



Route on SSN

The "Route on SSN" translate indicator indicates that the point code and SSN is the final destination for the MSU. In this case, the remote point code table is checked to determine the status of the point code and the subsystem number. If the point code or subsystem is unavailable and a backup point code and subsystem is available, the MSU is routed to the backup. Routing to the point codes or subsystems is based upon the data in the remote point code table. There can be up to 31 backup point codes and subsystems assigned to the primary point code and subsystem, thus forming a mated application (MAP) group.

The routing to these backup point codes is based on the relative cost values assigned to the backup point codes. The lower the relative cost value is, the higher priority the point code and subsystem has in determining the routing when the primary point code and subsystem is unavailable. The

relative cost value of the primary point code and subsystem is defined by the `rc` parameter of the `ent-map` or `chg-map` commands. The relative cost value of backup point codes and subsystems is defined by the `materc` parameter of the `ent-map` or `chg-map` commands.

There are four routing possibilities for a point code and subsystem number:

- Solitary – there is no backup point code and subsystem for the primary point code and subsystem.
- Dominant – a group of backup point codes and subsystems exists for the primary point code and subsystem. All the point codes and subsystems in this group have different relative cost values, with the primary point code and subsystem having the lowest relative cost value. All traffic is routed to the primary point code and subsystem, if it is available. If the primary point code and subsystem becomes unavailable, the traffic is routed to highest priority backup point code and subsystem that is available. When the primary point code and subsystem becomes available again, the traffic is then routed back to the primary point code and subsystem.
- Load sharing – a group of backup point codes and subsystems is defined for the primary point code and subsystem. All the point codes and subsystems in this group have the same relative cost value. Traffic is shared equally between the point codes and subsystems in this group.
- Combined dominant/load sharing – a group that is a combination of the dominant and load sharing groups. A combined dominant/load shared group is a group that contains a minimum of two RC (relative cost) values that are equal and a minimum of one RC value that is different. The traffic is shared between the point codes with the lowest relative cost values. If these point codes and subsystems become unavailable, the traffic is routed to the other point codes and subsystems in the group and shared between these point codes and subsystems.

For each point code, the user has the option of setting the `mrc` (message reroute on congestion) parameter. The `mrc` parameter, as well as the other data in the remote point code table, is set with the `ent-map` or `chg-map` commands. For more information on the `ent-map` or `chg-map` commands, refer to the *Commands Manual*.

If the `mrc` parameter is set to `no`, and the primary point code is congested, the MSU is discarded, even if a backup point code and subsystem is available. If the `mrc` parameter is set to `yes`, and the primary point code is congested, the MSU is routed to the backup point code and subsystem, if it is available. The default value for the `mrc` parameter is `no` if the primary point code is an ITU national or international point code, and `yes` if the primary point code is an ANSI point code.

SCCP Management

SCCP management is responsible for rerouting signaling traffic when network failures or congestion conditions occur.

MTP network management informs SCCP of any changes in point code routing status. Changes in subsystem status are updated by using the subsystem allowed and subsystem prohibited procedures of SCCP management.

SCCP management updates the status of point codes and subsystems. Also, SCCP management broadcasts subsystem allowed and prohibited messages to concerned nodes. The EAGLE 5 ISS supports a broadcast list of up to 96 concerned nodes for each subsystem. This list is configured with the `ent-cspc` command. For more information on the `ent-cspc` command, refer to the *Commands Manual*.

For ANSI primary point codes, if the backup point code and subsystem are adjacent when the subsystem becomes prohibited or allowed, these messages are sent to the backup subsystem before routing any messages to it:

- Subsystem prohibited or allowed message
- Subsystem backup routing or subsystem normal routing message

These messages are not required in ITU networks, so if the primary point code is either an ITU national or international point code, these messages are not sent.

Translation Type Mapping

Certain SCCP messages contain a called party address parameter that contains a translation type field. The translation type field indicates the type of global title processing the EAGLE 5 ISS must perform. The values used within any particular network may be different than the standardized values that are defined for internetwork applications.

The translation type mapping feature maps standardized internetwork translation type values to intranetwork translation type values used within any particular network. This feature also maps intranetwork translation type values to standardized internetwork translation type values.

The only SCCP messages that are affected by translation type mapping are UDT and XUDT messages, received or transmitted, whose global title indicator is 0010 (ANSI/ITU) or 0100 (ITU). The translation type will be modified for these messages regardless of whether the destination point code in the MTP routing label is an EAGLE 5 ISS point code and regardless of the SCCP CdPA routing indicator value. Other messages that contain the called party address parameter are not affected. For example, UDTS messages are assumed to be MTP routed and need not be examined. XUDTS messages are either MTP routed or use one translation type value indicating global title to point code translation and should not be mapped.

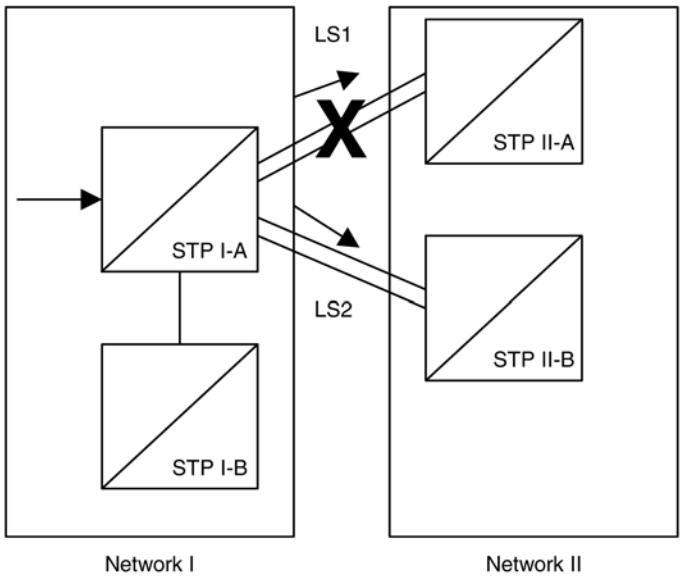
The translation type mapping feature is configured for any linkset, however, translation type mapping has no effect on messages in X.25 linksets, since this feature has not been implemented for X.25 linksets. There is currently no specification for translation type mapping in ITU networks, therefore, the EAGLE 5 ISS provides the same translation type mapping function as for ANSI networks.

Translation type mapping is performed on each LIM in the linkset. Incoming translation type mapping is performed on linksets bringing messages into the EAGLE 5 ISS, and is performed before the global title translation function, the gateway screening function, or the MSU copy function associated with the STPLAN feature. Outgoing translation type mapping is performed on linksets carrying messages out of the EAGLE 5 ISS to other destinations, and is performed after the global title translation function, the gateway screening function, or the MSU copy function associated with the STPLAN feature.

When outgoing translation type mapping is configured and the MSU is copied for the STPLAN feature, the copied MSU is mapped. This is done because the mapped translation type may have a different meaning in the local network, causing the MSU to be interpreted incorrectly.

When outgoing translation type mapping is configured and the MSU must be re-routed due to a changeback or signaling link failure, the re-routed MSU could be double mapped. This is a limitation since re-screening or re-translating (with possible incorrect results) can occur by performing the global title translation and gateway screening functions on the mapped MSU. *Figure 11: An Example of Double Translation Type Mapping* on page 68 shows an example of a translation type that is double mapped.

Figure 11: An Example of Double Translation Type Mapping



TT Mapping

STP I-A			
LS1	ETT	MTT	Meaning
incoming:	N/A	N/A	
outgoing:	251	127	800
	127	96	LIDB
LS2			
incoming:	N/A	N/A	
outgoing:	251	127	800
	127	96	LIDB

In *Figure 11: An Example of Double Translation Type Mapping* on page 68, MSUs on the outgoing linkset LS1 containing the existing translation type (ETT) 251 are mapped to translation type 127 (MTT). MSUs on the outgoing linkset LS2 containing the existing translation type 127 are mapped to translation type 96. Linkset LS1 fails and the traffic is re-routed on linkset LS2. Any outgoing traffic that was on linkset LS1 containing the translation type 251 has been changed to translation type 127. When this traffic is re-routed on linkset LS2, the translation type of the messages that was changed to 127 remains 127 and is not changed back to 251. When the messages are sent over linkset LS2, the existing translation type 127 is changed to translation type 96. This is an example of double mapping a translation type. In this example, the messages leaving network 1 on linkset LS1 were mapped to translation type 127, an "800" translation type. Because of double mapping, that translation type was changed to 96, a "LIDB" translation type. These messages can be routed to the wrong subsystem database; or if gateway screening is configured to screen for these messages, these messages could be discarded before they leave network 1, and network 2 would never receive them.

To help prevent this from happening, configure the incoming traffic on the linkset to map the mapped translation type of the outgoing traffic on that linkset (MTT) to the existing translation type for outgoing traffic on that linkset (ETT). In this example, for incoming traffic on linksets LS1 and LS2, map the existing translation type 127 (the mapped translation type for outgoing traffic on these linksets) to the mapped translation type 251 (the existing translation type for outgoing traffic on these linksets). When linkset LS1 fails, the incoming messages on linkset LS2 containing translation type 127, including those that were mapped to 127 on linkset LS1 and are now being rerouted, are now mapped to translation type 251. When these messages become outgoing messages on linkset LS2, those messages containing translation type 251 are mapped to translation type 127 instead of 96. These messages can then continue to be routed to the proper subsystem database. If gateway screening is configured to screen for and discard messages with translation type 96, the rerouted messages are not effected by the results of the translation type mapping.

If the database transport access feature is being used, and the MSU encapsulated by the gateway screening redirect function contains a translation type that must be mapped on an incoming basis, the encapsulated MSU contains the mapped translation type. The translation type of the new MSU is obtained from the gateway screening redirect table.

The EAGLE 5 ISS supports 64 translation type mappings for each linkset. This includes both incoming and outgoing translation type mappings. Since the EAGLE 5 ISS supports a total of 1024 linksets, the total number of translation type mappings that can be configured in the EAGLE 5 ISS is 65,536.

The translation type mapping information is configured in the database using the `ent-ttmap`, `chg-ttmap`, `dlt-ttmap`, and `rtrv-ttmap` commands.

GTT Configuration

The following procedures describe the steps needed to add, remove, or change global title translation (GTT) data in the database.

Note: The Global Title Translation (GTT) feature must be purchased before enabling the features with the `chg-feat:gtt=on` command. If you are not sure whether you have purchased the GTT feature, contact your Tekelec Sales Representative or Account Representative.

The items configured in this section are:

- Service modules
- Translation type mapping
- Concerned signaling point codes
- Mated applications
- Mated relay nodes.
- GT conversion table entries for the ANSI-ITU-China SCCP Conversion feature
- Loopsets for the SCCP Loop Detection feature.

To configure the global title translation feature, translation types and global title translations must also be configured. The procedures to configure translation types and global title translations are located in *Global Title Translation (GTT) Configuration* on page 467.

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

There must be SS7 routes to the nodes referenced by the global title translation entities in the database. Perform one of the Adding a Route procedures in the Database *Administration Manual – SS7* to configure these routes.

The following is a brief description of the global title translation entities. These global title translation entities must be configured in the order that they are shown.

1. The GTT feature must be turned on with the `chg-feat:gtt=on` command. Verify this with the `rtrv-feat` command.

   Note: Once the Global Title Translation (GTT) feature is enabled with the `chg-feat` command, it cannot be disabled.

   The GTT feature must be purchased before enabling this feature. If you are not sure whether you have purchased the GTT feature, contact your Tekelec Sales Representative or Account Representative.

2. A service module must be configured in the database with the `ent-card` command. A service module can be one of these cards: TSM, DSM, or E5-SM4G. The TSM is specified with the `type=tsm` and `appl=sccp` parameters of the `ent-card` command. The DSM or E5-SM4G is

specified with the `type=dsm` and `appl=vsccp` parameters of the `ent-card` command. See *Table 12: Service Module and Feature Combinations* on page 76 for the required cards. The card configuration can be verified with the `rtrv-card` command.

3. A translation type must be defined in the database. Verify this with the `rtrv-tt` command. If the necessary translation types are not in the database, add them with the `ent-tt` command. The translation type is used by the `ent-gtt` command and defines the length of the global title address.

   If the Variable-length Global Title Translation (VGTT) feature is being used, it must be enabled with the `chg-feat:vgtt=on` command. Verify this with the `rtrv-feat` command. Refer to the *Variable-length Global Title Translation Feature* on page 20 section for more information on this feature.

   Note: Once the Variable-length Global Title Translation (VGTT) feature is enabled with the `chg-feat` command, it cannot be disabled.

   The VGTT feature must be purchased before enabling this feature. If you are not sure whether you have purchased the VGTT feature, contact your Tekelec Sales Representative or Account Representative.

4. The translation type can be mapped to another translation type. This is a function of the translation type mapping feature. The translation type mapping feature maps standardized internetwork translation type values to intranetwork translation type values used within any particular network. This feature also maps intranetwork translation type values to standardized internetwork translation type values. Enter the `rtrv-ttmap` command to verify that the necessary translation type mapping information is in the database. Enter the necessary translation type mapping information in the database using the `ent-ttmap` command.
5. The concerned signaling point code broadcast groups must be defined in the database. These groups define the point codes that receive subsystem allowed and subsystem prohibited status messages about a particular global title translation node. These messages are broadcast from SCCP management. Verify that these groups are in the database with the `rtrv-cspc` command. If these groups are not in the database, add them with the `ent-cspc` command.
6. The mated applications must be defined in the database. The mated applications are the point codes and subsystem numbers of the service databases along with parameters describing the routing between replicated pairs of service databases. Verify the mated application information in the database with the `rtrv-map` command. If the necessary mated application information is not in the database, add the necessary information with the `ent-map` command.

   If the XMAP Table Expansion feature is to be used to increase the number of mated application entries in the mated application table to either 2000 or 3000 entries, the XMAP Table Expansion feature must be enabled with the `enable-ctrl-feat` command. Verify the status of the XMAP Table Expansion feature with the `rtrv-ctrl-feat` command.

   The mated applications provide load sharing of the traffic between replicated pairs of service databases. The Flexible GTT Load Sharing feature provides more flexible load sharing capabilities for final global title translations (global title translation containing the routing indicator value SSN) than the mated applications can provide without the Flexible GTT Load Sharing feature enabled. With this feature enabled, MAP sets are provisioned. These MAP sets are assigned to global title translations. See the *Flexible Final GTT Load Sharing* on page 31 section for more information on using the Flexible GTT Load Sharing feature with mated applications.

   Load sharing based on the transaction parameters of the message can be performed if the Transaction-Based GTT Load Sharing feature is enabled and turned on. See the *Transaction-Based*

GTT Load Sharing on page 49 section for more information on using the Transaction-Based GTT Load Sharing feature.

Load sharing based on the weight assigned to an individual entities in a load sharing MAP group can be performed if the Weighted GTT Load Sharing feature is enabled and turned on. Refer to the *Weighted GTT Load Sharing* on page 42 section for more information on using the Weighted GTT Load Sharing feature.

7. The global title translation data must be defined in the database. This data is used to determine the destination of the service database that needs to queried for additional routing information. Verify this with the `rtrv-gtt` command. If the necessary global title translation information is not in the database, add it with the `ent-gtt` command.

   If the Advanced GT Modification feature is being used, it must be enabled with the `enable-ctrl-feat` command. Verify this with the `rtrv-ctrl-feat` command. Refer to the *Advanced GT Modification Feature* on page 22 section for more information on this feature.

   Note: Once the Advanced GT Modification feature is enabled, it cannot be disabled.

   If the XGTT Table Expansion feature is to be used to increase the number of mated application entries in the mated application table to either 400,000 or 1,000,000 entries, the XGTT Table Expansion feature must be enabled with the `enable-ctrl-feat` command. Verify the status of the XGTT Table Expansion feature with the `rtrv-ctrl-feat` command.

   The ANSI-ITU-China SCCP Conversion feature provides a means to perform SCCP conversion between ANSI MSUs and ITU MSUs. To perform this conversion, the ANSI-ITU-China SCCP Conversion feature must be enabled with the `enable-ctrl-feat` command, and turned on with the `chg-ctrl-feat` command. Verify the status of the ANSI-ITU-China SCCP Conversion feature with the `rtrv-ctrl-feat` command. Entries must be also configured in the GT conversion table with the `ent-gtcnv` command. The content of the GT conversion table can be verified with the `rtrv-gtcnv` command.

   The global title address (`gta` and `egta`) values for the global title translation, and the prefix (`npds`) and suffix (`nsds`) values specified for the global title translation and for entries in the GT conversion table can be decimal digits (0-9) or hexadecimal digits (0-9, a-f, A-F). Hexadecimal digits can be specified only if the Hex Digit Support for GTT feature is enabled. Verify the status of the Hex Digit Support for GTT feature with the *rtrv-ctrl-feat* command. See the *Hex Digit Support for GTT* on page 39 section for more information on this feature.

   The SCCP Loop Detection feature provides a method for detecting SCCP looping. With this feature enabled, loopsets are provisioned. These loopsets are assigned to Global Title Translations. See the *SCCP Loop Detection* on page 54 section for more information on using the SCCP Loop Detection feature with Global Title Translations.

8. The mated relay node groups can be defined in the database if the Intermediate GTT Load Sharing feature is to be used. Verify this with the `rtrv-mrn` command. If the necessary global title translation information is not in the database, add it with the `ent-mrn` command.

   The Intermediate GTT Load Sharing (IGTTLS) feature must be enabled with the `enable-ctrl-feat` and `chg-ctrl-feat` commands. Verify this with the `rtrv-ctrl-feat` command. Refer to the *Intermediate GTT Load Sharing Feature* on page 24 section for more information on this feature.

   The Flexible GTT Load Sharing feature provides more flexible load sharing capabilities for intermediate global title translations (global title translation containing the routing indicator value GT) than the Intermediate GTT Load Sharing feature can provide. With this feature enabled, MRN sets are provisioned. These MRN sets are assigned to global title translations.

See the *Flexible Intermediate GTT Load Sharing* on page 29 section for more information on using the Flexible GTT Load Sharing feature with mated relay node groups.

Load sharing based on the transaction parameters of the message can be performed if the Transaction-Based GTT Load Sharing feature is enabled and turned on. See the *Transaction-Based GTT Load Sharing* on page 49 section for more information on using the Transaction-Based GTT Load Sharing feature.

Load sharing based on the weight assigned to an individual entities in a load sharing MRN group can be performed if the Weighted GTT Load Sharing feature is enabled and turned on. See the *Weighted GTT Load Sharing* on page 42 section for more information on using the Weighted GTT Load Sharing feature.

EGTT Configuration

To configure the enhanced global title translation feature, GTT sets, GTT selectors and global title address information must also be configured in addition to the service modules, translation type mapping, concerned signaling point codes, mated applications, mated relay nodes, and GT conversion table entries for the ANSI-ITU-China SCCP Conversion feature shown in the *GTT Configuration* on page 70 section. The procedures to configure GTT sets, GTT selectors and global title address information are located in *Enhanced Global Title Translation (EGTT) Configuration* on page 569.

The following is a brief description of the enhanced global title translation entities. These entities must be configured in the order that they are shown.

1. The Enhanced Global Title Translation (EGTT) feature must be turned on with the `chg-feat:egtt=on` command. The Global Title Translation (GTT) must be on before the EGTT feature can be turned on. Verify this with the `rtrv-feat` command.

   Note: Once the Enhanced Global Title Translation (EGTT) feature is turned on with the `chg-feat` command, it cannot be turned off.

   The EGTT feature must be purchased before turning on the feature. If you are not sure whether you have purchased the EGTT feature, contact your Tekelec Sales Representative or Account Representative.

2. A service module must be configured in the database with the `ent-card` command. A service module can be either a TSM, DSM, or E5-SM4G. The TSM is specified with the `type=tsm` and `appl=sccp` parameters of the `ent-card` command. The DSM or E5-SM4G is specified with the `type=dsm` and `appl=vsccp` parameters of the `ent-card` command. See *Table 12: Service Module and Feature Combinations* on page 76 for the required cards. The card configuration can be verified with the `rtrv-card` command.
3. A global title translation (GTT) set must be defined in the database. Verify this with the `rtrv-gttset` command. If the necessary GTT set is not in the database, add it with the `ent-gttset` command.

   If the Variable-length Global Title Translation (VGTT) feature is being used, it must be turned on with the `chg-feat:vgtt=on` command. Verify this with the `rtrv-feat` command. Refer to the *Variable-length Global Title Translation Feature* on page 20 section for more information on this feature.

Note: Once the Variable-length Global Title Translation (VGTT) feature is turned on with the `chg-feat` command, it cannot be turned off.

The VGTT feature must be purchased before turning it on. If you are not sure whether you have purchased the VGTT feature, contact your Tekelec Sales Representative or Account Representative.

4. A translation type must be defined in the database. Verify this with the `rtrv-gttsel` command. If the necessary translation types are not in the database, add them with the `ent-gttsel` command. The translation type is used by the `ent-gta` command and defines the length of the global title address.
5. The translation type can be mapped to another translation type. This is a function of the translation type mapping feature. The translation type mapping feature maps standardized internetwork translation type values to intranetwork translation type values used within any particular network. This feature also maps intranetwork translation type values to standardized internetwork translation type values. Enter the `rtrv-ttmap` command to verify that the necessary translation type mapping information is in the database. Enter the necessary translation type mapping information in the database using the `ent-ttmap` command.
6. The mated applications must be defined in the database. The mated applications are the point codes and subsystem numbers of the service databases along with parameters describing the routing between replicated pairs of service databases. Verify the mated application information in the database with the `rtrv-map` command. If the necessary mated application information is not in the database, add the necessary information with the `ent-map` command.

   If the XMAP Table Expansion feature is to be used to increase the number of mated application entries in the mated application table to either 2000 or 3000 entries, the XMAP Table Expansion feature must be enabled with the `enable-ctrl-feat` command. Verify the status of the XMAP Table Expansion feature with the `rtrv-ctrl-feat` command.

   The mated applications provide load sharing of the traffic between replicated pairs of service databases. The Flexible GTT Load Sharing feature provides more flexible load sharing capabilities for final global title translations (global title translation containing the routing indicator value SSN) than the mated applications can provide without the Flexible GTT Load Sharing feature enabled. With this feature enabled, MAP sets are provisioned. These MAP sets are assigned to global title translations. Refer to the *Flexible Final GTT Load Sharing* on page 31 section for more information on using the Flexible GTT Load Sharing feature with mated applications.

   Load sharing based on the transaction parameters of the message can be performed if the Transaction-Based GTT Load Sharing feature is enabled and turned on. Refer to the *Transaction-Based GTT Load Sharing* on page 49 section for more information on using the Transaction-Based GTT Load Sharing feature.
7. The concerned signaling point code broadcast groups must be defined in the database. These groups define the point codes that receive subsystem allowed and subsystem prohibited status messages about a particular global title translation node. These messages are broadcast from SCCP management. Verify that these groups are in the database with the `rtrv-cspc` command. If these groups are not in the database, add them with the `ent-cspc` command.
8. The global title address data must be defined in the database. This data is used to determine the destination of the service database that needs to be queried for additional routing information. Verify this with the `rtrv-gta` command. If the necessary global title address information is not in the database, add it with the `ent-gta` command.

If the Advanced GT Modification feature is being used, it must be enabled with the `enable-ctrl-feat` command. Verify this with the `rtrv-ctrl-feat` command. Refer to the *Advanced GT Modification Feature* on page 22 section for more information on this feature.

Note: Once the Advanced GT Modification feature is enabled, it cannot be disabled.

The XGTT Table Expansion feature is used to increase the number of entries in the GTT table to either 400,000 or 1,000,000 entries, the XGTT Table Expansion feature must be enabled with the `enable-ctrl-feat` command. Verify the status of the XGTT Table Expansion feature with the `rtrv-ctrl-feat` command.

The ANSI-ITU-China SCCP Conversion feature provides a means to perform SCCP conversion between ANSI MSUs and ITU MSUs. To perform this conversion, the ANSI-ITU-China SCCP Conversion feature must be enabled with the `enable-ctrl-feat` command, and turned on with the `chg-ctrl-feat` command. Verify the status of the ANSI-ITU-China SCCP Conversion feature with the `rtrv-ctrl-feat` command. Entries must be also configured in the GT conversion table with the `ent-gtcnv` command. The content of the GT conversion table can be verified with the `rtrv-gtcnv` command.

The global title address (`gta` and `egta`) values specified for the `ent-gta` and `chg-gta` commands, and the prefix (`npds`) and suffix (`nsds`) values specified for the `ent-gta` and `chg-gta` commands and for entries in the GT conversion table can be decimal digits (0-9) or hexadecimal digits (0-9, a-f, A-F). Hexadecimal digits can be specified only if the Hex Digit Support for GTT feature is enabled. Verify the status of the Hex Digit Support for GTT feature with the `rtrv-ctrl-feat` command. See the *Hex Digit Support for GTT* on page 39 section for more information on this feature.

The SCCP Loop Detection feature provides a method for detecting SCCP looping. With this feature enabled, loopsets are provisioned. These loopsets are assigned to Global Title Translations. See the *SCCP Loop Detection* on page 54 section for more information on using the SCCP Loop Detection feature with Global Title Translations.

9. The mated relay node groups can be defined in the database if the Intermediate GTT Load Sharing feature is to be used. Verify this with the `rtrv-mrn` command. If the necessary global title translation information is not in the database, add it with the `ent-mrn` command.

   The Intermediate GTT Load Sharing (IGTTLS) feature must be enabled with the `enable-ctrl-feat` and `chg-ctrl-feat` commands. Verify this with the `rtrv-ctrl-feat` command. Refer to the *Intermediate GTT Load Sharing Feature* on page 24 section for more information on this feature.

   The Flexible GTT Load Sharing feature provides more flexible load sharing capabilities for intermediate global title translations (global title translation containing the routing indicator value GT) than the Intermediate GTT Load Sharing feature can provide. With this feature enabled, MRN sets are provisioned. These MRN sets are assigned to global title translations. Refer to the *Flexible Intermediate GTT Load Sharing* on page 29section for more information on using the Flexible GTT Load Sharing feature with mated relay node groups.

   Load sharing based on the transaction parameters of the message can be performed if the Transaction-Based GTT Load Sharing feature is enabled and turned on. Refer to the *Transaction-Based GTT Load Sharing* on page 49 section for more information on using the Transaction-Based GTT Load Sharing feature.

   Load sharing based on the weight assigned to an individual entities in a load sharing MRN group can be performed if the Weighted GTT Load Sharing feature is enabled and turned on.

Refer to the *Weighted GTT Load Sharing* on page 42 section for more information on using the Weighted GTT Load Sharing feature.

Adding a Service Module

This procedure is used to add a service module to support the Global Title Translation or Enhanced Global Title Translation feature to the database using the `ent-card` command.

A service module can be one of the following:

Table 11: Service Modules

• TSM-256	• TSM-768	• DSM 1G	• DSM 3G
• TSM-512	• TSM-1024	• DSM 2G	• DSM 4G
• E5-SM4G			

The card that is used as a service module depends on the GTT related features that are being used and the features that will enabled after this procedure is performed. The features or feature combinations shown in *Table 12: Service Module and Feature Combinations* on page 76 show the type of card that must be installed in the EAGLE 5 ISS to meet the minimum EAGLE 5 ISS performance requirements. DSMs and E5-SM4G cards can be used in place of TSMs, when the feature combination requires TSMs. E5-SM4G cards can be used in place of DSMs, when the feature combination requires DSMs. If the LNP feature is enabled for a quantity greater than 192 million numbers, E5-SM4G cards cannot be used as service modules. The features that are currently being used by the EAGLE 5 ISS are shown in the `rtrv-feat` or `rtrv-ctrl-feat` command outputs.

Table 12: Service Module and Feature Combinations

Card	Features
E5-SM4G	E5-SM4G Throughput Capacity
DSM 1G, DSM 2G, DSM 3G, DSM 4G	Any of these features: • Enhanced GSM MAP Screening • G-FLEX • V-FLEX • G-Port • INP • PPSMS • ELAP Configuration feature and any LNP Telephone Number Quantity (See Note 1) • XGTT Table Expansion for 1,000,000 GTT entries • Equipment Identity Register (EIR)

Card	Features
	• Flexible GTT Load Sharing • IDP Screening for Prepaid • Prepaid IDP Query Relay • Origin-Based SCCP Routing • Hex Digit Support for GTT • A-Port - must be 4 gigabyte DSMs (DSM 4G) • IS41 GSM Migration • Weighted GTT Load Sharing • Transaction-Based GTT Load Sharing • ANSI-41 INP Query - must be 4 gigabyte DSMs (DSM 4G) • TINP • TIF Number Portability • TIF SCS Forwarding • TIF Simple Number Substitution • ATI Number Portability Query (ATINP) or GTT and EGTT (if the Enhanced Global Title Translation feature is on) in combination with at least 2 of these features: • Variable-Length Global Title Translation (VGTT) • Advanced GT Modification (with or without the ANSI-ITU-China SCCP Conversion feature) (See Note 2) • IGTTLS • XGTT Table Expansion enabled for 400,000 GTT entries • XMAP Table Expansion enabled for either 3000 or 2000 MAP table entries
TSM-256, TSM-512, TSM-768, TSM-1024	• GSM MAP Screening GTT and EGTT (if the Enhanced Global Title Translation feature is on) in combination with only one of these features: • VGTT • Advanced GT Modification (with or without the ANSI-ITU-China SCCP Conversion feature) (See Note 2) • IGTTLS • XGTT Table Expansion enabled for 400,000 GTT entries • XMAP Table Expansion enabled for either 3000 or 2000 MAP table entries

Notes:

1. Refer to the LNP Hardware and Part Number Configuration table in the *LNP Feature Activation Guide* for the minimum requirements for service modules used with the LNP feature.

2. It is recommended that DSMs or E5-SM4G cards are used with the Advanced GT Modification feature, but DSMs or E5-SM4G cards are not required for the Advanced GT Modification feature.

The DSM or E5-SM4G can be inserted only in the odd numbered card slots of the control or the extension shelf. Slots 09 and 10 of each shelf contains either the HMUX or HIPR card, thus the DSM or E5-SM4G cannot be inserted in slot 09 and 10. The DSM or E5-SM4G can be inserted in the control shelf, but only in slots 01, 03, 05, 07 and 11. The DSM or E5-SM4G occupies two card slots, so the even numbered card slot adjacent to the odd numbered slot where the DSM or E5-SM4G has been inserted must be empty, as shown in *Table 13: DSM Card Locations* on page 78. The DSM or E5-SM4G is connected to the network through the odd numbered card slot connector. The E5-SM4G requires two HIPR cards in the shelf where it is installed.

Table 13: DSM Card Locations

Location of the DSM	Empty Card Location	Location of the E5-SM4G	Empty Card Location
Slot 01	Slot 02	Slot 11	Slot 12
Slot 03	Slot 04	Slot 13	Slot 14
Slot 05	Slot 06	Slot 15	Slot 16
Slot 07	Slot 08	Slot 17	Slot 18

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. The value of this parameter depends on the card being configured in the database. *Table 14: Card Type Parameter Value* on page 78 shows the values for the type parameter.

Table 14: Card Type Parameter Value

Card	Card Type Parameter Value
TSM-256, TSM-512, TSM-768, TSM-1024	tsm
DSM 1G, DSM 2G, DSM 3G, DSM 4G, E5-SM4G	dsm

`:appl` – The application software or GPL that is assigned to the card. The value of this parameter depends on the card being configured in the database. *Table 15: Application Parameter Values* on page 78 shows the values for the `appl` parameter.

Table 15: Application Parameter Values

Card	Application Parameter Value
TSM-256, TSM-512, TSM-768, TSM-1024	sccp

Card	Application Parameter Value
DSM 1G, DSM 2G, DSM 3G, DSM 4G, E5-SM4G	vsccp

`:force` – Allow the LIM to be added to the database even if there are not enough service modules to support the number of LIMs in the EAGLE 5 ISS. This parameter does not apply to configuring service modules and should not be used.

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, perform the Adding a Shelf procedure in the Database *Administration Manual – System Management*.

The card cannot be added to the database if the specified card location already has a card assigned to it.

Note: If you want to add an E5-SM4G card as the service module, verify the temperature threshold settings for the E5-SM4G card by performing the "Changing the High-Capacity Card Temperature Alarm Thresholds" procedure in the *Database Administration Manual - SS7*.

1. Verify that the GTT feature is on, by entering the `rtrv-feat` command. If the GTT feature is on, the `GTT` field should be set to `on`. For this example, the GTT feature is off.

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

   Note: If the GTT feature is on, shown by the entry `GTT = on` in the `rtrv-feat` command output in *Step 1* on page 79, continue the procedure with *Step 3* on page 80.

2. Turn the global title translation feature on by entering this command.

   ```
   chg-feat:gtt=on
   ```

   Note: Once the Global Title Translation (GTT) feature is turned on with the `chg-feat` command, it cannot be turned off.

   The GTT feature must be purchased before turning it on. If you are not sure whether you have purchased the GTT feature, contact your Tekelec Sales Representative or Account Representative.

   When the `chg-feat` has successfully completed, this message should appear.

   ```
   rlghncxa03w 07-05-25 09:57:41 GMT EAGLE5 37.0.0
   CHG-FEAT: MASP A - COMPLTD
   ```

   The EAGLE 5 ISS can contain a maximum of 32 service modules, either TSMs, DSMs or E5-SM4Gs. If these service modules are DSMs or E5-SM4Gs, the EAGLE 5 ISS can perform a maximum of 52,700 SCCP transactions per second. To perform a maximum of 52,700 SCCP transactions per , the EAGLE 5 ISS must be configured according to *Table 16: 52,7000 SCCP Transactions per Second Configuration Requirements* on page 79.

Table 16: 52,7000 SCCP Transactions per Second Configuration Requirements

Features that Cannot be Enabled		
LNP	EIR	G-Port
INP	ANSI-41 INP Query	A-Port

Features that Cannot be Enabled		
IS41 GSM Migration	G-Flex	TINP
V-Flex	ATINP	TIF Number Portability
TIF SCS Forwarding	TIF Simple Number Substitution	
Card Requirements		
All service modules must be DSMs or E5-SM4G cards.		

If you plan to enable any of the features shown in *Table 16: 52,7000 SCCP Transactions per Second Configuration Requirements* on page 79, the EAGLE 5 ISS can contain a maximum of 25 service modules. Continue the procedure with *Step 5* on page 81.

If you plan to provision 26 to 32 service modules after performing this step, continue the procedure with *Step 5* on page 81.

The EAGLE 5 ISS can support a maximum of 150,000 SCCP transactions per second, for GTT traffic only, or a maximum of 75,000 transactions per second for EPAP-based traffic. To achieve this level of performance, the E5-SM4G Throughput Capacity feature must be enabled and all the service modules must be E5-SM4G cards. For more information about enabling the E5-SM4G Throughput Capacity feature, refer to the *Activating the E5-SM4G Throughput Capacity Feature* on page 839 procedure. Continue the procedure with *Step 5* on page 81.

3. Display the status of the controlled features in the database by entering the `rtrv-ctrl-feat` 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
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
XGTT Table Expansion      893006101  off     ----
XMAP Table Expansion      893007701  off     ----
Large System # Links      893005910  on      2000
HC-MIM SLK Capacity       893012707  on      64

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. Verify the number of service modules in the EAGLE 5 ISS by entering the `rept-stat-sccp` command. The number of service modules is shown in the `SCCP Cards Configured` field of the `rept-stat-sccp` output. This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:57:31 GMT  EAGLE5 37.0.0

SCCP Cards Configured=5  Cards IS-NR=5

CARD  VERSION      PST             SST        AST       MSU USAGE  CPU USAGE
------------------------------------------------------------------------------
```

```
2101  113-002-001  IS-NR           Active     -----       47%         81%
2103  113-002-001  IS-NR           Active     -----       34%         50%
2111  113-002-001  IS-NR           Active     -----       21%         29%
2115  113-002-001  IS-NR           Active     -----       35%         52%
2117  113-002-001  IS-NR           Active     -----       40%         71%
------------------------------------------------------------------------------
SCCP Service Average MSU Capacity = 36%       Average CPU Capacity = 56%
Command Completed.
```

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, refer to the `rept-stat-sccp` command description in the *Commands Manual*.

The EAGLE 5 ISS can contain a maximum of 32 service modules, either TSMs, DSMs or E5-SM4Gs. If these service modules are DSMs or E5-SM4Gs, the EAGLE 5 ISS can perform a maximum of 52,700 SCCP transactions per second. To perform a maximum of 52,700 SCCP transactions per , the EAGLE 5 ISS must be configured according to *Table 16: 52,7000 SCCP Transactions per Second Configuration Requirements* on page 79.

If the `rept-stat-sccp` output shows that there are 32 service modules configured, this procedure cannot be performed. This is the maximum number of service modules that can be configured.

The EAGLE 5 ISS can support a maximum of 150,000 SCCP transactions per second, for GTT traffic only, or a maximum of 75,000 transactions per second for EPAP-based traffic. To achieve this level of performance, the E5-SM4G Throughput Capacity feature must be enabled and all the service modules must be E5-SM4G cards. For more information about enabling the E5-SM4G Throughput Capacity feature, refer to the procedure *Activating the E5-SM4G Throughput Capacity Feature* on page 839.

If you plan to enable any of the features shown in *Table 16: 52,7000 SCCP Transactions per Second Configuration Requirements* on page 79, the EAGLE 5 ISS can contain a maximum of 25 service modules. Continue the procedure with *Step 5* on page 81.

If the `rept-stat-sccp` output shows that there are 25 service modules configured, and any of the features shown in *Table 16: 52,7000 SCCP Transactions per Second Configuration Requirements* on page 79 are enabled (shown in the `rtrv-ctrl-feat` output in *Step 3* on page 80), or you plan to enable any of the features shown in *Table 16: 52,7000 SCCP Transactions per Second Configuration Requirements* on page 79, this procedure cannot be performed. This is the maximum number of service modules that can be configured.

5. Display the cards in the EAGLE 5 ISS using the `rtrv-card` command to verify that the card location for the new service module is not provisioned. This is an example of the possible output.

   Note: 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.

   This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:58:31 GMT EAGLE5 37.0.0
CARD   TYPE      APPL      LSET NAME     LINK SLC LSET NAME     LINK SLC
1102   TSM       GLS
1113   GPSM      EOAM
1114   TDM-A
1115   GPSM      EOAM
1116   TDM-B
1117   MDAL
1118   RESERVED
```

```
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
1308   LIMDS0    SS7ANSI   sp6           A    1   sp7           B    0
1314   LIMDS0    SS7ANSI   sp7           A    1   sp5           B    1
1317   ACMENET   STPLAN
2101   DSM       VSCCP
2103   DSM       VSCCP
2111   DSM       VSCCP
2115   DSM       VSCCP
2117   DSM       VSCCP
```

If you wish to install a TSM or a DSM, continue the procedure with *Step 7* on page 82.

If you wish to install an E5-SM4G card, continue the procedure with *Step 6* on page 82.

6. Verify that HIPR cards are installed at card locations 9 and 10 in the shelf where the E5-SM4G card will be installed. 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 at card locations 9 and 10 in the shelf where the E5-SM4G card will be installed, continue the procedure with *Step 7* on page 82.

   If HIPR cards are not installed in the shelf where the E5-SM4G card will be installed, refer the *Installation Manual - EAGLE 5 ISS* and install the HIPR cards. Once the HIPR cards have been installed, continue the procedure with *Step 7* on page 82.

7. Verify that the service module has been physically installed into the proper location according to the feature requirements shown in *Table 12: Service Module and Feature Combinations* on page 76. *Table 12: Service Module and Feature Combinations* on page 76 shows the type of service module that is required based on the GTT-related features that are currently being used (also shown in the `rtrv-feat` output in *Step 1* on page 79 as being `on`, and in the `rtrv-ctrl-feat` output in *Step 3* on page 80 as being enabled) and any features that will be enabled after this procedure is performed.

   CAUTION: If the versions of the flash GPLs on the service module do not match the flash GPL versions in the database when the service module is inserted into the card slot, UAM 0002 is generated indicating that these GPL versions do not match. If UAM 0002 has been generated, perform the alarm clearing procedure for UAM 0002 in the *Unsolicited Alarm and Information Messages Manual* before proceeding with this procedure.

8. Add the service module to the database using the `ent-card` command. For this example, enter this command.

   ```
   ent-card:loc=1212:type=tsm:appl=sccp
   ```

   If a DSM or E5-SM4G is being configured as the service module, the `ent-card` command would be entered as shown in this example.

   ```
   ent-card:loc=1301:type=dsm:appl=vsccp
   ```

   Table 14: Card Type Parameter Value on page 78 and *Table 15: Application Parameter Values* on page 78 show the parameter combinations that can be used depending on what type of service module is being added to the database.

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

   ```
   rlghncxa03w 07-05-25 09:57:51 GMT  EAGLE5 37.0.0
   ENT-CARD: MASP A - COMPLTD
   ```

9. Verify the changes using the `rtrv-card` command with the card location specified. For this example, enter this command.

   ```
   rtrv-card:loc=1212
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 07-05-25 09:58:31 GMT EAGLE5 37.0.0
   CARD   TYPE      APPL      LSET NAME     LINK SLC LSET NAME     LINK SLC
   1212   TSM       SCCP
   ```

   If a DSM or E5-SM4G card was added to the database in *Step 8* on page 83, the output of the `rtrv-card` command would show the DSM card type and the VSCCP application as shown in this example.

   ```
   rtrv-card:loc=1301
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 07-05-25 09:58:31 GMT EAGLE5 37.0.0
   CARD   TYPE      APPL      LSET NAME     LINK SLC LSET NAME     LINK SLC
   1301   DSM       VSCCP
   ```

10. Put the card in service using the `rst-card` command with the card location specified in *Step 8* on page 83. For this example, enter this command.

    ```
    rst-card:loc=1212
    ```

    If a DSM or E5-SM4G card was added to the database in *Step 8* on page 83, for this example, enter this command.

    ```
    rst-card:loc=1301
    ```

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

    ```
    rlghncxa03w 06-10-28 08:21:07 GMT  EAGLE5 36.0.0
    Card has been allowed.
    ```

    Note: If the EGTT feature is on, shown by the entry `EGTT = on` in the `rtrv-feat` command output in *Step 1* on page 79, or if the EGTT feature is off and will not be turned on in this procedure, continue the procedure with *Step 12* on page 84.

11. Turn the enhanced global title translation feature on by entering this command.

    Note: Once the Enhanced Global Title Translation (EGTT) feature is turned on with the `chg-feat` command, it cannot be turned off.

    The EGTT feature must be purchased before turning it on. If you are not sure whether you have purchased the EGTT feature, contact your Tekelec Sales Representative or Account Representative.

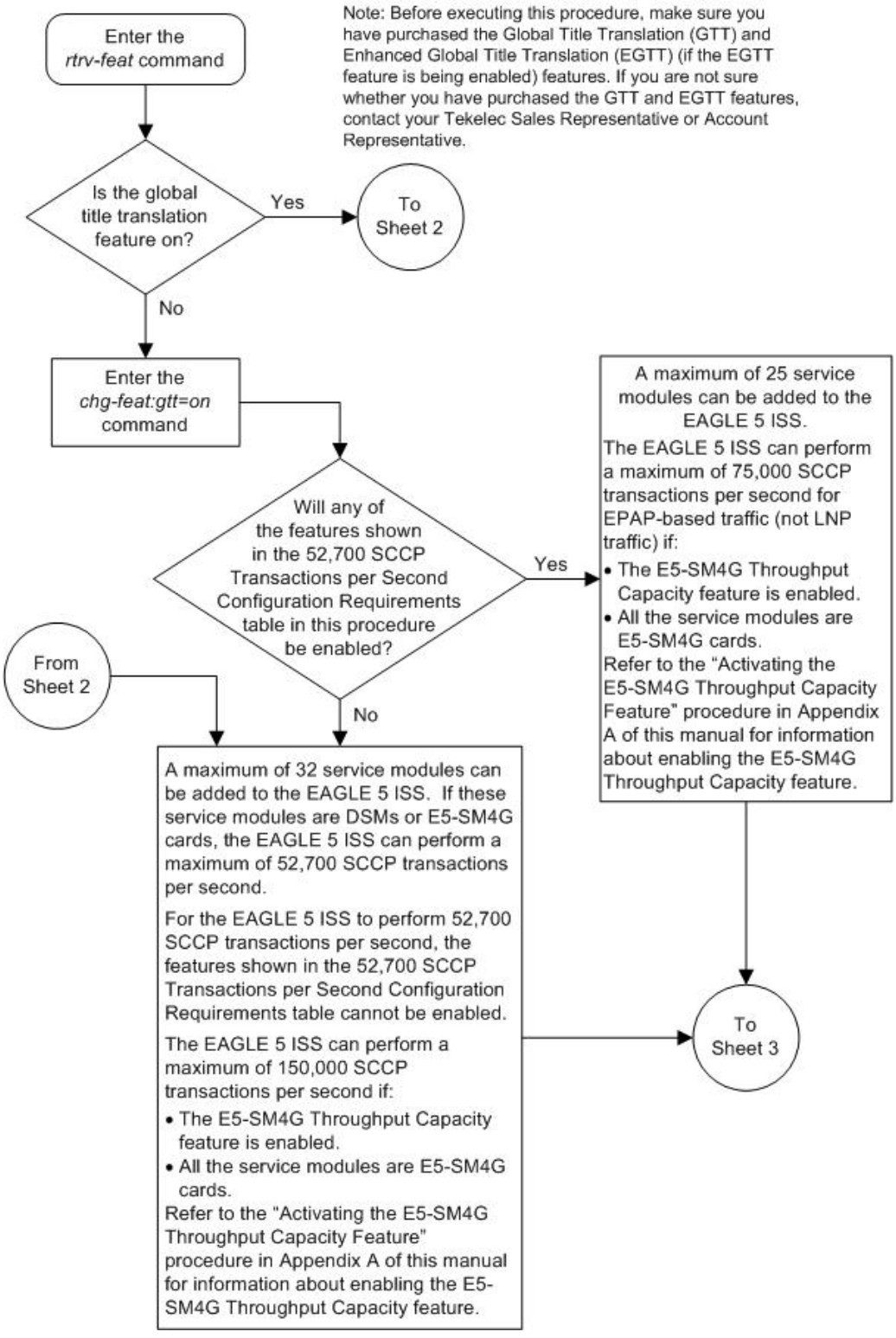
    When the `chg-feat` has successfully completed, this message should appear.

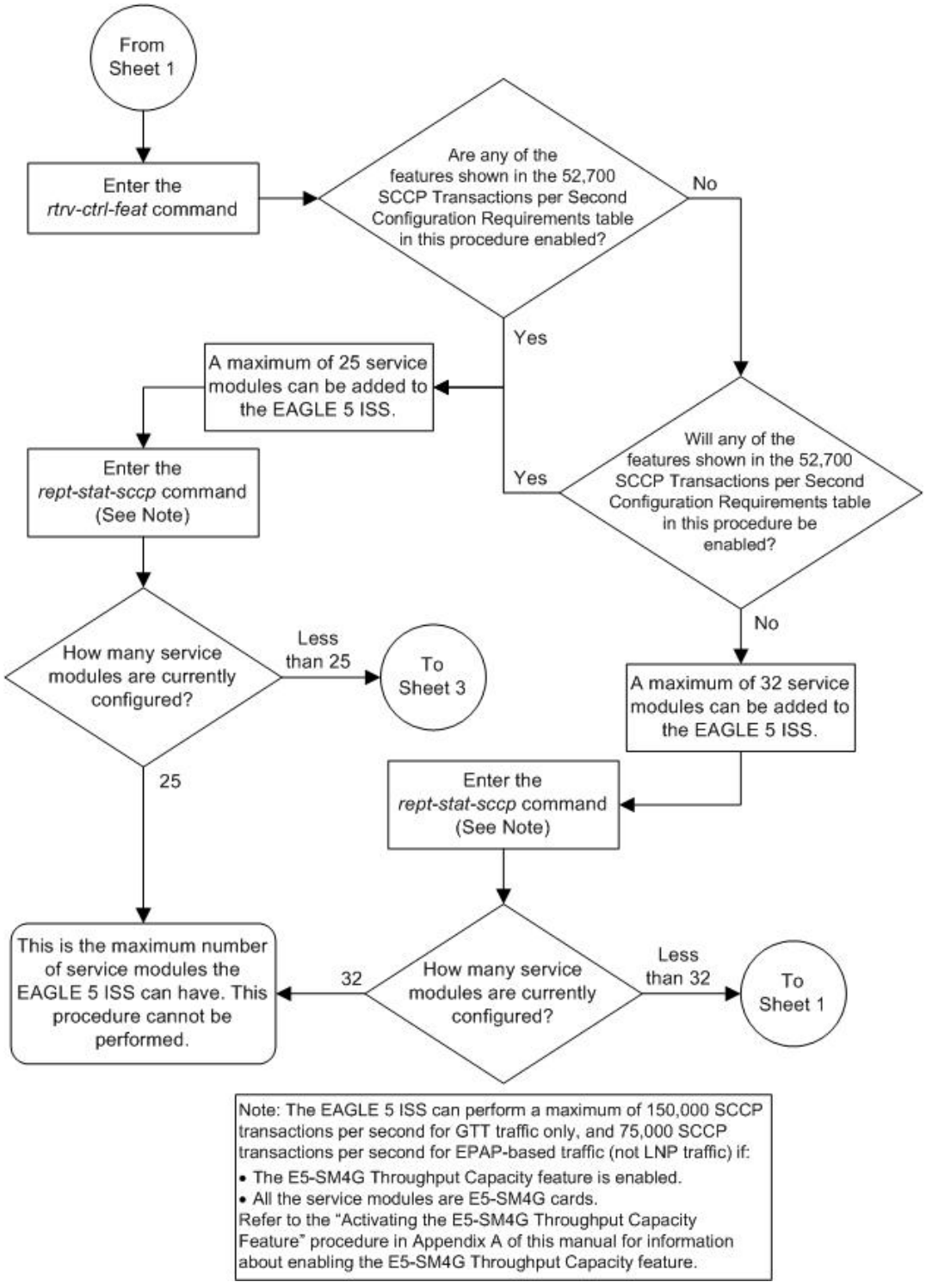
```
rlghncxa03w 07-05-25 09:57:41 GMT EAGLE5 37.0.0
CHG-FEAT: MASP A - COMPLTD
```

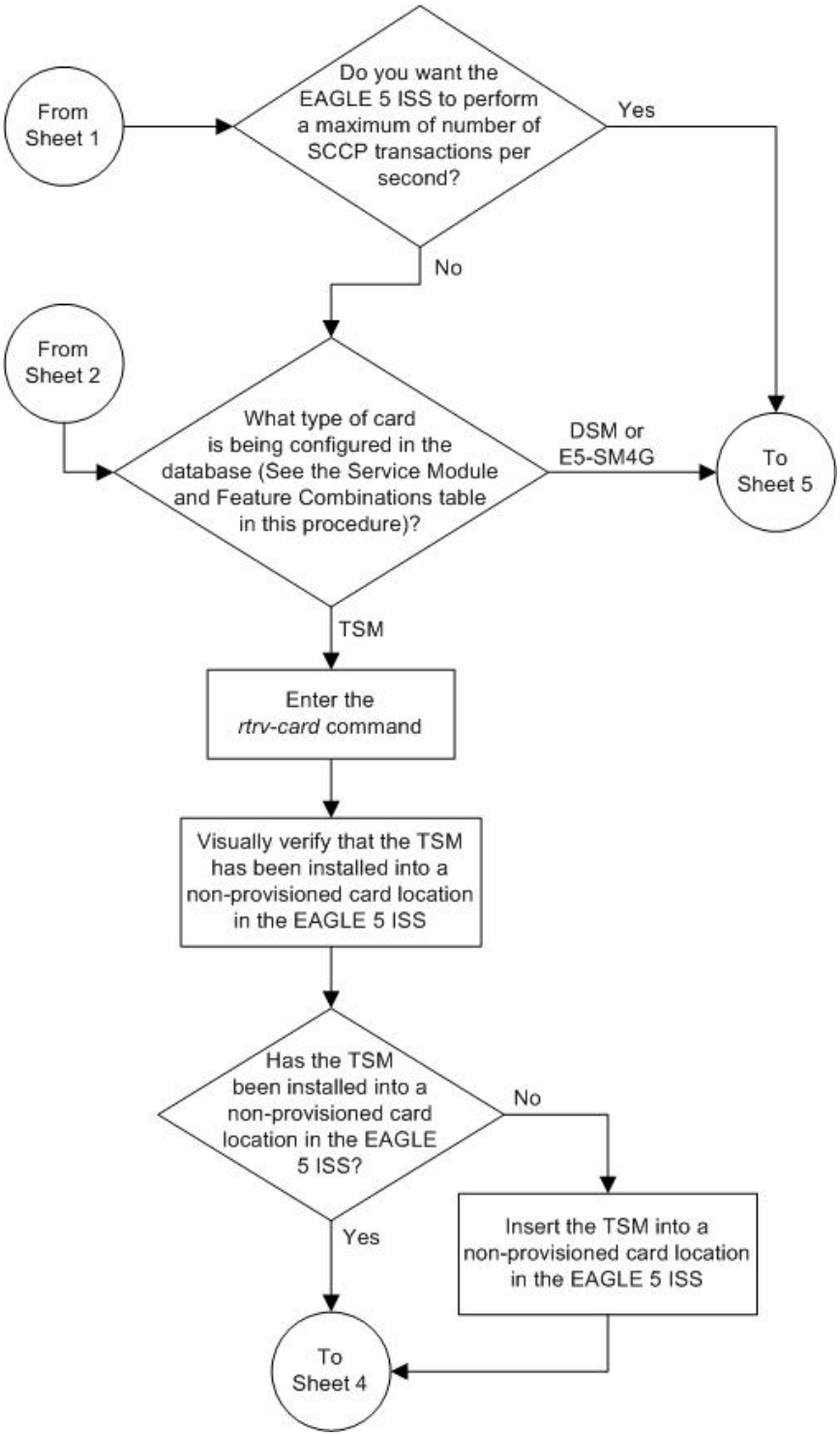
12. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

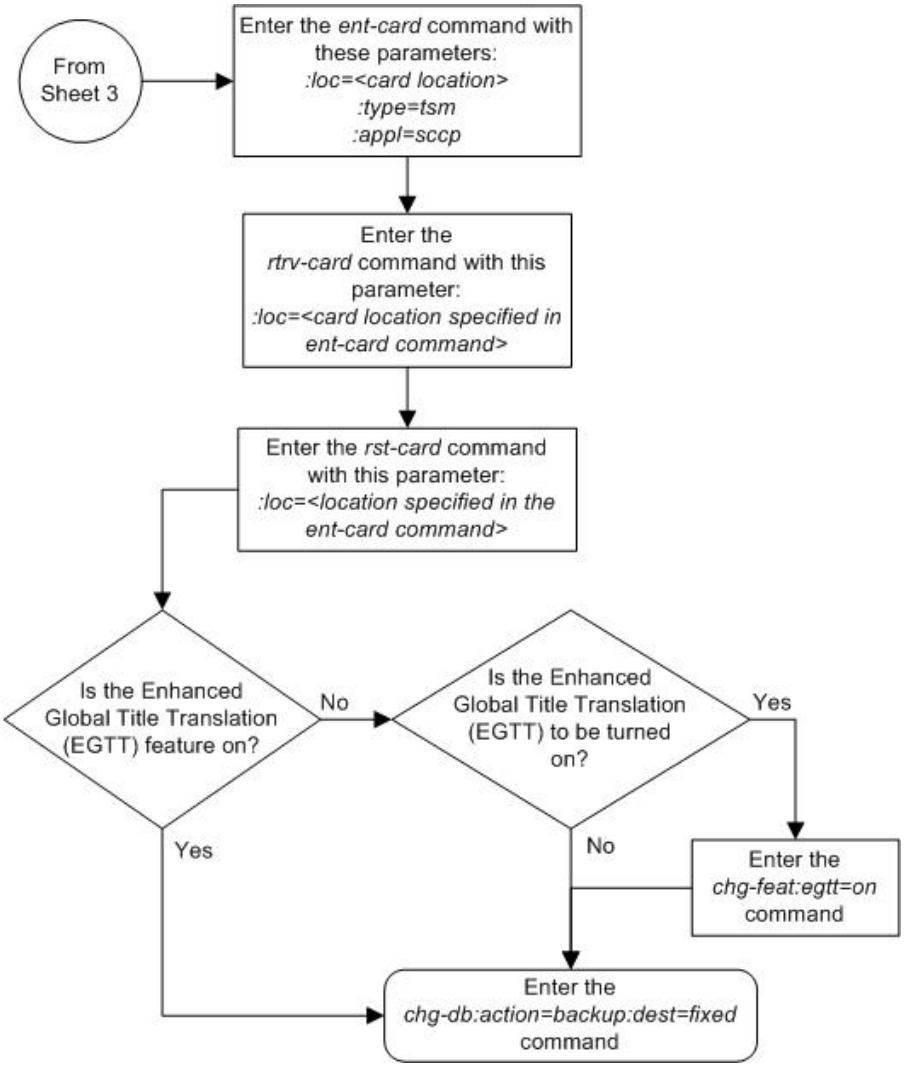
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

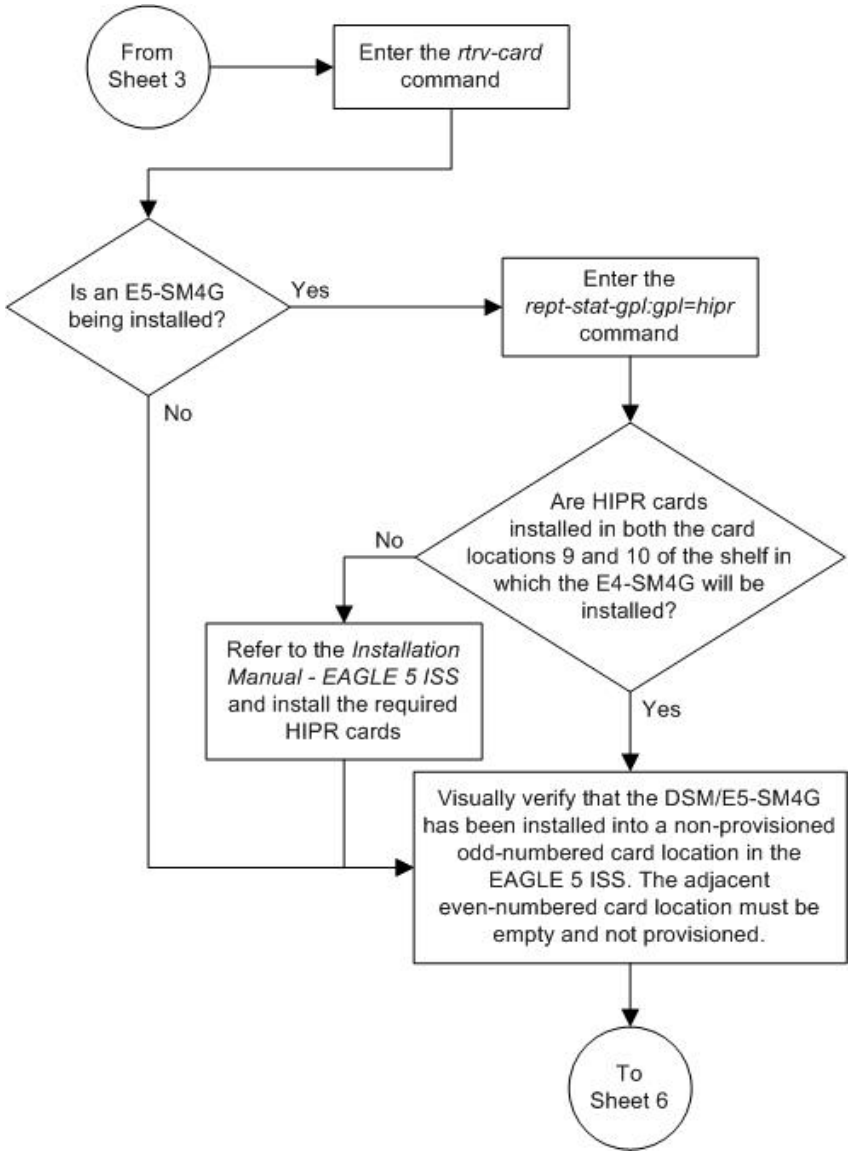
Figure 12: Adding a Service Module

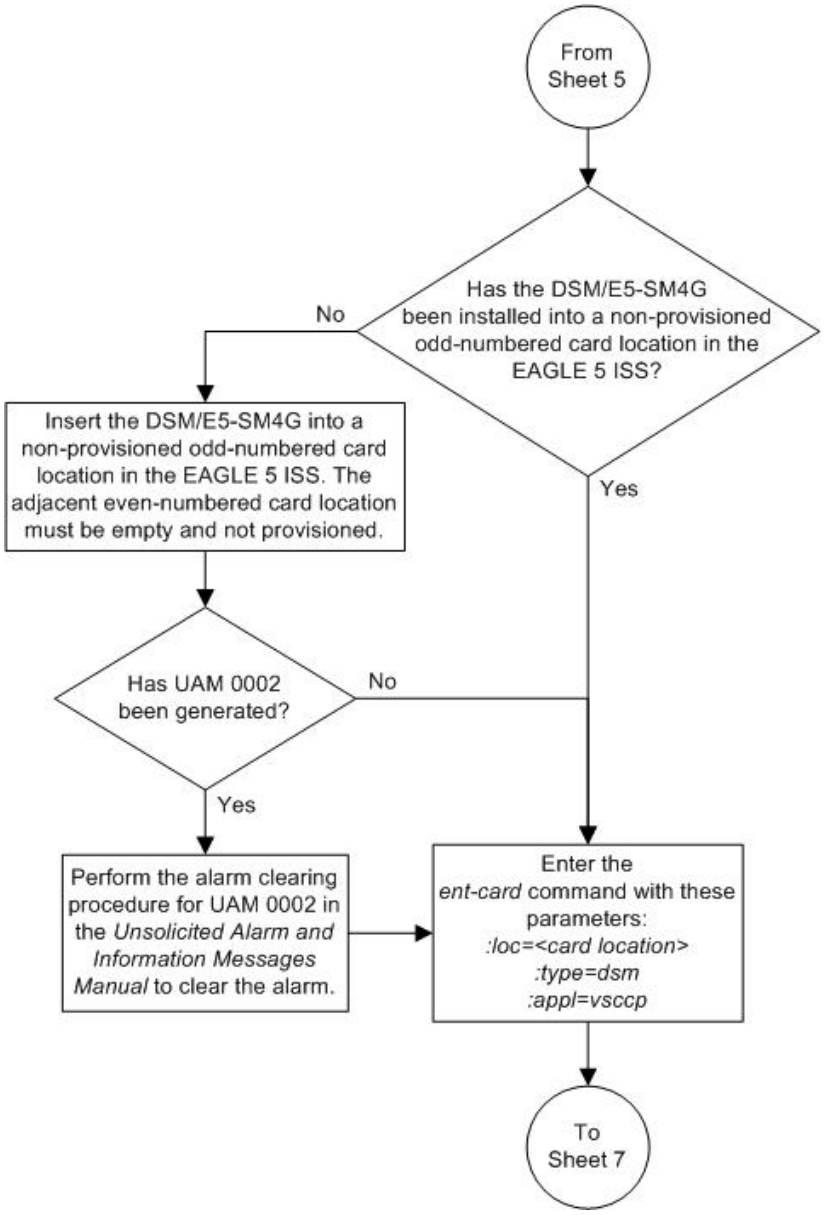

Note: Before executing this procedure, make sure you have purchased the Global Title Translation (GTT) and Enhanced Global Title Translation (EGTT) (if the EGTT feature is being enabled) features. If you are not sure whether you have purchased the GTT and EGTT features, contact your Tekelec Sales Representative or Account Representative.
Enter the rtrv-feat command
Is the global title translation feature on?
Yes
To Sheet 2
No
Enter the chg-feat:gtt=on command
Will any of the features shown in the 52,700 SCCP Transactions per Second Configuration Requirements table in this procedure be enabled?
Yes
A maximum of 25 service modules can be added to the EAGLE 5 ISS.
The EAGLE 5 ISS can perform a maximum of 75,000 SCCP transactions per second for EPAP-based traffic (not LNP traffic) if:
• The E5-SM4G Throughput Capacity feature is enabled.
• All the service modules are E5-SM4G cards.
Refer to the "Activating the E5-SM4G Throughput Capacity Feature" procedure in Appendix A of this manual for information about enabling the E5-SM4G Throughput Capacity feature.
From Sheet 2
No
A maximum of 32 service modules can be added to the EAGLE 5 ISS. If these service modules are DSMs or E5-SM4G cards, the EAGLE 5 ISS can perform a maximum of 52,700 SCCP transactions per second.
For the EAGLE 5 ISS to perform 52,700 SCCP transactions per second, the features shown in the 52,700 SCCP Transactions per Second Configuration Requirements table cannot be enabled.
The EAGLE 5 ISS can perform a maximum of 150,000 SCCP transactions per second if:
• The E5-SM4G Throughput Capacity feature is enabled.
• All the service modules are E5-SM4G cards.
Refer to the "Activating the E5-SM4G Throughput Capacity Feature" procedure in Appendix A of this manual for information about enabling the E5-SM4G Throughput Capacity feature.
To Sheet 3

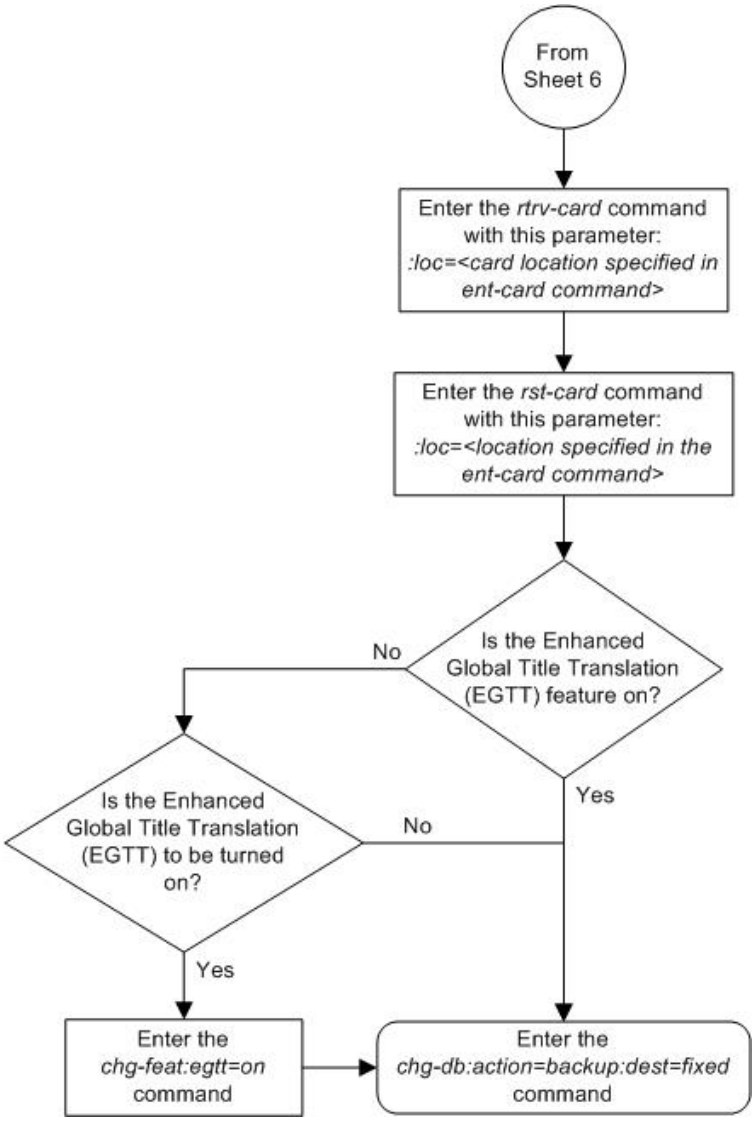

From Sheet 1
Enter the rtrv-ctrl-feat command
Are any of the features shown in the 52,700 SCCP Transactions per Second Configuration Requirements table in this procedure enabled?
No
Yes
A maximum of 25 service modules can be added to the EAGLE 5 ISS.
Enter the rept-stat-sccp command (See Note)
Yes
Will any of the features shown in the 52,700 SCCP Transactions per Second Configuration Requirements table in this procedure be enabled?
No
How many service modules are currently configured?
Less than 25
To Sheet 3
A maximum of 32 service modules can be added to the EAGLE 5 ISS.
25
Enter the rept-stat-sccp command (See Note)
This is the maximum number of service modules the EAGLE 5 ISS can have. This procedure cannot be performed.
32
How many service modules are currently configured?
Less than 32
To Sheet 1
Note: The EAGLE 5 ISS can perform a maximum of 150,000 SCCP transactions per second for GTT traffic only, and 75,000 SCCP transactions per second for EPAP-based traffic (not LNP traffic) if:
• The E5-SM4G Throughput Capacity feature is enabled.
• All the service modules are E5-SM4G cards.
Refer to the "Activating the E5-SM4G Throughput Capacity Feature" procedure in Appendix A of this manual for information about enabling the E5-SM4G Throughput Capacity feature.


From Sheet 1
Do you want the EAGLE 5 ISS to perform a maximum of number of SCCP transactions per second?
Yes
No
From Sheet 2
What type of card is being configured in the database (See the Service Module and Feature Combinations table in this procedure)?
DSM or E5-SM4G
To Sheet 5
TSM
Enter the rtrv-card command
Visually verify that the TSM has been installed into a non-provisioned card location in the EAGLE 5 ISS
Has the TSM been installed into a non-provisioned card location in the EAGLE 5 ISS?
No
Yes
Insert the TSM into a non-provisioned card location in the EAGLE 5 ISS
To Sheet 4


From Sheet 3
Enter the ent-card command with these parameters:
:loc=<card location>
:type=tsm
:appl=sccp
Enter the rtrv-card command with this parameter:
:loc=<card location specified in ent-card command>
Enter the rst-card command with this parameter:
:loc=<location specified in the ent-card command>
Is the Enhanced Global Title Translation (EGTT) feature on?
No
Is the Enhanced Global Title Translation (EGTT) to be turned on?
Yes
Yes
No
Enter the chg-feat:egtt=on command
Enter the chg-db:action=backup:dest=fixed command


From Sheet 3
Enter the *rtrv-card* command
Is an E5-SM4G being installed?
Yes
No
Enter the *rept-stat-gpl:gpl=hipr* command
Are HIPR cards installed in both the card locations 9 and 10 of the shelf in which the E4-SM4G will be installed?
No
Yes
Refer to the *Installation Manual - EAGLE 5 ISS* and install the required HIPR cards
Visually verify that the DSM/E5-SM4G has been installed into a non-provisioned odd-numbered card location in the EAGLE 5 ISS. The adjacent even-numbered card location must be empty and not provisioned.
To Sheet 6


From Sheet 5
Has the DSM/E5-SM4G been installed into a non-provisioned odd-numbered card location in the EAGLE 5 ISS?
No
Yes
Insert the DSM/E5-SM4G into a non-provisioned odd-numbered card location in the EAGLE 5 ISS. The adjacent even-numbered card location must be empty and not provisioned.
Has UAM 0002 been generated?
No
Yes
Perform the alarm clearing procedure for UAM 0002 in the *Unsolicited Alarm and Information Messages Manual* to clear the alarm.
Enter the *ent-card* command with these parameters:
:loc=<card location>
:type=dsm
:appl=vsccp
To Sheet 7



Removing a Service Module

This procedure is used to remove a service module, used by global title translation, from the database using the `dlt-card` command. The card cannot be removed if it does not exist in the database.

CAUTION

CAUTION: If the service module is the last service module in service, removing this card from the database will cause global title translation traffic to be lost.

The examples in this procedure are used to remove the service module in card location 1204.

1. Display the status of the service modules by entering the`rept-stat-sccp` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:57:31 GMT  EAGLE5 36.0.0
CARD
VERSION      PST             SST        AST       MSU USAGE  CPU USAGE
------------------------------------------------------------------------------
2101  113-002-001  IS-NR           Active     -----       47%         81%
2103  113-002-001  IS-NR           Active     -----       34%         50%
2111  113-002-001  IS-NR           Active     -----       21%         29%
2115  113-002-001  IS-NR           Active     -----       35%         52%
2117  113-002-001  IS-NR           Active     -----       40%         71%
------------------------------------------------------------------------------
SCCP Service Average MSU Capacity = 36%       Average CPU Capacity = 56%
Command Completed.
```

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, refer to the `rept-stat-sccp` command description in the *Commands Manual*.

2. Remove the card from service using the `rmv-card` command and specifying the card location.

   If the service module to be inhibited is the only service module in service, the `force=yes` parameter must also be specified. The cards that are in service are shown by the entry `IS-NR` in the `PST` field in the output in *Step 1* on page 91. For this example, enter this command.

   `rmv-card:loc=1204`

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

```
rlghncxa03w 06-10-25 09:57:41 GMT  EAGLE5 36.0.0
Card has been inhibited.
```

3. Remove the card from the database 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 this command.

   `dlt-card:loc=1204`

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

```
rlghncxa03w 06-10-25 09:57:51 GMT  EAGLE5 36.0.0
DLT-CARD: MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-card` command specifying the card that was removed in *Step 3* on page 92.

   For this example, enter this command.

   `rtrv-card:loc=1204`

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

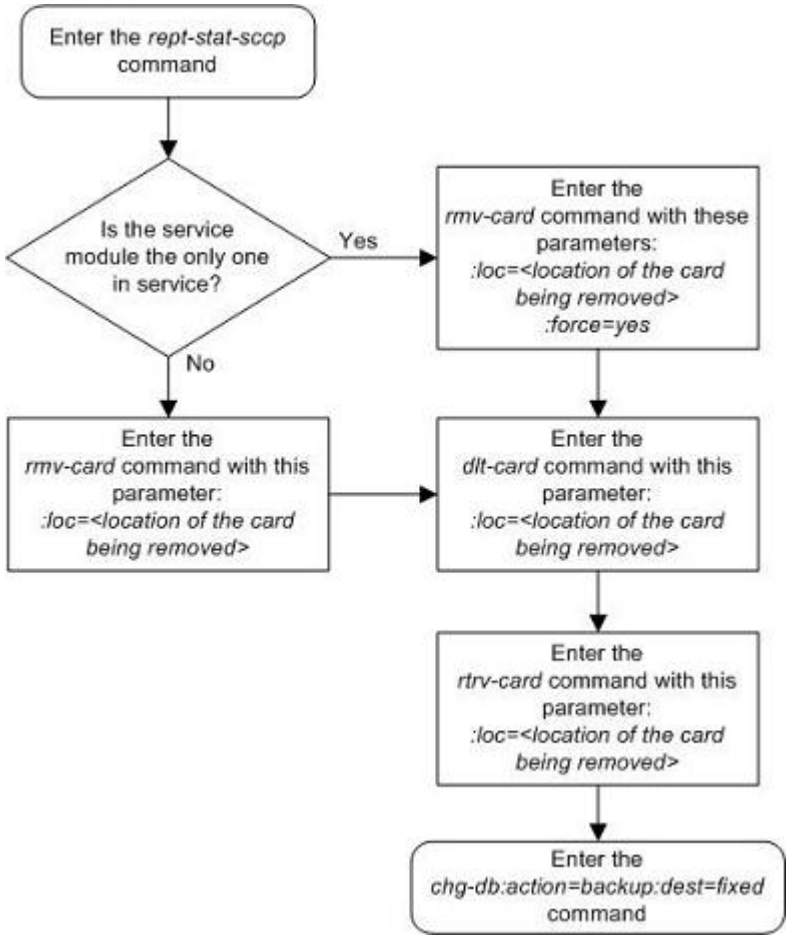
```
E2144
Cmd Rej: Location invalid for hardware configuration
```

5. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 13: Removing a Service Module



Adding a Mapped SS7 Message Translation Type

This procedure is used to add a mapped SS7 message translation type to the database. The mapped translation type is added to the database using the `ent-ttmap` command and is assigned to an ANSI SS7 linkset.

The `ent-ttmap` command uses these parameters.

`:lsn` – the name of the linkset.

:io – is translation type mapping to be performed on SS7 messages received in the linkset (incoming linkset) or on SS7 messages sent on the linkset (outgoing linkset).

:ett – the translation type contained in the SS7 message before that translation type is mapped.

:mtt – the translation type that the value of the ett parameter is mapped to.

The examples in this procedure are used to map the SS7 message translation type 250 to the translation type 001 for any incoming messages on linkset lsn01.

Canceling the RTRV-LS Command

Because the rtrv-ls command used in this procedure can output information for a long period of time, the rtrv-ls command can be canceled and the output to the terminal stopped. There are three ways that the rtrv-ls command can be canceled.

- Press the F9 function key on the keyboard at the terminal where the rtrv-ls command was entered.
- Enter the canc-cmd without the trm parameter at the terminal where the rtrv-ls command was entered.
- Enter the canc-cmd:trm=<xx>, where <xx> is the terminal where the rtrv-ls command was entered, from another terminal other that the terminal where the rtrv-ls command was entered. To enter the canc-cmd:trm=<xx> command, the terminal must allow Security Administration commands to be entered from it and the user must be allowed to enter Security Administration commands. The terminal's permissions can be verified with the rtrv-secu-trm command. The user's permissions can be verified with the rtrv-user or rtrv-secu-user commands.

For more information about the canc-cmd command, go to the *Commands Manual*.

1. Display the mapped translation types in the database using the rtrv-ttmap command.

   This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:57:31 GMT  EAGLE5 37.0.0
LSN       IO  ETT  MTT
nc001     I   047  032
nc001     I   128  055
nc001     I   238  128
nc001     I   254  016
nc001     O   016  254
nc001     O   128  238
```

2. Display the linksets in the database using the rtrv-ls command. This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:57:41 GMT EAGLE5 37.0.0

                                L3T SLT             GWS GWS GWS
LSN           APCA   (SS7)  SCRN SET SET BEI LST LNKS ACT MES DIS SLSCI NIS
lsa1          240-020-000   scr1 1    1   yes a   1    off off off no    off
lsa2          240-030-000   scr2 1    2   no  c   3    on  on  on  yes   off
lsa3          240-040-000   scr3 1    3   yes c   5    off off off yes   off
lsn01         240-050-000   scr4 1    3   yes c   5    off off off yes   off
nc001         240-060-000   scr5 1    3   yes c   5    off off off yes   off

                                L3T SLT             GWS GWS GWS
LSN           APCA (X25)     SCRN SET SET BEI LST LNKS ACT MES DIS SLSCI NIS
ls6           244-010-004    scr4 1    4   no  a   6    off off off ---   off
```

```
ls7           244-012-005   scr5  1    5  no  c   3    on  on  on  ---   off
ls8           244-012-006   scr6  1    6  no  c   8    off off off ---   off

                                  L3T SLT              GWS GWS GWS
LSN           APCI (SS7)    SCRN  SET SET BEI LST LNKS ACT MES DIS SLSCI NIS
lsi1          1-111-1       scr1  1    1  yes a   1    off off off ---   ---
lsi2          1-111-2       scr2  1    2  no  c   3    on  on  on  ---   ---
lsi3          1-111-3       scr3  1    3  yes c   5    off off off ---   ---

                                  L3T SLT              GWS GWS GWS
LSN           APCN (SS7)    SCRN  SET SET BEI LST LNKS ACT MES DIS SLSCI NIS
lsn1          11111         scr1  1    1  yes a   1    off off off ---   off
lsn2          11112         scr2  1    2  no  c   3    on  on  on  ---   off
lsn3          11113         scr3  1    3  yes c   5    off off off ---   off

Link set table is ( 14 of 1024)  1% full
```

If the required linkset is not in the database, perform the "Adding an SS7 Linkset" procedure in the *Database Administration Manual - SS7* and add the linkset..

3. Add the mapped translation type to the database using the `ent-ttmap` command. For this example, enter this command.

   `ent-ttmap:lsn=lsn01:io=i:ett=001:mtt=250`

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

```
rlghncxa03w 07-05-25 09:57:51 GMT  EAGLE5 37.0.0
ENT-TTMAP: MASP A - COMPLTD

TTMAP table for lsn01 is (1 of 64) 1% full
```

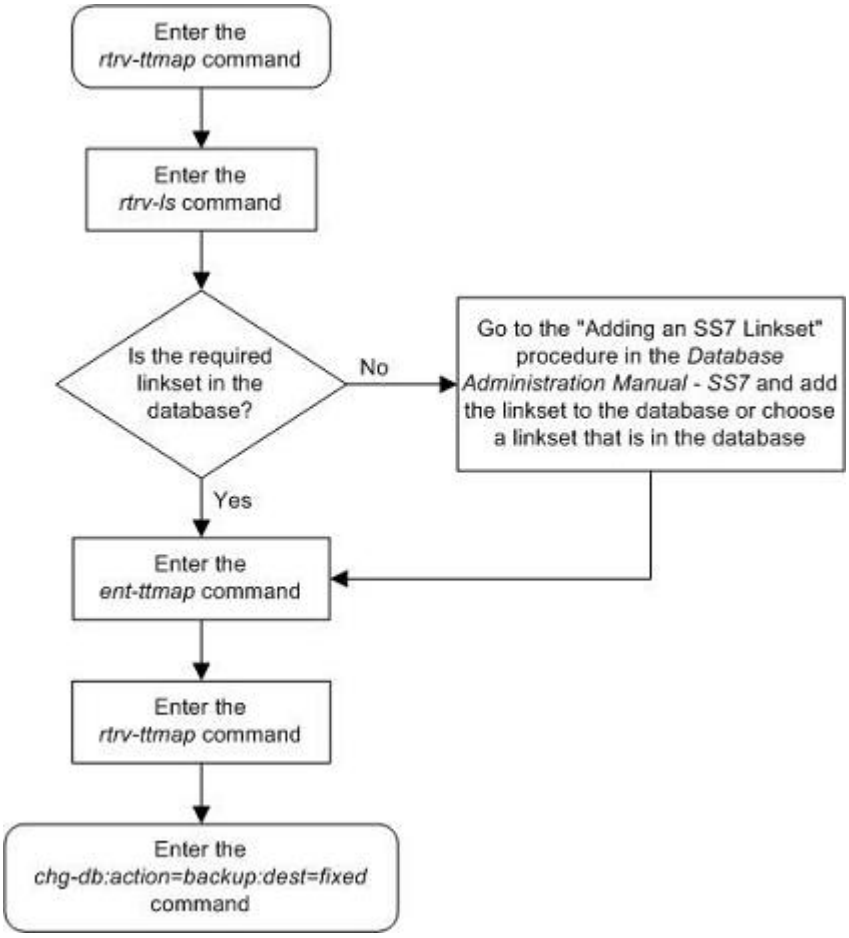
4. Verify the changes using the `rtrv-ttmap` command. This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:58:31 GMT  EAGLE5 37.0.0
LSN       IO  ETT  MTT
lsn01     I   001  250
nc001     I   047  032
nc001     I   128  055
nc001     I   238  128
nc001     I   254  016
nc001     O   016  254
nc001     O   128  238
```

5. Back up the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 14: Adding a Mapped SS7 Message Translation Type



Removing a Mapped SS7 Message Translation Type

This procedure is used to remove a mapped SS7 message translation type from the database using the `dlt-ttmap` command.

The `dlt-ttmap` command uses these parameters.

`:lsn` – the name of the linkset.

`:io` – is translation type mapping to be performed on SS7 messages received in the linkset (incoming linkset) or on SS7 messages sent on the linkset (outgoing linkset).

`:ett` – the translation type contained in the SS7 message before that translation type is mapped.

The examples in this procedure are used to remove the translation type `016` for any outgoing messages on linkset `nc001`.

1. Display the mapped translation types in the database using the `rtrv-ttmap` command.

This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:57:31 GMT  EAGLE5 37.0.0
LSN       IO  ETT  MTT
lsn01     I   001  250
nc001     I   047  032
nc001     I   128  055
nc001     I   238  128
nc001     I   254  016
nc001     O   016  254
nc001     O   128  238
```

2. Add the mapped translation type to the database using the `dlt-ttmap` command.

   For this example, enter this command.

   `dlt-ttmap:lsn=nc001:io=o:ett=016`

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

```
rlghncxa03w 07-05-25 09:57:41 GMT  EAGLE5 37.0.0
DLT-TTMAP: MASP A - COMPLTD
TTMAP table for nc001 is (5 of 64) 8% full
```

3. Verify the changes using the `rtrv-ttmap` command.

   This is an example of the possible output.

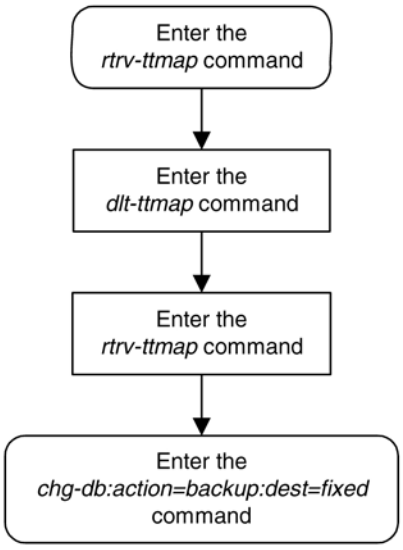
```
rlghncxa03w 07-05-25 09:57:51 GMT  EAGLE5 37.0.0
LSN       IO  ETT  MTT
lsn01     I   001  250
nc001     I   047  032
nc001     I   128  055
nc001     I   238  128
nc001     I   254  016
nc001     O   128  238
```

4. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

   These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 15: Removing a Mapped SS7 Message Translation Type



Changing a Mapped SS7 Message Translation Type

This procedure is used to change a mapped SS7 message translation type in the database using the `chg-ttmap` command.

The `chg-ttmap` command uses these parameters.

`:lsn` – the name of the linkset.

`:io` – is translation type mapping to be performed on SS7 messages received in the linkset (incoming linkset) or on SS7 messages sent on the linkset (outgoing linkset).

`:ett` – the translation type contained in the SS7 message before that translation type is mapped.

`:mtt` – the translation type that the value of the `ett` parameter is mapped to.

Only the mapped translation type (`mtt`) can be changed with this procedure. To change the `lsn`, `io`, or `ett` values, the mapped translation type entry has to be removed from the database using the *Removing a Mapped SS7 Message Translation Type* on page 96 procedure, then re-entered with the new `lsn`, `io`, or `ett` values using the *Adding a Mapped SS7 Message Translation Type* on page 93 procedure.

The examples in this procedure are used to change the mapped translation type `250`, being mapped for translation type `001` for incoming messages on linkset `lsn01` to mapped translation type `255`.

1. Display the mapped translation types in the database using the `rtrv-ttmap` command. This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:57:31 GMT  EAGLE5 37.0.0
LSN       IO  ETT  MTT
lsn01     I   001  250
nc001     I   047  032
nc001     I   128  055
nc001     I   238  128
nc001     I   254  016
```

```
nc001     O   016  254
nc001     O   128  238
```

2. Change the mapped translation type in the database using the `chg-ttmap` command. For this example, enter this command.

   `chg-ttmap:lsn=lsn01:io=i:ett=001:mtt=255`

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

```
rlghncxa03w 07-05-25 09:57:41 GMT  EAGLE5 37.0.0
CHG-TTMAP: MASP A - COMPLTD

TTMAP table for lsn01 is (1 of 64) 1% full
```

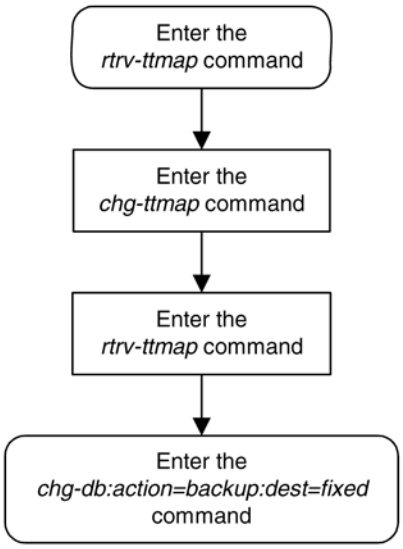
3. Verify the changes using the `rtrv-ttmap` command. This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:57:51 GMT  EAGLE5 37.0.0
LSN       IO  ETT  MTT
lsn01     I   001  255
nc001     I   047  032
nc001     I   128  055
nc001     I   238  128
nc001     I   254  016
nc001     O   016  254
nc001     O   128  238
```

4. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 16: Changing a Mapped SS7 Message Translation Type



Adding a Concerned Signaling Point Code

This procedure is used to add a concerned signaling point code (CSPC) group to the database using the `ent-cspc` command.

The `ent-cspc` command uses these parameters.

`:grp` – The name of the concerned signaling point code group that contains the point codes that should be notified of the subsystem status.

`:pc/pca/pci/pcn/pcn24` – The point code of the signaling point that is to be in the concerned signaling point code group, either an ANSI point code (`pc/pca`), ITU-I or ITU-I spare point code (`pci`), a 14-bit ITU-N or 14-bit ITU-N spare point code (`pcn`), or a 24-bit ITU-N (`pcn24`) point code.

Note: Refer to Chapter 2, Configuring Destination Tables in the *Database Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

Note: The EAGLE 5 ISS can contain 14-bit ITU-N point codes or 24-bit ITU-N point codes, but not both at the same time.

The examples in this procedure are used to add the concerned signaling point code (CSPC) groups shown in *Table 17: Concerned Signaling Point Code Configuration Table* on page 100.

Table 17: Concerned Signaling Point Code Configuration Table

CSPC Broadcast Group Name	Concerned Signaling Point Code
grp05	002-002-002
	008-008-008
grp10	008-008-008
	009-009-009
grp15	002-002-002
	009-009-009

The CSPC cannot be in the database for the indicated group.

The point code must exist in the routing table and cannot already exist in the specified group. Verify that the point code is in the routing table by entering the `rtrv-rte` command with the point code. If the point code is an ANSI point code, it must be a full point code.

The word “none” cannot be used to name a CSPC group.

The database can contain a maximum of 2550 CSPC groups. Each CSPC group can contain a maximum of 96 concerned signaling point codes.

The mated point codes in the mated application table will not automatically receive CSPC broadcasts unless each mated point code is contained in a CSPC group. A mated application group can contain up to 32 entries, a primary point code and up to 31 mated point codes. Each mated point code in a mated application group can be assigned to a different CSPC group.

The first point code entered for a CSPC group defines the network type for the CSPC group. If the first point code entered for a particular CSPC group is an ANSI point code (`pc` or `pca`), then that CSPC group is an ANSI CSPC group and only ANSI point codes can be added to it. If the first point code in the CSPC group is either an ITU international or ITU international spare point code (`pci`), then the CSPC group is an ITU international CSPC group and only ITU international or ITU international spare point codes can be added to it. If the first point code in the CSPC group is either a 14-bit ITU national or 14-bit ITU national spare point code (`pcn`), then the CSPC group is an ITU national CSPC group and only 14-bit ITU national or 14-bit ITU national spare point codes can be added to it. If the first point code in the CSPC group is a 24-bit ITU national point code (`pcn24`), then the CSPC group is an ITU national CSPC group and only 24-bit ITU national point codes can be added to it.

If the ANSI-ITU-China SCCP Conversion feature is enabled, CSPC groups can contain ANSI point codes (`pc/pca`), ITU-I or ITU-I spare point codes (`pci`), and either 14-bit ITU-N or 14-bit ITU-N spare point codes (`pcn`), or 24-bit ITU-N (`pcn24`) point codes. A CSPC group cannot contain both 14-bit and 24-bit ITU-N point codes. The status of the ANSI-ITU-China SCCP Conversion feature can be verified with the `rtrv-ctrl-feat` command.

When the `ent-cspc` command is entered with a CSPC group name and a point code and the CSPC group name does not exist, the command will be rejected. If the group name does not exist, and a point code is not specified, a new group will be created.

1. Display the CSPC group names in the database using the `rtrv-cspc` command. This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:57:31  GMT  EAGLE5 37.0.0
CSPC GRP
NETWORK
PERCENT FULL
grp01      ANSI                    6%
grp02      ITU-I                   9%
grp03      ITU-N                  12%
grp04      ANSI                   15%
```

   If the ANSI-ITU-China SCCP Conversion feature is enabled, and multiple network point code types are assigned to CSPC groups, the network types of the point codes in each CSPC group are displayed in the `rtrv-cspc` output as follows in this example.

```
rlghncxa03w 06-10-25 09:57:31  GMT  EAGLE5 36.0.0
CSPC GRP   NETWORK               PERCENT FULL
grp01      ANSI, ITU-I, ITU-N       9%
grp02      ITU-I                    9%
grp03      ANSI,  ITU-N             6%
grp04      ANSI                    15%
```

   Note: If the point code is being added to a new CSPC group, skip step 2 and go to step 3.

2. Display the point codes in the CSPC group that the new point code is being added to by entering the `rtrv-cspc` command with the CSPC group name.

   For this example, enter this command.

   `rtrv-cspc:grp=grp01`

This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:57:31  GMT  EAGLE5 37.0.0
CSPC GRP      PCA
grp01         002-002-002
              003-003-003
```

If the ANSI-ITU-China SCCP Conversion feature is enabled, then point codes of multiple network types can be displayed, if point codes of multiple network types are assigned to the CSPC group, as shown in this example.

```
rlghncxa03w 07-05-25 09:57:31  GMT  EAGLE5 37.0.0
CSPC GRP      PC            TYPE
grp01         003-003-003   A
              3-003-3       I
              00112         N
```

3. Enter the `rtrv-rte` command with the `dpc` parameter specifying the point code to be used with the `ent-cspc` command to verify whether or not the point code is the DPC of a route. For this example, enter these commands.

   `rtrv-rte:dpca=002-002-002`

   This is an example of the possible output.

```
rlghncxa03w 07-05-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   002-002-002 ---------- --------------   ls02       10    002-002-002
                                               RTX:No  CLLI=ls02clli
```

   `rtrv-rte:dpca=008-008-008`

   This is an example of the possible output.

```
rlghncxa03w 07-05-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   008-008-008 ---------- --------------   ls20       10    008-008-008
                                               RTX:No  CLLI=ls20clli
```

   `rtrv-rte:dpca=009-009-009`

   This is an example of the possible output.

```
rlghncxa03w 07-05-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   009-009-009 ---------- --------------   ls09       10    009-009-009
                                               RTX:No  CLLI=ls09clli
```

   If the point code is not shown in the `rtrv-rte` output, perform one the Adding a Route procedures in the Database *Administration Manual - SS7* and add the required route to the database.

   Note: If the network type of the point codes being added to the CSPC group is the same as the network type of the CSPC group, or if multiple point code network types are shown in the `rtrv-cspc` output in step 1, skip step 4 and go to step 5.

4. Verify that the ANSI-ITU-China SCCP Conversion feature is enabled by entering the `rtrv-ctrl-feat:partnum=893012001` 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
SCCP Conversion           893012001  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 ANSI-ITU-China SCCP Conversion feature is not enabled, perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure and the ANSI-ITU-China SCCP Conversion feature.

5. Add the concerned signaling point code to the database using the `ent-cspc` command. For this example, enter these commands.

   `ent-cspc:grp=grp05`

   `ent-cspc:grp=grp10`

   `ent-cspc:grp=grp15`

   `ent-cspc:grp=grp05:pca=002-002-002`

   `ent-cspc:grp=grp05:pca=008-008-008`

   `ent-cspc:grp=grp10:pca=008-008-008`

   `ent-cspc:grp=grp10:pca=009-009-009`

   `ent-cspc:grp=grp15:pca=002-002-002`

   `ent-cspc:grp=grp15:pca=009-009-009`

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

```
rlghncxa03w 07-05-25 09:57:41  GMT  EAGLE5 37.0.0
ENT-CSPC:  MASP A - COMPLTD
```

6. Verify the changes using the `rtrv-cspc` command, with the CSPC group names specified in step 5. For this example enter these commands.

   `rtrv-cspc:grp=grp05`

   This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:58:31  GMT  EAGLE5 37.0.0
CSPC GRP
PCA
```

```
grp05         002-002-002
              008-008-008
```

`rtrv-cspc:grp=grp10`

This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:59:31  GMT  EAGLE5 37.0.0
CSPC GRP      PCA
grp10         008-008-008
              009-009-009
```

`rtrv-cspc:grp=grp15`

This is an example of the possible output.

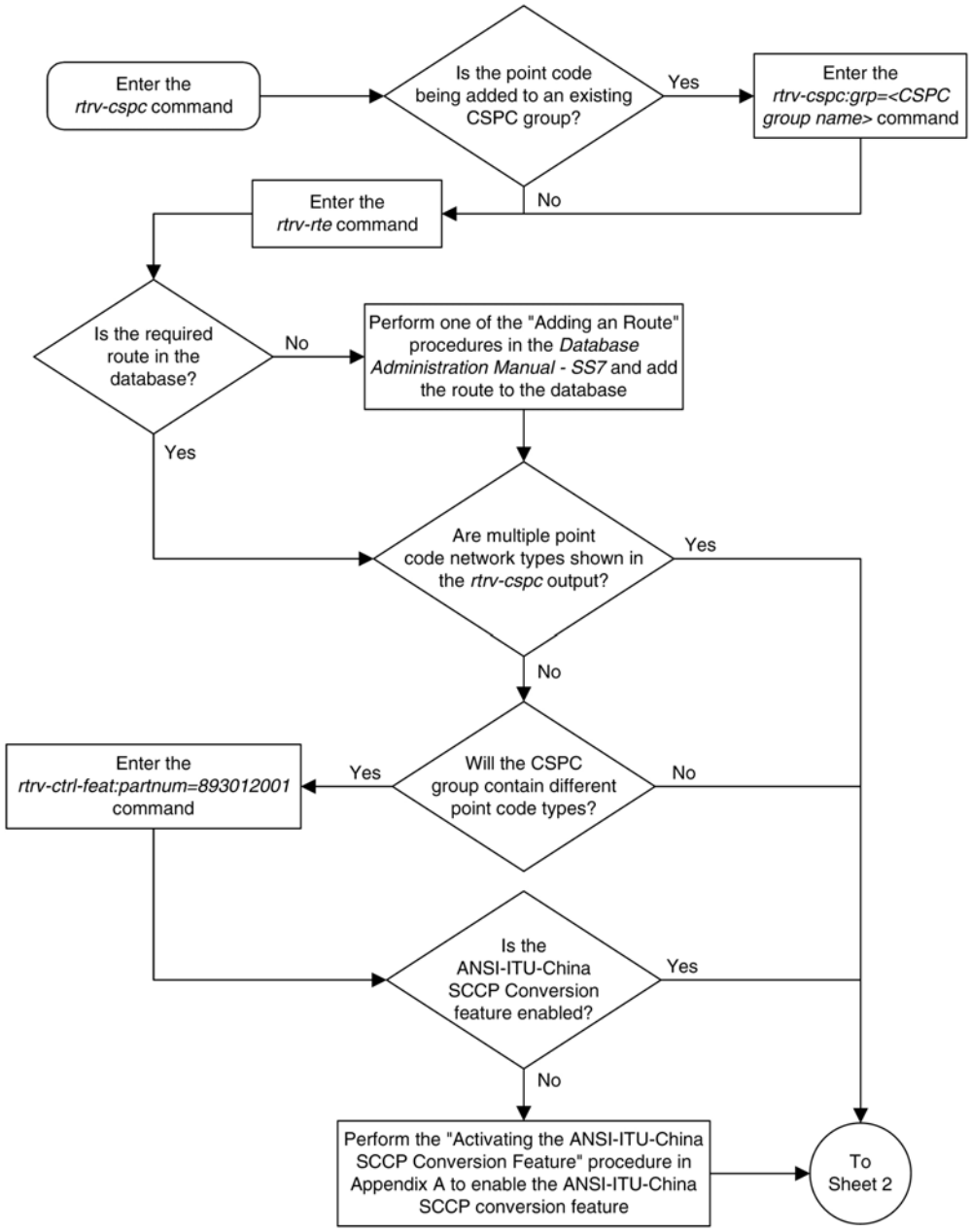
```
rlghncxa03w 07-05-25 09:57:41  GMT  EAGLE5 37.0.0
CSPC GRP      PCA
grp15         002-002-002
              009-009-009
```

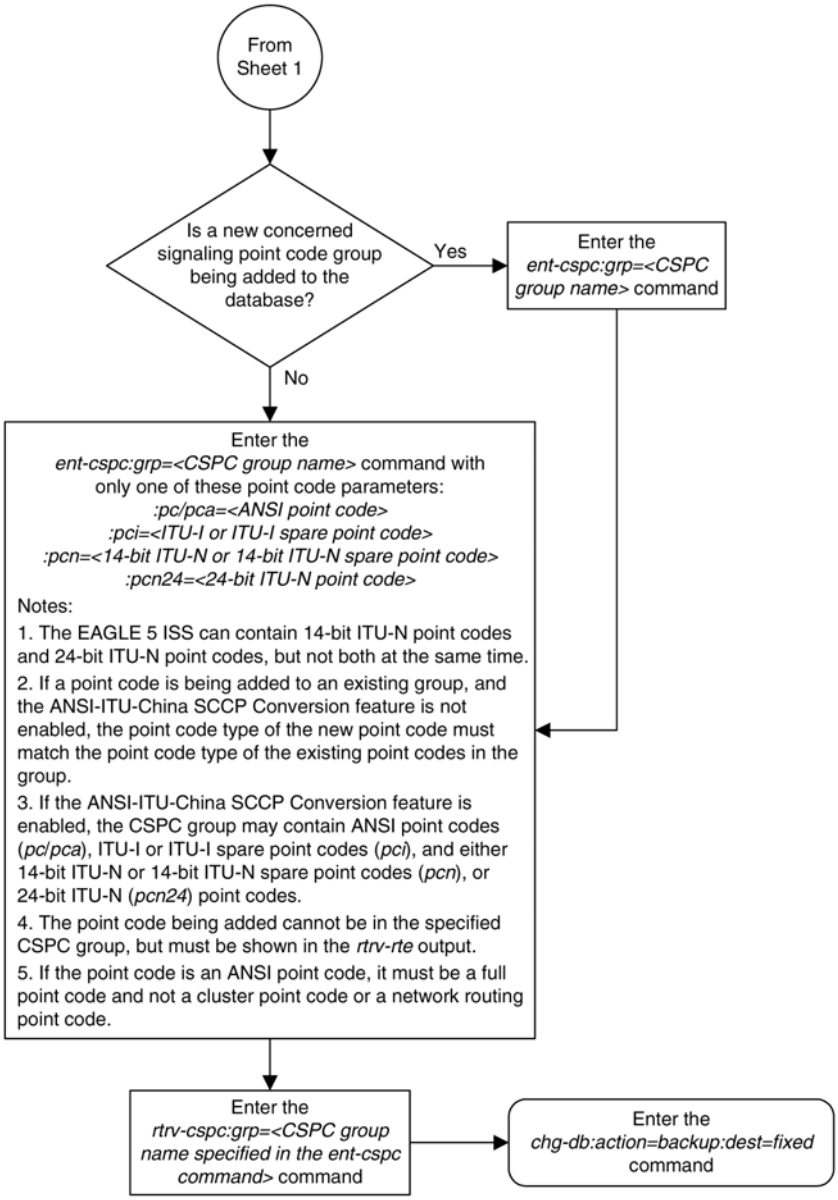
Note: If the ANSI-ITU-China SCCP Conversion feature is enabled, then point codes of multiple network types can be displayed in the `rtrv-cspc` output, if point codes of multiple network types are assigned to the CSPC group.

7. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 17: Adding a Concerned Signaling Point Code


Enter the rtrv-cspc command
Is the point code being added to an existing CSPC group?
Yes
Enter the rtrv-cspc:grp=<CSPC group name> command
No
Enter the rtrv-rte command
Is the required route in the database?
No
Perform one of the "Adding an Route" procedures in the Database Administration Manual - SS7 and add the route to the database
Yes
Are multiple point code network types shown in the rtrv-cspc output?
Yes
No
Enter the rtrv-ctrl-feat:partnum=893012001 command
Yes
Will the CSPC group contain different point code types?
No
Is the ANSI-ITU-China SCCP Conversion feature enabled?
Yes
No
Perform the "Activating the ANSI-ITU-China SCCP Conversion Feature" procedure in Appendix A to enable the ANSI-ITU-China SCCP conversion feature
To Sheet 2



Removing a Concerned Signaling Point Code

This procedure is used to remove a concerned signaling point code (CSPC) group from the database using the `dlt-cspc` command.

The `dlt-cspc` command uses these parameters.

`:grp` – The name of the concerned signaling point code group that contains the point codes that should be notified of the subsystem status.

`:pc/pca/pci/pcn/pcn24` – The point code of the signaling point that is to be in the concerned signaling point code group, either an ANSI point code (`pc/pca`), ITU-I or ITU-I spare point code (`pci`), a 14-bit ITU-N or 14-bit ITU-N spare point code (`pcn`), or a 24-bit ITU-N (`pcn24`) point code.

Note: Refer to Chapter 2, Configuring Destination Tables in the Database *Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

`:all` – Confirms that all entries for a particular concerned signaling point code group are to be removed.

The examples in this procedure are used to remove the concerned signaling point code `008-008-008` from the CSPC group `grp10` from the database.

The CSPC must be in the database for the indicated group.

1. Display the group names in the database using the `rtrv-cspc` command.

   This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:47:31  GMT  EAGLE5 37.0.0
CSPC GRP
NETWORK
PERCENT FULL
grp01      ANSI                   6%
grp02      ITU-I                  9%
grp03      ITU-N                 12%
grp04      ANSI                  15%
grp05      ANSI                  15%
grp10      ANSI                  15%
grp15      ANSI                  15%
```

   If the ANSI-ITU-China SCCP Conversion feature is enabled, and multiple network point code types are assigned to CSPC groups, the `rtrv-cspc` output is displayed as follows in this example.

```
rlghncxa03w 07-05-25 09:57:31  GMT  EAGLE5 37.0.0
CSPC GRP   NETWORK               PERCENT FULL
grp01      ANSI, ITU-I, ITU-N       9%
grp02      ITU-I                    9%
grp03      ANSI,  ITU-N             6%
grp04      ANSI                    15%
grp05      ANSI                    15%
grp10      ANSI                    15%
grp15      ANSI                    15%
```

2. Display the point codes in the CSPC group that you wish to remove from that CSPC group using the `rtrv-cspc` command with the CSPC group name.

   For this example, enter this command.

```
rtrv-cspc:grp=grp10
```

   This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:48:31  GMT  EAGLE5 37.0.0
CSPC GRP      PCA
```

```
grp10         008-008-008
              009-009-009
```

If the ANSI-ITU-China SCCP Conversion feature is enabled, then point codes of multiple network types can be displayed, if point codes of multiple network types are assigned to the CSPC group, as shown in this example.

```
rlghncxa03w 07-05-25 09:57:31  GMT  EAGLE5 37.0.0
CSPC GRP      PC            TYPE
grp10         008-008-008   A
              009-009-009   A
              3-003-3       I
              00112         N
```

Note: If only a point code entry in the CSPC group is being removed, skip steps 3 and 4, and go to step 5.

3. Display the status of the Flexible GTT Load Sharing feature by entering the `rtrv-ctrl-feat` command with the Flexible GTT Load Sharing feature part number.

   Enter this command.

   `rtrv-ctrl-feat:partnum=893015401`

   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
Flexible GTT Load Sharing 893015401 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 Flexible GTT Load Sharing feature is not enabled, skip step 4 and go to step 5.

   If the Flexible GTT Load Sharing feature is enabled, go to step 4.

4. Display the mated applications in the database using the `rtrv-map` command.

   This is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

MAP TABLE IS   2 % FULL    (20 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=DFLT
255-001-000               250 10  SOL --- --- grp01    ON
MAPSET ID=1
255-001-000               251 10  SHR --- --- grp01    OFF
             253-001-002  254 10  SHR --- --- grp01    OFF
MAPSET ID=2
255-001-000               252 10  SOL --- --- grp01    ON
```

```
MAPSET ID=DFLT
255-001-000               253 10  SHR --- --- grp01    OFF
            253-001-004   254 10  SHR --- --- grp01    OFF
MAPSET ID=3
255-001-001               255 10  DOM YES YES grp01    ON
            253-001-005   254 20  DOM YES YES grp01    ON
MAPSET ID=4
255-001-001               250 10  DOM YES YES grp01    OFF
            253-001-001   254 20  DOM YES YES grp01    OFF
MAPSET ID=DFLT
255-001-002               251 10  SHR --- --- grp01    OFF
            255-001-002   254 10  SHR --- --- grp01    OFF
MAPSET ID=5
255-001-002               252 10  DOM YES YES grp01    ON
            255-001-003   254 20  DOM YES YES grp01    ON
MAPSET ID=6
255-001-002               253 10  SHR --- --- grp01    ON
            255-001-004   254 10  SHR --- --- grp01    ON
PCI         Mate PCI      SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=7
2-001-2                   255 10  DOM YES YES grp03    OFF
            2-001-1       254 20  DOM YES YES grp03    OFF
PCN         Mate PCN      SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=8
00347                     253 10  SHR --- --- grp05    OFF
            01387         254 10  SHR --- --- grp05    OFF
```

If the CSPC group being removed in this procedure is shown in the `rtrv-map` output, perform the *Changing a Mated Application* on page 278 procedure and change the CSPC group assigned to the mated applications that are currently referencing the CSPC group being removed. After the CSPC group assignments have been changed, go to step 5.

If the CSPC group being removed in this procedure is not shown in the `rtrv-map` output, go to step 5.

5. Remove the concerned signaling point code from the database using the `dlt-cspc` command.

   For this example, enter this command.

   `dlt-cspc:grp=grp10:pca=008-008-008`

   This message should appear.

   ```
   rlghncxa03w 07-05-25 09:49:31  GMT  EAGLE5 37.0.0
   DLT-CSPC:  MASP A - COMPLTD
   ```

   Note: If you wish to remove the entire CSPC group, enter the `dlt-cspc` command with the CSPC group name and the `all=yes` parameter. For this example, enter the `dlt-cspc:grp=grp10:all=yes` command.

6. Verify the changes using the `rtrv-cspc` command with the CSPC group name.

   For this example, enter this command.

   `rtrv-cspc:grp=grp10`

   This is an example of the possible output.

   ```
   rlghncxa03w 07-05-25 09:50:31  GMT  EAGLE5 37.0.0
   ```

```
CSPC GRP      PCA
grp10         009-009-009
```

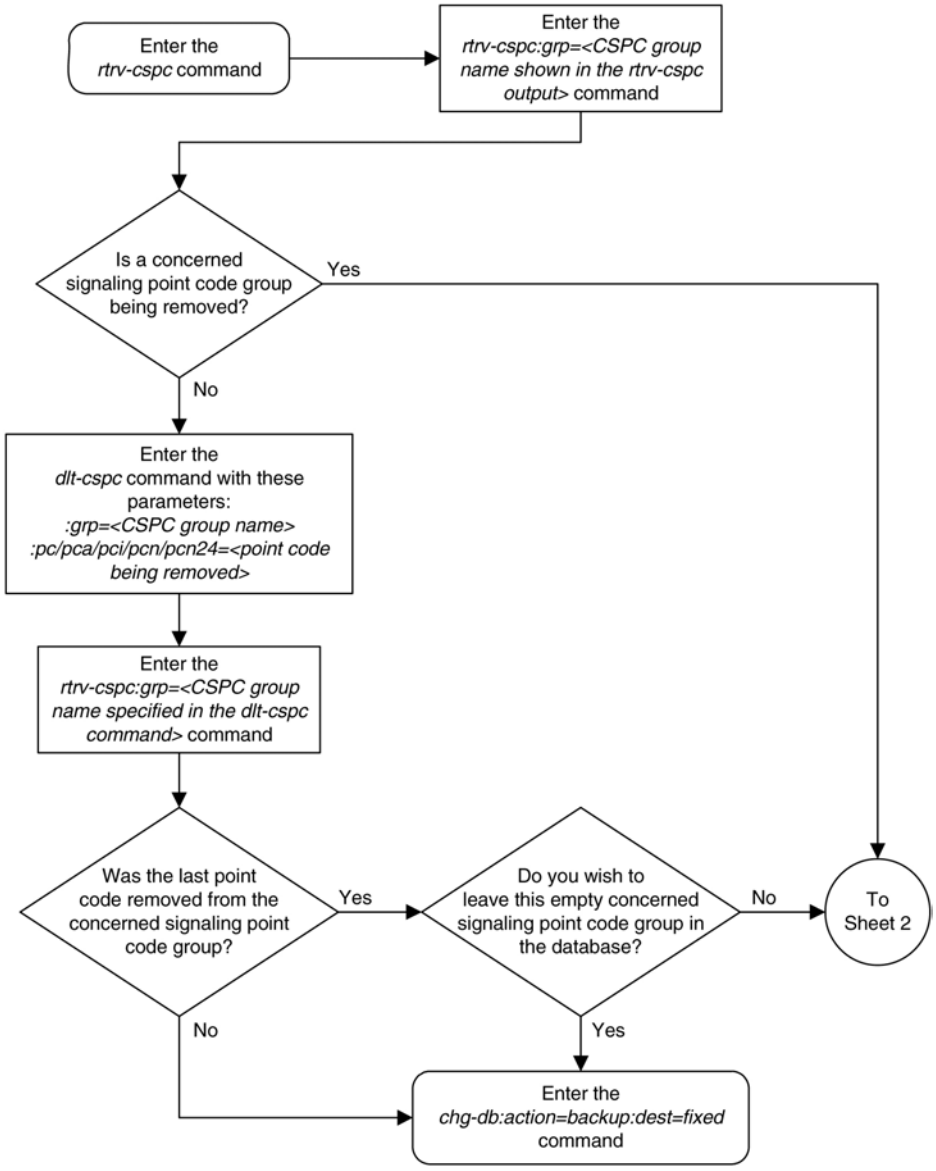
Note: If the ANSI-ITU-China SCCP Conversion feature is enabled, then point codes of multiple network types can be displayed in the `rtrv-cspc` output, if point codes of multiple network types are assigned to the CSPC group.

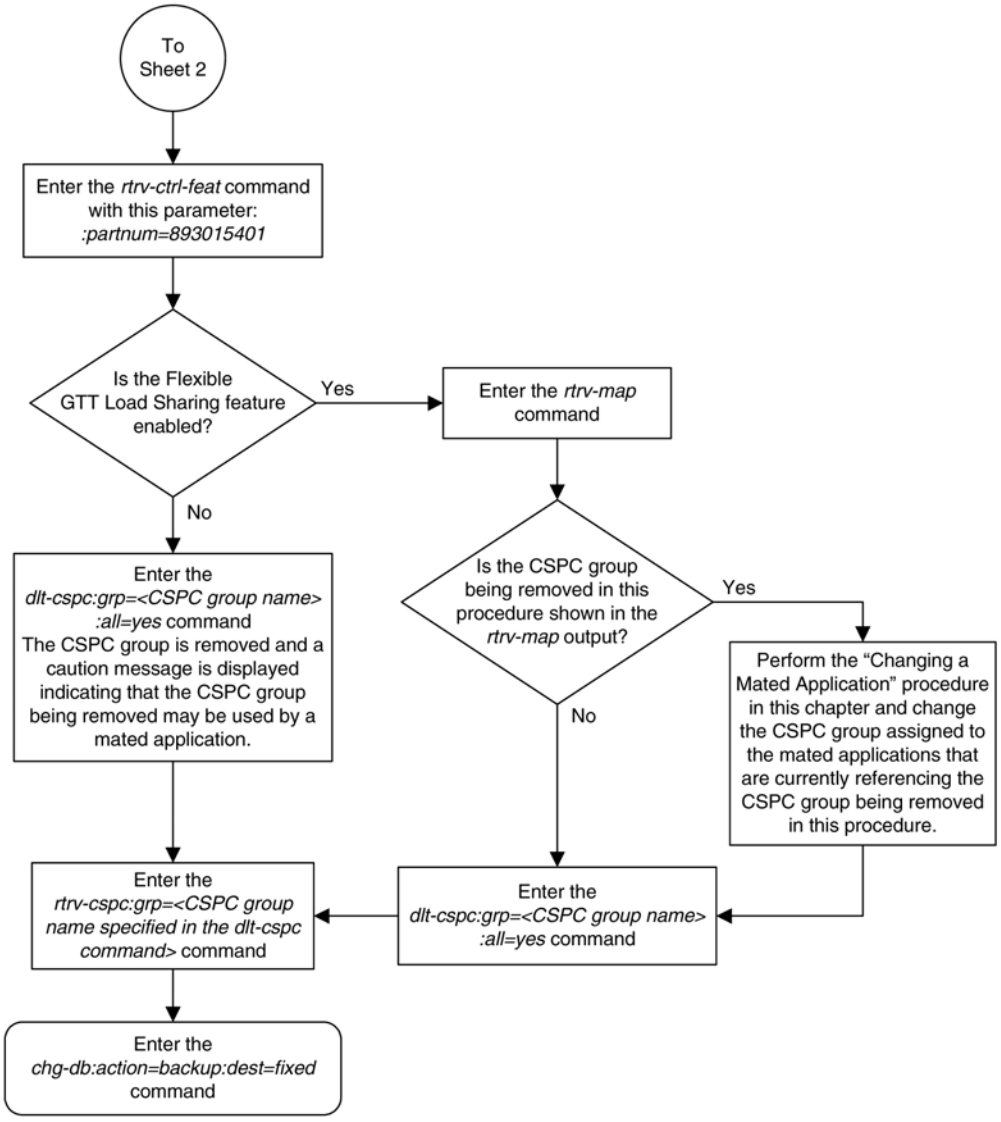
7. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

   These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 18: Removing a Concerned Signaling Point Code


Enter the rtrv-cspc command
Enter the rtrv-cspc:grp=<CSPC group name shown in the rtrv-cspc output> command
Is a concerned signaling point code group being removed?
Yes
No
Enter the dlt-cspc command with these parameters: :grp=<CSPC group name> :pc/pca/pci/pcn/pcn24=<point code being removed>
Enter the rtrv-cspc:grp=<CSPC group name specified in the dlt-cspc command> command
Was the last point code removed from the concerned signaling point code group?
Yes
Do you wish to leave this empty concerned signaling point code group in the database?
No
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No
Yes
Enter the chg-db:action=backup:dest=fixed command



Provisioning a Solitary Mated Application

This procedure is used to provision a solitary mated application in the database using the `ent-map` command. A solitary mated application contains only one entry. The `ent-map` command use these parameters to provision a solitary mated application.

`:pc/pca/pci/pcn/pcn24` – The point code of the signaling point that is to receive the message.

Note: The point codes can be either an ANSI point code (pc/pca), ITU-I or ITU-I spare point code (pci), a 14-bit ITU-N or 14-bit ITU-N spare point code (pcn), or a 24-bit ITU-N (`pcn24`) point code.

Note: Refer to Chapter 2, Configuring Destination Tables in the Database *Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

`:ssn` – Subsystem number – the subsystem address of the point code that is to receive the message.

`:grp` – The name of the concerned signaling point code group that contains the point codes that should be notified of the subsystem status. This parameter applies to both RPCs/SSNs.

`:sso` – Subsystem Status Option – defines whether the subsystem status option is on or off. This parameter allows the user the option to have the specified subsystem marked as prohibited even though an MTP-RESUME message has been received by the indicating that the specified point code is allowed. The `sso` parameter cannot be specified if the `pc/pca/pci/pcn/pcn24` value is the EAGLE 5 ISS's true point code, shown in the `rtrv-sid` output.

`:mapset` – The MAP set ID that the mated applications are assigned to. This parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled. If the Flexible GTT Load Sharing feature is enabled, the point code and subsystem specified for the global title translation must be assigned to the MAP set specified by this parameter. The status of the Flexible GTT Load Sharing feature is shown in the `rtrv-ctrl-feat` output. To enable the Flexible GTT Load Sharing feature, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure.

The `mapset` parameter has three values:

- `dflt` – to assign the MAP to the default MAP set.
- `new` – to assign the mated application to a new MAP set.
- the specific number of an existing MAP set if you are assigning the mated application to an existing MAP set. This value can be specified only with the `chg-map` command.

Refer to the Provisioning a MAP Set section for information on provisioning MAP sets.

The `ent-map` command also contains other parameters that can be used to provision mated applications, but cannot be used to provision a solitary mated applications. These parameters are: `mpc/mpca/mpci/mpcn/mpcn24`, `mssn`, `rc`, `materc`, `mrc`, `srm`. If you wish to use these parameters to provision mated applications, perform one of these procedures:

- *Provisioning a Dominant Mated Application* on page 142
- *Provisioning a Load Shared Mated Application* on page 189 (the `mrc` and `srm` parameters cannot be used with this procedure)
- *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223

The `rc` parameter can be specified for a solitary mated application, but since a solitary mated application contains only one entry, the `rc` parameter does not need to be specified. If the `rc` parameter is not specified, the `rc` value is set to 10.

If the Weighted GTT Load Sharing feature is enabled, shown by the columns `WT`, `%WT`, and `THR` in the `rtrv-map` output, the parameters `wt`, `mwt`, and `thr` cannot be specified for a solitary mated application. If you wish to use these parameters to provision a mated application, perform on of these procedures:

- *Provisioning a Dominant Mated Application* on page 142
- *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223

The examples in this procedure are used to add the mated applications shown in *Table 18: Solitary Mated Application Configuration Table* on page 114.

Table 18: Solitary Mated Application Configuration Table

Point Code	SSN	CSPC Group	SSO
007-007-007	251	grp05	on
006-006-006	250	grp15	off

If the Flexible GTT Load Sharing feature is not enabled, the mated application cannot be in the database. If the Flexible GTT Load Sharing feature is enabled, the mated applications can be in other MAP sets. Refer to the Provisioning a MAP Set section for information on provisioning MAP sets.

The point codes specified in the `ent-map` command (`pc/pca`, `pci`, `pcn`, or `pcn24`) must be either a full point code in the routing point code table or the EAGLE 5 ISS's true point code. Cluster point codes or network routing point codes cannot be specified with this command. The `rtrv-rte` command can be used to verify the point codes in the routing table. The point codes in the routing table are shown in the `DPCA`, `DPCI`, `DPCN`, or `DPCN24` fields of the `rtrv-rte` command output. The EAGLE 5 ISS's true point code is shown in the `PCA`, `PCI`, `PCN`, or `PCN24` fields of the `rtrv-sid` command output.

A solitary mated application can be provisioned with a point code that is assigned to other mated applications as long as the SSN is not assigned to other mated applications. A point code can be assigned to maximum of 12 different SSNs.

If the EAGLE 5 ISS's true point code is specified in the mated application and the Flexible GTT Load Sharing feature is enabled, the mated application containing the EAGLE 5 ISS's true point code can be assigned only to the default MAP set.

A mated application containing the LNP subsystem can contain only the EAGLE 5 ISS's ANSI true point code. The LNP feature must be enabled for a quantity greater than zero.

A mated application containing the INP subsystem can contain only the EAGLE 5 ISS's true14-bit ITU-N point code, 14-bit ITU-N spare point code, or 24-bit ITU-N point code. The INP or ANSI-41 INP Query feature must be enabled and turned on. The EAGLE 5 ISS can contain either 14-bit ITU-N point codes (spare or non-spare point codes) or 24-bit ITU-N point codes. Both types of point codes cannot be present on the EAGLE 5 ISS at the same time.

A mated application containing the EIR subsystem can contain only the EAGLE 5 ISS's true ITU-I point code, ITU-I spare point code, 14-bit ITU-N point code, 14-bit ITU-N spare point code, or 24-bit ITU-N point code. The EIR feature must be enabled and turned on. The EAGLE 5 ISS can contain either 14-bit ITU-N point codes (spare or non-spare point codes) or 24-bit ITU-N point codes. Both types of point codes cannot be present on the EAGLE 5 ISS at the same time.

A mated application containing the VFLEX subsystem can contain any of the EAGLE 5 ISS's true point codes. The V-Flex feature must be enabled and turned on.The EAGLE 5 ISS can contain either 14-bit ITU-N point codes (spare or non-spare point codes) or 24-bit ITU-N point codes. Both types of point codes cannot be present on the EAGLE 5 ISS at the same time.

A mated application containing the ATINPQ subsystem can contain only the EAGLE 5 ISS's true ANSI point code, ITU-I point code, ITU-I spare point code, 14-bit ITU-N point code, or 14-bit ITU-N spare point code. The ATINP feature must be enabled.

The format of the point codes in the CSPC group specified with the `grp` parameter must be the same as the point code specified with the `ent-map` command only if the ANSI-ITU-China SCCP Conversion feature is not enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (refer to the *Adding a Concerned Signaling Point Code* on page 100 procedure), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application. The status of the ANSI-ITU-China SCCP Conversion feature can be verified with the `rtrv-ctrl-feat` command.

If the `grp` and `sso` parameter values are specified, and the specified point code and SSN is assigned to multiple mated applications, the `grp` and `sso` values for all mated applications containing the specified point code and SSN will be changed to the values specified in this procedure.

The values of the `ssn` parameter must be from 2 to 255.

The EAGLE 5 ISS can contain 1024, 2000, or 3000 mated applications. The EAGLE 5 ISS default is 1024 mated applications. This quantity can be increased to 2000 by enabling the feature access key for part number 893-0077-01, or to 3000 by enabling the feature access key for part number 893-0077-10. For more information on enabling these feature access keys, refer to the *Enabling the XMAP Table Expansion Feature* on page 771 procedure.

Provisioning a MAP Set

The Flexible GTT Load Sharing feature provides the ability to define multiple load sharing sets in the MAP table where the same point code and subsystem can be assigned to different load sharing sets.

The MAP table contains specific load sharing sets, designated by numbers, and a default MAP set.

The Flexible Final GTT Load Sharing provides flexible load sharing for global title translations defined in the GTT table and not for the MPS based features. The MPS based features do not support the MAP set ID parameter. The MPS based features perform lookups for load sharing in the default MAP set and the GTT table. The entries in the GTT table can be linked to a MAP set ID, allowing lookups in a specific MAP set other than the default MAP set.

Any MAP entries that were provisioned in the database before the Flexible GTT Load Sharing feature is enabled are placed in the default MAP set when the Flexible GTT Load Sharing feature is enabled.

To provision entries in the default MAP set, the `mapset=dflt` parameter must be specified with the `ent-map` command.

To provision entries in a new MAP set, the `mapset=new` parameter must be specified with the `ent-map` command. The `mapset=new` parameter can be specified only with the `ent-map` command. When the `ent-map` command is executed with the `mapset=new` parameter, the new MAP set ID is automatically generated and displayed in the output of the `ent-map` command as follows.

```
New MAPSET Created : MAPSETID = <new MAP set ID>
```

The default MAP set can contain multiple MAP groups. The point code can appear in only one MAP group in the default MAP set.

The point code provisioned in a MAP set can be provisioned in multiple MAP sets. All the point codes in a MAP set must be different.

Canceling the `RTRV-MAP` Command

Because the rtrv-map command used in this procedure can output information for a long period of time, the rtrv-map command can be canceled and the output to the terminal stopped. There are three ways that the rtrv-map command can be canceled.

- Press the F9 function key on the keyboard at the terminal where the rtrv-map command was entered.
- Enter the canc-cmd without the trm parameter at the terminal where the rtrv-map command was entered.
- Enter the canc-cmd:trm=<xx>, where <xx> is the terminal where the rtrv-map command was entered, from another terminal other that the terminal where the rtrv-map 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, refer to the *Commands Manual*.

1. Display the mated applications in the database using the rtrv-map command.

   If the Flexible GTT Load Sharing feature is not enabled, this is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

MAP TABLE IS   2 % FULL    (25 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF
255-001-000                250 10  SOL --- --- grp01    ON
255-001-000                251 10  SHR --- --- grp01    OFF
             253-001-002   254 10  SHR --- --- grp01    OFF
255-001-000                252 10  SOL --- --- grp01    ON
255-001-000                253 10  SHR --- --- grp01    OFF
             253-001-004   254 10  SHR --- --- grp01    OFF
255-001-001                255 10  DOM YES YES grp01    ON
             253-001-005   254 20  DOM YES YES grp01    ON
255-001-001                250 10  DOM YES YES grp01    OFF
             253-001-001   254 20  DOM YES YES grp01    OFF
255-001-002                251 10  SHR --- --- grp01    OFF
             255-001-002   254 10  SHR --- --- grp01    OFF
255-001-002                252 10  DOM YES YES grp01    ON
             255-001-003   254 20  DOM YES YES grp01    ON
255-001-002                253 10  SHR --- --- grp01    ON
             255-001-004   254 10  SHR --- --- grp01    ON

PCI          Mate PCI     SSN RC MULT SRM MRC GRP NAME SSO
2-001-2                   255 10  DOM YES YES grp03    OFF
             2-001-1      254 20  DOM YES YES grp03    OFF
PCN          Mate PCN     SSN RC MULT SRM MRC GRP NAME SSO
00347                     253 10  SHR --- --- grp05    OFF
             01387        254 10  SHR --- --- grp05    OFF
```

Note: If the Weighted GTTLoad Sharing feature is enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output as shown in the following example.

```
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
002-002-007                50 10  COM YES YES grp01    OFF 10  33  20
             002-002-008   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-009   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-010   30 20  COM YES YES grp01    OFF 10  50  20
             002-002-011   30 20  COM YES YES grp01    OFF 10  50  20

255-001-000               250 10  SOL --- --- grp01    ON  -- ---  --

255-001-000               251 10  SHR --- --- grp01    OFF  10  50  20
             253-001-002  254 10  SHR --- --- grp01    OFF  10  50  20

255-001-000               252 10  SOL --- --- grp01    ON  -- ---  --

255-001-000               253 10  SHR --- --- grp01    OFF  10  50  20
             253-001-004  254 10  SHR --- --- grp01    OFF  10  50  20

255-001-001               255 10  DOM YES YES grp01    ON  -- ---  --
             253-001-005  254 20  DOM YES YES grp01    ON  -- ---  --
```

If the Flexible GTT Load Sharing feature is enabled, this is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

MAP TABLE IS   1 % FULL    (20 of 36000)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=DFLT
255-001-000               250 10  SOL --- --- grp01    ON
MAPSET ID=1
255-001-000               251 10  SHR --- --- grp01    OFF
             253-001-002  254 10  SHR --- --- grp01    OFF
MAPSET ID=2
255-001-000               252 10  SOL --- --- grp01    ON
MAPSET ID=DFLT
255-001-000               253 10  SHR --- --- grp01    OFF
             253-001-004  254 10  SHR --- --- grp01    OFF
MAPSET ID=3
255-001-001               255 10  DOM YES YES grp01    ON
             253-001-005  254 20  DOM YES YES grp01    ON
MAPSET ID=4
255-001-001               250 10  DOM YES YES grp01    OFF
             253-001-001  254 20  DOM YES YES grp01    OFF
MAPSET ID=DFLT
255-001-002               251 10  SHR --- --- grp01    OFF
             255-001-002  254 10  SHR --- --- grp01    OFF
MAPSET ID=5
255-001-002               252 10  DOM YES YES grp01    ON
             255-001-003  254 20  DOM YES YES grp01    ON
MAPSET ID=6
255-001-002               253 10  SHR --- --- grp01    ON
             255-001-004  254 10  SHR --- --- grp01    ON
MAPSET ID=7
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF
PCI          Mate PCI     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=8
2-001-2                   255 10  DOM YES YES grp03    OFF
```

```
             2-001-1      254 20  DOM YES YES grp03    OFF
MAPSET ID=9
00347                     253 10  SHR --- --- grp05    OFF
             01387        254 10  SHR --- --- grp05    OFF
```

Note: If the Flexible GTTLoad Sharing and Weighted GTTLoad Sharing features are enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output as shown in the following example.

```
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR MAPSET
 ID=7
002-002-007                50 10  COM YES YES grp01    OFF 10  33  20
             002-002-008   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-009   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-010   30 20  COM YES YES grp01    OFF 10  50  20
             002-002-011   30 20  COM YES YES grp01    OFF 10  50  20

MAPSET ID=DFLT
255-001-000               250 10  SOL --- --- grp01    ON  -- ---  --

MAPSET ID=1
255-001-000               251 10  SHR --- --- grp01    OFF  10  50  20
             253-001-002  254 10  SHR --- --- grp01    OFF  10  50  20

MAPSET ID=2
255-001-000               252 10  SOL --- --- grp01    ON  -- ---  --

MAPSET ID=DFLT
255-001-000               253 10  SHR --- --- grp01    OFF  10  50  20
             253-001-004  254 10  SHR --- --- grp01    OFF  10  50  20

MAPSET ID=3
255-001-001               255 10  DOM YES YES grp01    ON  -- ---  --
             253-001-005  254 20  DOM YES YES grp01    ON  -- ---  --
```

Note: If the maximum number of mated applications shown in the `rtrv-map` output in step 1 is 1024, 2000, or 3000, skip step 2 and go to step 3.

2. To verify the number of different point codes that can be provisioned for mated applications, enter the `rtrv-tbl-capacity` command.

   If the maximum number of mated applications shown in the `rtrv-map` output in step 1 is 36000, the Flexible GTT Load Sharing feature is enabled.

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

   Although the `rtrv-map` output shows there can be 36000 entries, a maximum of 1024, 2000, or 3000 different point codes (depending on whether the XMAP Table Expansion feature is enabled for 2000 or 3000 mated applications) can be provisioned for mated applications.

   The following is an example of the possible output.

```
rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0

MAP table is (3000 of 3000) 100% full
```

   Note: If the `rtrv-map` output in step 1 or the `rtrv-tbl-capacity` output in step 2 shows that the maximum number of mated applications is 3000, and the current number of provisioned mated applications is 3000, no new point codes can be used to provision mated applications. Skip step 3 and go to step 4.

Note: If the If the `rtrv-map` output in step 1 or the `rtrv-tbl-capacity` output in step 2 shows that the maximum number of mated applications is either 1024 or 2000, and the mated application being added increases the number beyond 1024 or 2000, do not perform step 3, but perform the *Enabling the XMAP Table Expansion Feature* on page 771 procedure and enable XMAP Table Expansion feature for 3000 mated applications. Then go to step 4. If the maximum number of mated applications is not increased, no new point codes can be used to provision mated applications.

Note: If the `rtrv-map` output in step 1 or the `rtrv-tbl-capacity` output in step 2 shows that the maximum number of mated applications is either 1024, 2000, or 3000 and the mated application being added will not increase the number beyond the quantity shown in the `rtrv-map` output in step 1 or the `rtrv-tbl-capacity` output in step 2, skip step 3 and go to step 4.

3. Display the status of the XMAP Table Expansion feature by entering the `rtrv-ctrl-feat` 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
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
XGTT Table Expansion      893006101  off     ----
XMAP Table Expansion      893007701  off     ----
Large System # Links      893005910  on      2000
HC-MIM SLK Capacity       893012707  on      64

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 XMAP Table Expansion controlled feature is not enabled or on, refer to the *Enabling the XMAP Table Expansion Feature* on page 771 procedure and enable XMAP Table Expansion controlled feature for either 2000 or 3000 mated applications as required. Then go to step 4.

   Note: If a new point code is being provisioned for the mated application, skip step 4 and go to step 5.

4. A mated application can be provisioned with a point code that is assigned to other mated applications as long as the SSN is not assigned to other mated applications. A point code can be assigned to maximum of 12 different SSNs.

   Verify the number of SSNs assigned to the point code that will be specified for the mated application in this procedure by entering the `rtrv-map` command with the point code of the new mated application. For this example, enter this command.

   `rtrv-map:pca=255-001-000`

This is an example of the possible output.

```
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
255-001-000               250 10  SOL --- --- grp01    ON
255-001-000               251 10  SHR --- --- grp01    OFF
             253-001-002  254 10  SHR --- --- grp01    OFF
255-001-000               252 10  SOL --- --- grp01    ON
255-001-000               253 10  SHR --- --- grp01    OFF
             253-001-004  254 10  SHR --- --- grp01    OFF
```

If the Flexible GTTLoad Sharing feature is enabled, the MAPSETIDs for the mated applications are shown in the `rtrv-map` output.

If the Weighted GTT Load Sharing feature is enabled and turned, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output.

If the point code is assigned to less than 12 different SSNs, then the existing point code in the `rtrv-map` output can be used to provision the mated application. Go to step 5.

If the point code is assigned to 12 different SSNs, another existing point code in the `rtrv-map` output or a new point code must be used to provision the mated application. If an existing point code in the `rtrv-map` output will be used to provision the mated application, repeat this step for that point code. Then go to step 5.

If a new point code will be used to provision the mated application, go to step 5.

If the point code is assigned to 12 different SSNs, and neither an existing point code in the `rtrv-map` output nor a new point code will be used to provision the mated application, then this procedure cannot be performed.

Note: If a concerned signaling point code (CSPC) group is not being assigned to the mated application, skip steps 5 and 6, and go to step 7.

5. Display the point codes in the CSPC group that you wish to assign to the mated application by first entering the `rtrv-cspc` command with no parameters.

   This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:48:31  GMT  EAGLE5 37.0.0
CSPC GRP
NETWORK
PERCENT FULL
grp01      ANSI                    6%
grp02      ITU-I                   9%
grp03      ITU-N                  12%
grp04      ANSI                   15%
grp05      ANSI                   15%
grp10      ANSI                   15%
grp15      ANSI                   15%
```

   If the desired CSPC group is shown in the `rtrv-cspc` output, re-enter the `rtrv-cspc` command with the CSPC group name. For this example, enter these commands.

   `rtrv-cspc:grp=grp05`

   This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:48:31  GMT  EAGLE5 37.0.0
CSPC GRP      PCA
grp05         005-005-005
              007-007-007
```

```
              008-008-008
              009-009-009
```

`rtrv-cspc:grp=grp10`

This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:59:31  GMT  EAGLE5 37.0.0
CSPC GRP      PCA
grp10         003-003-003
              004-004-004
              008-008-008
              009-009-009
```

`rtrv-cspc:grp=grp15`

This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:48:31  GMT  EAGLE5 37.0.0
CSPC GRP      PCA
grp15         005-005-005
              006-006-006
              008-008-008
              009-009-009
```

Note: If the ANSI-ITU-China SCCP Conversion feature is enabled, then point codes of multiple network types can be displayed in the `rtrv-cspc` output, if point codes of multiple network types are assigned to the CSPC group.

If the CSPC group is not in the database, or if the required point code is not assigned to the CSPC group, perform the *Adding a Concerned Signaling Point Code* on page 100 procedure and add the required CSPC group or point code to the database.

Note: If the output of the `rtrv-cspc` command performed in step 5 shows CSPC groups containing a mixture of point code types, or if the new CSPC group that was added in step 5 contains a mixture of point code types, skip step 6 and go to step 7.

6. The format of the point codes in the CSPC group specified with the `grp` parameter must be the same as the primary point code specified with the `ent-map` command only if the ANSI-ITU-China SCCP Conversion feature is not enabled.

   If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (refer to the *Adding a Concerned Signaling Point Code* on page 100 procedure), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application.

   Verify the status of the ANSI-ITU-China SCCP Conversion feature by entering this command:

   `rtrv-ctrl-feat:partnum=893012001`

   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
SCCP Conversion           893012001  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 ANSI-ITU-China SCCP Conversion feature is not enabled, perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure to enable the ANSI-ITU-China SCCP Conversion feature.

7. If the MAPSET column is shown in the `rtrv-map` output in step 1, the Flexible GTT Load Sharing feature is enabled. Go to step 8.

   If the MAPSET column is not shown in step 1 and you do not wish to provision MAP sets in this procedure, skip this step and go to step 8.

   If the MAPSET column is not shown in step 1 and you wish to provision MAP sets in this procedure, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure and enable the Flexible GTT Load Sharing feature. After the Flexible GTT Load Sharing feature is enabled, go to step 8.

   Note: If the EAGLE 5 ISS's point code and subsystem number are being assigned to the mated application, skip step 8 and go to step 9.

8. Display the destination point codes in the database by entering the `rtrv-dstn` command. This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN          DOMAIN
   001-207-000   ----------- no  ---   -------      -----------     SS7
   001-001-001   ----------- no  ---   -------      -----------     SS7
   001-001-002   ----------- no  ---   -------      -----------     SS7
   001-005-000   ----------- no  ---   -------      -----------     SS7
   001-007-000   ----------- no  ---   -------      -----------     SS7
   008-012-003   ----------- no  ---   -------      -----------     SS7
   003-002-004   ----------- no  ---   -------      -----------     SS7
   009-002-003   ----------- no  ---   -------      -----------     SS7
   010-020-005   ----------- no  ---   -------      -----------     SS7

   DPCI          CLLI        BEI ELEI  ALIASI       ALIASN          DOMAIN
   1-207-0       ----------- no  ---   -------      -----------     SS7
   0-015-0       ----------- no  ---   -------      -----------     SS7
   0-017-0       ----------- no  ---   -------      -----------     SS7
   1-011-1       ----------- no  ---   -------      -----------     SS7
   1-011-2       ----------- no  ---   -------      -----------     SS7

   DPCN          CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

   DPCN24        CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the required point code is not shown in the `rtrv-dstn` output, perform the "Adding a Destination Point Code" procedure in the *Database Administration Manual - SS7* to add the required point code. A proxy point code cannot be assigned to the point code.

After the new point code has been added, skip steps 9 through 13 and perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database. After the route has been added, continue the procedure with step 14.

9. Display the point code that will be assigned to the mated application by using the `rtrv-dstn` command and specifying the point code. For this example, enter this command.

   `rtrv-dstn:dpca=010-020-005`

   This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
   010-020-005   ----------- no  ---   -------      -----------    SS7

   PPC           NCAI           PRX
   009-002-003   ----           no

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

   If the adjacent point code is not shown in the `rtrv-dstn` command output, the following output is displayed.

```
DPCA          CLLI        BEI ELEI  ALIASI       ALIASN/N24    DOMAIN

No destinations meeting the requested criteria were found

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

   A proxy point code (a point code value is shown in the `PPC` column) cannot be assigned to the point code. If a proxy point code is shown in this step, choose another point code from the `rtrv-dstn` output in the previous step and repeat this step.

   After the new point code has been added, skip steps 10 through 13 and perform one of the Adding a Route procedures in the Database *Administration Manual - SS7* and add the required route to the database. After the route has been added, continue the procedure with step14.

10. Enter the `rtrv-rte` command with the `dpc` parameter specifying the point code to be used with the `ent-map` command to verify whether or not the point code is the DPC of a route.

    For this example, enter these commands.

    `rtrv-rte:dpca=006-006-006`

    This is an example of the possible output.

```
rlghncxa03w 07-05-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA          ALIASI     ALIASN/N24    LSN        RC    APCA
   006-006-006 ---------- --------------   ls06       10    006-006-006
                                              RTX:No  CLLI=ls06clli
```

    `rtrv-rte:dpca=007-007-007`

    This is an example of the possible output.

```
rlghncxa03w 07-05-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA          ALIASI     ALIASN/N24    LSN        RC    APCA
   007-007-007 ---------- --------------   ls03       10    007-007-007
                                           ls02       30    150-150-150
                                           lsa2       50    200-200-200
```

```
                                          lsa5       50    066-030-100
                                             RTX:No  CLLI=ls03clli
```

If the point code is not shown in the `rtrv-rte` output, perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database. After this step is performed, skip steps 11 through 13 and go to step 14 .

Note: If the `sso` parameter will be specified for the mated application, skip steps 11 through 13 and go to step 14 . The EAGLE 5 ISS's point code and LNP, EIR, V-Flex, or INP subsystem cannot be assigned to a mated application using the `sso` parameter.

11. Display the EAGLE 5 ISS self-identification, using the `rtrv-sid` command.

The EAGLE 5 ISS's true point code is shown in either the `PCA`, `PCI`, `PCN`, or `PCN24` fields. This is an example of the possible output.

```
rlghncxa03w 07-05-10 11:43:04 GMT EAGLE5 37.0.0
   PCA             PCI          PCN                CLLI              PCTYPE
   010-020-030     1-023-1      12-0-14-1          rlghncxa03w       OTHER
                  s-1-023-1    s-12-0-14-1
   CPCA
   001-001-001       002-002-003       002-002-004      002-002-005
   002-002-006       002-002-007       002-002-008      002-002-009
   004-002-001       004-003-003       050-060-070

   CPCI
   1-001-1           1-001-2           1-001-3          1-001-4
   1-002-1           1-002-2           1-002-3          1-002-4
   2-001-1           7-222-7

   CPCN
   2-0-10-3          2-0-11-0          2-0-11-2          2-0-12-1
   2-2-3-3           2-2-4-0           10-14-10-1
```

Note: If the `rtrv-ctrl-feat` output in step 3 shows that either the LNPor ATINPQfeature is enabled, or the EIR, V-Flex , INP, or ANSI-41 INP Query feature is enabled and turned on, skip step 12 and go to step 13.

12. Verify whether or not either the LNP or ATINPQ feature is enabled, or the EIR, INP, V-Flex , or ANSI-41 INP Query feature is enabled and turned on by entering the `rtrv-ctrl-feat` command, or by examining the `rtrv-ctrl-feat` output from step 3, if step 3 was performed.

The entry `LNP TNs` is shown in the `rtrv-ctrl-feat` output with a quantity greater than zero if the LNP feature is enabled. If the EIR feature is enabled and turned on, the entry `EIR` is shown in the `rtrv-ctrl-feat` output and the status of the EIR feature should be on. If the V-Flex feature is enabled and turned on, the entry `VFLEX` is shown in the `rtrv-ctrl-feat` output and the status of the V-Flex feature should be on. If the ATINP feature is enabled, the entry `ATINP` is shown in the `rtrv-ctrl-feat` output. If the INP feature is enabled and turned on, the entry `INP` is shown in the `rtrv-ctrl-feat` output and the status of the INP feature should be on. If the ANSI-41 INP Query feature is enabled and turned on, the entry `ANSI-41 INP Query` is shown in the `rtrv-ctrl-feat` output and the status of the ANSI-41 INP Query feature should be on. If the LNP or ATINPQ feature is enabled, or if the EIR, INP, V-Flex, or ANSI-41 INP Query feature is enabled and turned on, skip step 13 and go to step 14. .

13. Enable either the INP, ANSI-41 INP Query, EIR, V-Flex , ATINPQ, or LNP features, depending on which subsystem you wish to use.

To use the INP subsystem, enable and turn on either the INP or ANSI-41 INP Query feature, perform the procedures in the *Feature Manual* - INP/AINPQ .

To use the LNP subsystem, enable the LNP feature, perform the procedures in the LNP *Feature Activation Guide*.

To use the EIR subsystem, enable and turn on the EIR feature, perform the procedures in the *Feature Manual - EIR*.

To use the V-Flex subsystem, enable and turn on the V-Flex feature, perform the procedures in the *Feature Manual - V-Flex*.

To use the ATINPQ subsystem, enable the ATINP feature, perform the procedures in the *Feature Manual - ATINP*.

Note: If the LNP feature is enabled, the INP, ANSI-41 INP Query, V-Flex, ATINPQ, or EIR features cannot be enabled.

14. Add the mated application to the database using the `ent-map` command.

If the Flexible GTT Load Sharing feature is not enabled for this example, enter these commands.

```
ent-map:pca=006-006-006:ssn=250:grp=grp15:sso=off
```

```
ent-map:pca=007-007-007:ssn=251:grp=grp05:sso=on
```

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

```
rlghncxa03w 07-05-07  11:44:13  GMT  EAGLE5 37.0.0
ENT-MAP:  MASP A - COMPLTD
```

If the Flexible GTT Load Sharing feature is enabled for this example, enter these commands.

```
ent-map:pca=006-006-006:ssn=250:grp=grp15:sso=off:mapset=new
```

```
ent-map:pca=007-007-007:ssn=251:grp=grp05:sso=on:mapset=dflt
```

If the Flexible GTT Load Sharing feature is enabled when each of these commands have successfully completed, and a new MAP set was created, a message similar to the following should appear.

```
rlghncxa03w 07-05-07  11:44:13  GMT  EAGLE5 37.0.0
New MAPSET Created : MAPSETID = 9
ENT-MAP:  MASP A - COMPLTD
```

If the Flexible GTT Load Sharing feature is enabled when each of these commands have successfully completed, and the mated application was added to the default MAP set, this message should appear.

```
rlghncxa03w 07-05-07  11:44:13  GMT  EAGLE5 37.0.0
ENT-MAP:  MASP A - COMPLTD
```

Note:

- If the EAGLE 5 ISS's point code and subsystem number is being assigned to the mated application, and if the Flexible GTTLoad Sharing feature is enabled, the EAGLE 5 ISS's point code and subsystem number can be assigned only to the default MAP set using the `mapset=dflt` parameter.
- To create a solitary mated application, the only parameters that can be specified are `pc/pca/pci/pcn/pcn24`, `ssn`, `rc`, and `grp`. The `rc` parameter can be specified, but does not have to. If the `rc` parameter is not specified, its value will be 10.
- The EIR subsystem can be assigned to mated applications containing an ITU-I EAGLE 5 ISS point code and to another mated application containing either a 14-bit ITU-N EAGLE

5 ISS point codeor a 24-bit ITU-N EAGLE 5 ISS point code. The ITU-N point code can be either a 14-bit or a 24-bit ITU-N point code. Both types of point codes cannot be specified. Perform this step as necessary to provision an ITU-I and either a 14-bit ITU-N or a 24-bit ITU-N mated application containing the EIR subsystem.

- The VFLEX subsystem can be assigned to mated applications containing an ANSI, ITU-I, and either a 14-bit ITU-N or a 24-bit ITU-N EAGLE 5 ISS point code. The ITU-N point code can be either a 14-bit or a 24-bit ITU-N point code. Both types of point codes cannot be specified. Perform this step as necessary to provision an ANSI, ITU-I, and either a 14-bit ITU-N or a 24-bit ITU-N mated application containing the VFLEX subsystem.
- The ATINPQ subsystem can be assigned to mated applications containing an ANSI, ITU-I, and a 14-bit ITU-N EAGLE 5 ISS point code. Perform this step as necessary to provision an ANSI, ITU-I, and a 14-bit ITU-N mated application containing the ATINPQ subsystem.
- The format of the point codes in the CSPC group specified with the `grp` parameter must be the same as the primary point code specified with the `ent-map` command only if the ANSI - ITU-China SCCP Conversion feature is not enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (refer to the *Adding a Concerned Signaling Point Code* on page 100 procedure), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application.
- If the Flexible GTTLoad Sharing is enabled, the `mapset` parameter must be specified with the `ent-map` command.

  If the Flexible GTT Load Sharing is not enabled, the `mapset` parameter cannot be specified with the `ent-map` command.

  To provision entries in the default MAP set, the `mapset=dflt` parameter must be specified with the `ent-map` command.

  To provision entries in a new MAP set, the `mapset=new` parameter must be specified with the `ent-map` command. The `mapset=new` parameter can be specified only with the `ent-map` command. When the `ent-map` command is executed with the `mapset=new` parameter, the new MAP set ID is automatically generated and displayed in the output of the `ent-map` command as follows.

  ```
  New MAPSET Created : MAPSETID = <new MAP set ID>
  ```

  The default MAP set can contain multiple MAP groups. Each group in the default MAP set can contain a maximum of 32 point code and subsystem entries. The point code and subsystem entry can appear only once in the default MAP set, so the point code and subsystem entry can appear in only one MAP group in the default MAP set.

  The point code and subsystem entry provisioned in a MAP set can be provisioned in multiple MAPsets. If a point code and subsystem entry is provisioned in different MAP sets, the relative cost value of the entry in each MAP set can be different. All the point code and subsystem entries in a MAP set, including the default MAP set, must be different.
- If the Weighted GTTLoad Sharing feature is enabled, shown by the columns `WT`, `%WT`, and `THR` in the `rtrv-map` output, the parameters `wt`, `mwt`, and `thr` cannot be specified for a solitary mated application.

15. Verify the changes using the `rtrv-map` command with the primary point code and subsystem specified in step 14

    If the `mapset=dflt` parameter was specified in step 14 , the `mapset=dflt` parameter should be specified with the `rtrv-map` command.

If a new MAP set was created in step 14 , the `mapset` parameter should be specified with the `rtrv-map` command. The value for the mapset parameter should be the MAP set ID generated in step 14 . If the mated application was added to an existing MAP set in step 14 , the `mapset` parameter and value specified in step 14 should be specified with the `rtrv-map` command.

If the Flexible GTT Load Sharing feature is not enabled for this example, enter these commands.

`rtrv-map:pca=006-006-006:ssn=250`

This is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
006-006-006               250 10  SOL --- --- grp15    OFF
```

`rtrv-map:pca=007-007-007:ssn=251`

This is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
007-007-007               251 10  SOL --- --- grp05    ON
```

Note: If the Weighted GTTLoad Sharing feature is enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output.

If the Flexible GTT Load Sharing feature is enabled for this example, enter these commands.

`rtrv-map:pca=006-006-006:ssn=250:mapset=10`

This is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

MAP TABLE IS   1 % FULL    (37 of 36000)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=10
006-006-006               250 10  SOL --- --- grp15    OFF
```

`rtrv-map:pca=007-007-007:ssn=251:mapset=dflt`

This is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0
MAP TABLE IS   1 % FULL    (37 of 36000)
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=DFLT
007-007-007               251 10  SOL --- --- grp05    ON
```

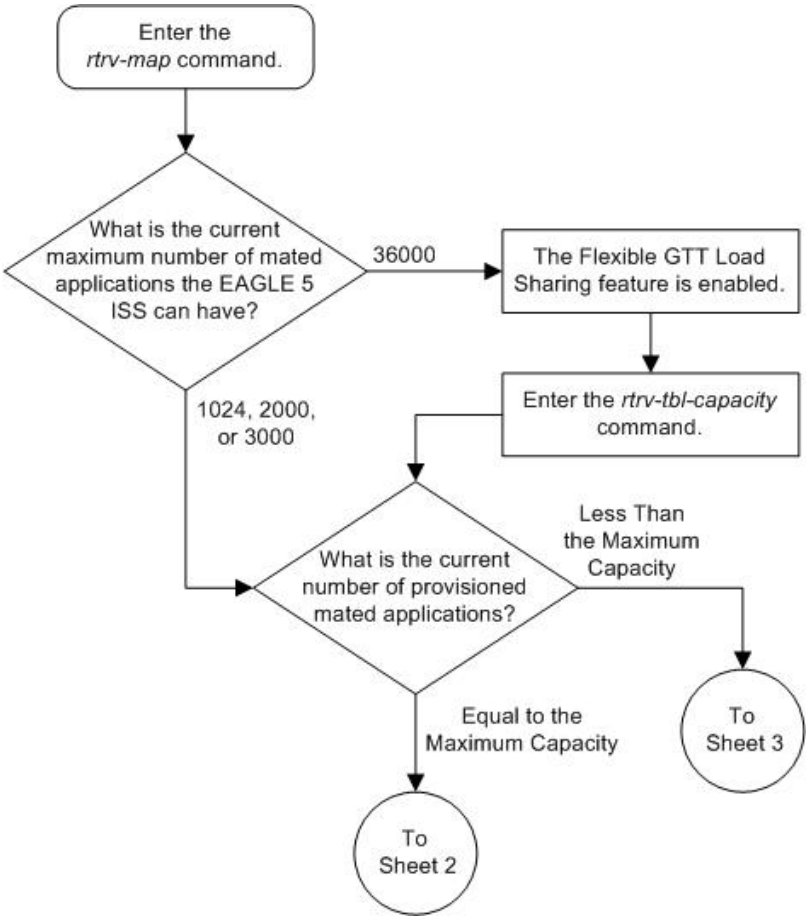
Note: If the Weighted GTTLoad Sharing feature is enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output.

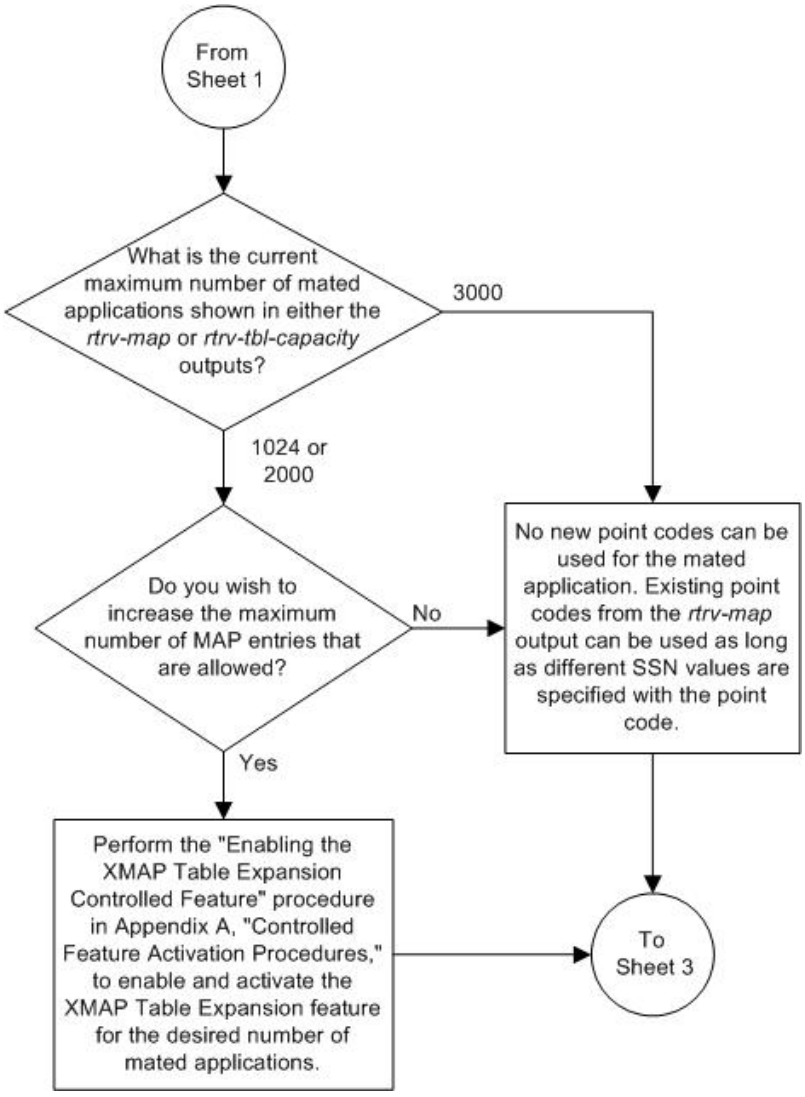
16. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

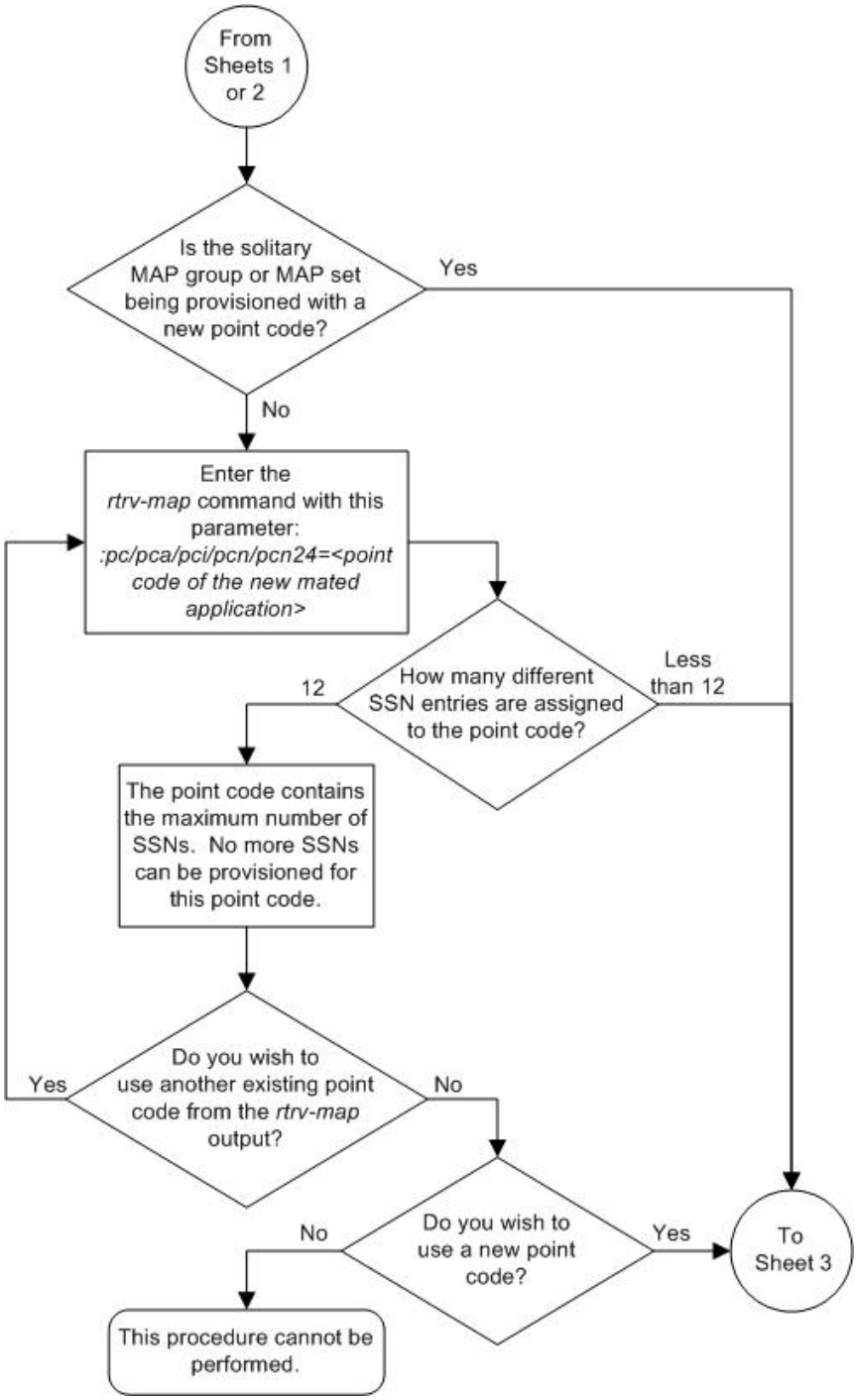
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

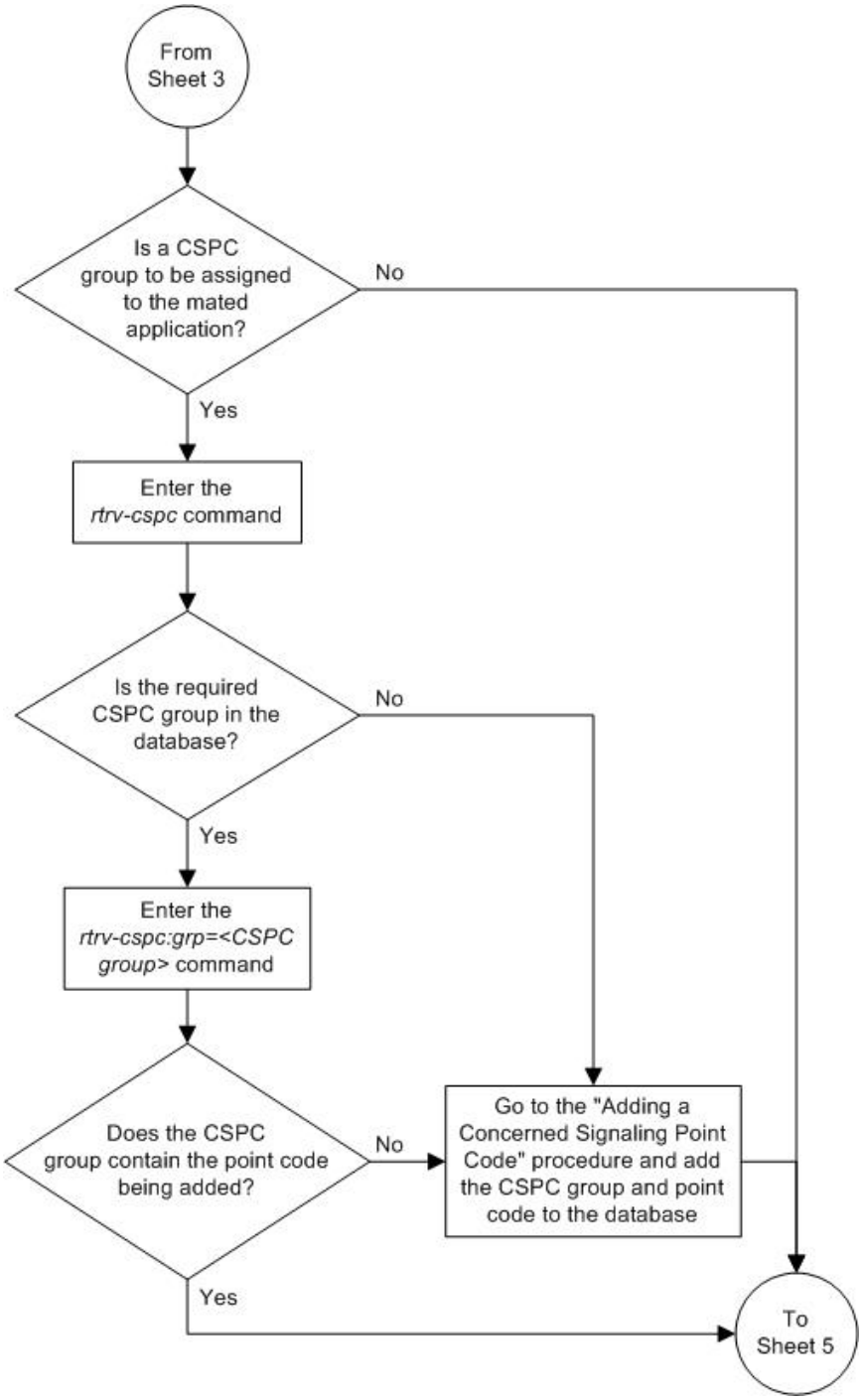
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

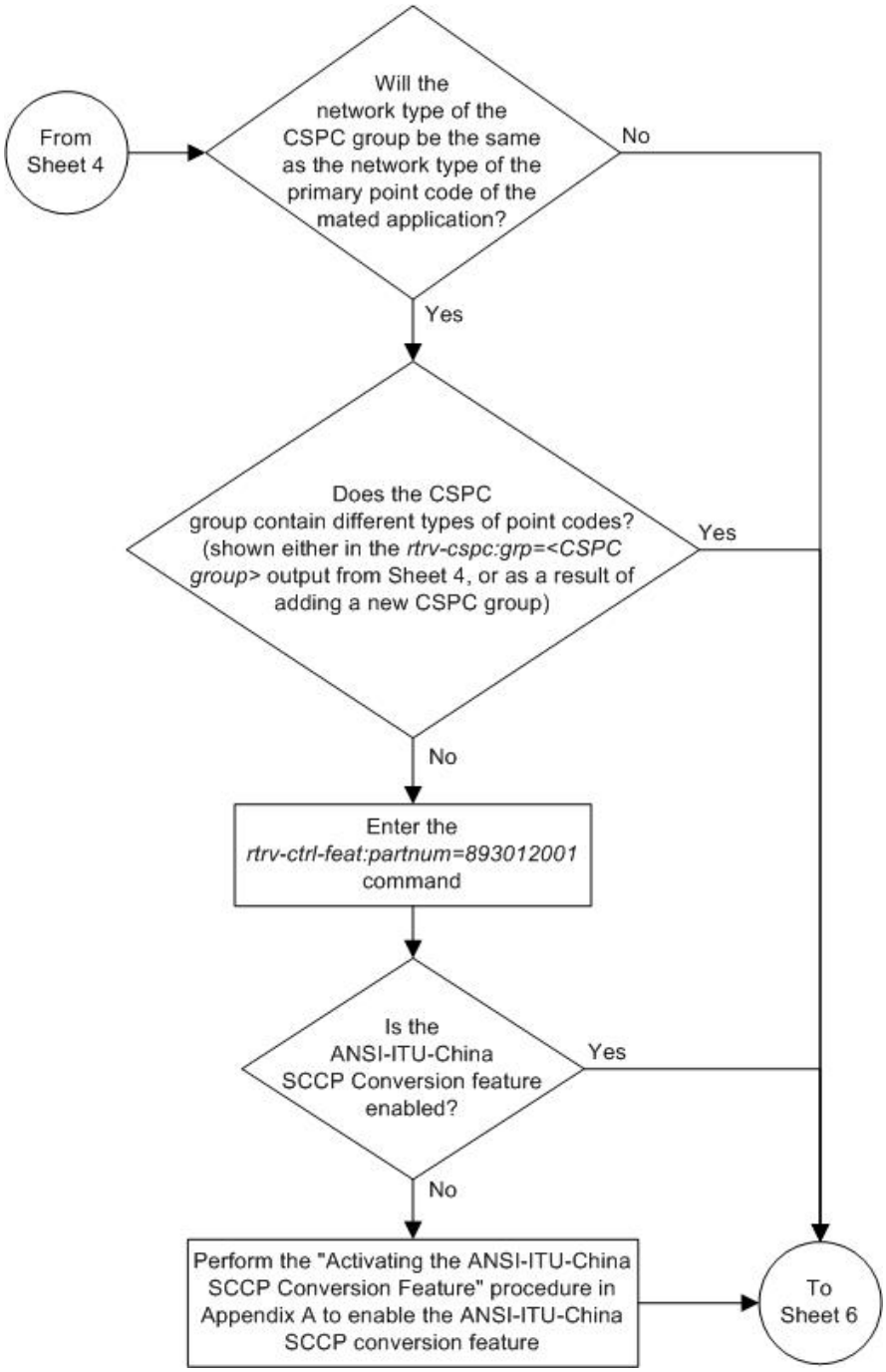
Figure 19: Provisioning a Solitary Mated Application

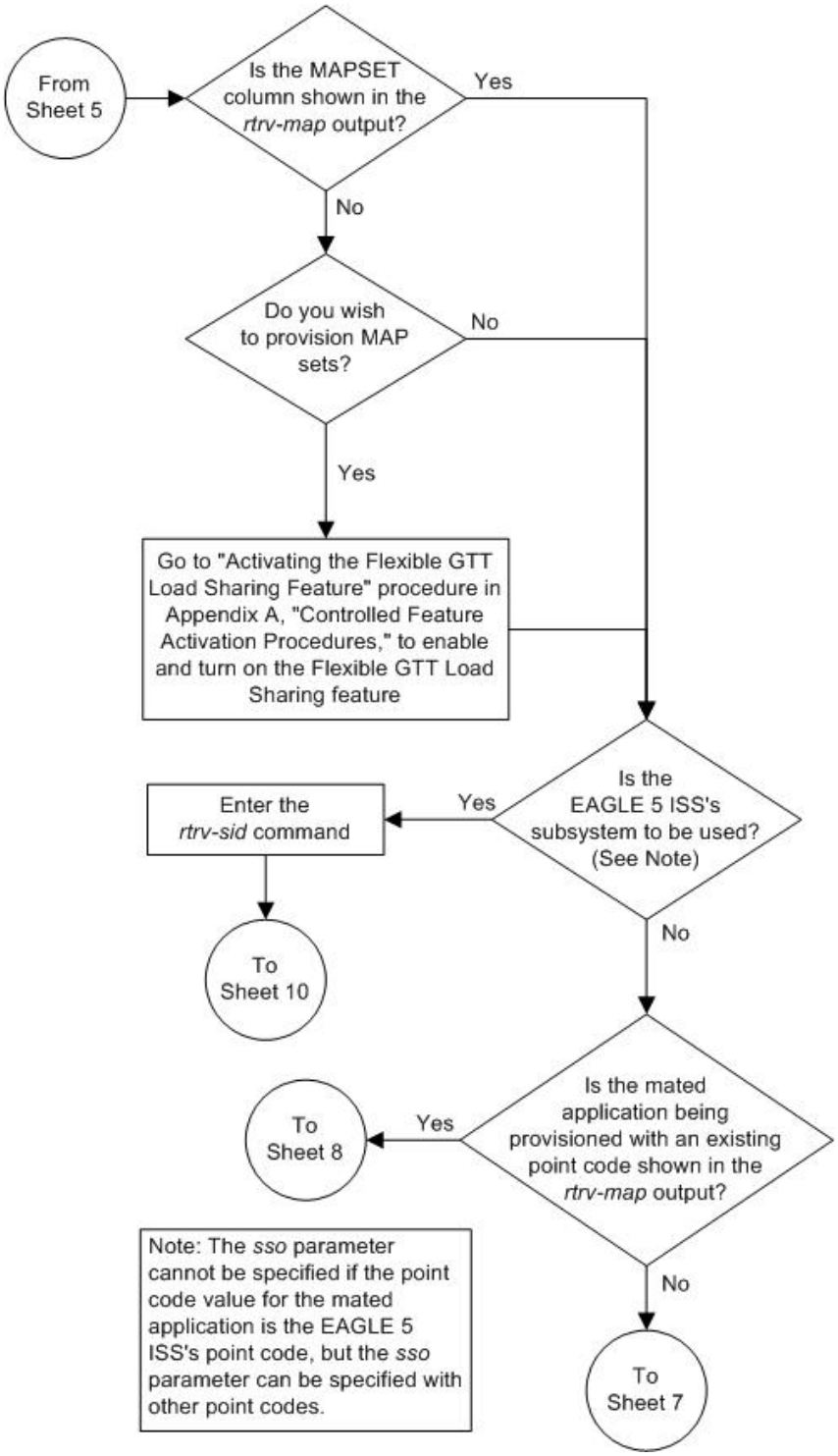


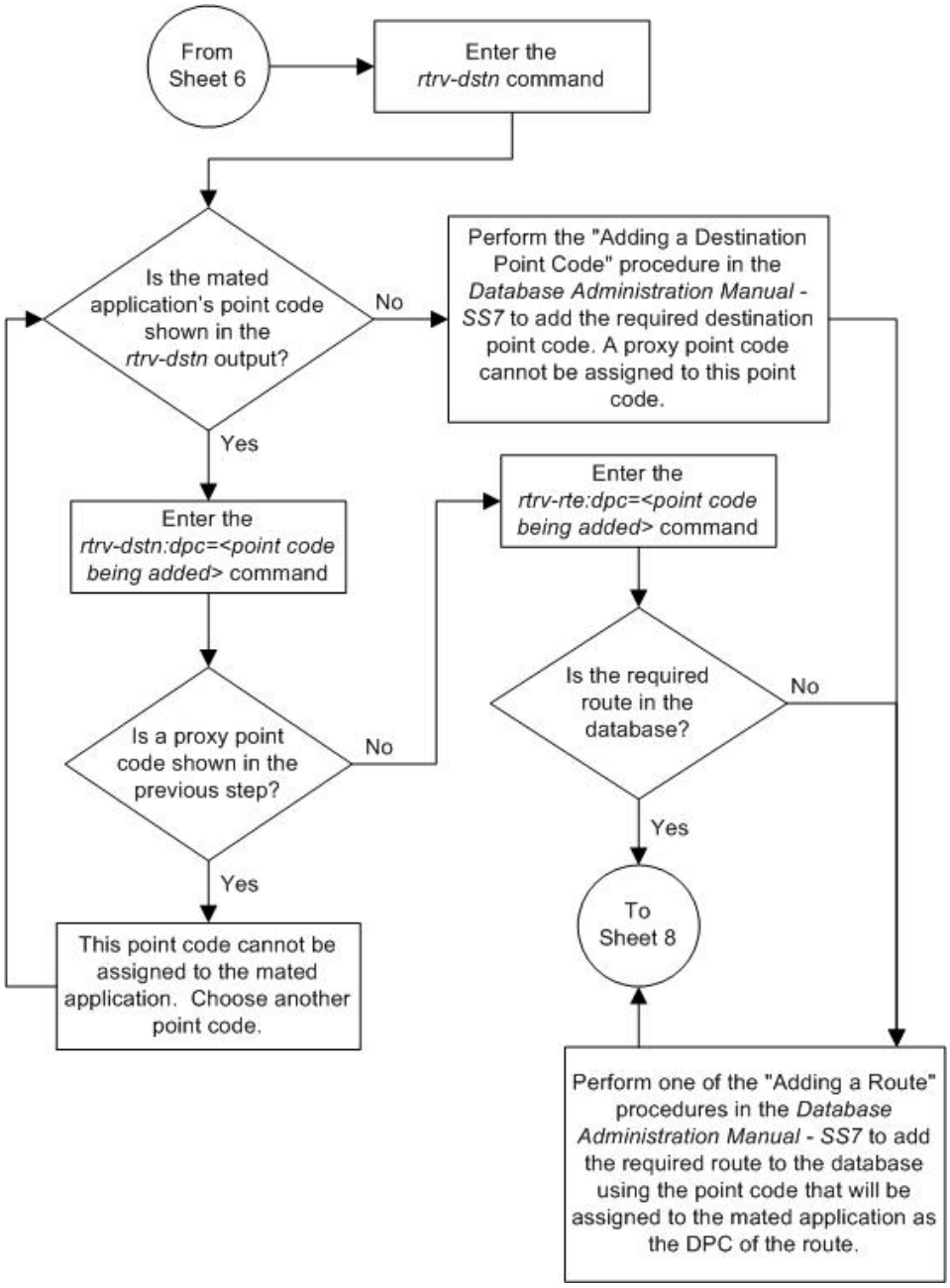

From Sheet 1
What is the current maximum number of mated applications shown in either the rtrv-map or rtrv-tbl-capacity outputs?
3000
1024 or 2000
Do you wish to increase the maximum number of MAP entries that are allowed?
No
No new point codes can be used for the mated application. Existing point codes from the rtrv-map output can be used as long as different SSN values are specified with the point code.
Yes
Perform the "Enabling the XMAP Table Expansion Controlled Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," to enable and activate the XMAP Table Expansion feature for the desired number of mated applications.
To Sheet 3

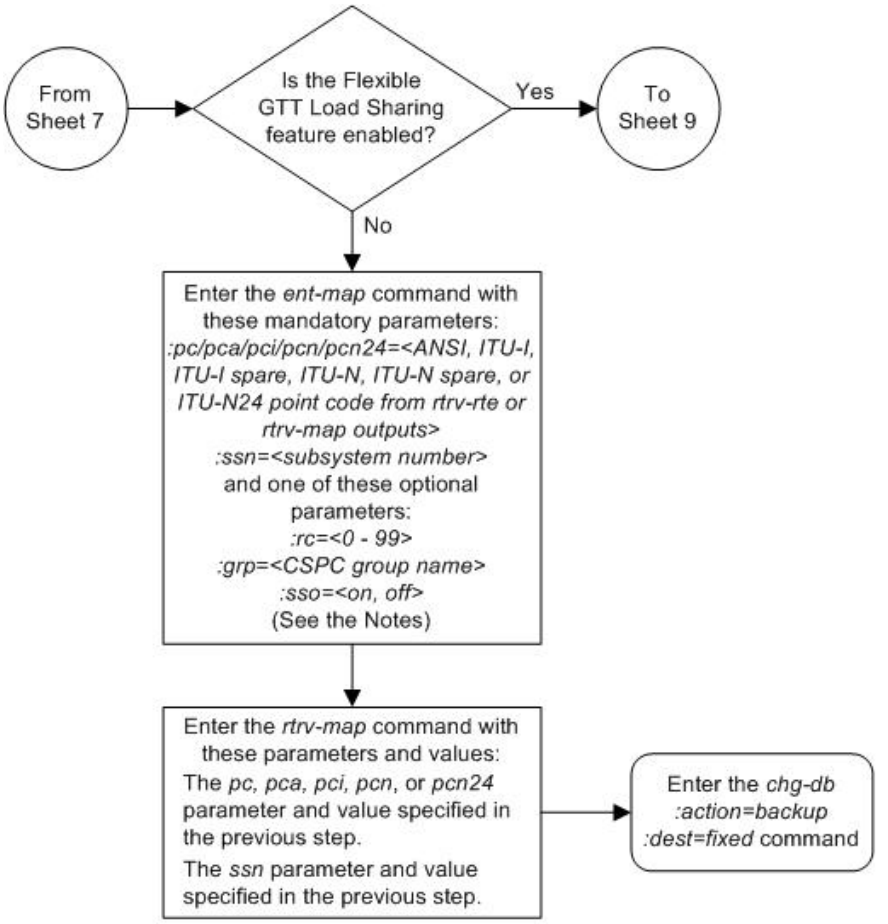

From Sheets 1 or 2
Is the solitary MAP group or MAP set being provisioned with a new point code?
Yes
No
Enter the *rtrv-map* command with this parameter: *:pc/pca/pci/pcn/pcn24=<point code of the new mated application>*
How many different SSN entries are assigned to the point code?
12
Less than 12
The point code contains the maximum number of SSNs. No more SSNs can be provisioned for this point code.
Do you wish to use another existing point code from the *rtrv-map* output?
Yes
No
Do you wish to use a new point code?
No
Yes
To Sheet 3
This procedure cannot be performed.


From Sheet 3
Is a CSPC group to be assigned to the mated application?
No
Yes
Enter the rtrv-cspc command
Is the required CSPC group in the database?
No
Yes
Enter the rtrv-cspc:grp=<CSPC group> command
Does the CSPC group contain the point code being added?
No
Go to the "Adding a Concerned Signaling Point Code" procedure and add the CSPC group and point code to the database
Yes
To Sheet 5


From Sheet 4
Will the network type of the CSPC group be the same as the network type of the primary point code of the mated application?
No
Yes
Does the CSPC group contain different types of point codes? (shown either in the rtrv-cspc:grp=<CSPC group> output from Sheet 4, or as a result of adding a new CSPC group)
Yes
No
Enter the rtrv-ctrl-feat:partnum=893012001 command
Is the ANSI-ITU-China SCCP Conversion feature enabled?
Yes
No
Perform the "Activating the ANSI-ITU-China SCCP Conversion Feature" procedure in Appendix A to enable the ANSI-ITU-China SCCP conversion feature
To Sheet 6


From Sheet 5
Is the MAPSET column shown in the rtrv-map output?
Yes
No
Do you wish to provision MAP sets?
No
Yes
Go to "Activating the Flexible GTT Load Sharing Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," to enable and turn on the Flexible GTT Load Sharing feature
Is the EAGLE 5 ISS's subsystem to be used? (See Note)
Yes
Enter the rtrv-sid command
To Sheet 10
No
Is the mated application being provisioned with an existing point code shown in the rtrv-map output?
Yes
To Sheet 8
No
To Sheet 7
Note: The sso parameter cannot be specified if the point code value for the mated application is the EAGLE 5 ISS's point code, but the sso parameter can be specified with other point codes.


From Sheet 6
Enter the rtrv-dstn command
Is the mated application's point code shown in the rtrv-dstn output?
No
Perform the "Adding a Destination Point Code" procedure in the Database Administration Manual - SS7 to add the required destination point code. A proxy point code cannot be assigned to this point code.
Yes
Enter the rtrv-dstn:dpc=<point code being added> command
Enter the rtrv-rte:dpc=<point code being added> command
Is a proxy point code shown in the previous step?
No
Is the required route in the database?
No
Yes
Yes
To Sheet 8
This point code cannot be assigned to the mated application. Choose another point code.
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 to add the required route to the database using the point code that will be assigned to the mated application as the DPC of the route.

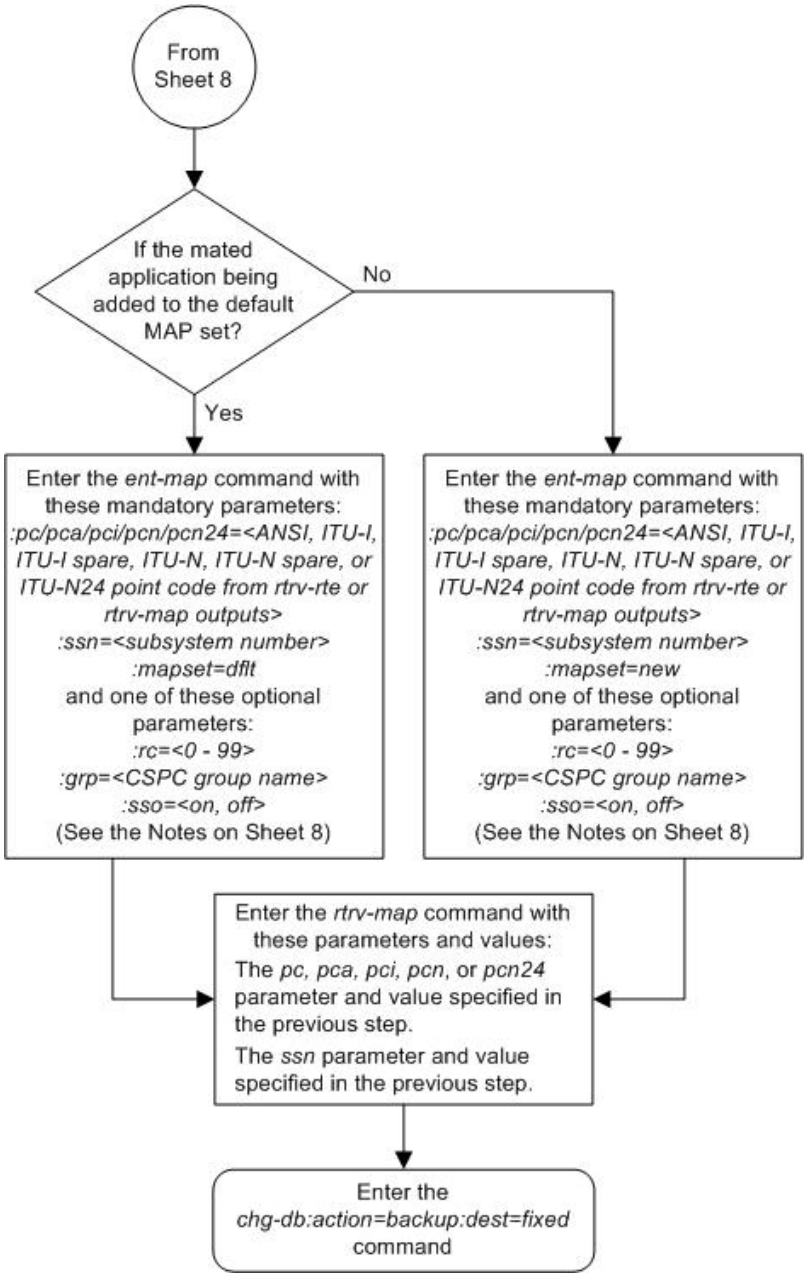


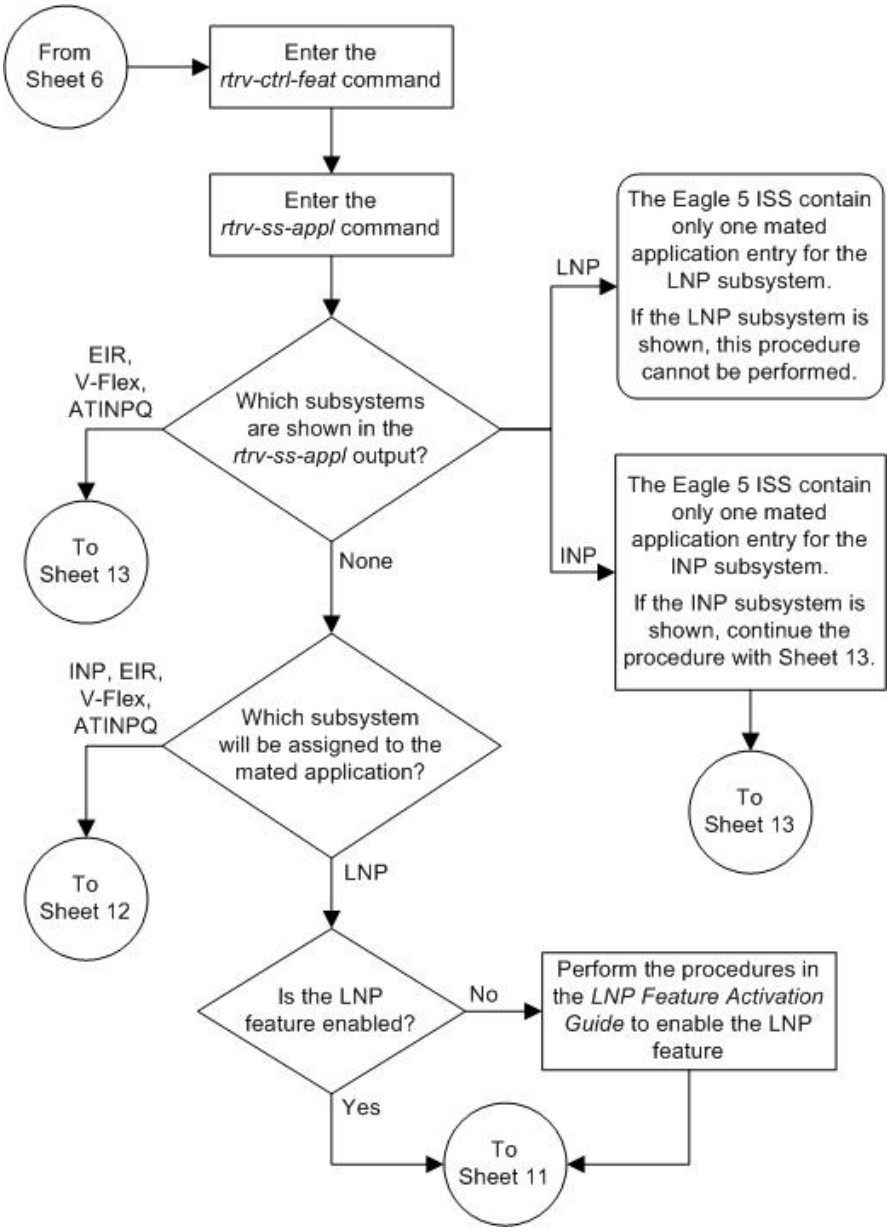
Notes:

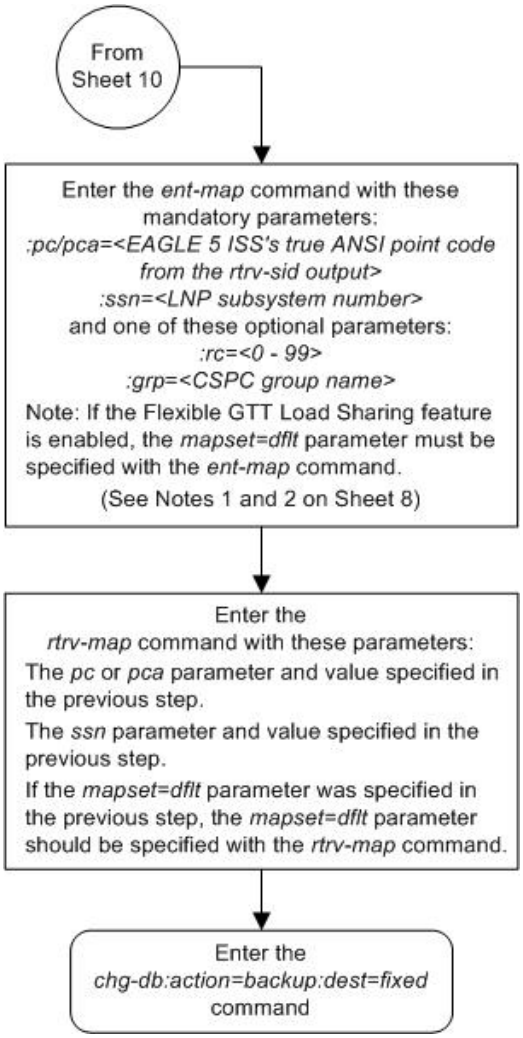
1. The *rc* parameter can be specified, but does not have to. If the *rc* parameter is not specified, its value will be 10.

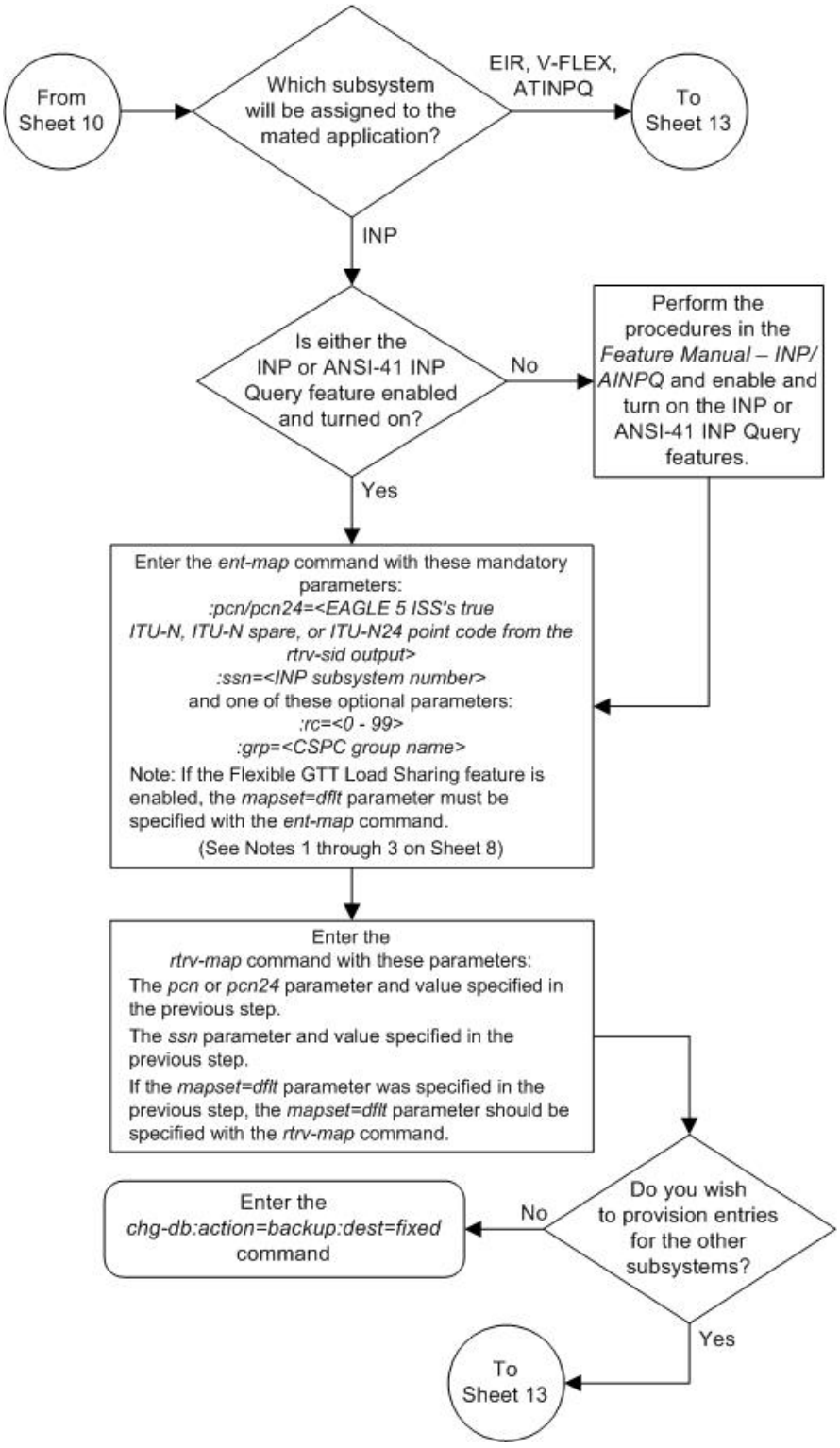
2. The format of the point codes in the CSPC group specified with the *grp* parameter must be the same as the primary point code specified with the *ent-map* command only if the ANSI-ITU-China SCCP Conversion feature is not enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (see the "Adding a Concerned Signaling Point Code" procedure in this chapter), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application.

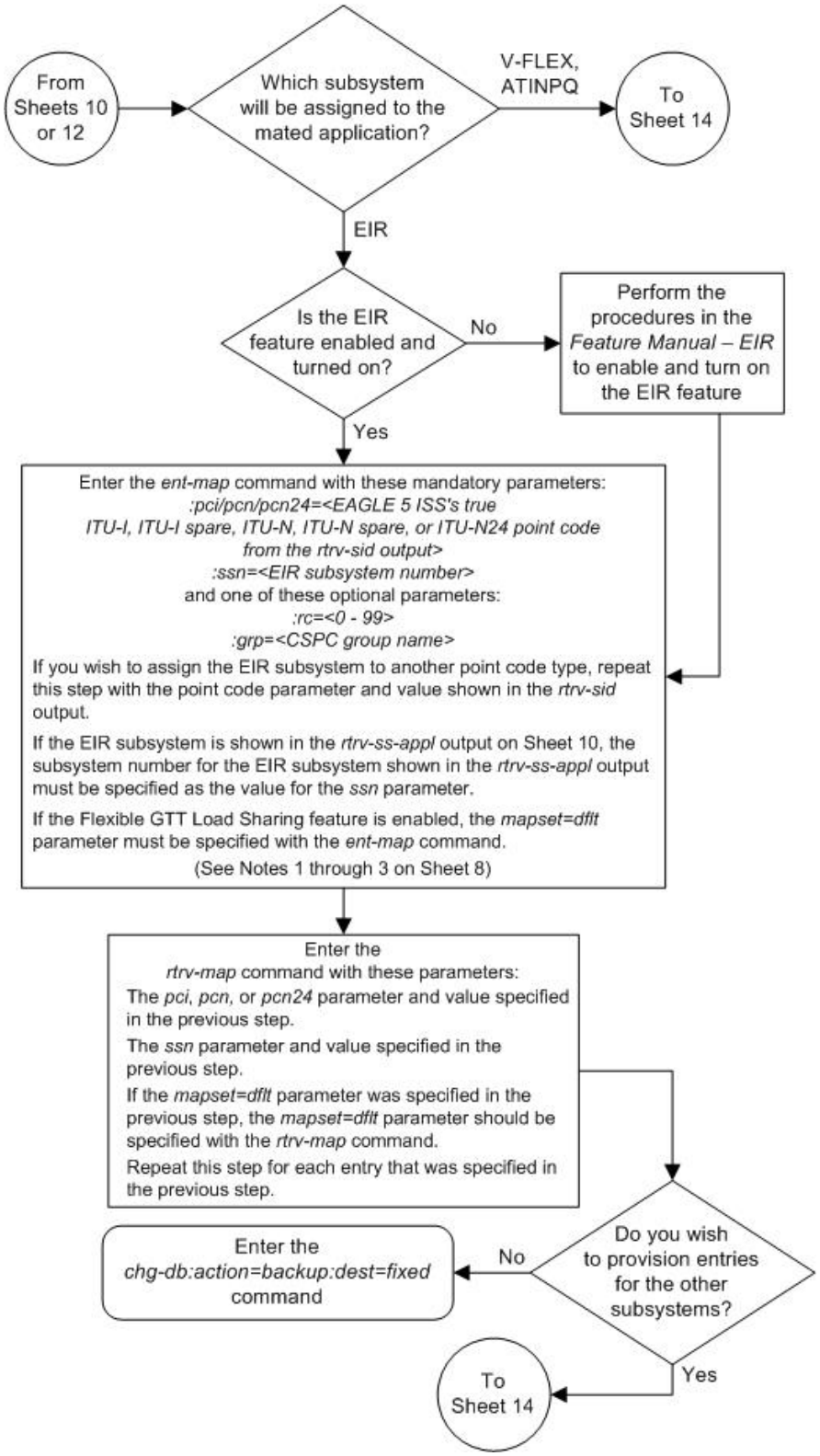
3. If the point code shown in the *rtrv-rte* output is a 14-bit ITU-N point code (*dpcn*), then the *pcn*/*mpcn* parameters must be specified. If the point code shown in the *rtrv-rte* output is a 24-bit ITU-N point code (*dpcn24*), then the *pcn24*/*mpcn24* parameters must be specified.

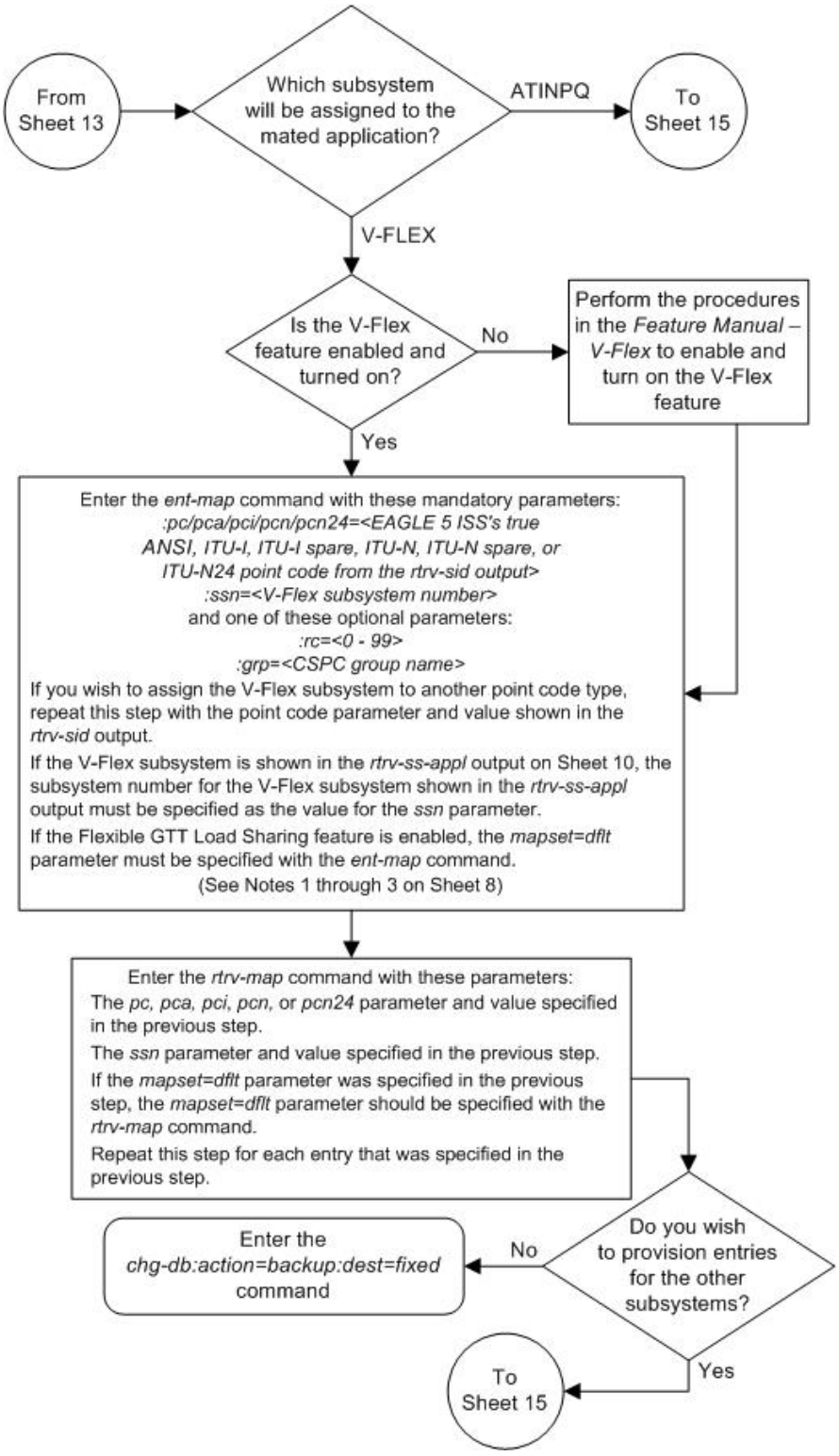

From Sheet 8
If the mated application being added to the default MAP set?
No
Yes
Enter the ent-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from rtrv-rte or rtrv-map outputs>
:ssn=<subsystem number>
:mapset=dflt
and one of these optional parameters:
:rc=<0 - 99>
:grp=<CSPC group name>
:sso=<on, off>
(See the Notes on Sheet 8)
Enter the ent-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from rtrv-rte or rtrv-map outputs>
:ssn=<subsystem number>
:mapset=new
and one of these optional parameters:
:rc=<0 - 99>
:grp=<CSPC group name>
:sso=<on, off>
(See the Notes on Sheet 8)
Enter the rtrv-map command with these parameters and values:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
Enter the chg-db:action=backup:dest=fixed command

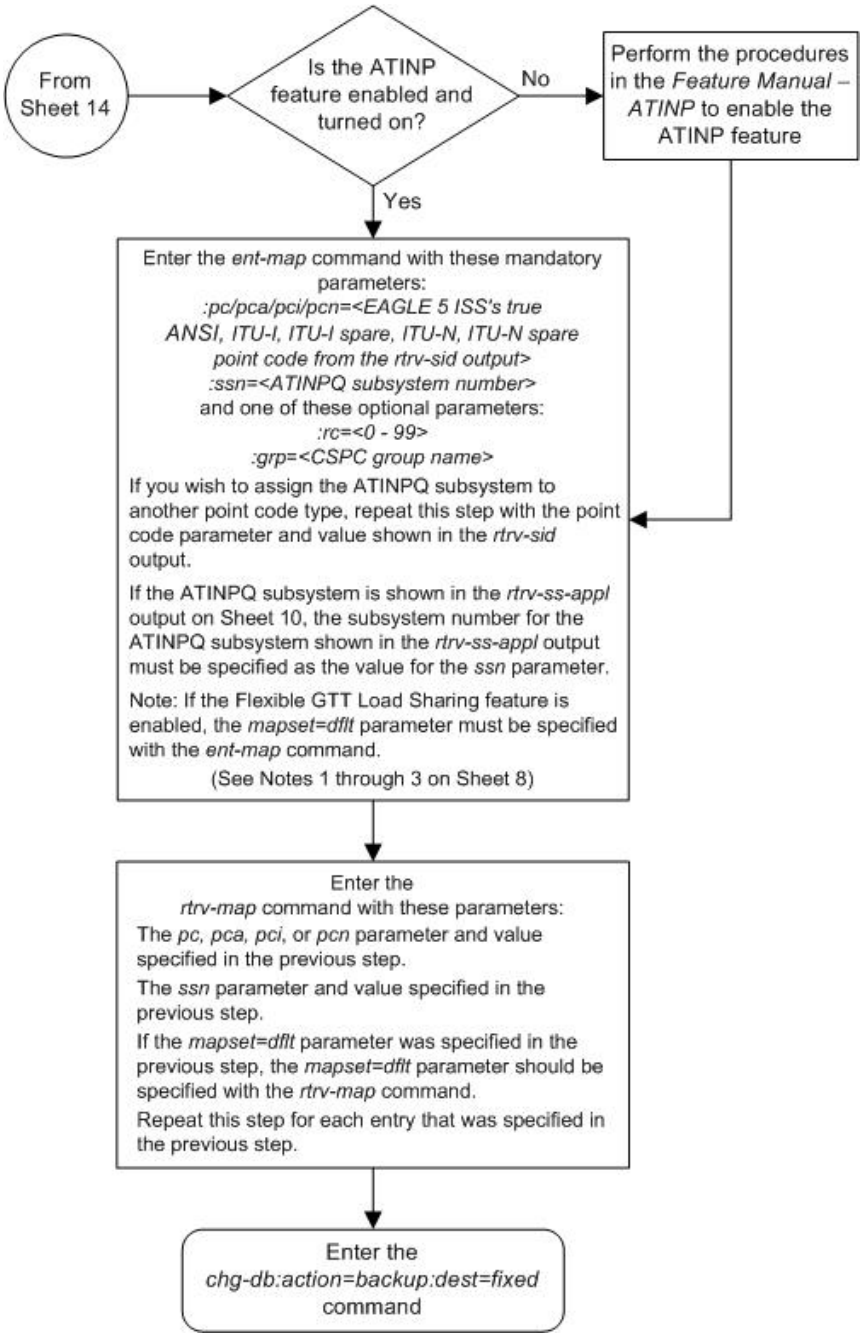

From Sheet 6
Enter the rtrv-ctrl-feat command
Enter the rtrv-ss-appl command
Which subsystems are shown in the rtrv-ss-appl output?
EIR, V-Flex, ATINPQ
To Sheet 13
None
LNP
The Eagle 5 ISS contain only one mated application entry for the LNP subsystem.
If the LNP subsystem is shown, this procedure cannot be performed.
INP
The Eagle 5 ISS contain only one mated application entry for the INP subsystem.
If the INP subsystem is shown, continue the procedure with Sheet 13.
To Sheet 13
INP, EIR, V-Flex, ATINPQ
Which subsystem will be assigned to the mated application?
To Sheet 12
LNP
Is the LNP feature enabled?
No
Perform the procedures in the LNP Feature Activation Guide to enable the LNP feature
Yes
To Sheet 11


From Sheet 10
Enter the ent-map command with these mandatory parameters:
:pc/pca=<EAGLE 5 ISS's true ANSI point code from the rtrv-sid output>
:ssn=<LNP subsystem number>
and one of these optional parameters:
:rc=<0 - 99>
:grp=<CSPC group name>
Note: If the Flexible GTT Load Sharing feature is enabled, the mapset=dflt parameter must be specified with the ent-map command.
(See Notes 1 and 2 on Sheet 8)
Enter the rtrv-map command with these parameters:
The pc or pca parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
If the mapset=dflt parameter was specified in the previous step, the mapset=dflt parameter should be specified with the rtrv-map command.
Enter the chg-db:action=backup:dest=fixed command


From Sheet 10
Which subsystem will be assigned to the mated application?
EIR, V-FLEX, ATINPQ
To Sheet 13
INP
Is either the INP or ANSI-41 INP Query feature enabled and turned on?
No
Perform the procedures in the Feature Manual – INP/ AINPQ and enable and turn on the INP or ANSI-41 INP Query features.
Yes
Enter the ent-map command with these mandatory parameters:
:pcn/pcn24=<EAGLE 5 ISS's true ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-sid output>
:ssn=<INP subsystem number>
and one of these optional parameters:
:rc=<0 - 99>
:grp=<CSPC group name>
Note: If the Flexible GTT Load Sharing feature is enabled, the mapset=dflt parameter must be specified with the ent-map command.
(See Notes 1 through 3 on Sheet 8)
Enter the rtrv-map command with these parameters:
The pcn or pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
If the mapset=dflt parameter was specified in the previous step, the mapset=dflt parameter should be specified with the rtrv-map command.
Do you wish to provision entries for the other subsystems?
No
Enter the chg-db:action=backup:dest=fixed command
Yes
To Sheet 13


From Sheets 10 or 12
Which subsystem will be assigned to the mated application?
V-FLEX, ATINPQ
To Sheet 14
EIR
Is the EIR feature enabled and turned on?
No
Perform the procedures in the Feature Manual – EIR to enable and turn on the EIR feature
Yes
Enter the ent-map command with these mandatory parameters:
:pci/pcn/pcn24=<EAGLE 5 ISS's true ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-sid output>
:ssn=<EIR subsystem number>
and one of these optional parameters:
:rc=<0 - 99>
:grp=<CSPC group name>
If you wish to assign the EIR subsystem to another point code type, repeat this step with the point code parameter and value shown in the rtrv-sid output.
If the EIR subsystem is shown in the rtrv-ss-appl output on Sheet 10, the subsystem number for the EIR subsystem shown in the rtrv-ss-appl output must be specified as the value for the ssn parameter.
If the Flexible GTT Load Sharing feature is enabled, the mapset=dflt parameter must be specified with the ent-map command.
(See Notes 1 through 3 on Sheet 8)
Enter the rtrv-map command with these parameters:
The pci, pcn, or pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
If the mapset=dflt parameter was specified in the previous step, the mapset=dflt parameter should be specified with the rtrv-map command.
Repeat this step for each entry that was specified in the previous step.
Do you wish to provision entries for the other subsystems?
No
Enter the chg-db:action=backup:dest=fixed command
Yes
To Sheet 14


From Sheet 13
Which subsystem will be assigned to the mated application?
ATINPQ
To Sheet 15
V-FLEX
Is the V-Flex feature enabled and turned on?
No
Perform the procedures in the *Feature Manual – V-Flex* to enable and turn on the V-Flex feature
Yes
Enter the *ent-map* command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<EAGLE 5 ISS's true ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-sid output>
:ssn=<V-Flex subsystem number>
and one of these optional parameters:
:rc=<0 - 99>
:grp=<CSPC group name>
If you wish to assign the V-Flex subsystem to another point code type, repeat this step with the point code parameter and value shown in the *rtrv-sid* output.
If the V-Flex subsystem is shown in the *rtrv-ss-appl* output on Sheet 10, the subsystem number for the V-Flex subsystem shown in the *rtrv-ss-appl* output must be specified as the value for the *ssn* parameter.
If the Flexible GTT Load Sharing feature is enabled, the *mapset=dflt* parameter must be specified with the *ent-map* command.
(See Notes 1 through 3 on Sheet 8)
Enter the *rtrv-map* command with these parameters:
The *pc, pca, pci, pcn,* or *pcn24* parameter and value specified in the previous step.
The *ssn* parameter and value specified in the previous step.
If the *mapset=dflt* parameter was specified in the previous step, the *mapset=dflt* parameter should be specified with the *rtrv-map* command.
Repeat this step for each entry that was specified in the previous step.
Do you wish to provision entries for the other subsystems?
No
Enter the *chg-db:action=backup:dest=fixed* command
Yes
To Sheet 15



Provisioning a Dominant Mated Application

This procedure is used to provision a dominant mated application in the database using the `ent-map` and `chg-map` commands. A dominant mated application is a mated application containing entries whose RC (relative cost) values are unique. The `ent-map` and `chg-map` commands use these parameters to provision a dominant mated application.

`:pc/pca/pci/pcn/pcn24` – The point code of the primary signaling point that is to receive the message.

`:mpc/mpca/mpci/mpcn/mpcn24` – The point code of the backup signaling point that is to receive the message.

Note: The point codes can be either an ANSI point code (pc/pca, mpc/mpca), ITU-I or ITU-I spare point code (pci, mpci), a 14-bit ITU-N or 14-bit ITU-N spare point code (pcn, mpcn), or a 24-bit ITU-N (`pcn24`, `mpcn24`) point code.

Note: Refer to Chapter 2, Configuring Destination Tables in the Database *Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

`:ssn` – Subsystem number – the subsystem address of the primary point code that is to receive the message.

`:mssn` – Mate subsystem number – the subsystem address of the backup point code that is to receive the message.

`:rc` – The relative cost value of the primary point code and subsystem, defined by the `pc/pca/pci/pcn/pcn24` and `ssn` parameters. The `rc` parameter has a range of values from 0 to 99, with the default value being 10.

`:materc` – The relative cost value of the backup point code and subsystem, defined by the `mpc/mpca/mpci/mpcn/mpcn24` and `mssn` parameters. The `materc` parameter has a range of values from 0 to 99, with the default value being 50.

`:grp` – The name of the concerned signaling point code group that contains the point codes that should be notified of the subsystem status. This parameter applies to both RPCs/SSNs.

`:mrc` – Message routing under congestion – defines the handling of Class 0 messages during congestion conditions.

`:srm` – Subsystem routing messages – defines whether subsystem routing messages (SBR, SNR) are transmitted between the mated applications.

`:sso` – Subsystem Status Option – defines whether the subsystem status option is on or off. This parameter allows the user the option to have the specified subsystem marked as prohibited even though an MTP-RESUME message has been received by the indicating that the specified point code is allowed. The `sso` parameter cannot be specified if the `pc/pca/pci/pcn/pcn24` value is the EAGLE 5 ISS's true point code, shown in the `rtrv-sid` output.

`:mapset` – The MAP set ID that the mated applications are assigned to. This parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled. If the Flexible GTT Load Sharing feature is enabled, the point code and subsystem specified for the global title translation must be assigned to the MAP set specified by this parameter. The status of the Flexible GTT Load Sharing feature is shown in the `rtrv-ctrl-feat` output. To enable the Flexible GTT Load Sharing feature, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure.

The `mapset` parameter has three values:

- `dflt` – to assign the MAP to the default MAP set. This value can be specified with both the `ent-map` and `chg-map` commands.
- `new` – to assign the mated application to a new MAP set. This value can be specified only with the `ent-map` command.

- the specific number of an existing MAP set if you are assigning the mated application to an existing MAP set. This value can be specified only with the `chg-map` command.

Refer to the *"Provisioning a MAP Set" section* on page 146 for information on provisioning MAP sets.

If the Weighted GTT Load Sharing feature is enabled, shown by the columns `WT`, `%WT`, and `THR` in the `rtrv-map` output, the parameters `wt`, `mwt`, and `thr` cannot be specified for a dominant mated application. If you wish to use these parameters to provision a mated application, perform on of these procedures:

- *Provisioning a Load Shared Mated Application* on page 189
- *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223.

A dominant mated application can contain up to 32 point codes and subsystems, a primary point code and subsystem, and up to 31 mated point codes and subsystems. When a new dominant mated application is added to the database, the first two entries, the primary point code and subsystem and a mate point code and subsystem are added using the `ent-map` command. All other mated point code and subsystem entries that are being assigned to the primary point code and subsystem are added to the dominant mated application using the `chg-map` command.

All the point codes and subsystems in a dominant mated application have different relative cost values, with the primary point code and subsystem having the lowest relative cost value. All traffic is routed to the primary point code and subsystem, if it is available. If the primary point code and subsystem becomes unavailable, the traffic is routed to highest priority backup point code and subsystem that is available. When the primary point code and subsystem becomes available again, the traffic is then routed back to the primary point code and subsystem.

The examples in this procedure are used to add the mated applications shown in *Table 19: Dominant Mated Application Configuration Table* on page 144.

Table 19: Dominant Mated Application Configuration Table

Point Code	SSN	RC	Mated Point Code	Mated SSN	MATE RC	CSPC Group	MRC	SRM	SSO
003-003-003	254	10	040-040-040	254	20	grp10	yes	yes	on
005-005-005	250	10	060-060-060	250	20	grp15	yes	yes	off
			070-070-070	251	30	grp05	yes	yes	on

If the Flexible GTT Load Sharing feature is not enabled, the mated applications, either primary or the mate, cannot be in the database. If the Flexible GTT Load Sharing feature is enabled, the mated applications, either primary or the mate, can be in other MAP sets. Refer to the *"Provisioning a MAP Set" section* on page 146 for information on provisioning MAP sets.

The point codes specified in the `ent-map` or `chg-map` commands (`pc/pca`, `pci`, `pcn`, or `pcn24`, and `mpc/mpca`, `mpci`, `mpcn`, or `mpcn24`) must be either a full point code in the routing point code table or the EAGLE 5 ISS's true point code. Cluster point codes or network routing point codes cannot be specified with this command. The `rtrv-rte` command can be used to verify the point codes in the routing table. The point codes in the routing table are shown in the `DPCA`, `DPCI`, `DPCN`,

or DPCN24 fields of the rtrv-rte command output. The EAGLE 5 ISS's true point code is shown in the PCA, PCI, PCN, or PCN24 fields of the rtrv-sid command output.

A dominant mated application can be provisioned with a point code that is assigned to other mated applications as long as the SSN is not assigned to other mated applications. A point code can be assigned to maximum of 12 different SSNs.

If the EAGLE 5 ISS's true point code is specified in the mated application, it must be the primary point code. The relative cost value assigned to this point code must be the lowest value in the mated application. If the Flexible GTT Load Sharing feature is enabled, the mated application containing the EAGLE 5 ISS's true point code can be assigned only to the default MAP set.

A mated application containing the LNP subsystem can contain only ANSI point codes. The primary point code (pc or pca) must be the EAGLE 5 ISS's true ANSI point code. The LNP feature must be enabled for a quantity greater than zero.

A mated application containing the INP subsystem can contain only 14-bit ITU-N point codes, 14-bit ITU-N spare point codes, or 24-bit ITU-N point codes. The primary point code (pcn or pcn24) must be the EAGLE 5 ISS's true 14-bit ITU-N point code, 14-bit ITU-N spare point code, or 24-bit ITU-N point code.The INP or ANSI-41 INP Query feature must be enabled and turned on. The EAGLE 5 ISS can contain either 14-bit ITU-N point codes (spare or non-spare point codes) or 24-bit ITU-N point codes. Both types of point codes cannot be present on the EAGLE 5 ISS at the same time.

A mated application containing the EIR subsystem can contain only ITU-I point codes, ITU-I spare point codes, 14-bit ITU-N point codes, 14-bit ITU-N spare point codes, or 24-bit ITU-N point codes. The primary point code (pci, pcn, or pcn24) must be the EAGLE 5 ISS's true ITU-I point code, ITU-I spare point code, 14-bit ITU-N point code, 14-bit ITU-N spare point code, or 24-bit ITU-N point code. The EIR feature must be enabled and turned on. The EAGLE 5 ISS can contain either 14-bit ITU-N point codes (spare or non-spare point codes) or 24-bit ITU-N point codes. Both types of point codes cannot be present on the EAGLE 5 ISS at the same time.

A mated application containing the VFLEX subsystem can contain any type of point code. The primary point code (pc, pca, pci, pcn, or pcn24) must be the EAGLE 5 ISS's true point code. The V-Flex feature must be enabled and turned on.The EAGLE 5 ISS can contain either 14-bit ITU-N point codes (spare or non-spare point codes) or 24-bit ITU-N point codes. Both types of point codes cannot be present on the EAGLE 5 ISS at the same time.

A mated application containing the ATINPQ subsystem can contain only ANSI point codes, ITU-I point codes, ITU-I spare point codes, 14-bit ITU-N point codes, or 14-bit ITU-N spare point codes. The primary point code (pc, pca, pci, or pcn) must be the EAGLE 5 ISS's true ANSI point code, ITU-I point code, ITU-I spare point code, 14-bit ITU-N point code, or 14-bit ITU-N spare point code. The ATINP feature must be enabled.

The format of the point codes specified in the ent-map command must be the same. For example, if the primary point code is a 24-bit ITU-N point code (pcn24), the mate point code must be a 24-bit ITU-N point code (mpcn24).

The format of the point codes in the CSPC group specified with the grp parameter must be the same as the primary point code specified with the ent-map command only if the ANSI-ITU-China SCCP Conversion feature is not enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (refer to the *Adding a Concerned Signaling Point Code* on page 100 procedure), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application. The status of the ANSI-ITU-China SCCP Conversion feature can be verified with the rtrv-ctrl-feat command.

The values for the primary point code and subsystem combination (pc/ssn) cannot be the same as the mated point code and subsystem combination (mpc/mssn). However, the primary and mated point codes can be the same as long as the subsystem numbers are different.

If the point code values are ITU values (pci , pcn, or pcn24), the srm=yes parameter cannot be specified.

If a mate point code (mpc/mpca/mpci/mpcn/mpcn24) is specified, the mssn parameter must be specified. Also, the point code type of the mate point code must be the same as the point code type of the primary point code. For example, if the primary point code is a 24-bit ITU-N point code (pcn24), the mate point code must be a 24-bit ITU-N point code (mpcn24). If spare point codes are being used, both the primary and mate point codes must be spare point codes. For example, if the primary point code is an ITU-I spare point code, the mate point code must be an ITU-I spare point code.

If the mssn parameter is specified, the mate point code (mpc/mpca/mpci/mpcn/mpcn24) must be specified.

If the grp, srm, mrc, and sso parameter values are specified, and the specified point code and SSN is assigned to multiple mated applications, the grp, srm, mrc, and sso values for all mated applications containing the specified point code and SSN will be changed to the values specified in this procedure.

The values of the ssn and mssn parameters must be from 2 to 255.

The EAGLE 5 ISS can contain 1024, 2000, or 3000 mated applications. The EAGLE 5 ISS default is 1024 mated applications. This quantity can be increased to 2000 by enabling the feature access key for part number 893-0077-01, or to 3000 by enabling the feature access key for part number 893-0077-10. For more information on enabling these feature access keys, refer to the *Enabling the XMAP Table Expansion Feature* on page 771 procedure.

Provisioning a MAP Set

The Flexible GTT Load Sharing feature provides the ability to define multiple load sharing sets in the MAP table where the same point code and subsystem can be assigned to different load sharing sets.

The MAP table contains specific load sharing sets, designated by numbers, and a default MAP set.

The Flexible Final GTT Load Sharing provides flexible load sharing for global title translations defined in the GTT table and not for the MPS based features. The MPS based features do not support the MAP set ID parameter. The MPS based features perform lookups for load sharing in the default MAP set and the GTT table. The entries in the GTT table can be linked to a MAP set ID, allowing lookups in a specific MAP set other than the default MAP set.

Any MAP entries that were provisioned in the database before the Flexible GTT Load Sharing feature is enabled are placed in the default MAP set when the Flexible GTT Load Sharing feature is enabled.

To provision entries in the default MAP set, the mapset=dflt parameter must be specified with the ent-map or chg-map commands.

To provision entries in an existing MAP set other than the default MAP set, the mapset=<MAP set ID> parameter must be specified with the chg-map command. Provisioning entries in an existing MAP set can be performed only with the chg-map command.

To provision entries in a new MAP set, the `mapset=new` parameter must be specified with the `ent-map` command. The `mapset=new` parameter can be specified only with the `ent-map` command. When the `ent-map` command is executed with the `mapset=new` parameter, the new MAP set ID is automatically generated and displayed in the output of the `ent-map` command as follows.

```
New MAPSET Created : MAPSETID = <new MAP set ID>
```

A MAP set, other than the default MAP set, is a MAP group provisioned with the MAP set ID and can contain a maximum of 32 point codes.

The default MAP set can contain multiple MAP groups. The point code can appear in only one MAP group in the default MAP set.

The point code provisioned in a MAP set can be provisioned in multiple MAP sets. All the point codes in a MAP set must be different.

Canceling the `RTRV-MAP` Command

Because the `rtrv-map` command used in this procedure can output information for a long period of time, the `rtrv-map` command can be canceled and the output to the terminal stopped. There are three ways that the `rtrv-map` command can be canceled.

- Press the `F9` function key on the keyboard at the terminal where the `rtrv-map` command was entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rtrv-map` command was entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rtrv-map` command was entered, from another terminal other that the terminal where the `rtrv-map` 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, refer to the *Commands Manual*.

1. Display the mated applications in the database using the `rtrv-map` command.

   If the Flexible GTT Load Sharing feature is not enabled, this is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0
MAP TABLE IS   2 % FULL    (25 of 1024)
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF
255-001-000                250 10  SOL --- --- grp01    ON
255-001-000                251 10  SHR --- --- grp01    OFF
             253-001-002   254 10  SHR --- --- grp01    OFF
255-001-000                252 10  SOL --- --- grp01    ON
255-001-000                253 10  SHR --- --- grp01    OFF
             253-001-004   254 10  SHR --- --- grp01    OFF
255-001-001                255 10  DOM YES YES grp01    ON
             253-001-005   254 20  DOM YES YES grp01    ON
```

```
255-001-001               250 10  DOM YES YES grp01    OFF
            253-001-001   254 20  DOM YES YES grp01    OFF
255-001-002               251 10  SHR --- --- grp01    OFF
            255-001-002   254 10  SHR --- --- grp01    OFF
255-001-002               252 10  DOM YES YES grp01    ON
            255-001-003   254 20  DOM YES YES grp01    ON
255-001-002               253 10  SHR --- --- grp01    ON
            255-001-004   254 10  SHR --- --- grp01    ON
PCI         Mate PCI      SSN RC MULT SRM MRC GRP NAME SSO
2-001-2                   255 10  DOM YES YES grp03    OFF
            2-001-1       254 20  DOM YES YES grp03    OFF
PCN         Mate PCN      SSN RC MULT SRM MRC GRP NAME SSO
00347                     253 10  SHR --- --- grp05    OFF
            01387         254 10  SHR --- --- grp05    OFF
```

Note: If the Weighted GTTLoad Sharing feature is enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output as shown in the following example.

```
PCA         Mate PCA      SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
002-002-007                50 10  COM YES YES grp01    OFF 10  33  20
            002-002-008    30 10  COM YES YES grp01    OFF 10  33  20
            002-002-009    30 10  COM YES YES grp01    OFF 10  33  20
            002-002-010    30 20  COM YES YES grp01    OFF 10  50  20
            002-002-011    30 20  COM YES YES grp01    OFF 10  50  20

255-001-000               250 10  SOL --- --- grp01    ON  -- ---  --

255-001-000               251 10  SHR --- --- grp01    OFF  10  50  20
            253-001-002   254 10  SHR --- --- grp01    OFF  10  50  20

255-001-000               252 10  SOL --- --- grp01    ON  -- ---  --

255-001-000               253 10  SHR --- --- grp01    OFF  10  50  20
            253-001-004   254 10  SHR --- --- grp01    OFF  10  50  20

255-001-001               255 10  DOM YES YES grp01    ON  -- ---  --
            253-001-005   254 20  DOM YES YES grp01    ON  -- ---  --
```

If the Flexible GTT Load Sharing feature is enabled, this is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0
MAP TABLE IS   1 % FULL    (20 of 36000)
PCA         Mate PCA      SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=DFLT
255-001-000               250 10  SOL --- --- grp01    ON
MAPSET ID=1
255-001-000               251 10  SHR --- --- grp01    OFF
            253-001-002   254 10  SHR --- --- grp01    OFF
MAPSET ID=2
255-001-000               252 10  SOL --- --- grp01    ON
MAPSET ID=DFLT
255-001-000               253 10  SHR --- --- grp01    OFF
            253-001-004   254 10  SHR --- --- grp01    OFF
MAPSET ID=3
255-001-001               255 10  DOM YES YES grp01    ON
            253-001-005   254 20  DOM YES YES grp01    ON
MAPSET ID=4
255-001-001               250 10  DOM YES YES grp01    OFF
            253-001-001   254 20  DOM YES YES grp01    OFF
MAPSET ID=DFLT
255-001-002               251 10  SHR --- --- grp01    OFF
            255-001-002   254 10  SHR --- --- grp01    OFF
MAPSET ID=5
255-001-002               252 10  DOM YES YES grp01    ON
```

```
             255-001-003  254 20  DOM YES YES grp01    ON
MAPSET ID=6
255-001-002               253 10  SHR --- --- grp01    ON
             255-001-004  254 10  SHR --- --- grp01    ON
MAPSET ID=7
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF
PCI          Mate PCI     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=8
2-001-2                   255 10  DOM YES YES grp03    OFF
             2-001-1      254 20  DOM YES YES grp03    OFF
PCN          Mate PCN     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=9
00347                     253 10  SHR --- --- grp05    OFF
             01387        254 10  SHR --- --- grp05    OFF
```

Note: If the Flexible GTTLoad Sharing and Weighted GTTLoad Sharing features are enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output as shown in the following example.

```
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
MAPSET ID=7
002-002-007                50 10  COM YES YES grp01    OFF 10  33  20
             002-002-008   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-009   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-010   30 20  COM YES YES grp01    OFF 10  50  20
             002-002-011   30 20  COM YES YES grp01    OFF 10  50  20

MAPSET ID=DFLT
255-001-000               250 10  SOL --- --- grp01    ON  -- ---  --

MAPSET ID=1
255-001-000               251 10  SHR --- --- grp01    OFF  10  50  20
             253-001-002  254 10  SHR --- --- grp01    OFF  10  50  20

MAPSET ID=2
255-001-000               252 10  SOL --- --- grp01    ON  -- ---  --

MAPSET ID=DFLT
255-001-000               253 10  SHR --- --- grp01    OFF  10  50  20
             253-001-004  254 10  SHR --- --- grp01    OFF  10  50  20

MAPSET ID=3
255-001-001               255 10  DOM YES YES grp01    ON  -- ---  --
             253-001-005  254 20  DOM YES YES grp01    ON  -- ---  --
```

Note: If the maximum number of mated applications shown in the `rtrv-map` output in step 1 is 1024, 2000, or 3000, skip step 2 and go to step 3.

2. If the maximum number of mated applications shown in the `rtrv-map` output in step 1 is 36000, the Flexible GTT Load Sharing feature is enabled.

   Although the `rtrv-map` output shows there can be 36000 entries, a maximum of 1024, 2000, or 3000 different point codes (depending on whether the XMAP Table Expansion feature is enabled for 2000 or 3000 mated applications) can be provisioned for mated applications. To verify the number of different point codes that can be provisioned for mated applications, enter the `rtrv-tbl-capacity` command. The following is an example of the possible output.

```
rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
```

```
MAP table is (3000 of 3000) 100% full
```

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

Note: If the `rtrv-map` output in step 1 or the `rtrv-tbl-capacity` output in step 2 shows that the maximum number of mated applications is 3000, and the current number of provisioned mated applications is 3000, no new point codes can be used to provision mated applications. Skip step 3 and go to step 4.

Note: If the If the `rtrv-map` output in step 1 or the `rtrv-tbl-capacity` output in step 2 shows that the maximum number of mated applications is either 1024 or 2000, and the mated application being added increases the number beyond 1024 or 2000, do not perform step 3, but perform the *Enabling the XMAP Table Expansion Feature* on page 771 procedure and enable XMAP Table Expansion feature for 3000 mated applications. Then go to step 4. If the maximum number of mated applications is not increased, no new point codes can be used to provision mated applications.

Note: If the `rtrv-map` output in step 1 or the `rtrv-tbl-capacity` output in step 2 shows that the maximum number of mated applications is either 1024, 2000, or 3000 and the mated application being added will not increase the number beyond the quantity shown in the `rtrv-map` output in step 1 or the `rtrv-tbl-capacity` output in step 2, skip step 3 and go to step 4.

3. Display the status of the XMAP Table Expansion feature by entering the `rtrv-ctrl-feat` 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
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
XGTT Table Expansion      893006101  off     ----
XMAP Table Expansion      893007701  off     ----
Large System # Links      893005910  on      2000
HC-MIM SLK Capacity       893012707  on      64

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 XMAP Table Expansion controlled feature is not enabled or on, refer to the *Enabling the XMAP Table Expansion Feature* on page 771 procedure and enable XMAP Table Expansion controlled feature for either 2000 or 3000 mated applications as required. Then go to step 4.

   Note: If a new point code is being added to a new MAP group or MAP set, skip steps 4 and 5, and go to step 6.

Note: If an existing point code in the `rtrv-map` output on Sheet 1 is being added to a new MAP group or MAP set, skip step 4 and go to step 5.

4. A MAP group, without the Flexible GTT Load Sharing feature enabled, a MAP set, other than the default MAP set, and a MAP group contained in the default MAP set can contain a maximum of 32 entries.

   Verify the number of entries that the MAP group or MAP set contains by entering the `rtrv-map` command with the primary point code and SSN assigned to the MAP group or MAP set. If the Flexible GTT Load Sharing feature is enabled, the `mapset` parameter and MAP set ID of the MAP set that the new mated application will be added to.

   If the specified MAP set is not the default MAP set, only the `mapset` parameter needs to be specified with the `rtrv-map` command. The point code and SSN does not need to be specified. For this example, enter one of these commands.

   `rtrv-map:pca=002-002-007:ssn=50`

   The following is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

MAP TABLE IS   2 % FULL    (25 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF
```

   `rtrv-map:pca=002-002-007:ssn=50:mapset=dflt`

   The following is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0
MAP TABLE IS   2 % FULL    (25 of 1024)
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=DFLT
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF
```

   `rtrv-map:mapset=7`

   The following is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0
MAP TABLE IS   2 % FULL    (25 of 1024)
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=7
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF
```

   If the MAP group or MAP set contains 32 entries, no more entries can be added to the specified MAP group or MAP set. Entries can be removed from the specified MAP group or MAP set

or the new mated application can be added another MAP group or MAP set, or can be added to a new MAP group or MAP set.

Perform the *Removing a Mated Application* on page 256 procedure to remove any entries from the MAP group or MAP set. If a new point code is being added to this MAP group or MAP set, go to step 6. If an existing point code is being added to this MAP group or MAP set, go to step 5.

If the point code will be added to another MAP group or MAP set, repeat this step for the other MAP group or MAP set.

If the point code will be added to a new MAP group or MAP set, go to step 5.

If none of these actions will be performed, then this procedure cannot be performed.

If the MAP group or MAP set contains less than 32 entries, and a new point code is being added to this MAP group or MAP set, go to step 6. If an existing point code is being added to this MAP group or MAP set, go to step 5.

Note: If a new point code is being provisioned for the mated application, skip step 5 and go to step 6.

5. A mated application can be provisioned with a point code that is assigned to other mated applications as long as the SSN is not assigned to other mated applications.

   A point code can be assigned to maximum of 12 different SSNs. Verify the number of SSNs assigned to the point code that will be specified for the mated application in this procedure by entering the `rtrv-map` command with the point code of the new mated application. For this example, enter this command.

   ```
   rtrv-map:pca=255-001-000
   ```

   This is an example of the possible output.

   ```
   PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
   255-001-000               250 10  SOL --- --- grp01    ON
   255-001-000               251 10  SHR --- --- grp01    OFF
                253-001-002  254 10  SHR --- --- grp01    OFF
   255-001-000               252 10  SOL --- --- grp01    ON
   255-001-000               253 10  SHR --- --- grp01    OFF
                253-001-004  254 10  SHR --- --- grp01    OFF
   ```

   If the Flexible GTT Load Sharing feature is enabled, the MAPSET IDs for the mated applications are shown in the `rtrv-map` output.

   If the Weighted GTT Load Sharing feature is enabled and turned, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output.

   If the point code is assigned to less than 12 different SSNs, then the existing point code in the `rtrv-map` output can be used to provision the mated application. Go to step 6.

   If the point code is assigned to 12 different SSNs, another existing point code in the `rtrv-map` output or a new point code must be used to provision the mated application. If an existing point code in the `rtrv-map` output will be used to provision the mated application, repeat this step for that point code. Then go to step 6.

   If a new point code will be used to provision the mated application, go to step 6.

   If the point code is assigned to 12 different SSNs, and neither an existing point code in the `rtrv-map` output nor a new point code will be used to provision the mated application, then this procedure cannot be performed.

Note: If a concerned signaling point code (CSPC) group is not being assigned to the mated application, skip steps 6 and 7, and go to step 8.

Note: If the mated point code is not assigned to a CSPC group, that point code will not be notified of the subsystem's status.

6. Display the point codes in the CSPC group that you wish to assign to the mated application by first entering the `rtrv-cspc` command with no parameters.

   This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:48:31  GMT  EAGLE5 37.0.0
CSPC GRP   NETWORK               PERCENT FULL
grp01      ANSI                    6%
grp02      ITU-I                   9%
grp03      ITU-N                  12%
grp04      ANSI                   15%
grp05      ANSI                   15%
grp10      ANSI                   15%
grp15      ANSI                   15%
```

   If the desired CSPC group is shown in the `rtrv-cspc` output, re-enter the `rtrv-cspc` command with the CSPC group name. For this example, enter these commands.

   `rtrv-cspc:grp=grp05`

   This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:48:31  GMT  EAGLE5 37.0.0
CSPC GRP      PCA
grp05         005-005-005
              007-007-007
              008-008-008
              009-009-009
```

   `rtrv-cspc:grp=grp10`

   This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:59:31  GMT  EAGLE5 37.0.0
CSPC GRP      PCA
grp10         003-003-003
              004-004-004
              008-008-008
              009-009-009
```

   `rtrv-cspc:grp=grp15`

   This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:48:31  GMT  EAGLE5 37.0.0
CSPC GRP      PCA
grp15         005-005-005
              006-006-006
              008-008-008
              009-009-009
```

   Note: If the ANSI-ITU-China SCCP Conversion feature is enabled, then point codes of multiple network types can be displayed in the `rtrv-cspc` output, if point codes of multiple network types are assigned to the CSPC group.

If the CSPC group is not in the database, or if the required point code is not assigned to the CSPC group, perform the *Adding a Concerned Signaling Point Code* on page 100 procedure and add the required CSPC group or point code to the database.

Note: If the output of the `rtrv-cspc` command performed in step 6 shows CSPC groups containing a mixture of point code types, or if the new CSPC group that was added in step 6 contains a mixture of point code types, skip step 7 and go to step 8.

7. The format of the point codes in the CSPC group specified with the `grp` parameter must be the same as the primary point code specified with the `ent-map` command only if the ANSI-ITU-China SCCP Conversion feature is not enabled.

   If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (refer to the *Adding a Concerned Signaling Point Code* on page 100 procedure), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application.

   Verify the status of the ANSI-ITU-China SCCP Conversion feature by entering this command:

   `rtrv-ctrl-feat:partnum=893012001`

   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
SCCP Conversion           893012001  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 ANSI-ITU-China SCCP Conversion feature is not enabled, perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure to enable the ANSI-ITU-China SCCP Conversion feature.

8. If the `MAPSET` column is shown in the `rtrv-map` output in step 1, the Flexible GTT Load Sharing feature is enabled. Go to step 9.

   If the `MAPSET` column is not shown in step 1 and you do not wish to provision MAP sets in this procedure, skip this step and go to step 9.

   If the `MAPSET` column is not shown in step 1 and you wish to provision MAP sets in this procedure, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure and enable the Flexible GTT Load Sharing feature. After the Flexible GTT Load Sharing feature is enabled, go to step 9.

   Note: If the `sso` parameter will be specified for the mated application, skip step 9 and go to step 10. The EAGLE 5 ISS's point code and LNP, EIR, V-Flex, or INP subsystem cannot be assigned to a mated application using the `sso` parameter.

9. Display the EAGLE 5 ISS self-identification, using the `rtrv-sid` command.

```
rlghncxa03w 07-05-10 11:43:04 GMT EAGLE5 37.0.0
   PCA             PCI          PCN                CLLI              PCTYPE
   010-020-030     1-023-1      12-0-14-1          rlghncxa03w       OTHER
                 s-1-023-1    s-12-0-14-1
   CPCA
   001-001-001       002-002-003       002-002-004      002-002-005
   002-002-006       002-002-007       002-002-008      002-002-009
   004-002-001       004-003-003       050-060-070

   CPCI
   1-001-1           1-001-2           1-001-3          1-001-4
   1-002-1           1-002-2           1-002-3          1-002-4
   2-001-1           7-222-7

   CPCN
   2-0-10-3          2-0-11-0          2-0-11-2          2-0-12-1
   2-2-3-3           2-2-4-0           10-14-10-1
```

The EAGLE 5 ISS's true point code is shown in either the `PCA`, `PCI`, `PCN`, or `PCN24` fields. This is an example of the possible output.

Note: If the both point codes that will be specified for the mated application are point codes assigned to other mated applications, skip steps 10 through 14, and go to step 15.

Note: If the EAGLE 5 ISS's point code will be specified for the mated application, and its mated point code is assigned to other mated applications, skip steps 10, 11 and 12, and go to step 13.

Note: If only one of the point codes that will be specified for the mated application is assigned to other mated applications, perform step 10 for the new point code that is not assigned to other mated applications.

10. Display the destination point codes in the database by entering the `rtrv-dstn` command. This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN          DOMAIN
   001-207-000   ----------- no  ---   -------      -----------     SS7
   001-001-001   ----------- no  ---   -------      -----------     SS7
   001-001-002   ----------- no  ---   -------      -----------     SS7
   001-005-000   ----------- no  ---   -------      -----------     SS7
   001-007-000   ----------- no  ---   -------      -----------     SS7
   008-012-003   ----------- no  ---   -------      -----------     SS7
   003-002-004   ----------- no  ---   -------      -----------     SS7
   009-002-003   ----------- no  ---   -------      -----------     SS7
   010-020-005   ----------- no  ---   -------      -----------     SS7

   DPCI          CLLI        BEI ELEI  ALIASI       ALIASN          DOMAIN
   1-207-0       ----------- no  ---   -------      -----------     SS7
   0-015-0       ----------- no  ---   -------      -----------     SS7
   0-017-0       ----------- no  ---   -------      -----------     SS7
   1-011-1       ----------- no  ---   -------      -----------     SS7
   1-011-2       ----------- no  ---   -------      -----------     SS7

   DPCN          CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

   DPCN24        CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

Destination table is (14 of 2000) 1% full
```

```
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the required point code is not shown in the `rtrv-dstn` output, perform the "Adding a Destination Point Code" procedure in the *Database Administration Manual - SS7* to add the required point code. A proxy point code cannot be assigned to the point code.

After the new point code has been added, skip steps11 through 14 and perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database. After the route has been added, continue the procedure with step 15.

11. Display the point code that will be assigned to the mated application by using the `rtrv-dstn` command and specifying the point code. For this example, enter this command.

`rtrv-dstn:dpca=010-020-005`

This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
   010-020-005   ----------- no  ---   -------      -----------    SS7

   PPC           NCAI           PRX
   009-002-003   ----           no

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the point code is not shown in the `rtrv-dstn` command output, the following output is displayed.

```
DPCA          CLLI        BEI ELEI  ALIASI       ALIASN/N24    DOMAIN

No destinations meeting the requested criteria were found

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

A proxy point code (a point code value is shown in the `PPC` column) cannot be assigned to the point code. If a proxy point code is shown in this step, choose another point code from the `rtrv-dstn` output in the previous step and repeat this step.

After the new point code has been added, skip steps 12 through 14 and perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database. After the route has been added, continue the procedure with step 15.

12. Enter the `rtrv-rte` command with the `dpc` parameter specifying the point codes to be used with the `ent-map` or `chg-map` commands to verify whether or not the point code is the DPC of a route.

For this example, enter these commands.

`rtrv-rte:dpca=003-003-003`

This is an example of the possible output.

```
rlghncxa03w 07-05-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
```

```
   003-003-003 ---------- --------------   ls03       10    003-003-003
                                               RTX:No  CLLI=ls07clli
```

`rtrv-rte:dpca=005-005-005`

This is an example of the possible output.

```
rlghncxa03w 07-05-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   005-005-005 ---------- --------------   ls05       10    005-005-005
                                           ls15       30    089-047-123
                                           lsa8       50    077-056-000
                                               RTX:No  CLLI=ls05clli
```

`rtrv-rte:dpca=008-008-008`

This is an example of the possible output.

```
rlghncxa03w 07-05-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   008-008-008 ---------- --------------   ls20       10    008-008-008
                                               RTX:No  CLLI=ls20clli
```

`rtrv-rte:dpca=031-049-100`

This is an example of the possible output.

```
rlghncxa03w 07-05-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   031-049-100 ---------- --------------   ls10       10    031-049-100
                                               RTX:No  CLLI=ls10clli
```

`rtrv-rte:dpca=040-040-040`

This is an example of the possible output.

```
rlghncxa03w 07-05-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   040-040-040 ---------- --------------   ls11       10    040-040-040
                                               RTX:No  CLLI=ls11clli
```

`rtrv-rte:dpca=056-113-200`

This is an example of the possible output.

```
rlghncxa03w 07-05-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   056-113-200 ---------- --------------   ls12       10    056-113-200
                                               RTX:No  CLLI=ls12clli
```

`rtrv-rte:dpca=060-060-060`

This is an example of the possible output.

```
rlghncxa03w 07-05-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   060-060-060 ---------- --------------   ls13       10    060-060-060
                                               RTX:No  CLLI=ls13clli
```

`rtrv-rte:dpca=070-070-070`

This is an example of the possible output.

```
rlghncxa03w 07-05-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   070-070-070 ----------   --------------   ls15       10    070-070-070
                                             RTX:No  CLLI=ls15clli
```

`rtrv-rte:dpca=179-183-050`

This is an example of the possible output.

```
rlghncxa03w 07-05-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   179-183-050 ---------- --------------   ls18       10    179-183-050
                                             RTX:No  CLLI=ls18clli
```

If the point code is not shown in the `rtrv-rte` output, perform one of the Adding a Route procedures in the Database *Administration Manual - SS7* and add the required route to the database.

If the EAGLE 5 ISS's point code will not be specified for the mated application, skip steps 13 and 14, and go to step 15.

If the EAGLE 5 ISS's point code will be specified for the mated application, go to step 13.

Note: If the `rtrv-ctrl-feat` output in step 3 shows that either the LNP or ATINPQ feature is enabled, or the EIR, V-Flex, INP , ANSI-41 INP Query or V-Flex feature is enabled and turned on, skip steps 13 and 14, and go to step 15.

13. Verify whether or not either the LNP or ATINPQ feature is enabled, or the EIR, INP, V-Flex, or ANSI-41 INP Query feature is enabled and turned on by entering the `rtrv-ctrl-feat` command, or by examining the `rtrv-ctrl-feat` output from step 3, if step 3 was performed.

The entry `LNP TNs` is shown in the `rtrv-ctrl-feat` output with a quantity greater than zero if the LNP feature is enabled. If the EIR feature is enabled and turned on, the entry `EIR` is shown in the `rtrv-ctrl-feat` output and the status of the EIR feature should be on. If the INP feature is enabled and turned on, the entry `INP` is shown in the `rtrv-ctrl-feat` output and the status of the INP feature should be on. If the ANSI-41 INP Query feature is enabled and turned on, the entry `ANSI-41 INP Query` is shown in the `rtrv-ctrl-feat` output and the status of the ANSI-41 INP Query feature should be on. If the V-Flex feature is enabled and turned on, the entry `V-Flex` is shown in the `rtrv-ctrl-feat` output and the status of the V-Flex feature should be on. If the ATINP feature is enabled, the entry `ATINP` is shown in the `rtrv-ctrl-feat` output. If the LNP or ATINPQ feature is enabled, or if the EIR, INP, V-Flex, or ANSI-41 INP Query feature is enabled and turned on, skip step 14 and go to step 15.

14. Enable either the INP, ANSI-41 INP Query, EIR, V-Flex, ATINPQ, or LNP features, depending on which subsystem you wish to use.

To use the INP subsystem, enable and turn on either the INP or ANSI-41 INP Query feature, perform the procedures in the *Feature Manual - INP/AINPQ*.

To use the LNP subsystem, enable the LNP feature, perform the procedures in the LNP *Feature Activation Guide*.

To use the EIR subsystem, enable and turn on the EIR feature, perform the procedures in the *Feature Manual* - EIR .

To use the V-Flex subsystem, enable and turn on the V-Flex feature, perform the procedures in the *Feature Manual* - V-Flex .

To use the ATINPQ subsystem, enable the ATINP feature, perform the procedures in the *Feature Manual - ATINP*.

Note: If the LNP feature is enabled, the INP, ANSI-41 INP Query, V-Flex, ATINPQ, or EIR features cannot be enabled.

Note: If an entry is being added to an existing mated application, skip step 15 and go to step 16.

15. Add the mated application to the database using the `ent-map` command.

If the Flexible GTT Load Sharing feature is not enabled for this example, enter these commands.

```
ent-map:pca=003-003-003:ssn=254:rc=10:mpc=040-040-040:mssn=254
:materc=20:grp=grp10:mrc=yes:srm=yes:sso=on
```

```
ent-map:pca=005-005-005:ssn=250:rc=10:mpc=060-060-060:mssn=250
:materc=20:grp=grp15:mrc=yes:srm=yes:sso=off
```

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

```
rlghncxa03w 07-05-07  11:44:13  GMT  EAGLE5 37.0.0
ENT-MAP:  MASP A - COMPLTD
```

If the Flexible GTT Load Sharing feature is enabled for this example, enter these commands.

```
ent-map:pca=003-003-003:ssn=254:rc=10:mpc=040-040-040:mssn=254
:materc=20:grp=grp10:mrc=yes:srm=yes:sso=on:mapset=new
```

```
ent-map:pca=005-005-005:ssn=250:rc=10:mpc=060-060-060:mssn=250
:materc=20:grp=grp15:mrc=yes:srm=yes:sso=off:mapset=dflt
```

If the Flexible GTT Load Sharing feature is enabled when each of these commands have successfully completed, and a new MAP set was created, a message similar to the following should appear.

```
rlghncxa03w 07-05-07  11:44:13  GMT  EAGLE5 37.0.0
New MAPSET Created : MAPSETID = 9
ENT-MAP:  MASP A - COMPLTD
```

If the Flexible GTT Load Sharing feature is enabled when each of these commands have successfully completed, and the mated application was added to the default MAP set, this message should appear.

```
rlghncxa03w 07-05-07  11:44:13  GMT  EAGLE5 37.0.0
ENT-MAP:  MASP A - COMPLTD
```

Note:

- If the EAGLE 5 ISS's point code and subsystem number is being assigned to the mated application, the point code and subsystem number must have the lowest relative cost value in the mated application and can have only one mated point code and subsystem assigned to it. The EAGLE 5 ISS's point code and subsystem cannot be assigned if the `sso` parameter is specified for the mated application. If the Flexible GTTLoad Sharing feature is enabled, the EAGLE 5 ISS's point code and subsystem number can be assigned only to the default MAP set using the `mapset=dflt` parameter.

- To create a dominant mated application, the `rc`, `mpc/mpca/mpci/mpcn/mpcn24`, `mssn`, and `materc` parameters must be specified. The `materc` values must be larger than the `rc` value. The `materc` values cannot be equal to each other.
- The EIR subsystem can be assigned to mated applications containing an ITU-I EAGLE 5 ISS point code and to another mated application containing either a 14-bit ITU-N EAGLE 5 ISS point codeor a 24-bit ITU-N EAGLE 5 ISS point code. The ITU-N point code can be either a 14-bit or a 24-bit ITU-N point code. Both types of point codes cannot be specified. Perform this step as necessary to provision an ITU-I and either a 14-bit ITU-N or a 24-bit ITU-N mated application containing the EIR subsystem.
- The VFLEX subsystem can be assigned to mated applications containing an ANSI, ITU-I, and either a 14-bit ITU-N or a 24-bit ITU-N EAGLE 5 ISS point code. The ITU-N point code can be either a 14-bit or a 24-bit ITU-N point code. Both types of point codes cannot be specified. Perform this step as necessary to provision an ANSI, ITU-I, and either a 14-bit ITU-N or a 24-bit ITU-N mated application containing the VFLEX subsystem.
- The ATINPQ subsystem can be assigned to mated applications containing an ANSI, ITU-I, and a 14-bit ITU-N EAGLE 5 ISS point code. Perform this step as necessary to provision an ANSI, ITU-I, and a 14-bit ITU-N mated application containing the ATINPQ subsystem.
- The format of the point codes in the CSPC group specified with the `grp` parameter must be the same as the primary point code specified with the `ent-map` command only if the ANSI-ITU-China SCCP Conversion feature is not enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (refer to the *Adding a Concerned Signaling Point Code* on page 100 procedure), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application.
- The point code type of the mate point code must be the same as the point code type of the primary point code. For example, if the primary point code is a 24-bit ITU-N point code (`pcn24`), the mate point code must be a 24-bit ITU-N point code (`mpcn24`). If spare point codes are being used, both the primary and mate point codes must be spare point codes. For example, if the primary point code is an ITU-I spare point code, the mate point code must be an ITU-I spare point code.
- If the Flexible GTTLoad Sharing is enabled, the `mapset` parameter must be specified with the `ent-map` command.

  If the Flexible GTT Load Sharing is not enabled, the `mapset` parameter cannot be specified with the `ent-map` command.

  To provision entries in the default MAP set, the `mapset=dflt` parameter must be specified with the `ent-map` command.

  To provision entries in a new MAP set, the `mapset=new` parameter must be specified with the `ent-map` command. The `mapset=new` parameter can be specified only with the `ent-map` command. When the `ent-map` command is executed with the `mapset=new` parameter, the new MAP set ID is automatically generated and displayed in the output of the `ent-map` command as follows.

  ```
  New MAPSET Created : MAPSETID = <new MAP set ID>
  ```

  A MAP set, other than the default MAP set, is a MAP group provisioned with the MAP set ID and can contain a maximum of 32 point code and subsystem entries.

  The default MAP set can contain multiple MAP groups. Each group in the default MAP set can contain a maximum of 32 point code and subsystem entries.

The point code and subsystem entry can appear only once in the default MAP set, so the point code and subsystem entry can appear in only one MAP group in the default MAP set. The point code and subsystem entry provisioned in a MAP set can be provisioned in multiple MAP sets. If a point code and subsystem entry is provisioned in different MAP sets, the relative cost value of the entry in each MAP set can be different. All the point code and subsystem entries in a MAP set, including the default MAP set, must be different.

- If the Weighted GTTLoad Sharing feature is enabled, shown by the columns `WT`, `%WT`, and `THR` in the `rtrv-map` output, the parameters `wt`, `mwt`, and `thr` cannot be specified for a dominant mated application.

Note: If no other entries are being added to the mated application, skip step 16 and go to step 17.

16. Add the mated point code and subsystem to the mated application using the `chg-map` command according to the notes in step 15.

If the Flexible GTT Load Sharing feature is not enabled for this example, enter these commands.

```
chg-map:pca=005-005-005:ssn=250:rc=10:mpca=070-070-070
:mssn=251:materc=30:grp=grp05:mrc=yes:srm=yes:sso=on
```

```
chg-map:pca=008-008-008:ssn=254:rc=10:mpca=031-049-100
:mssn=250:materc=40:grp=grp15:mrc=yes:srm=yes:sso=on
```

```
chg-map:pca=008-008-008:ssn=254:rc=10:mpca=056-113-200
:mssn=251:materc=50:grp=grp05:mrc=yes:srm=yes:sso=off
```

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

```
rlghncxa03w 07-05-07  11:44:13  GMT  EAGLE5 37.0.0
CHG-MAP:  MASP A - COMPLTD
```

If the Flexible GTT Load Sharing feature is enabled for this example, enter these commands.

```
chg-map:pca=005-005-005:ssn=250:rc=10:mpca=070-070-070
:mssn=251:materc=30:grp=grp05:mrc=yes:srm=yes:sso=on :mapset=dflt
```

```
chg-map:pca=008-008-008:ssn=254:rc=10:mpc=179-183-050:mssn=250
:materc=11:grp=grp15:sso=off:mapset=12
```

```
chg-map:pca=008-008-008:ssn=254:rc=10:mpca=031-049-100
:mssn=250:materc=40:grp=grp15:mrc=yes:srm=yes:sso=on:mapset=13
```

```
chg-map:pca=008-008-008:ssn=254:rc=10:mpca=056-113-200
:mssn=251:materc=50:grp=grp05:mrc=yes:srm=yes:sso=off :mapset=13
```

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

```
rlghncxa03w 07-05-07  11:44:13  GMT  EAGLE5 37.0.0
CHG-MAP:  MASP A - COMPLTD
```

Repeat this step for all new entries being added to the existing mated application.

If the Flexible GTT Load Sharing feature is not enabled, the mated application can contain a maximum of 32 entries.

If the Flexible GTT Load Sharing feature is enabled, and the MAP set is not the default MAP set, the MAP set can contain a maximum of 32 entries.

If the Flexible GTT Load Sharing feature is enabled, and the MAP set is the default MAP set, the default MAP set can contain multiple MAP groups. Each group in the default MAP set can contain a maximum of 32 point code and subsystem entries.

17. Verify the changes using the `rtrv-map` command with the primary point code and subsystem specified in steps 15 and 16.

    If a new MAP set was created in step 15, the `mapset` parameter should be specified with the `rtrv-map` command. The value for the mapset parameter should be the MAP set ID generated in step 15.

    If the mated application was added to an existing MAP in step 16, the `mapset` parameter and value specified in step 16 should be specified with the `rtrv-map` command.

    If the Flexible GTT Load Sharing feature is not enabled for this example, enter these commands.

    ```
    rtrv-map:pca=003-003-003:ssn=254
    ```

    This is an example of the possible output.

    ```
    rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0
    MAP TABLE IS   4 % FULL    (37 of 1024)
    PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
    003-003-003               254 10  DOM YES YES grp10    ON
                 040-040-040  254 20  DOM YES YES grp10    ON
    ```

    ```
    rtrv-map:pca=005-005-005:ssn=250
    ```

    This is an example of the possible output.

    ```
    rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0
    MAP TABLE IS   4 % FULL    (37 of 1024)
    PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
    005-005-005               250 10  DOM YES YES grp15    OFF
                 060-060-060  250 20  DOM YES YES grp15    OFF
                 070-070-070  251 30  DOM YES YES grp05    ON
    ```

    ```
    rtrv-map:pca=008-008-008:ssn=254
    ```

    This is an example of the possible output.

    ```
    rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0
    MAP TABLE IS   4 % FULL    (37 of 1024)
    PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
    008-008-008               254 10  DOM YES YES grp10    ON
                 031-049-100  250 40  DOM YES YES grp15    ON
                 056-113-200  251 50  DOM YES YES grp05    OFF
    ```

    Note:

    If the Weighted GTT Load Sharing feature is enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output.

    If the Flexible GTT Load Sharing feature is enabled for this example, enter these commands.

    ```
    rtrv-map:pca=003-003-003:ssn=254:mapset=11
    ```

    This is an example of the possible output.

    ```
    rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0
    MAP TABLE IS   1 % FULL    (37 of 36000)
    PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
    ```

```
MAPSET ID=11
003-003-003               254 10  DOM YES YES grp10    ON
            040-040-040   254 20  DOM YES YES grp10    ON
```

`rtrv-map:pca=005-005-005:ssn=250:mapset=dflt`

This is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0
MAP TABLE IS   1 % FULL    (37 of 36000)
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=DFLT
005-005-005               250 10  DOM YES YES grp15    OFF
            060-060-060   250 20  DOM YES YES grp15    OFF
            070-070-070   251 30  DOM YES YES grp05    ON
```

`rtrv-map:pca=008-008-008:ssn=254:mapset=13`

This is an example of the possible output.

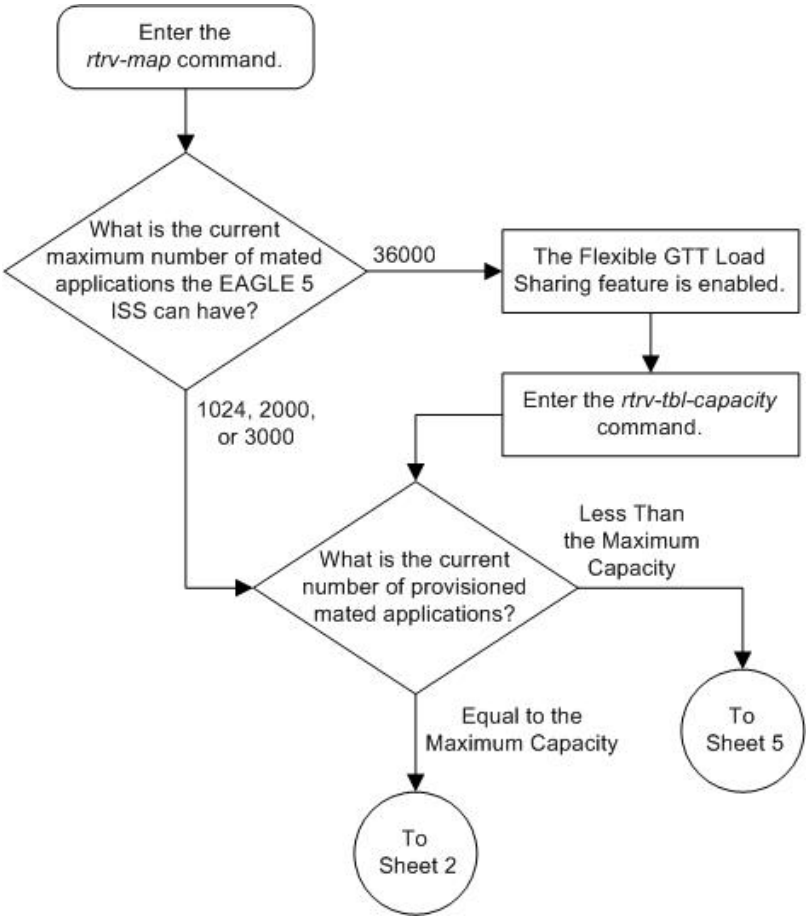
```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0
MAP TABLE IS   1 % FULL    (37 of 36000)
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=13
008-008-008               254 10  DOM YES YES grp10    ON
            031-049-100   250 40  DOM YES YES grp15    ON
            056-113-200   251 50  DOM YES YES grp05    OFF
```

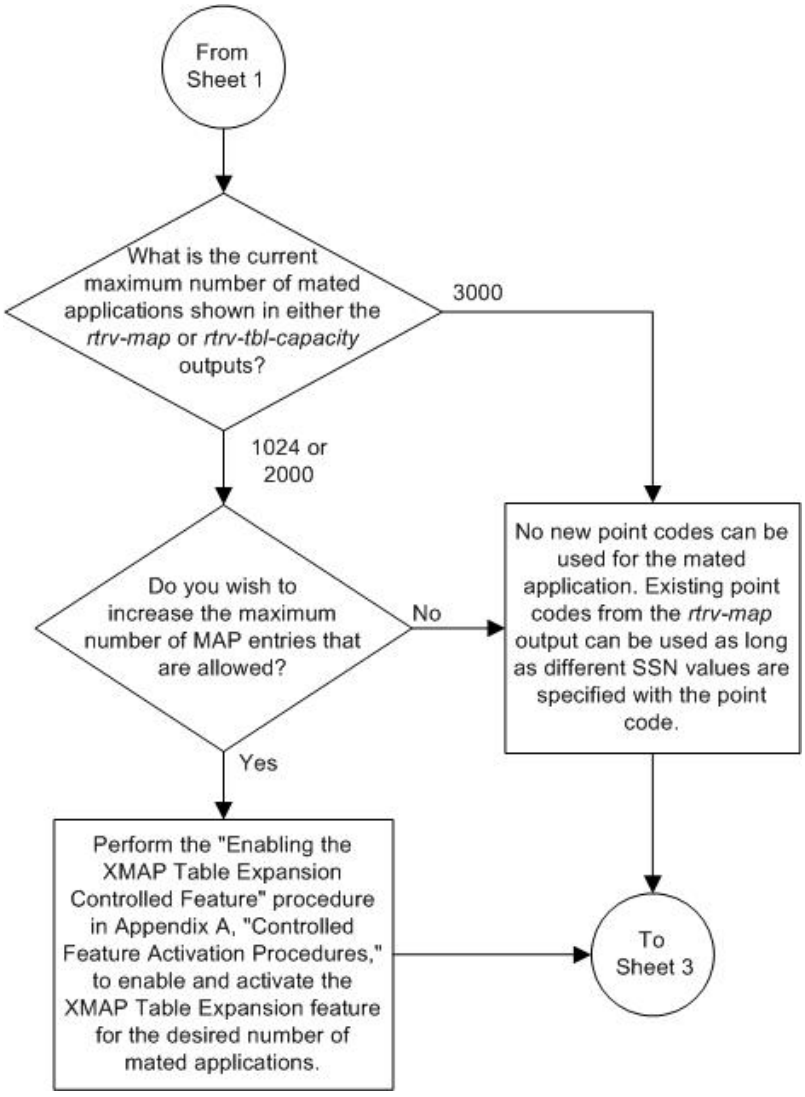
Note: If the Weighted GTTLoad Sharing feature is enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output.

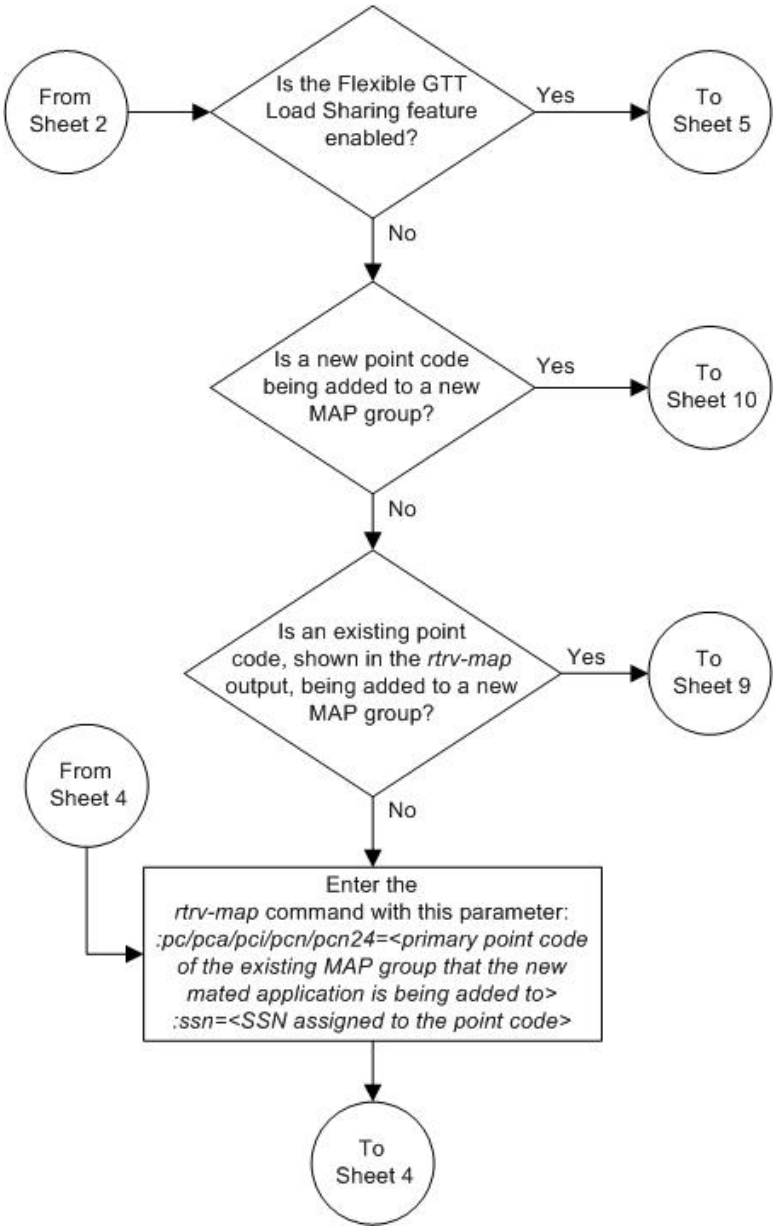
18. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

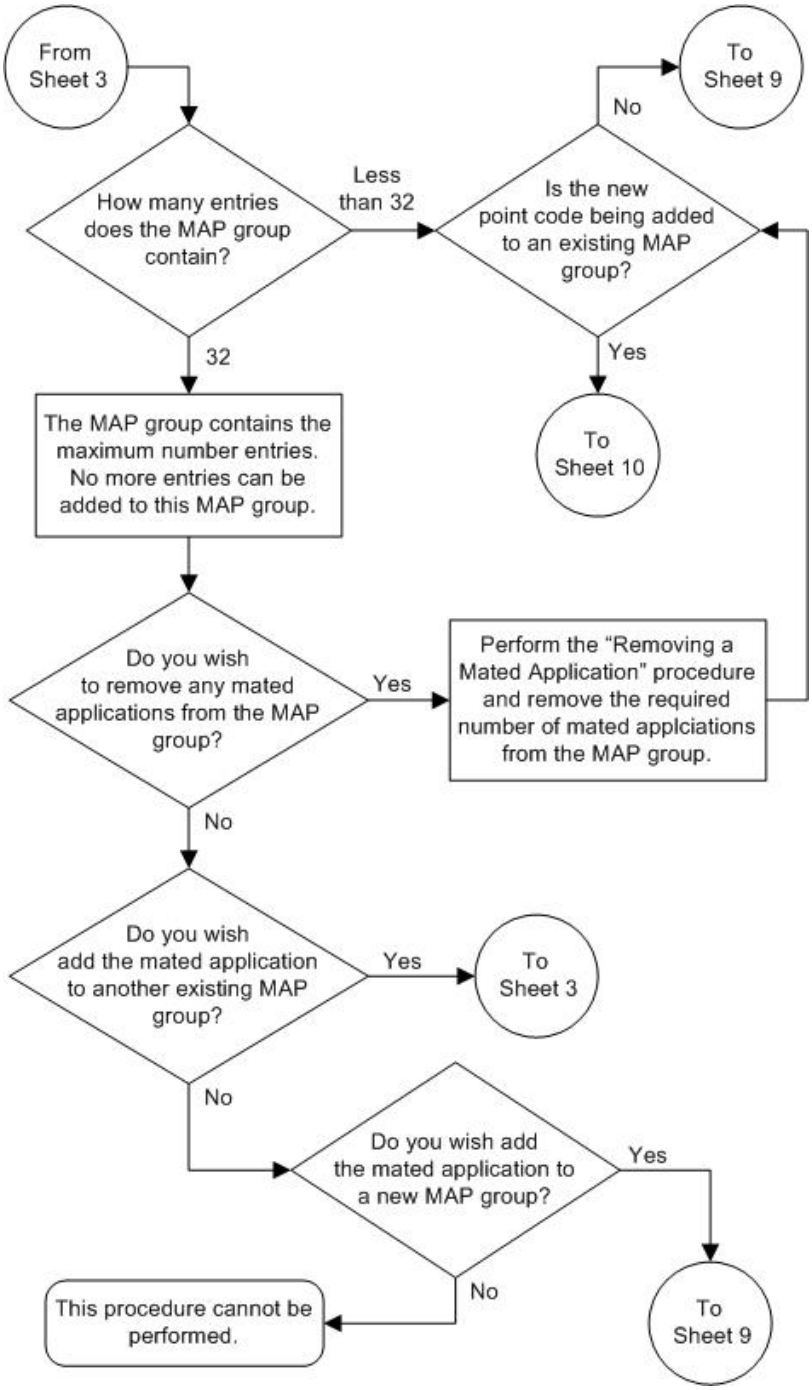
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

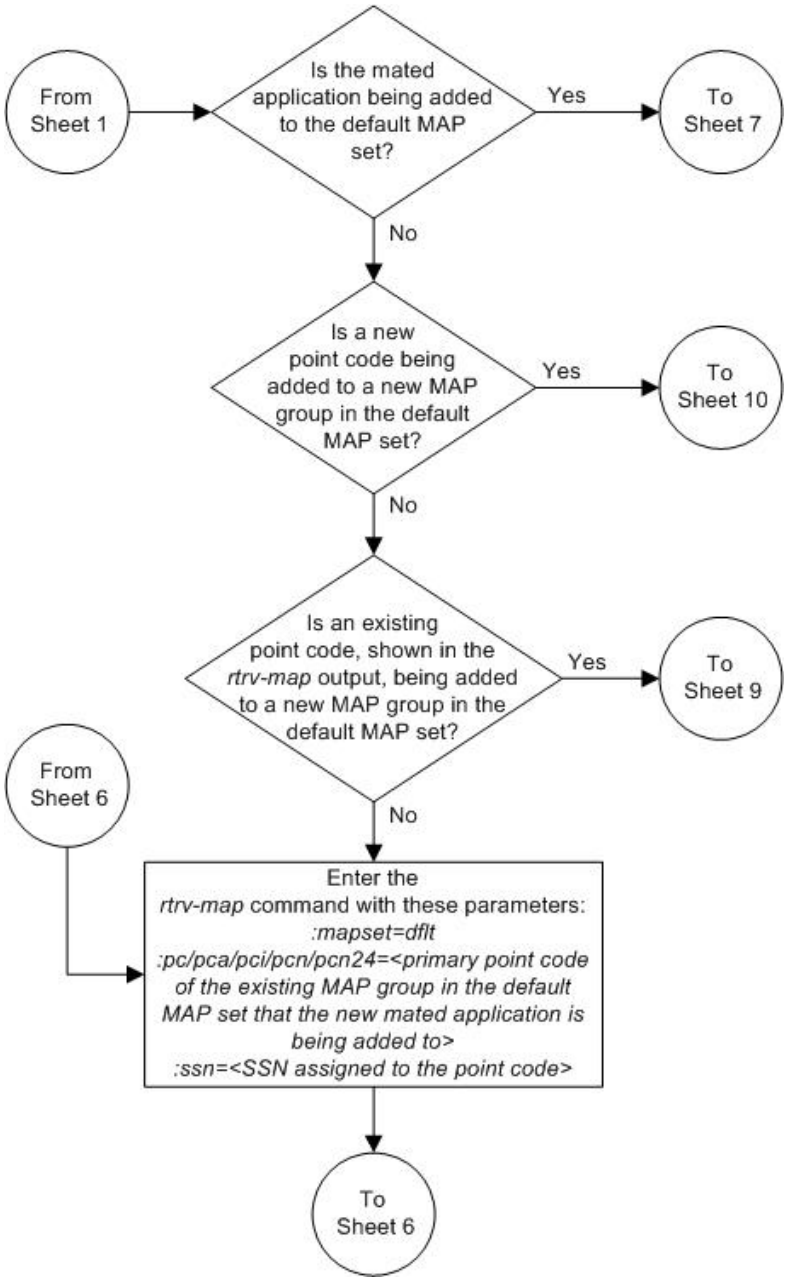
Figure 20: Provisioning a Dominant Mated Application

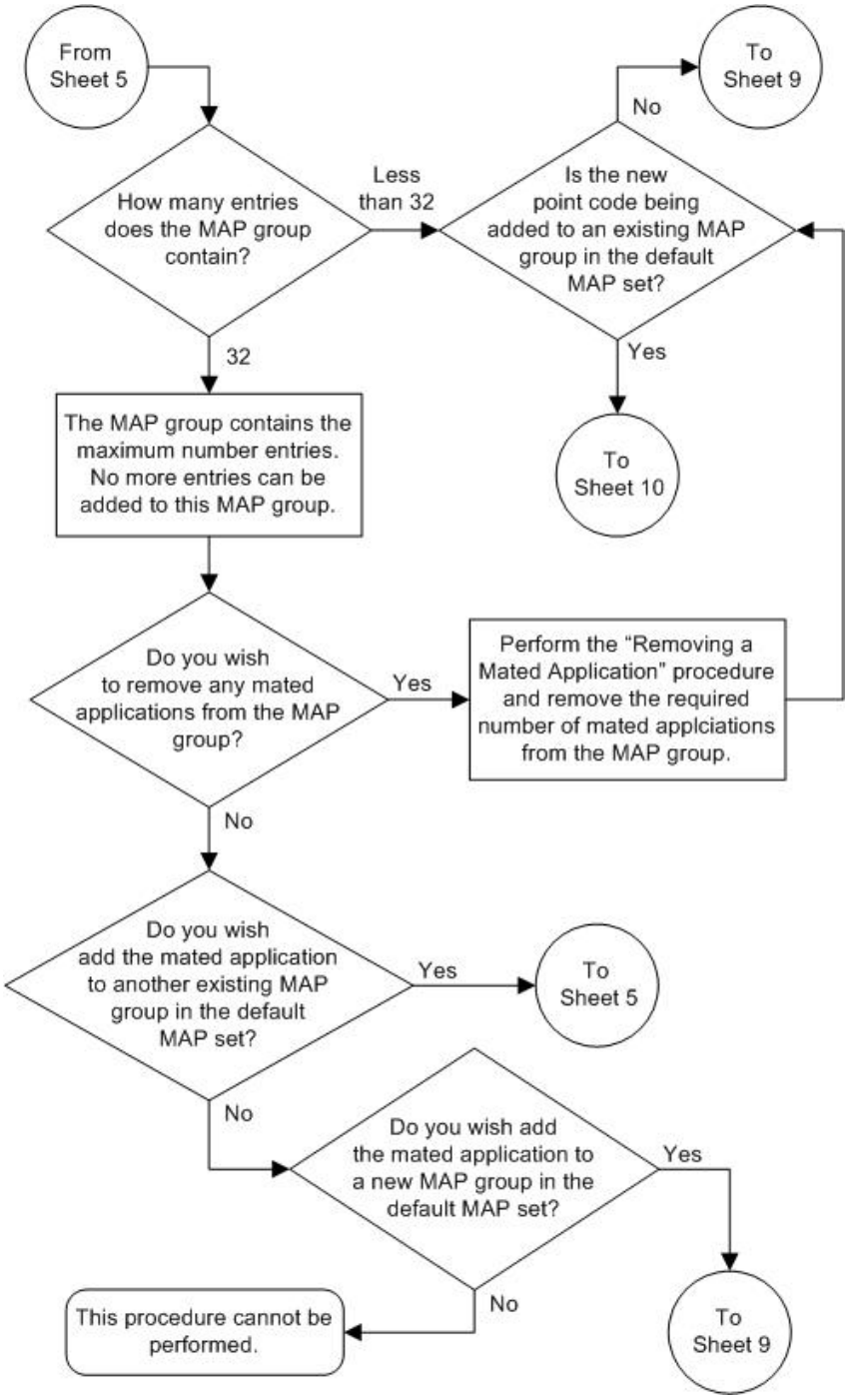

Enter the *rtrv-map* command.
What is the current maximum number of mated applications the EAGLE 5 ISS can have?
36000
The Flexible GTT Load Sharing feature is enabled.
Enter the *rtrv-tbl-capacity* command.
1024, 2000, or 3000
What is the current number of provisioned mated applications?
Less Than the Maximum Capacity
To Sheet 5
Equal to the Maximum Capacity
To Sheet 2

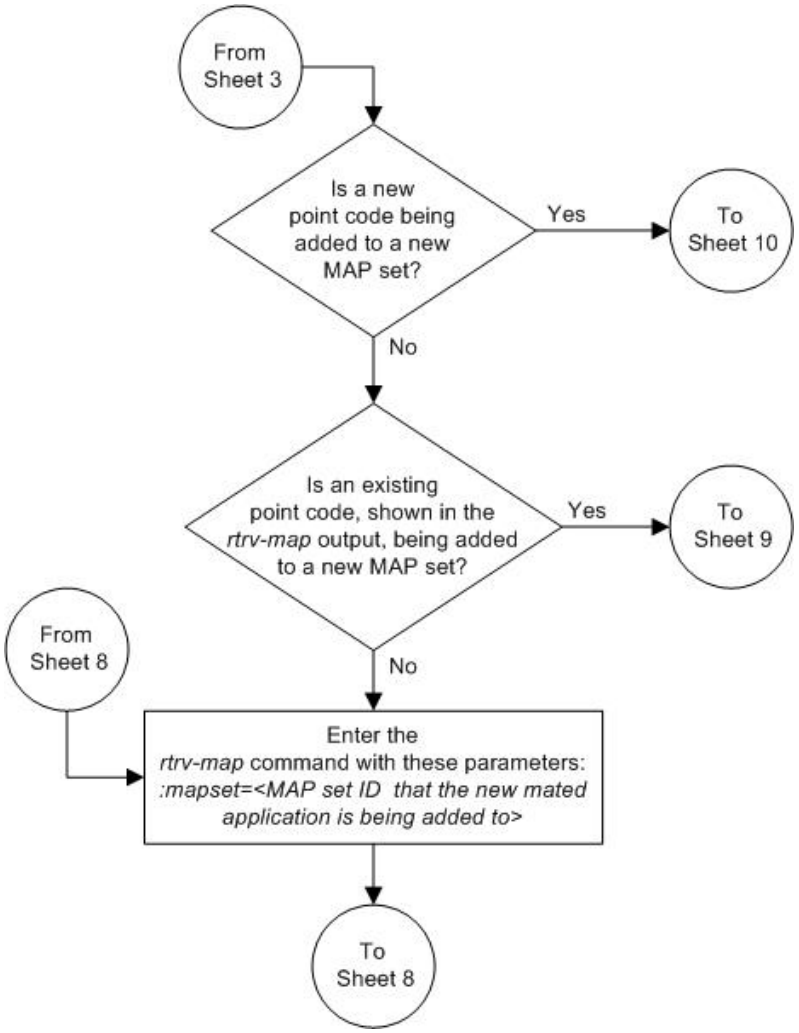

From Sheet 1
What is the current maximum number of mated applications shown in either the rtrv-map or rtrv-tbl-capacity outputs?
3000
1024 or 2000
Do you wish to increase the maximum number of MAP entries that are allowed?
No
No new point codes can be used for the mated application. Existing point codes from the rtrv-map output can be used as long as different SSN values are specified with the point code.
Yes
Perform the "Enabling the XMAP Table Expansion Controlled Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," to enable and activate the XMAP Table Expansion feature for the desired number of mated applications.
To Sheet 3

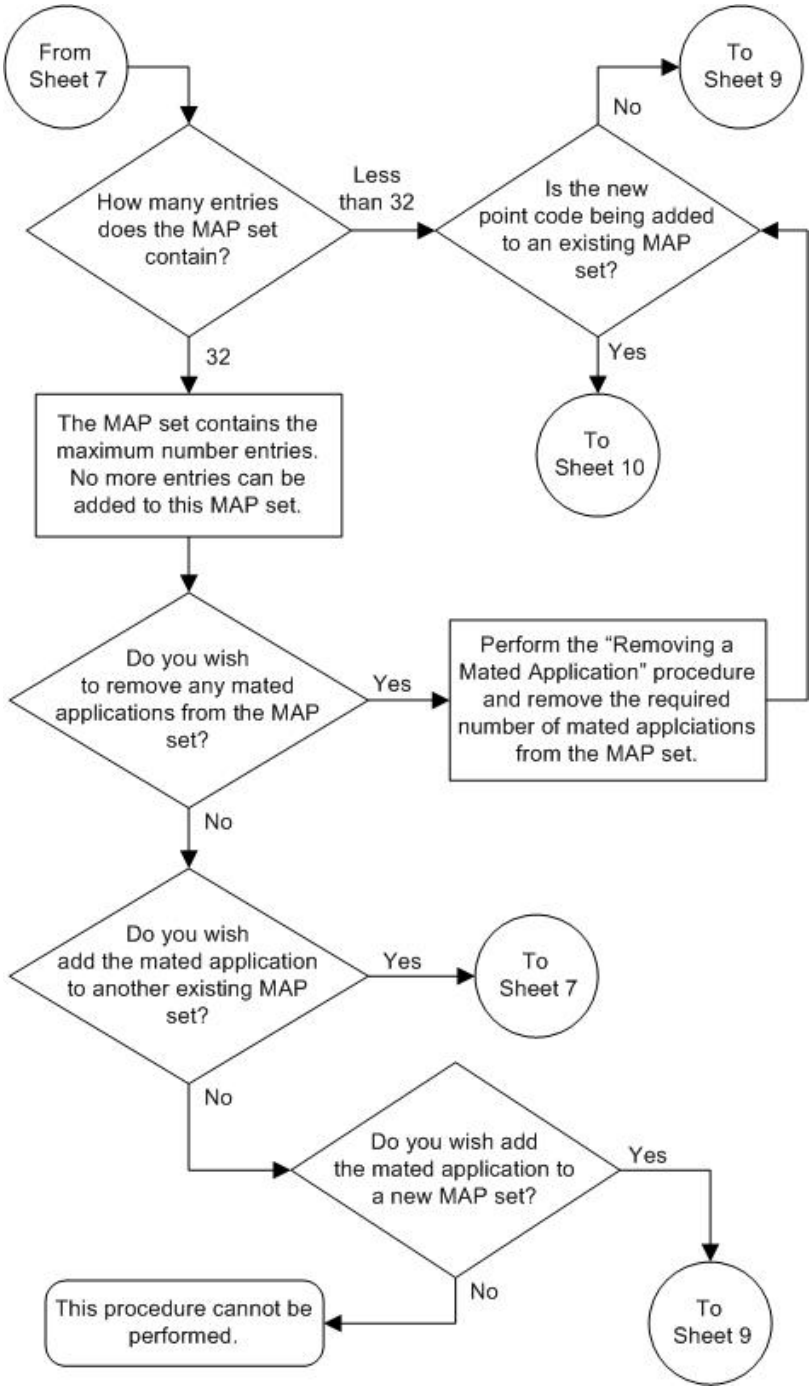

From Sheet 2
Is the Flexible GTT Load Sharing feature enabled?
Yes
To Sheet 5
No
Is a new point code being added to a new MAP group?
Yes
To Sheet 10
No
Is an existing point code, shown in the rtrv-map output, being added to a new MAP group?
Yes
To Sheet 9
From Sheet 4
No
Enter the rtrv-map command with this parameter: :pc/pca/pci/pcn/pcn24=<primary point code of the existing MAP group that the new mated application is being added to> :ssn=<SSN assigned to the point code>
To Sheet 4

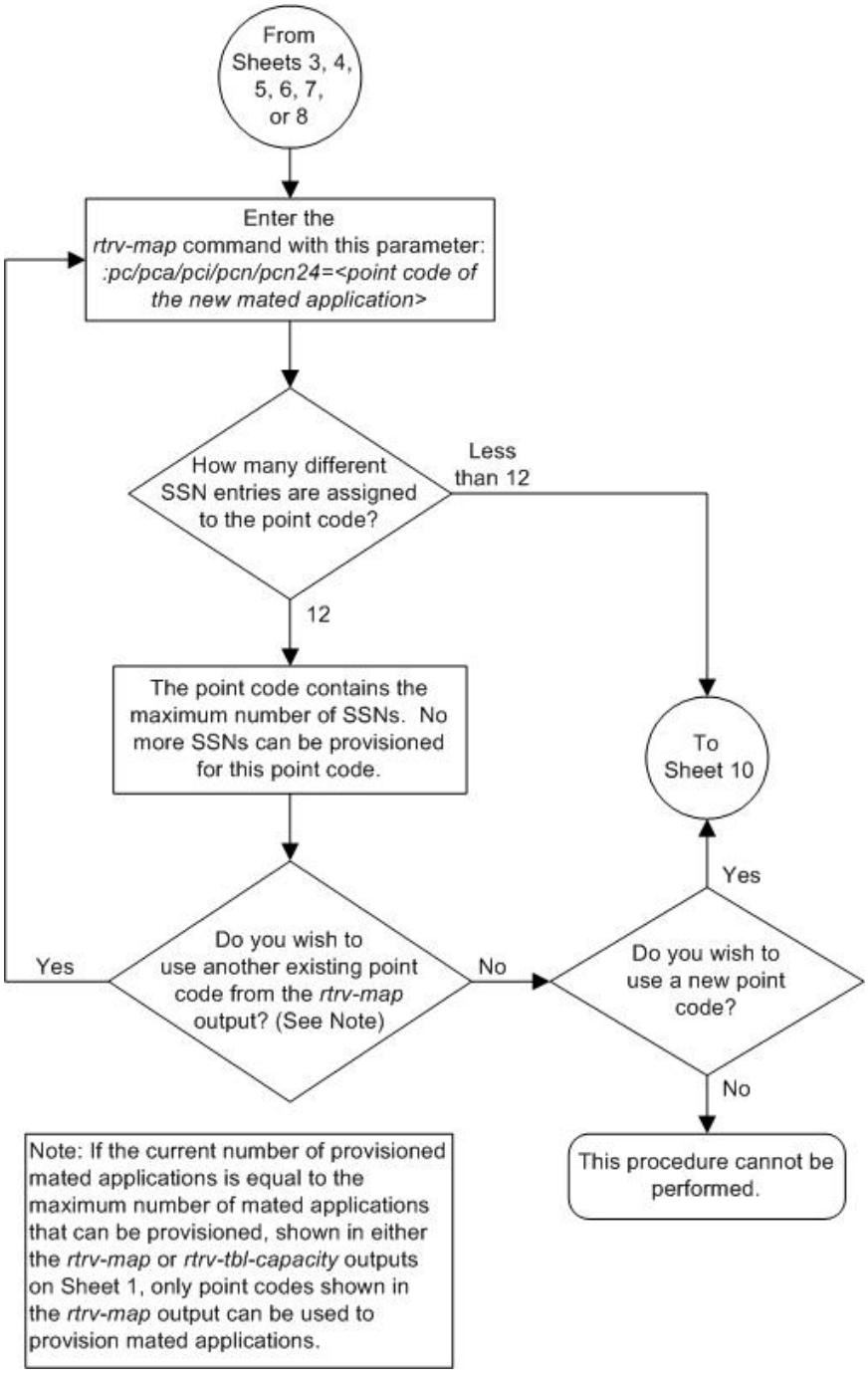

From Sheet 3
How many entries does the MAP group contain?
Less than 32
Is the new point code being added to an existing MAP group?
No
To Sheet 9
Yes
To Sheet 10
32
The MAP group contains the maximum number entries. No more entries can be added to this MAP group.
Do you wish to remove any mated applications from the MAP group?
Yes
Perform the "Removing a Mated Application" procedure and remove the required number of mated applciations from the MAP group.
No
Do you wish add the mated application to another existing MAP group?
Yes
To Sheet 3
No
Do you wish add the mated application to a new MAP group?
Yes
No
This procedure cannot be performed.
To Sheet 9

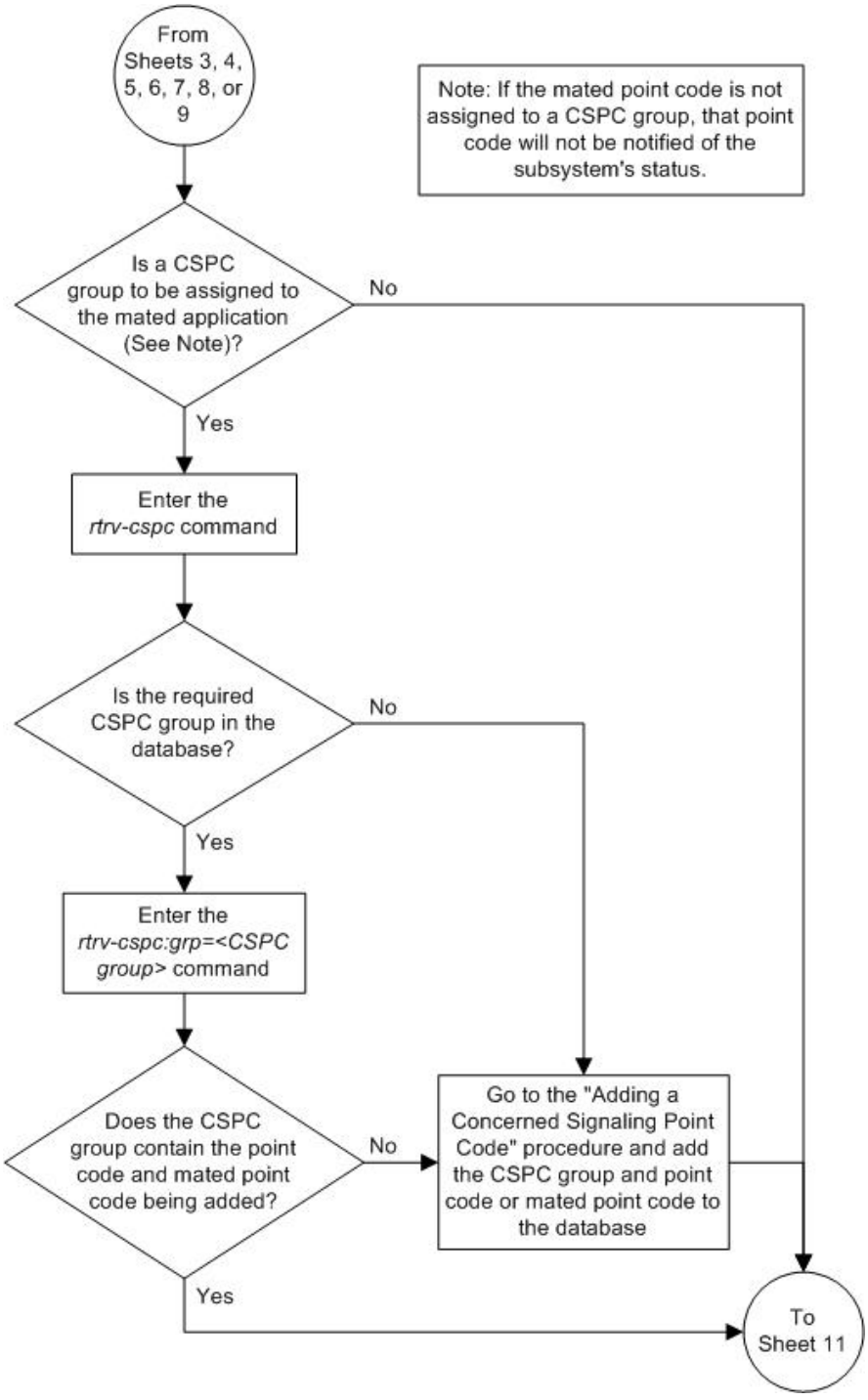

From Sheet 1
Is the mated application being added to the default MAP set?
Yes
To Sheet 7
No
Is a new point code being added to a new MAP group in the default MAP set?
Yes
To Sheet 10
No
Is an existing point code, shown in the rtrv-map output, being added to a new MAP group in the default MAP set?
Yes
To Sheet 9
No
From Sheet 6
Enter the rtrv-map command with these parameters:
:mapset=dflt
:pc/pca/pci/pcn/pcn24=<primary point code of the existing MAP group in the default MAP set that the new mated application is being added to>
:ssn=<SSN assigned to the point code>
To Sheet 6

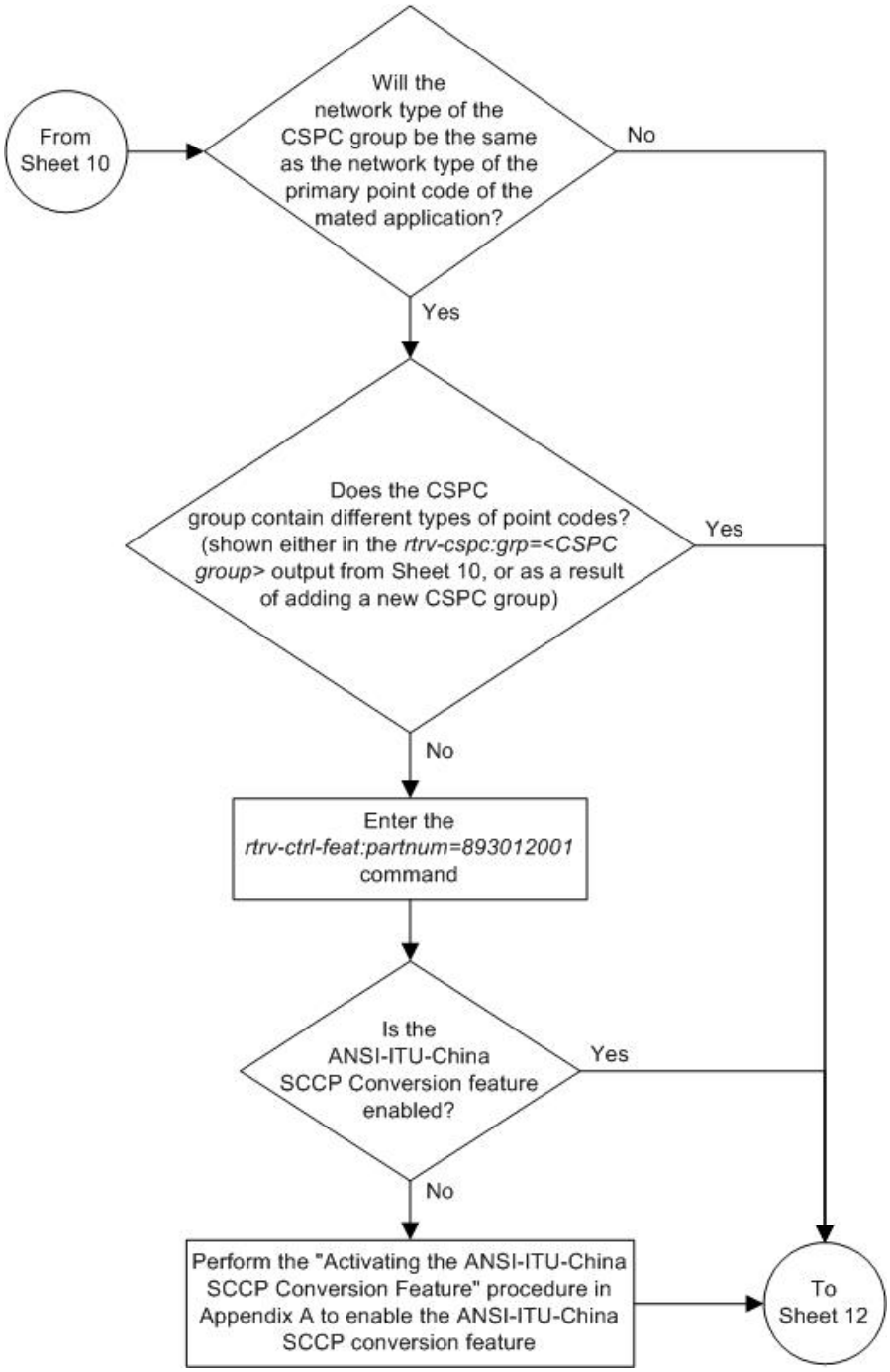

From Sheet 5
How many entries does the MAP group contain?
Less than 32
Is the new point code being added to an existing MAP group in the default MAP set?
No
To Sheet 9
Yes
To Sheet 10
32
The MAP group contains the maximum number entries. No more entries can be added to this MAP group.
Do you wish to remove any mated applications from the MAP group?
Yes
Perform the "Removing a Mated Application" procedure and remove the required number of mated applciations from the MAP group.
No
Do you wish add the mated application to another existing MAP group in the default MAP set?
Yes
To Sheet 5
No
Do you wish add the mated application to a new MAP group in the default MAP set?
Yes
No
This procedure cannot be performed.
To Sheet 9

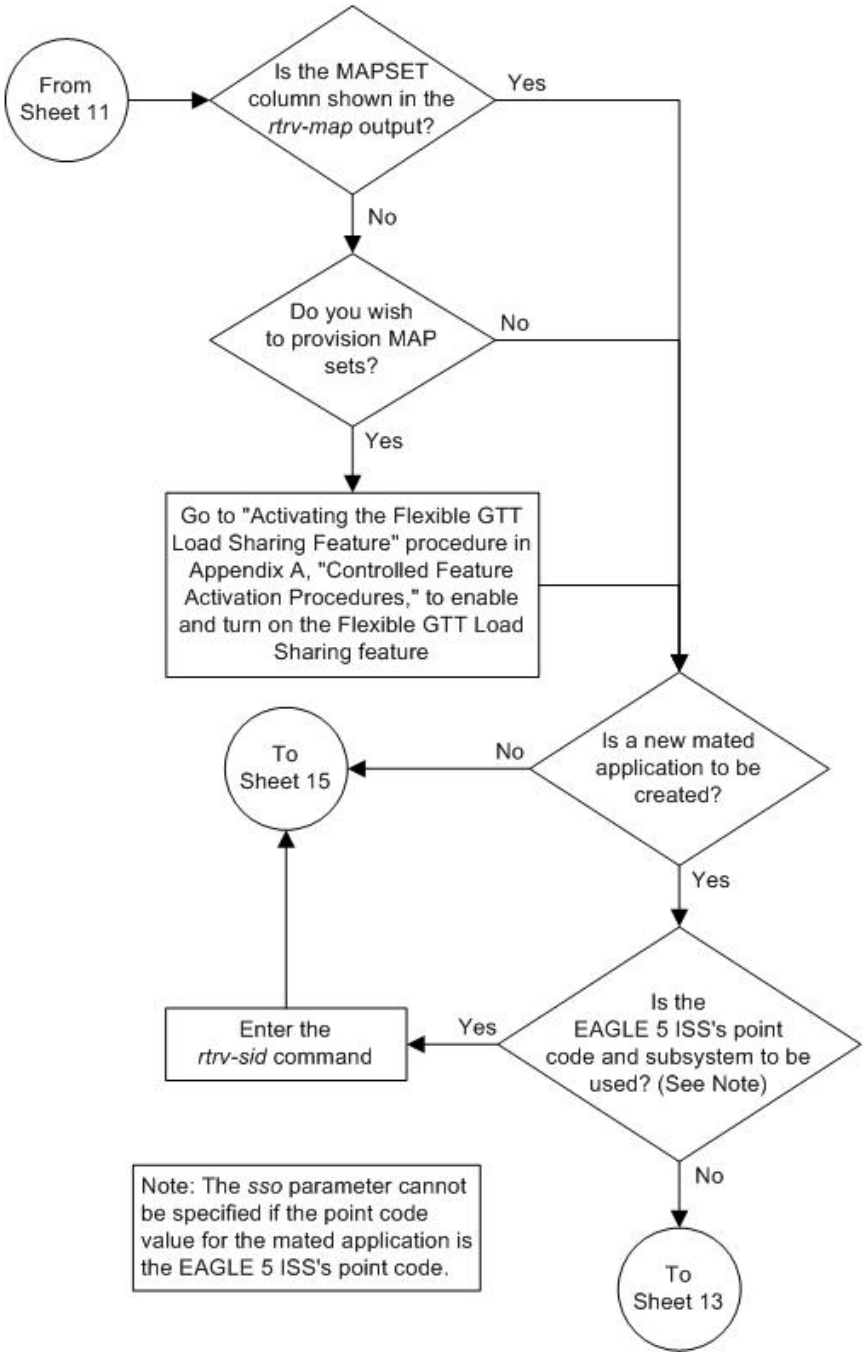

From Sheet 3
Is a new point code being added to a new MAP set?
Yes
To Sheet 10
No
Is an existing point code, shown in the rtrv-map output, being added to a new MAP set?
Yes
To Sheet 9
From Sheet 8
No
Enter the rtrv-map command with these parameters: :mapset=<MAP set ID that the new mated application is being added to>
To Sheet 8

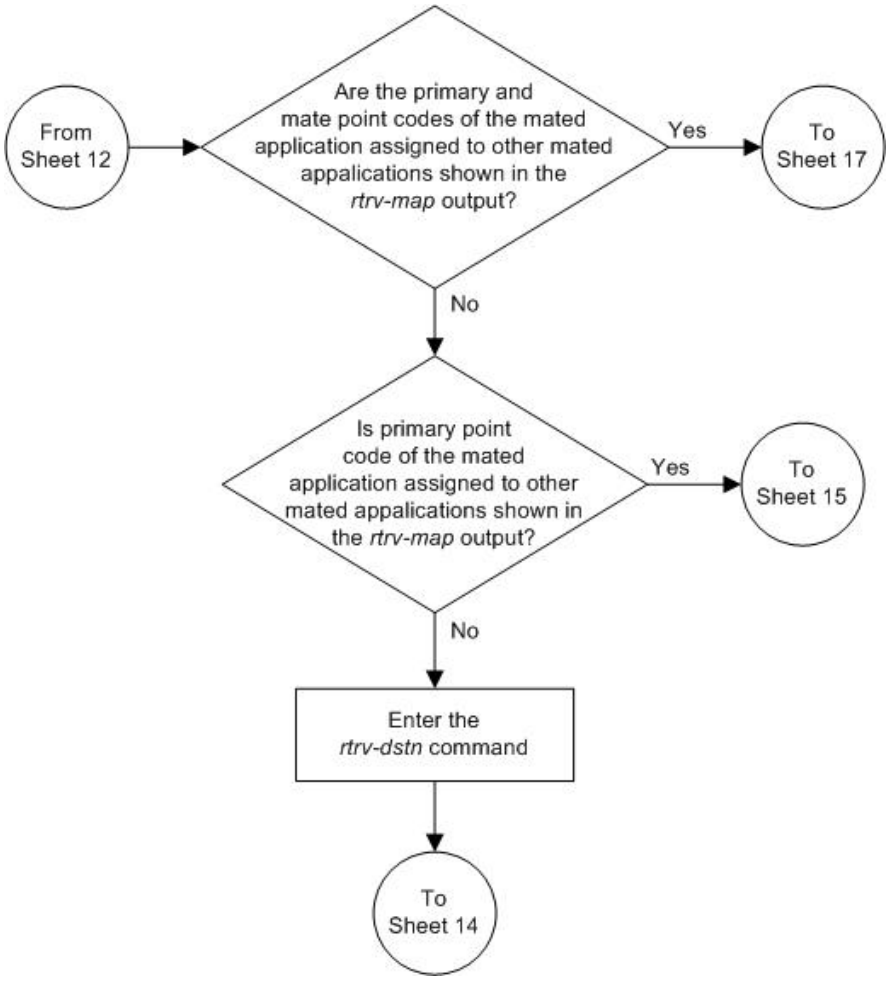

From Sheet 7
How many entries does the MAP set contain?
Less than 32
Is the new point code being added to an existing MAP set?
No
To Sheet 9
Yes
To Sheet 10
32
The MAP set contains the maximum number entries. No more entries can be added to this MAP set.
Do you wish to remove any mated applications from the MAP set?
Yes
Perform the "Removing a Mated Application" procedure and remove the required number of mated applciations from the MAP set.
No
Do you wish add the mated application to another existing MAP set?
Yes
To Sheet 7
No
Do you wish add the mated application to a new MAP set?
Yes
No
This procedure cannot be performed.
To Sheet 9

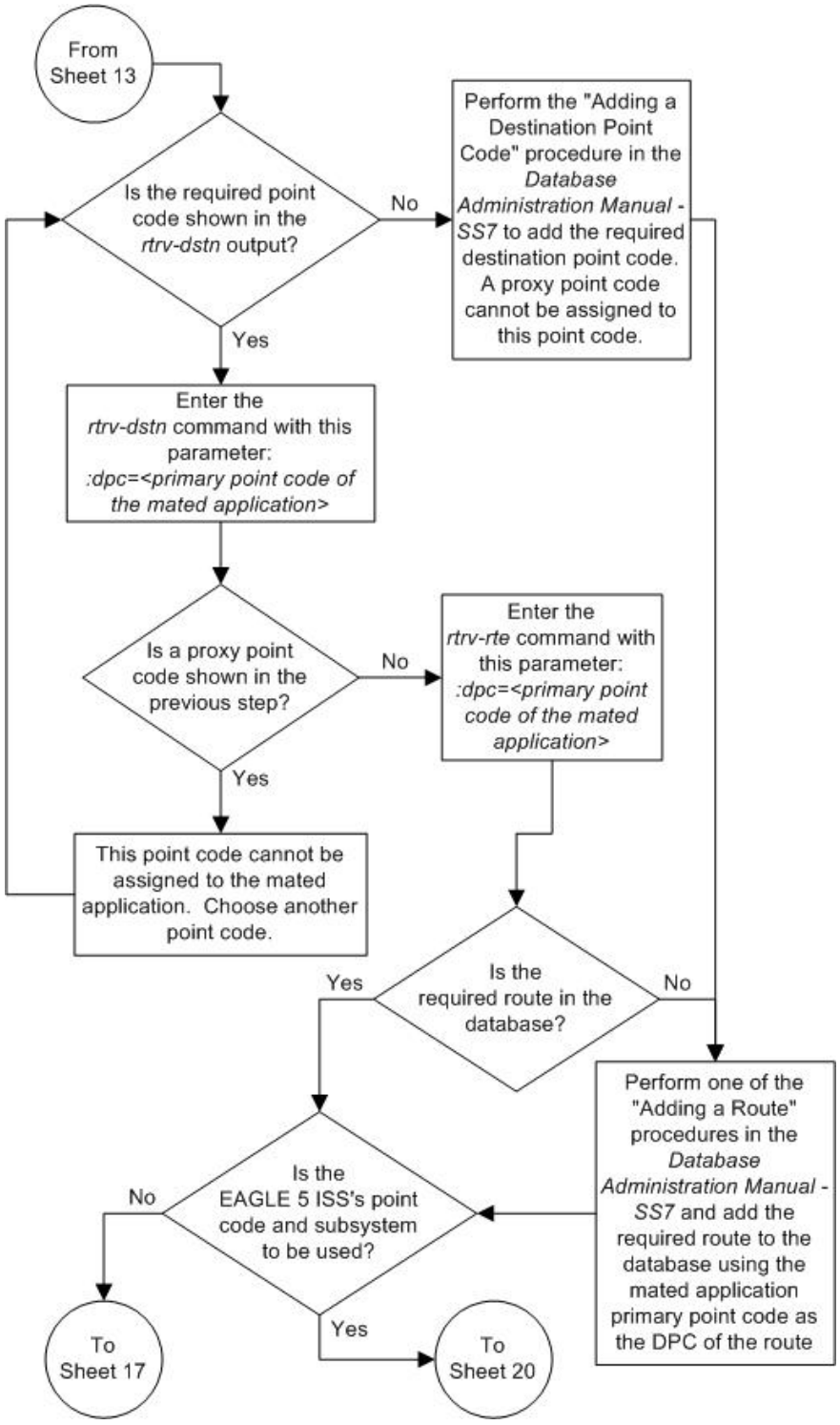

From Sheets 3, 4, 5, 6, 7, or 8
Enter the *rtrv-map* command with this parameter: *:pc/pca/pci/pcn/pcn24=<point code of the new mated application>*
How many different SSN entries are assigned to the point code?
Less than 12
12
The point code contains the maximum number of SSNs. No more SSNs can be provisioned for this point code.
To Sheet 10
Yes
Do you wish to use another existing point code from the *rtrv-map* output? (See Note)
Yes
No
Do you wish to use a new point code?
No
This procedure cannot be performed.
Note: If the current number of provisioned mated applications is equal to the maximum number of mated applications that can be provisioned, shown in either the *rtrv-map* or *rtrv-tbl-capacity* outputs on Sheet 1, only point codes shown in the *rtrv-map* output can be used to provision mated applications.

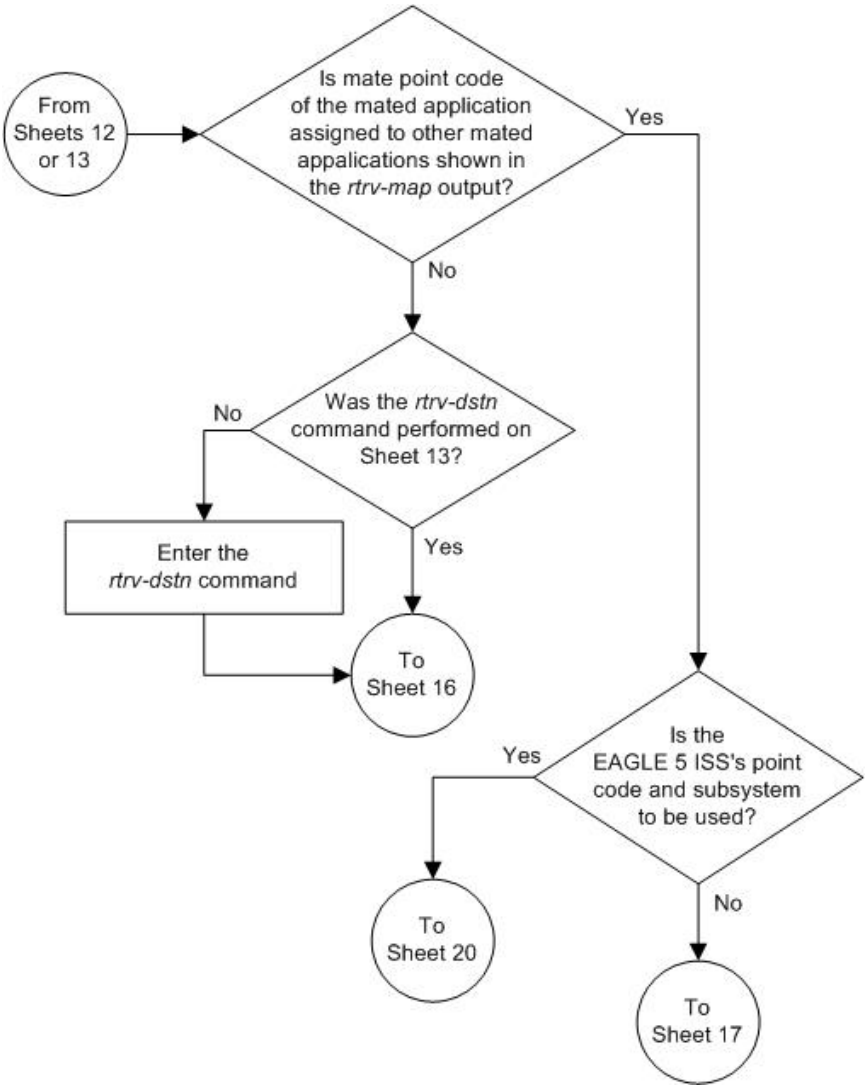

From Sheets 3, 4, 5, 6, 7, 8, or 9
Note: If the mated point code is not assigned to a CSPC group, that point code will not be notified of the subsystem's status.
Is a CSPC group to be assigned to the mated application (See Note)?
No
Yes
Enter the rtrv-cspc command
Is the required CSPC group in the database?
No
Yes
Enter the rtrv-cspc:grp=<CSPC group> command
Does the CSPC group contain the point code and mated point code being added?
No
Go to the "Adding a Concerned Signaling Point Code" procedure and add the CSPC group and point code or mated point code to the database
Yes
To Sheet 11

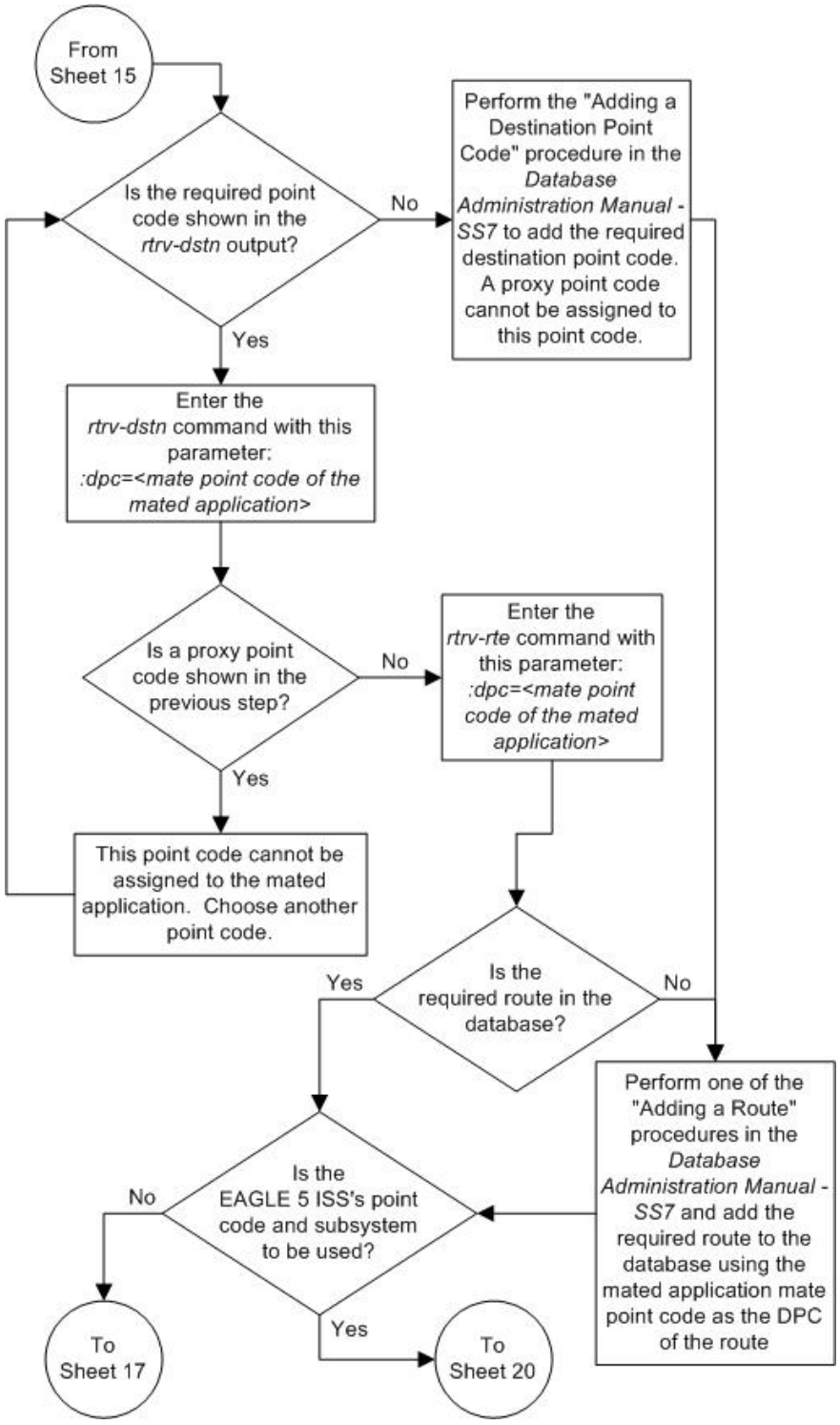

From Sheet 10
Will the network type of the CSPC group be the same as the network type of the primary point code of the mated application?
No
Yes
Does the CSPC group contain different types of point codes? (shown either in the rtrv-cspc:grp=<CSPC group> output from Sheet 10, or as a result of adding a new CSPC group)
Yes
No
Enter the rtrv-ctrl-feat:partnum=893012001 command
Is the ANSI-ITU-China SCCP Conversion feature enabled?
Yes
No
Perform the "Activating the ANSI-ITU-China SCCP Conversion Feature" procedure in Appendix A to enable the ANSI-ITU-China SCCP conversion feature
To Sheet 12

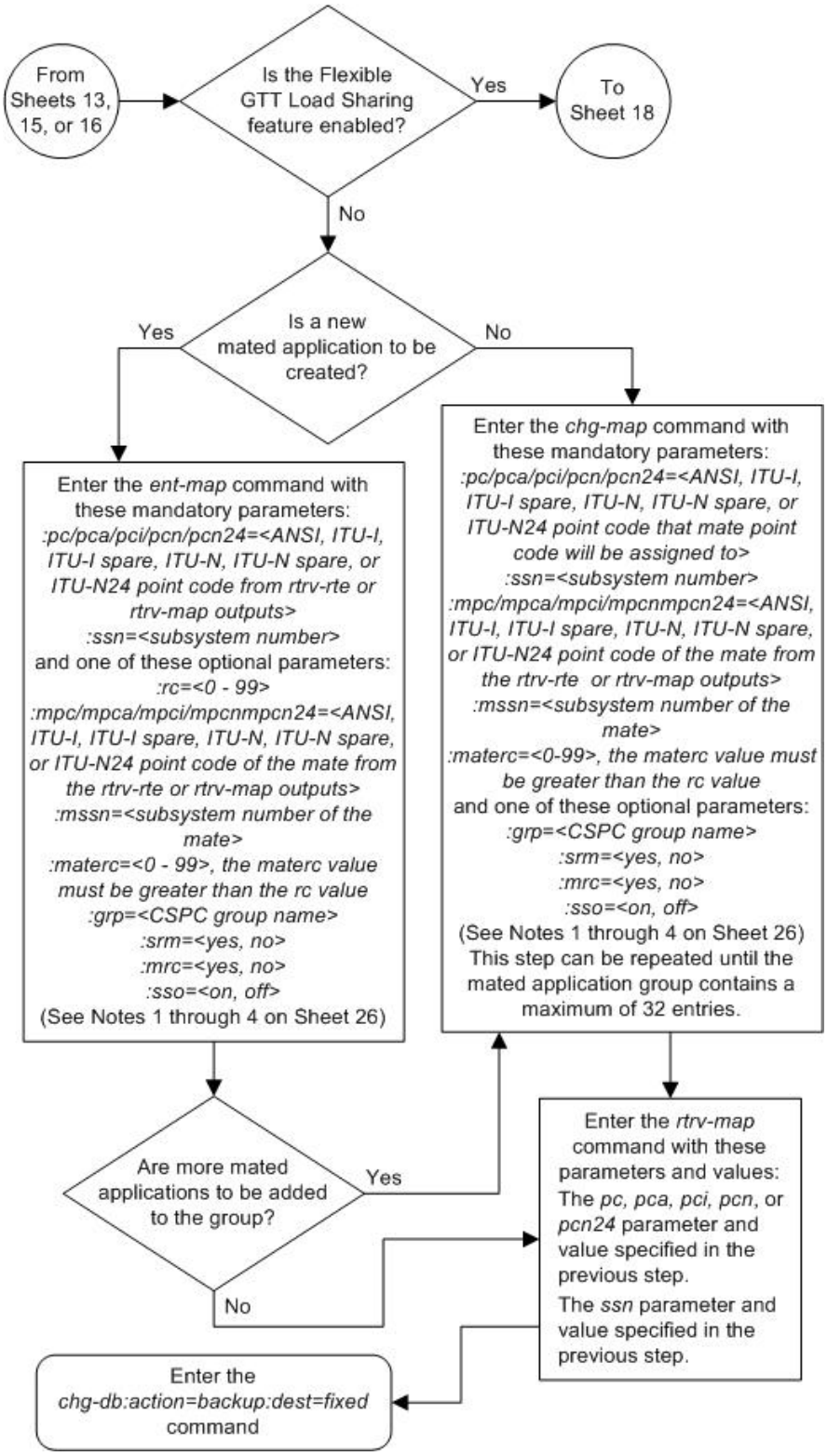

From Sheet 11
Is the MAPSET column shown in the rtrv-map output?
Yes
No
Do you wish to provision MAP sets?
No
Yes
Go to "Activating the Flexible GTT Load Sharing Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," to enable and turn on the Flexible GTT Load Sharing feature
To Sheet 15
No
Is a new mated application to be created?
Yes
Enter the rtrv-sid command
Yes
Is the EAGLE 5 ISS's point code and subsystem to be used? (See Note)
No
To Sheet 13
Note: The sso parameter cannot be specified if the point code value for the mated application is the EAGLE 5 ISS's point code.

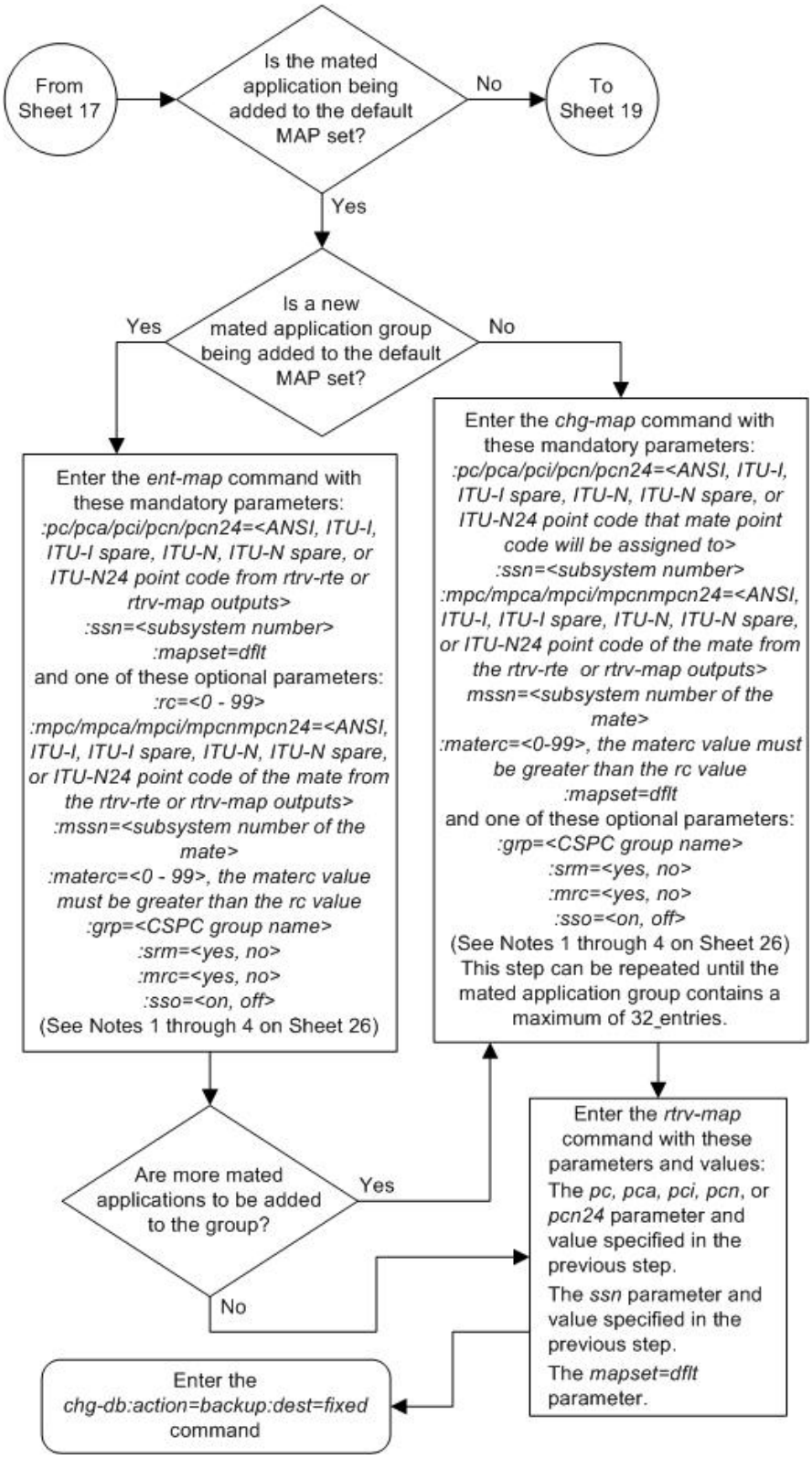

From Sheet 12
Are the primary and mate point codes of the mated application assigned to other mated appalications shown in the rtrv-map output?
Yes
To Sheet 17
No
Is primary point code of the mated application assigned to other mated appalications shown in the rtrv-map output?
Yes
To Sheet 15
No
Enter the rtrv-dstn command
To Sheet 14

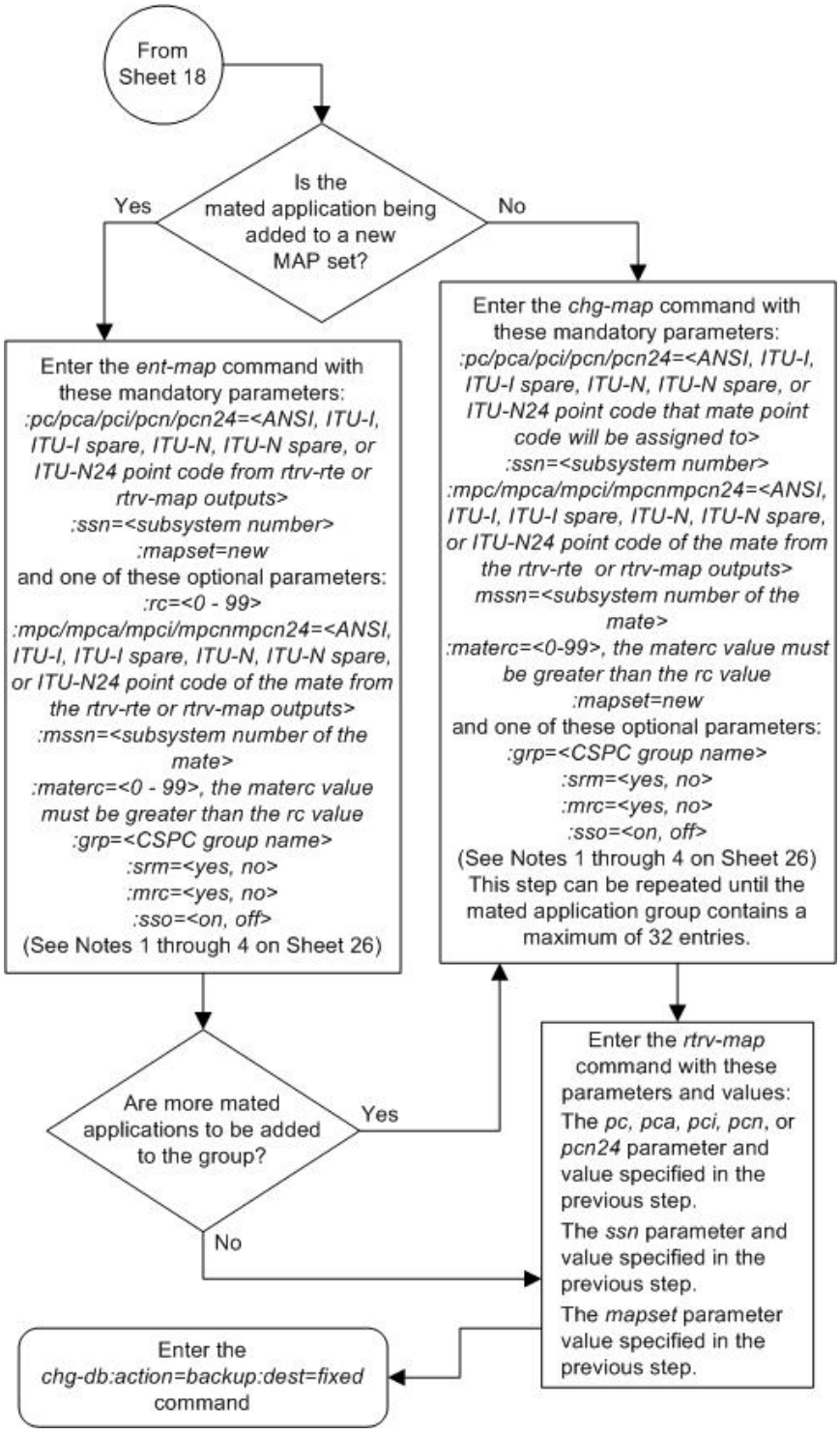

From Sheet 13
Is the required point code shown in the rtrv-dstn output?
No
Perform the "Adding a Destination Point Code" procedure in the Database Administration Manual - SS7 to add the required destination point code. A proxy point code cannot be assigned to this point code.
Yes
Enter the rtrv-dstn command with this parameter: :dpc=<primary point code of the mated application>
Is a proxy point code shown in the previous step?
No
Enter the rtrv-rte command with this parameter: :dpc=<primary point code of the mated application>
Yes
This point code cannot be assigned to the mated application. Choose another point code.
Yes
Is the required route in the database?
No
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 and add the required route to the database using the mated application primary point code as the DPC of the route
Is the EAGLE 5 ISS's point code and subsystem to be used?
No
Yes
To Sheet 17
To Sheet 20

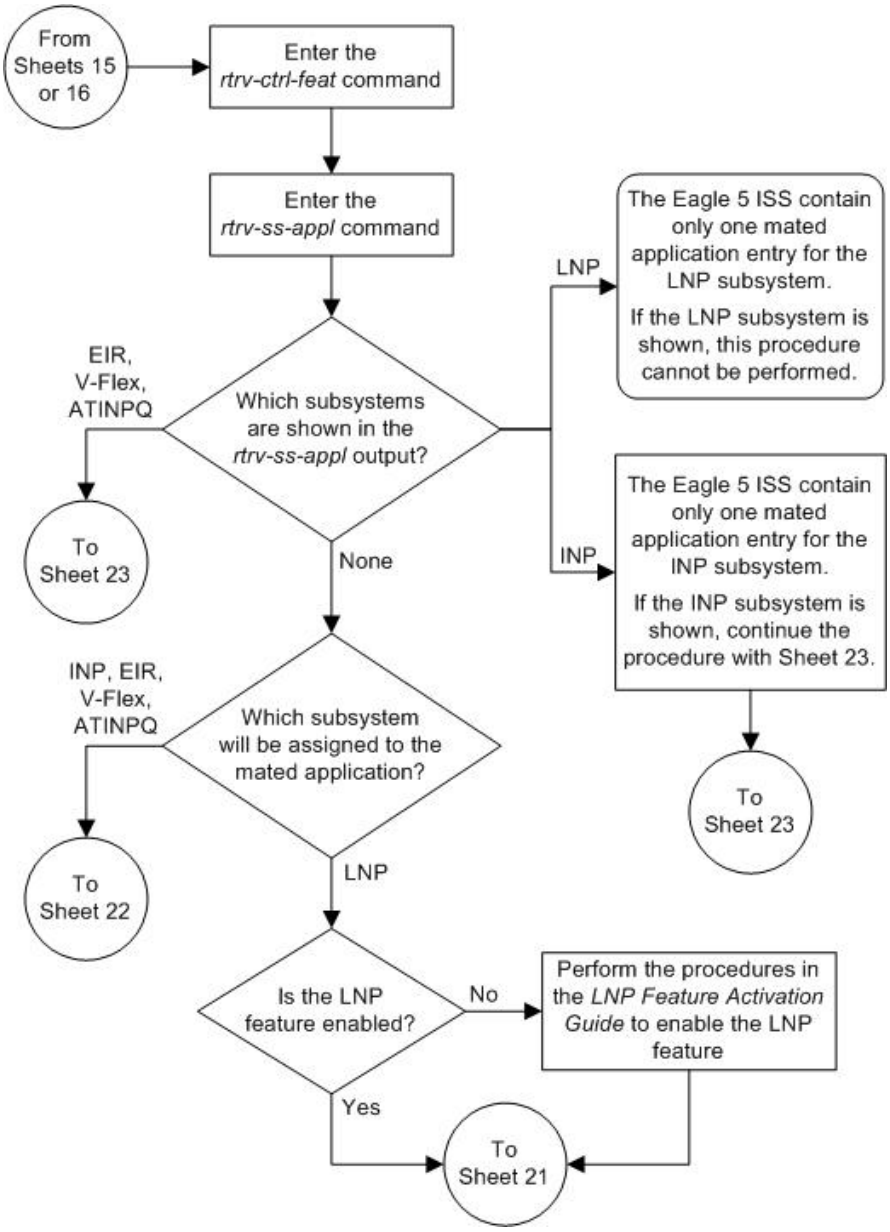

From Sheets 12 or 13
Is mate point code of the mated application assigned to other mated appalications shown in the rtrv-map output?
Yes
No
Was the rtrv-dstn command performed on Sheet 13?
No
Yes
Enter the rtrv-dstn command
To Sheet 16
Is the EAGLE 5 ISS's point code and subsystem to be used?
Yes
No
To Sheet 20
To Sheet 17

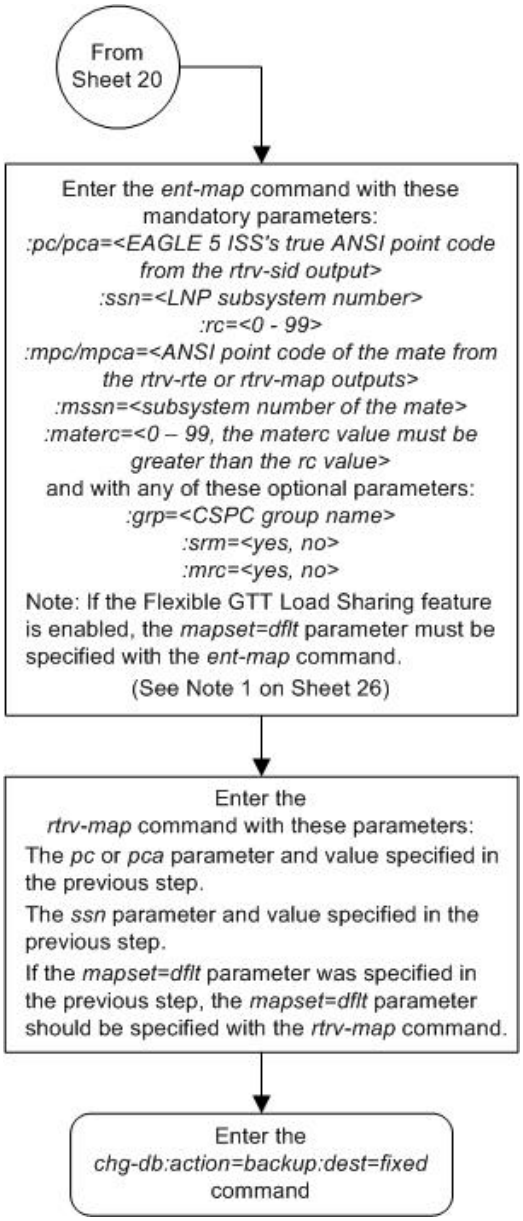

From Sheet 15
Is the required point code shown in the rtrv-dstn output?
No
Perform the "Adding a Destination Point Code" procedure in the Database Administration Manual - SS7 to add the required destination point code. A proxy point code cannot be assigned to this point code.
Yes
Enter the rtrv-dstn command with this parameter: :dpc=<mate point code of the mated application>
Is a proxy point code shown in the previous step?
No
Enter the rtrv-rte command with this parameter: :dpc=<mate point code of the mated application>
Yes
This point code cannot be assigned to the mated application. Choose another point code.
Yes
Is the required route in the database?
No
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 and add the required route to the database using the mated application mate point code as the DPC of the route
Is the EAGLE 5 ISS's point code and subsystem to be used?
No
Yes
To Sheet 17
To Sheet 20

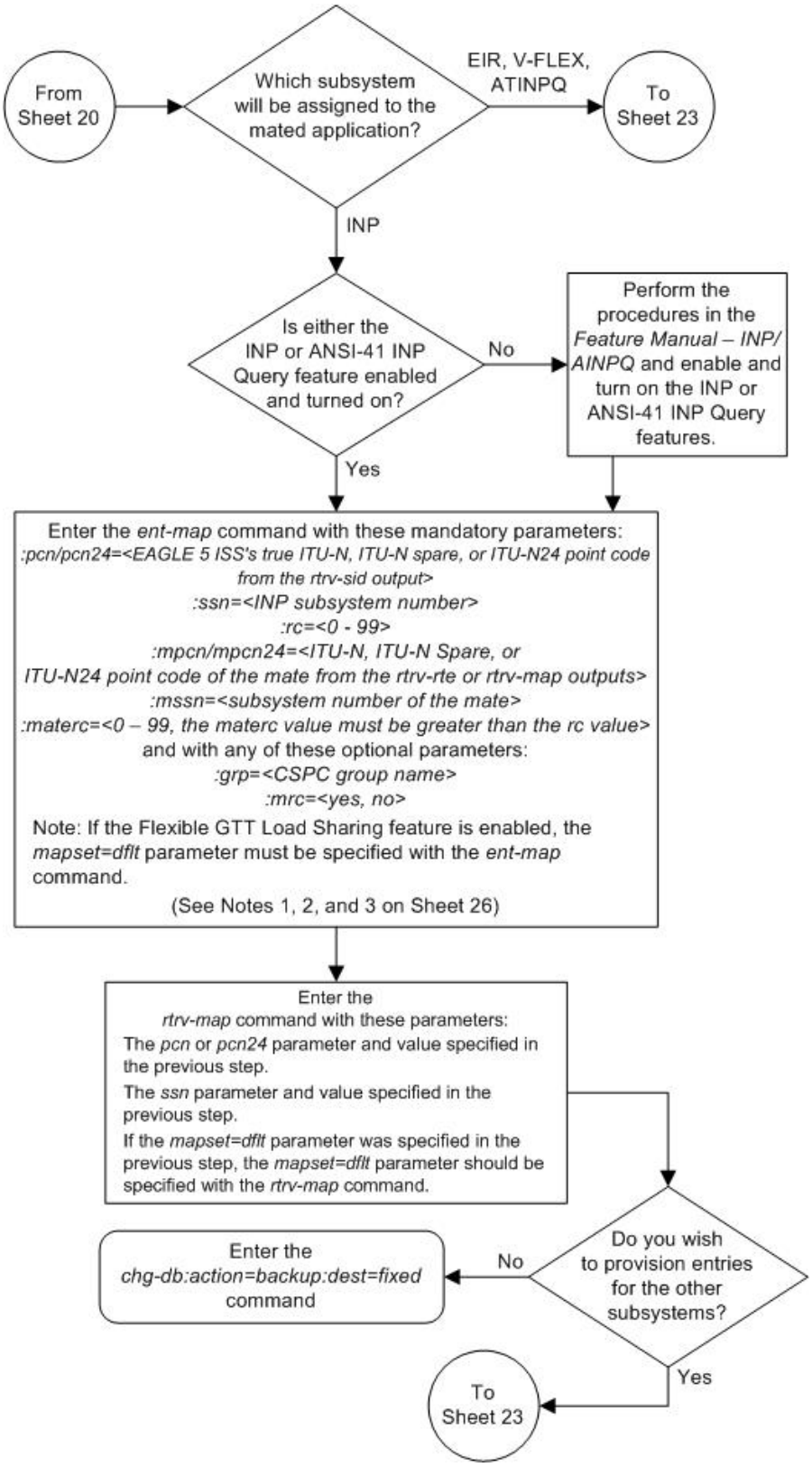

From Sheets 13, 15, or 16
Is the Flexible GTT Load Sharing feature enabled?
Yes
To Sheet 18
No
Is a new mated application to be created?
Yes
No
Enter the ent-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from rtrv-rte or rtrv-map outputs>
:ssn=<subsystem number>
and one of these optional parameters:
:rc=<0 - 99>
:mpc/mpca/mpci/mpcnmpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
:mssn=<subsystem number of the mate>
:materc=<0 - 99>, the materc value must be greater than the rc value
:grp=<CSPC group name>
:srm=<yes, no>
:mrc=<yes, no>
:sso=<on, off>
(See Notes 1 through 4 on Sheet 26)
Enter the chg-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code that mate point code will be assigned to>
:ssn=<subsystem number>
:mpc/mpca/mpci/mpcnmpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
:mssn=<subsystem number of the mate>
:materc=<0-99>, the materc value must be greater than the rc value
and one of these optional parameters:
:grp=<CSPC group name>
:srm=<yes, no>
:mrc=<yes, no>
:sso=<on, off>
(See Notes 1 through 4 on Sheet 26)
This step can be repeated until the mated application group contains a maximum of 32 entries.
Are more mated applications to be added to the group?
Yes
No
Enter the rtrv-map command with these parameters and values:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
Enter the chg-db:action=backup:dest=fixed command

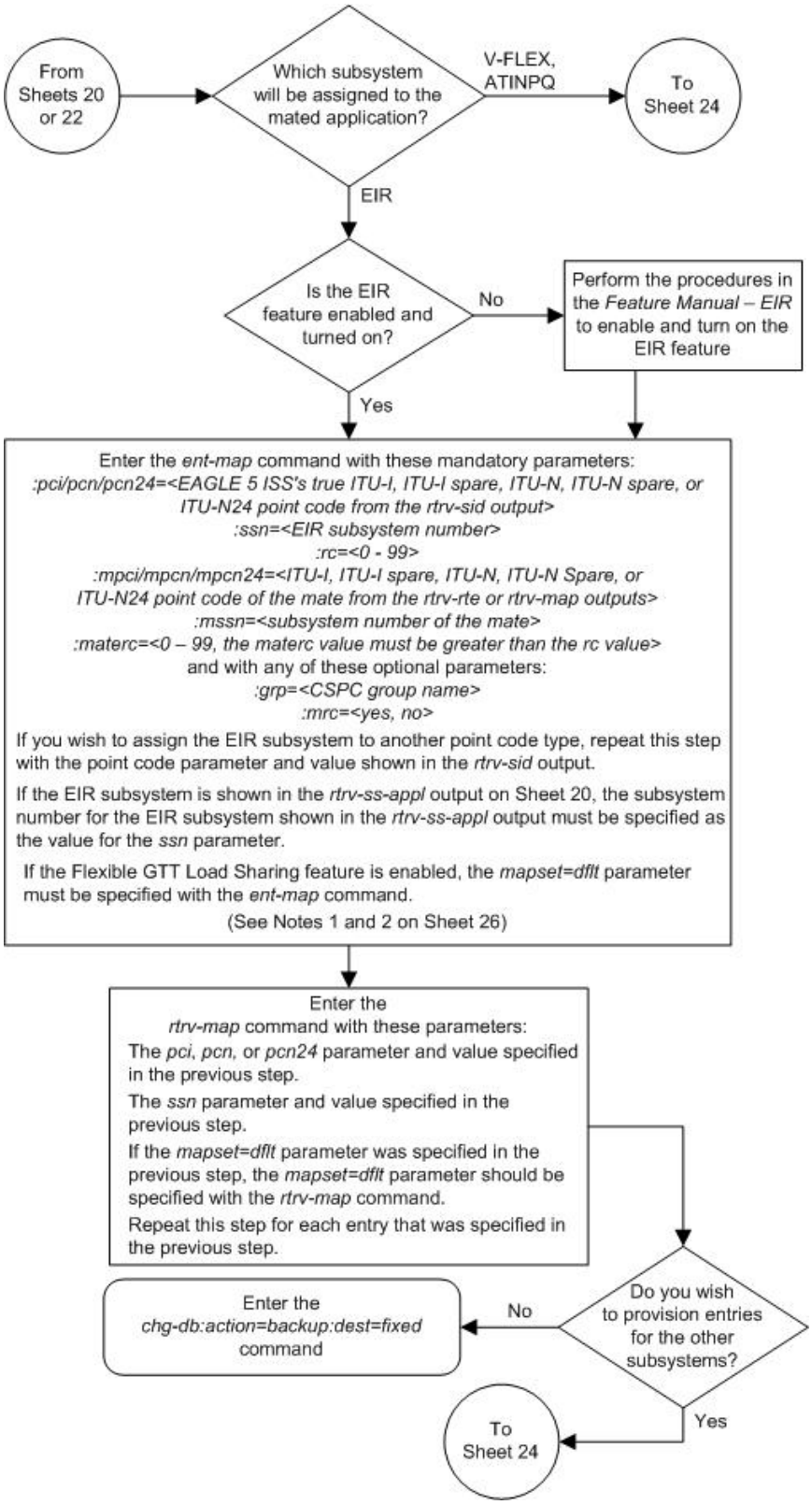

From Sheet 17
Is the mated application being added to the default MAP set?
No
To Sheet 19
Yes
Is a new mated application group being added to the default MAP set?
Yes
No
Enter the ent-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from rtrv-rte or rtrv-map outputs>
:ssn=<subsystem number>
:mapset=dflt
and one of these optional parameters:
:rc=<0 - 99>
:mpc/mpca/mpci/mpcnmpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
:mssn=<subsystem number of the mate>
:materc=<0 - 99>, the materc value must be greater than the rc value
:grp=<CSPC group name>
:srm=<yes, no>
:mrc=<yes, no>
:sso=<on, off>
(See Notes 1 through 4 on Sheet 26)
Enter the chg-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code that mate point code will be assigned to>
:ssn=<subsystem number>
:mpc/mpca/mpci/mpcnmpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
mssn=<subsystem number of the mate>
:materc=<0-99>, the materc value must be greater than the rc value
:mapset=dflt
and one of these optional parameters:
:grp=<CSPC group name>
:srm=<yes, no>
:mrc=<yes, no>
:sso=<on, off>
(See Notes 1 through 4 on Sheet 26)
This step can be repeated until the mated application group contains a maximum of 32 entries.
Are more mated applications to be added to the group?
Yes
No
Enter the rtrv-map command with these parameters and values:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
The mapset=dflt parameter.
Enter the chg-db:action=backup:dest=fixed command

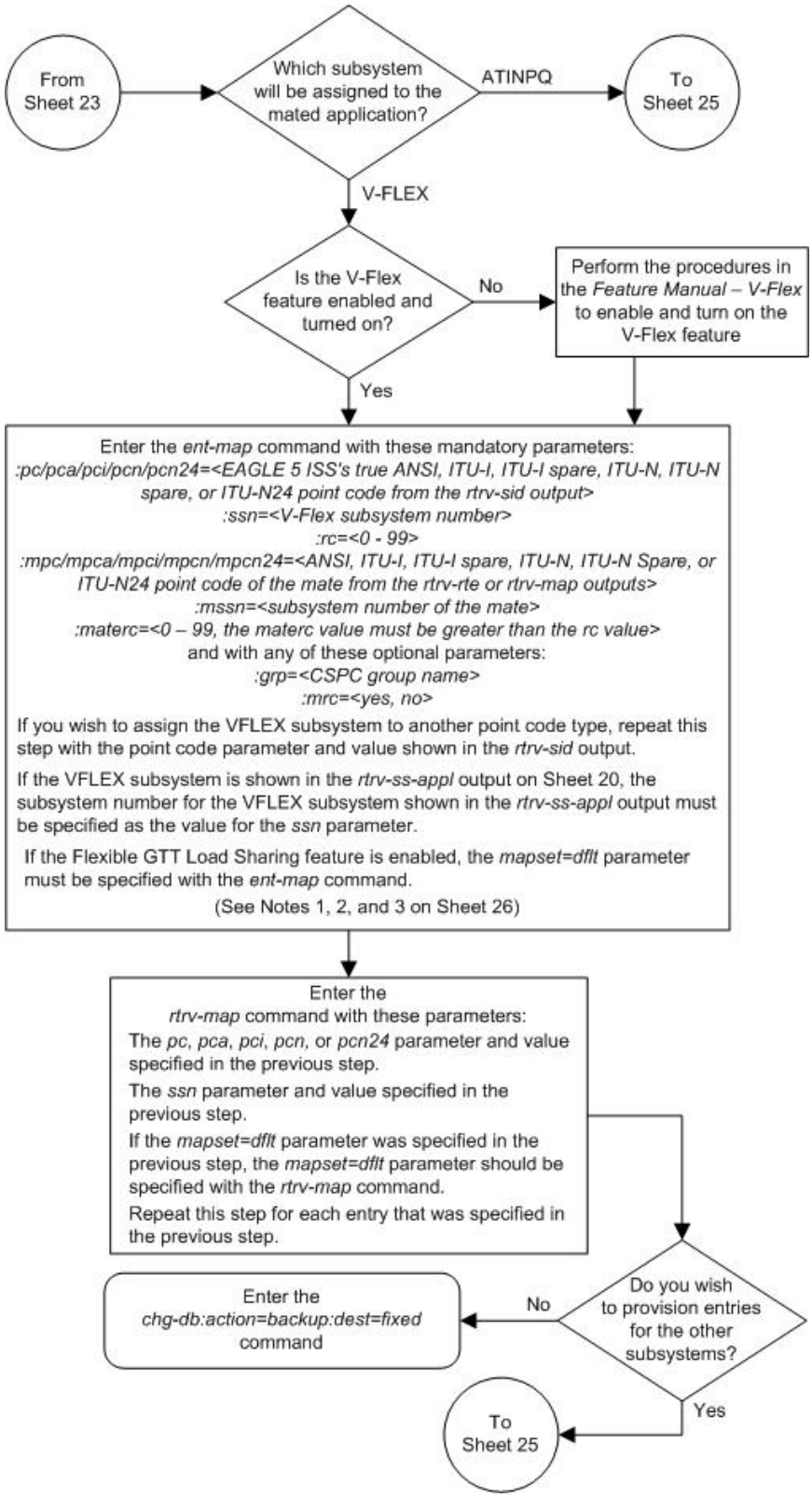

From Sheet 18
Is the mated application being added to a new MAP set?
Yes
No
Enter the ent-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from rtrv-rte or rtrv-map outputs>
:ssn=<subsystem number>
:mapset=new
and one of these optional parameters:
:rc=<0 - 99>
:mpc/mpca/mpci/mpcnmpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
:mssn=<subsystem number of the mate>
:materc=<0 - 99>, the materc value must be greater than the rc value
:grp=<CSPC group name>
:srm=<yes, no>
:mrc=<yes, no>
:sso=<on, off>
(See Notes 1 through 4 on Sheet 26)
Enter the chg-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code that mate point code will be assigned to>
:ssn=<subsystem number>
:mpc/mpca/mpci/mpcnmpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
mssn=<subsystem number of the mate>
:materc=<0-99>, the materc value must be greater than the rc value
:mapset=new
and one of these optional parameters:
:grp=<CSPC group name>
:srm=<yes, no>
:mrc=<yes, no>
:sso=<on, off>
(See Notes 1 through 4 on Sheet 26)
This step can be repeated until the mated application group contains a maximum of 32 entries.
Are more mated applications to be added to the group?
Yes
No
Enter the rtrv-map command with these parameters and values:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
The mapset parameter value specified in the previous step.
Enter the chg-db:action=backup:dest=fixed command

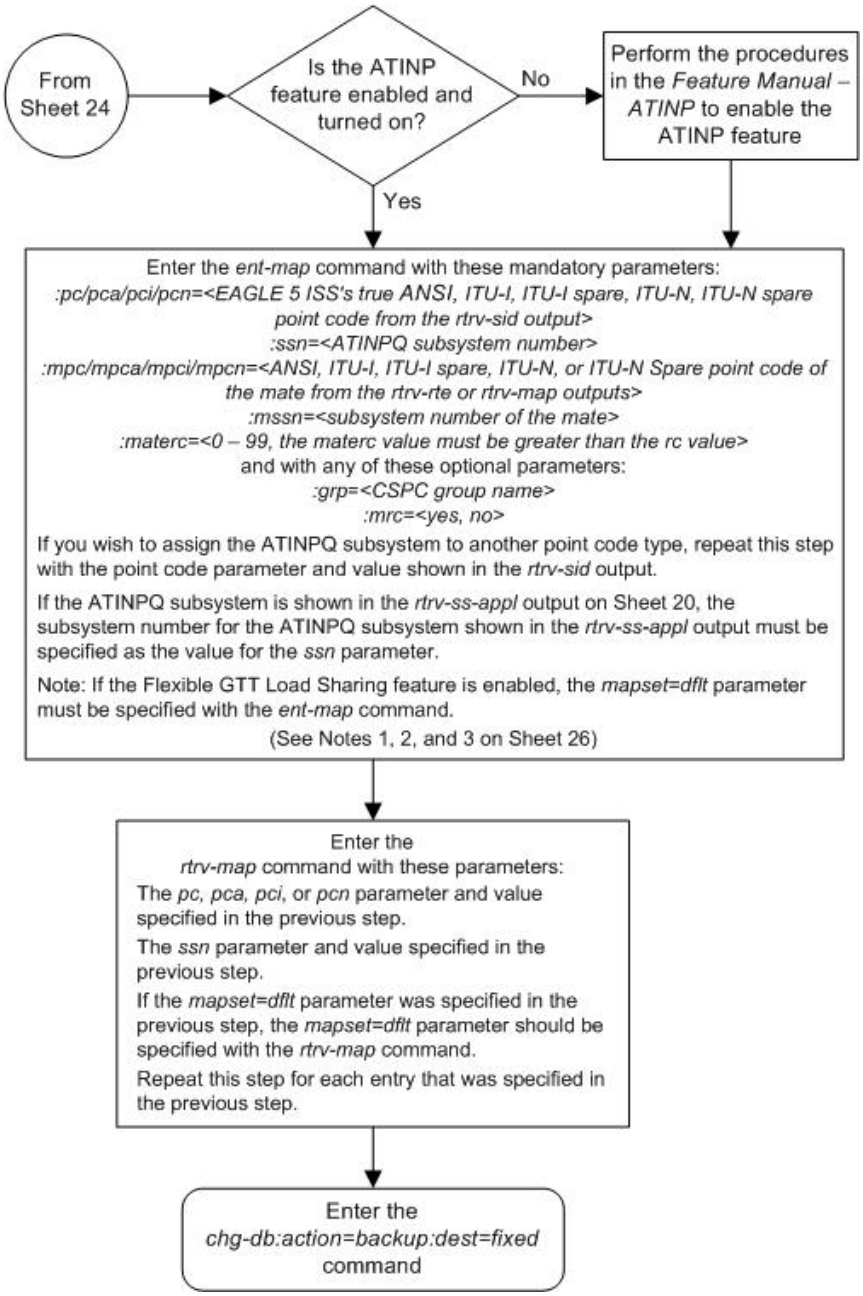

From Sheets 15 or 16
Enter the rtrv-ctrl-feat command
Enter the rtrv-ss-appl command
Which subsystems are shown in the rtrv-ss-appl output?
EIR, V-Flex, ATINPQ
To Sheet 23
None
LNP
The Eagle 5 ISS contain only one mated application entry for the LNP subsystem.
If the LNP subsystem is shown, this procedure cannot be performed.
INP
The Eagle 5 ISS contain only one mated application entry for the INP subsystem.
If the INP subsystem is shown, continue the procedure with Sheet 23.
To Sheet 23
INP, EIR, V-Flex, ATINPQ
Which subsystem will be assigned to the mated application?
To Sheet 22
LNP
Is the LNP feature enabled?
No
Perform the procedures in the LNP Feature Activation Guide to enable the LNP feature
Yes
To Sheet 21


From Sheet 20
Enter the ent-map command with these mandatory parameters:
:pc/pca=<EAGLE 5 ISS's true ANSI point code from the rtrv-sid output>
:ssn=<LNP subsystem number>
:rc=<0 - 99>
:mpc/mpca=<ANSI point code of the mate from the rtrv-rte or rtrv-map outputs>
:mssn=<subsystem number of the mate>
:materc=<0 – 99, the materc value must be greater than the rc value>
and with any of these optional parameters:
:grp=<CSPC group name>
:srm=<yes, no>
:mrc=<yes, no>
Note: If the Flexible GTT Load Sharing feature is enabled, the mapset=dflt parameter must be specified with the ent-map command.
(See Note 1 on Sheet 26)
Enter the rtrv-map command with these parameters:
The pc or pca parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
If the mapset=dflt parameter was specified in the previous step, the mapset=dflt parameter should be specified with the rtrv-map command.
Enter the chg-db:action=backup:dest=fixed command


From Sheet 20
Which subsystem will be assigned to the mated application?
EIR, V-FLEX, ATINPQ
To Sheet 23
INP
Is either the INP or ANSI-41 INP Query feature enabled and turned on?
No
Perform the procedures in the Feature Manual – INP/ AINPQ and enable and turn on the INP or ANSI-41 INP Query features.
Yes
Enter the ent-map command with these mandatory parameters:
:pcn/pcn24=<EAGLE 5 ISS's true ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-sid output>
:ssn=<INP subsystem number>
:rc=<0 - 99>
:mpcn/mpcn24=<ITU-N, ITU-N Spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
:mssn=<subsystem number of the mate>
:materc=<0 – 99, the materc value must be greater than the rc value>
and with any of these optional parameters:
:grp=<CSPC group name>
:mrc=<yes, no>
Note: If the Flexible GTT Load Sharing feature is enabled, the mapset=dflt parameter must be specified with the ent-map command.
(See Notes 1, 2, and 3 on Sheet 26)
Enter the rtrv-map command with these parameters:
The pcn or pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
If the mapset=dflt parameter was specified in the previous step, the mapset=dflt parameter should be specified with the rtrv-map command.
Do you wish to provision entries for the other subsystems?
No
Enter the chg-db:action=backup:dest=fixed command
Yes
To Sheet 23


From Sheets 20 or 22
Which subsystem will be assigned to the mated application?
V-FLEX, ATINPQ
To Sheet 24
EIR
Is the EIR feature enabled and turned on?
No
Perform the procedures in the Feature Manual – EIR to enable and turn on the EIR feature
Yes
Enter the ent-map command with these mandatory parameters:
:pci/pcn/pcn24=<EAGLE 5 ISS's true ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-sid output>
:ssn=<EIR subsystem number>
:rc=<0 - 99>
:mpci/mpcn/mpcn24=<ITU-I, ITU-I spare, ITU-N, ITU-N Spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
:mssn=<subsystem number of the mate>
:materc=<0 – 99, the materc value must be greater than the rc value>
and with any of these optional parameters:
:grp=<CSPC group name>
:mrc=<yes, no>
If you wish to assign the EIR subsystem to another point code type, repeat this step with the point code parameter and value shown in the rtrv-sid output.
If the EIR subsystem is shown in the rtrv-ss-appl output on Sheet 20, the subsystem number for the EIR subsystem shown in the rtrv-ss-appl output must be specified as the value for the ssn parameter.
If the Flexible GTT Load Sharing feature is enabled, the mapset=dflt parameter must be specified with the ent-map command.
(See Notes 1 and 2 on Sheet 26)
Enter the rtrv-map command with these parameters:
The pci, pcn, or pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
If the mapset=dflt parameter was specified in the previous step, the mapset=dflt parameter should be specified with the rtrv-map command.
Repeat this step for each entry that was specified in the previous step.
Do you wish to provision entries for the other subsystems?
No
Enter the chg-db:action=backup:dest=fixed command
Yes
To Sheet 24


From Sheet 23
Which subsystem will be assigned to the mated application?
ATINPQ
To Sheet 25
V-FLEX
Is the V-Flex feature enabled and turned on?
No
Perform the procedures in the Feature Manual – V-Flex to enable and turn on the V-Flex feature
Yes
Enter the ent-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<EAGLE 5 ISS's true ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-sid output>
:ssn=<V-Flex subsystem number>
:rc=<0 - 99>
:mpc/mpca/mpci/mpcn/mpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N Spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
:mssn=<subsystem number of the mate>
:materc=<0 – 99, the materc value must be greater than the rc value>
and with any of these optional parameters:
:grp=<CSPC group name>
:mrc=<yes, no>
If you wish to assign the VFLEX subsystem to another point code type, repeat this step with the point code parameter and value shown in the rtrv-sid output.
If the VFLEX subsystem is shown in the rtrv-ss-appl output on Sheet 20, the subsystem number for the VFLEX subsystem shown in the rtrv-ss-appl output must be specified as the value for the ssn parameter.
If the Flexible GTT Load Sharing feature is enabled, the mapset=dflt parameter must be specified with the ent-map command.
(See Notes 1, 2, and 3 on Sheet 26)
Enter the rtrv-map command with these parameters:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
If the mapset=dflt parameter was specified in the previous step, the mapset=dflt parameter should be specified with the rtrv-map command.
Repeat this step for each entry that was specified in the previous step.
Do you wish to provision entries for the other subsystems?
No
Enter the chg-db:action=backup:dest=fixed command
Yes
To Sheet 25


From Sheet 24
Is the ATINP feature enabled and turned on?
No
Perform the procedures in the *Feature Manual – ATINP* to enable the ATINP feature
Yes
Enter the *ent-map* command with these mandatory parameters:
:pc/pca/pci/pcn=<EAGLE 5 ISS's true ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare point code from the rtrv-sid output>
:ssn=<ATINPQ subsystem number>
:mpc/mpca/mpci/mpcn=<ANSI, ITU-I, ITU-I spare, ITU-N, or ITU-N Spare point code of the mate from the rtrv-rte or rtrv-map outputs>
:mssn=<subsystem number of the mate>
:materc=<0 – 99, the materc value must be greater than the rc value>
and with any of these optional parameters:
:grp=<CSPC group name>
:mrc=<yes, no>
If you wish to assign the ATINPQ subsystem to another point code type, repeat this step with the point code parameter and value shown in the *rtrv-sid* output.
If the ATINPQ subsystem is shown in the *rtrv-ss-appl* output on Sheet 20, the subsystem number for the ATINPQ subsystem shown in the *rtrv-ss-appl* output must be specified as the value for the *ssn* parameter.
Note: If the Flexible GTT Load Sharing feature is enabled, the *mapset=dflt* parameter must be specified with the *ent-map* command.
(See Notes 1, 2, and 3 on Sheet 26)
Enter the *rtrv-map* command with these parameters:
The *pc*, *pca*, *pci*, or *pcn* parameter and value specified in the previous step.
The *ssn* parameter and value specified in the previous step.
If the *mapset=dflt* parameter was specified in the previous step, the *mapset=dflt* parameter should be specified with the *rtrv-map* command.
Repeat this step for each entry that was specified in the previous step.
Enter the *chg-db:action=backup:dest=fixed* command

Notes:

1. The format of the point codes in the CSPC group specified with the *grp* parameter must be the same as the primary point code specified for the mated application only if the ANSI-ITU-China SCCP Conversion feature is not enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (see the "Adding a Concerned Signaling Point Code" procedure in this chapter), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application.

2. The point code type of the mate point code must be the same as the point code type of the primary point code. For example, if the primary point code is a 24-bit ITU-N point code (*pcn24*), the mate point code must be a 24-bit ITU-N point code (*mpcn24*). This is also true for spare point codes. For example, if the primary point code is an ITU-I spare point code, the mate point code must be an ITU-I spare point code.

3. If the point code selected from either the *rtrv-rte* or *rtrv-map* outputs is a 14-bit ITU-N point code, then the *pcn*/*mpcn* parameters must be specified. If the point code selected from either the *rtrv-rte* or *rtrv-map* outputs is a 24-bit ITU-N point code, then the *pcn24*/*mpcn24* parameters must be specified.

4. The *srm=yes* parameter can be specified only for mated applications containing ANSI point codes.

5. If the CSPC group name (*grp*), *mrc*, *srm*, or *sso* values for a specific point code and SSN in a mated application are changed, these parameter values for this specific point code and SSN in all applicable mated applications will be changed to the new values.

Provisioning a Load Shared Mated Application

This procedure is used to provision a load shared mated application in the database using the `ent-map` and `chg-map` commands. A load shared mated application is a mated application containing entries whose RC (relative cost) values are equal. The `ent-map` and `chg-map` commands use these parameters to provision a load shared mated application.

`:pc/pca/pci/pcn/pcn24` – The point code of the primary signaling point that is to receive the message.

`:mpc/mpca/mpci/mpcn/mpcn24` – The point code of the backup signaling point that is to receive the message.

Note: The point codes can be either an ANSI point code (pc/pca, mpc/mpca), ITU-I or ITU-I spare point code (pci, mpci), a 14-bit ITU-N or 14-bit ITU-N spare point code (pcn, mpcn), or a 24-bit ITU-N (`pcn24`, `mpcn24`) point code.

Note: Refer to Chapter 2, Configuring Destination Tables in the Database *Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

`:ssn` – Subsystem number – the subsystem address of the primary point code that is to receive the message.

`:mssn` – Mate subsystem number – the subsystem address of the backup point code that is to receive the message.

`:rc` – The relative cost value of the primary point code and subsystem, defined by the `pc/pca/pci/pcn/pcn24` and `ssn` parameters. The `rc` parameter has a range of values from 0 to 99, with the default value being 10.

`:materc` – The relative cost value of the backup point code and subsystem, defined by the `mpc/mpca/mpci/mpcn/mpcn24` and `mssn` parameters. The `materc` parameter has a range of values from 0 to 99, with the default value being 50.

`:grp` – The name of the concerned signaling point code group that contains the point codes that should be notified of the subsystem status. This parameter applies to both RPCs/SSNs.

`:sso` – Subsystem Status Option – defines whether the subsystem status option is on or off. This parameter allows the user the option to have the specified subsystem marked as prohibited even though an MTP-RESUME message has been received by the indicating that the specified point code is allowed.

`:mapset` – The MAP set ID that the mated applications are assigned to. This parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled. If the Flexible GTT Load Sharing feature is enabled, the point code and subsystem specified for the global title translation must be assigned to the MAP set specified by this parameter. The status of the Flexible GTT Load Sharing feature is shown in the `rtrv-ctrl-feat` output. To enable the Flexible GTT Load Sharing feature, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure.

The `mapset` parameter has three values:

- `dflt` – to assign the MAP to the default MAP set. This value can be specified with both the `ent-map` and `chg-map` commands.
- `new` – to assign the mated application to a new MAP set. This value can be specified only with the `ent-map` command.
- the specific number of an existing MAP set if you are assigning the mated application to an existing MAP set. This value can be specified only with the `chg-map` command.

  Refer to the Provisioning a MAP Set section for information on provisioning MAP sets.

`:wt` – The weight value assigned to the `pc/pca/pci/pcn/pcn24` parameter value. The value of this parameter is from 1 - 99.

`:mwt` – The weight value assigned to the `mpc/mpca/mpci/mpcn/mpcn24` parameter value. The value of this parameter is from 1 - 99.

`:thr` – The in-service threshold assigned to the MAP group or MAP set. The in-service threshold is the minimum percentage (from 1 - 100) of weight that must be available for an RC group (a group of entries in the MAP group or MAP set that have the same RC value assigned) to be considered available to carry traffic. If the percentage of the available weight is less than the in-service threshold, then the entire RC group is considered unavailable for traffic. If the percentage of the available weight is equal to or greater than the in-service threshold, then the RC group is considered available, and traffic can be sent to any available entity in the RC group. The value of the `thr` parameter is assigned to all entries that have the same RC (relative cost) value in the MAP group or MAP set that contain the point code specified in the `ent-map` or `chg-map` command.

Refer to the Provisioning Weights and In-Service Thresholds for Mated Applications section for information on provisioning MAP groups or MAP sets with weight and in-service threshold values.

The `ent-map` and `chg-map` commands also contain these parameters: `mrc` and `srm`. These parameters cannot be used when provisioning a load shared mated application. If you wish to use these parameters when provisioning a load shared mated application, perform one of these procedures:

- *Provisioning a Dominant Mated Application* on page 142
- *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223.

A load shared mated application can contain up to 32 point codes and subsystems, a primary point code and subsystem, and up to 31 mated point codes and subsystems. When a new load shared mated application is added to the database, the first two entries, the primary point code and subsystem and a mate point code and subsystem are added using the `ent-map` command. All other mated point code and subsystem entries that are being assigned to the primary point code and subsystem are added to the load shared mated application using the `chg-map` command.

All the point codes and subsystems in a load shared mated application have the same relative cost value. Traffic is shared equally between the point codes and subsystems in this mated application.

The examples in this procedure are used to add the mated applications shown in *Table 20: Load Shared Mated Application Configuration Table* on page 191.

Table 20: Load Shared Mated Application Configuration Table

Point Code	SSN	RC	Mated Point Code	Mated SSN	MATE RC	CSPC Group	SSO
004-004-004	254	10	100-100-100	254	10	grp10	off
002-002-002	250	10	100-130-079	250	10	grp15	on
			068-135-094	251	10	grp05	off

If the Flexible GTT Load Sharing feature is not enabled, the mated applications, either primary or the mate, cannot be in the database. If the Flexible GTT Load Sharing feature is enabled, the mated applications, either primary or the mate, can be in other MAP sets. Refer to the Provisioning a MAP Set section for information on provisioning MAP sets.

The point codes specified in the `ent-map` or `chg-map` commands (`pc/pca`, `pci`, `pcn`, or `pcn24`, and `mpc/mpca`, `mpci`, `mpcn`, or `mpcn24`) must be either a full point code in the routing point code table. Cluster point codes or network routing point codes cannot be specified with this command. The `rtrv-rte` command can be used to verify the point codes in the routing table. The point codes in the routing table are shown in the `DPCA`, `DPCI`, `DPCN`, or `DPCN24` fields of the `rtrv-rte` command output. The EAGLE 5 ISS's true point code, shown in the `PCA`, `PCI`, `PCN`, or `PCN24` fields of the `rtrv-sid` command output, cannot be specified for a load shared mated application.

A load shared mated application can be provisioned with a point code that is assigned to other mated applications as long as the SSN is not assigned to other mated applications. A point code can be assigned to maximum of 12 different SSNs.

The format of the point codes specified in the `ent-map` command must be the same. For example, if the primary point code is a 24-bit ITU-N point code (`pcn24`), the mate point code must be a 24-bit ITU-N point code (`mpcn24`).

The format of the point codes in the CSPC group specified with the `grp` parameter must be the same as the primary point code specified with the `ent-map` command only if the ANSI-ITU-China SCCP Conversion feature is not enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (refer

to the *Adding a Concerned Signaling Point Code* on page 100 procedure), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application. The status of the ANSI-ITU-China SCCP Conversion feature can be verified with the `rtrv-ctrl-feat` command.

The values for the primary point code and subsystem combination (`pc/ssn`) cannot be the same as the mated point code and subsystem combination (`mpc/mssn`). However, the primary and mated point codes can be the same as long as the subsystem numbers are different.

If a mate point code (`mpc/mpca/mpci/mpcn/mpcn24`) is specified, the `mssn` parameter must be specified. Also, the point code type of the mate point code must be the same as the point code type of the primary point code. For example, if the primary point code is a 24-bit ITU-N point code (`pcn24`), the mate point code must be a 24-bit ITU-N point code (`mpcn24`). If spare point codes are being used, both the primary and mate point codes must be spare point codes. For example, if the primary point code is an ITU-I spare point code, the mate point code must be an ITU-I spare point code.

If the `mssn` parameter is specified, the mate point code (`mpc/mpca/mpci/mpcn/mpcn24`) must be specified.

If the `grp` and `sso` parameter values are specified, and the specified point code and SSN is assigned to multiple mated applications, the `grp` and `sso` values for all mated applications containing the specified point code and SSN will be changed to the values specified in this procedure.

The values of the `ssn` and `mssn` parameters must be from 2 to 255.

The EAGLE 5 ISS can contain 1024, 2000, or 3000 mated applications. The EAGLE 5 ISS default is 1024 mated applications. This quantity can be increased to 2000 by enabling the feature access key for part number 893-0077-01, or to 3000 by enabling the feature access key for part number 893-0077-10. For more information on enabling these feature access keys, refer to the *Enabling the XMAP Table Expansion Feature* on page 771 procedure.

Provisoning a MAP Set

The Flexible GTT Load Sharing feature provides the ability to define multiple load sharing sets in the MAP table where the same point code and subsystem can be assigned to different load sharing sets.

The MAP table contains specific load sharing sets, designated by numbers, and a default MAP set.

The Flexible Final GTT Load Sharing provides flexible load sharing for global title translations defined in the GTT table and not for the MPS based features. The MPS based features do not support the MAP set ID parameter. The MPS based features perform lookups for load sharing in the default MAP set and the GTT table. The entries in the GTT table can be linked to a MAP set ID, allowing lookups in a specific MAP set other than the default MAP set.

Any MAP entries that were provisioned in the database before the Flexible GTT Load Sharing feature is enabled are placed in the default MAP set when the Flexible GTT Load Sharing feature is enabled.

To provision entries in the default MAP set, the `mapset=dflt` parameter must be specified with the `ent-map` or `chg-map` commands.

To provision entries in an existing MAP set other than the default MAP set, the `mapset=<MAP set ID>` parameter must be specified with the `chg-map` command. Provisioning entries in an existing MAP set can be performed only with the `chg-map` command.

To provision entries in a new MAP set, the `mapset=new` parameter must be specified with the `ent-map` command. The `mapset=new` parameter can be specified only with the `ent-map` command. When the `ent-map` command is executed with the `mapset=new` parameter, the new MAP set ID is automatically generated and displayed in the output of the `ent-map` command as follows.

```
New MAPSET Created : MAPSETID = <new MAP set ID>
```

A MAP set, other than the default MAP set, is a MAP group provisioned with the MAP set ID and can contain a maximum of 32 point codes.

The default MAP set can contain multiple MAP groups. The point code can appear in only one MAP group in the default MAP set.

The point code provisioned in a MAP set can be provisioned in multiple MAP sets. All the point codes in a MAP set must be different.

Provisioning Weights and In-Service Thresholds for Mated Applications

Weighted GTT Load Sharing allows unequal traffic loads to be provisioned in MAP load sharing groups or MAP load sharing sets. This feature also allows provisioning control over load sharing groups or sets so that if insufficient capacity within the load sharing group or set is available, the load sharing group or set is not used.

To provision the weight values and in-service threshold values for MAP groups or MAP sets in this procedure, the `wt`, `mwt`, and `thr` parameters are used.

The `wt`, `mwt`, and `thr` parameters can be used only:

- If the MAP group or MAP set is either a load shared or combined dominant/load shared MAP group or MAP set.
- If the Weighted GTTLoad Sharing feature is enabled and turned on.

The status of the Weighted GTTLoad Sharing feature can be verified by entering the `rtrv-ctrl-feat` command. If the Weighted GTTLoad Sharing feature is not enabled or not turned on, perform the *Activating the Weighted GTT Load Sharing Feature* on page 813 procedure to enable and turn on the Weighted GTT Load Sharing feature.

If either the `wt` or `mwt` parameters are specified with the `ent-map` command, both parameters must be specified with the `ent-map` command.

To assign an in-service threshold value to the entries of a MAP group or MAP set that contains the point code value specified in the `ent-map` command, use the `thr` parameter with the `wt` and `mwt` parameters. When the `thr` parameter is specified with the `ent-map` command, the in-service threshold value is assigned to both entries specified in the `ent-map` command. The `thr` parameter cannot be specified with the `chg-map` command when adding additional entries to the MAP group or MAP set. When additional entries are added to the MAP group or MAP set with the `chg-map` command, the `thr` value that was specified in the `ent-map` command is assigned to the additional entries. For information on using the `thr` parameter with the `chg-map` command, refer to the *Changing a Mated Application* on page 278 procedure.

The `thr` parameter does not have to be specified with the `ent-map` command. If the `thr` parameter is not specified with the `ent-map` command, the `THR` parameter value for the MAP group or MAP set is set to 1.

Specifying the `wt` and `mwt` parameters assigns a weight value to the point codes specified in the `ent-map` command. The `wt` parameter value is assigned to the `mpc/mpca/mpci/mpcn/mpcn24`

parameter value and the mwt parameter value is assigned to the mpc/mpca/mpci/mpcn/mpcn24 parameter value.

When additional entries are added to the MAP group or MAP set with the chg-map command, and the MAP group or MAP set entries have weight and in-service threshold values assigned, a weight value must be assigned to the mpc/mpca/mpci/mpcn/mpcn24 parameter value using the mwt parameter.

The wt parameter does not have to be specified with the chg-map command. If the wt parameter is specified with the chg-map command, the weight value for the pc/pca/pci/pcn/pcn24 parameter is not changed.

If the wt parameter is specified with the chg-map command and the wt value is the same as the value currently assigned to the pc/pca/pci/pcn/pcn24 parameter, the weight value for the pc/pca/pci/pcn/pcn24 parameter is not changed.

If the wt parameter is specified with the chg-map command and the wt value is different from the value currently assigned to the pc/pca/pci/pcn/pcn24 parameter, the weight value for the pc/pca/pci/pcn/pcn24 parameter is changed to the new wt value.

The weight values assigned to the entiries in the MAP group or MAP set are shown in the WT column in the rtrv-map output.

The in-service threshold values assigned to the entiries in the MAP group or MAP set are shown in the THR column in the rtrv-map output.

The %WT column in the rtrv-map output shows the percentage of the traffic the particular entry in the MAP group or MAP set will handle.

The WT, %WT, and THR columns are shown in the rtrv-map output only if the Weighted GTT Load Sharing feature is enabled and turned on.

For more information on the Weighted GTT Load Sharing feature, refer to the *Weighted GTT Load Sharing* on page 42 section.

Canceling the RTRV-MAP Command

Because the rtrv-map command used in this procedure can output information for a long period of time, the rtrv-map command can be canceled and the output to the terminal stopped. There are three ways that the rtrv-map command can be canceled.

- Press the F9 function key on the keyboard at the terminal where the rtrv-map command was entered.
- Enter the canc-cmd without the trm parameter at the terminal where the rtrv-map command was entered.
- Enter the canc-cmd:trm=<xx>, where <xx> is the terminal where the rtrv-map command was entered, from another terminal other that the terminal where the rtrv-map 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, refer to the *Commands Manual*.

1. Display the mated applications in the database using the rtrv-map command.

If the Flexible GTT Load Sharing feature is not enabled, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   2 % FULL    (25 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF
255-001-000                250 10  SOL --- --- grp01    ON
255-001-000                251 10  SHR --- --- grp01    OFF
             253-001-002   254 10  SHR --- --- grp01    OFF
255-001-000                252 10  SOL --- --- grp01    ON
255-001-000                253 10  SHR --- --- grp01    OFF
             253-001-004   254 10  SHR --- --- grp01    OFF
255-001-001                255 10  DOM YES YES grp01    ON
             253-001-005   254 20  DOM YES YES grp01    ON
255-001-001                250 10  DOM YES YES grp01    OFF
             253-001-001   254 20  DOM YES YES grp01    OFF
255-001-002                251 10  SHR --- --- grp01    OFF
             255-001-002   254 10  SHR --- --- grp01    OFF
255-001-002                252 10  DOM YES YES grp01    ON
             255-001-003   254 20  DOM YES YES grp01    ON
255-001-002                253 10  SHR --- --- grp01    ON
             255-001-004   254 10  SHR --- --- grp01    ON
PCI          Mate PCI     SSN RC MULT SRM MRC GRP NAME SSO
2-001-2                    255 10  DOM YES YES grp03    OFF
             2-001-1       254 20  DOM YES YES grp03    OFF
PCN          Mate PCN     SSN RC MULT SRM MRC GRP NAME SSO
00347                      253 10  SHR --- --- grp05    OFF
             01387         254 10  SHR --- --- grp05    OFF
```

Note: If the Weighted GTTLoad Sharing feature is enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output as shown in the following example.

```
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
002-002-007                50 10  COM YES YES grp01    OFF 10  33  20
             002-002-008   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-009   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-010   30 20  COM YES YES grp01    OFF 10  50  20
             002-002-011   30 20  COM YES YES grp01    OFF 10  50  20

255-001-000                250 10  SOL --- --- grp01    ON  -- ---  --

255-001-000                251 10  SHR --- --- grp01    OFF  10  50  20
             253-001-002   254 10  SHR --- --- grp01    OFF  10  50  20

255-001-000                252 10  SOL --- --- grp01    ON  -- ---  --

255-001-000                253 10  SHR --- --- grp01    OFF  10  50  20
             253-001-004   254 10  SHR --- --- grp01    OFF  10  50  20

255-001-001                255 10  DOM YES YES grp01    ON  -- ---  --
             253-001-005   254 20  DOM YES YES grp01    ON  -- ---  --
```

If the Flexible GTT Load Sharing feature is enabled, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   1 % FULL    (20 of 36000)
```

```
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=DFLT
255-001-000               250 10  SOL --- --- grp01    ON
MAPSET ID=1
255-001-000               251 10  SHR --- --- grp01    OFF
             253-001-002  254 10  SHR --- --- grp01    OFF
MAPSET ID=2
255-001-000               252 10  SOL --- --- grp01    ON
MAPSET ID=DFLT
255-001-000               253 10  SHR --- --- grp01    OFF
             253-001-004  254 10  SHR --- --- grp01    OFF
MAPSET ID=3
255-001-001               255 10  DOM YES YES grp01    ON
             253-001-005  254 20  DOM YES YES grp01    ON
MAPSET ID=4
255-001-001               250 10  DOM YES YES grp01    OFF
             253-001-001  254 20  DOM YES YES grp01    OFF
MAPSET ID=DFLT
255-001-002               251 10  SHR --- --- grp01    OFF
             255-001-002  254 10  SHR --- --- grp01    OFF
MAPSET ID=5
255-001-002               252 10  DOM YES YES grp01    ON
             255-001-003  254 20  DOM YES YES grp01    ON
MAPSET ID=6
255-001-002               253 10  SHR --- --- grp01    ON
             255-001-004  254 10  SHR --- --- grp01    ON
MAPSET ID=7
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF
PCI          Mate PCI     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=8
2-001-2                   255 10  DOM YES YES grp03    OFF
             2-001-1      254 20  DOM YES YES grp03    OFF
PCN          Mate PCN     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=9
00347                     253 10  SHR --- --- grp05    OFF
             01387        254 10  SHR --- --- grp05    OFF
```

Note: If the Flexible GTTLoad Sharing and Weighted GTTLoad Sharing features are enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output as shown in the following example.

```
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR MAPSET
 ID=7
002-002-007                50 10  COM YES YES grp01    OFF 10  33  20
             002-002-008   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-009   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-010   30 20  COM YES YES grp01    OFF 10  50  20
             002-002-011   30 20  COM YES YES grp01    OFF 10  50  20

MAPSET ID=DFLT
255-001-000               250 10  SOL --- --- grp01    ON  -- ---  --

MAPSET ID=1
255-001-000               251 10  SHR --- --- grp01    OFF  10  50  20
             253-001-002  254 10  SHR --- --- grp01    OFF  10  50  20

MAPSET ID=2
255-001-000               252 10  SOL --- --- grp01    ON  -- ---  --

MAPSET ID=DFLT
```

```
255-001-000               253 10  SHR --- --- grp01    OFF  10  50  20
            253-001-004   254 10  SHR --- --- grp01    OFF  10  50  20

MAPSET ID=3
255-001-001               255 10  DOM YES YES grp01    ON   -- ---  --
            253-001-005   254 20  DOM YES YES grp01    ON   -- ---  --
```

Note: If the maximum number of mated applications shown in the `rtrv-map` output in step 1 is 1024, 2000, or 3000, skip step 2 and go to step 3.

2. If the maximum number of mated applications shown in the `rtrv-map` output in step 1 is 36000, the Flexible GTT Load Sharing feature is enabled.

   Although the `rtrv-map` output shows there can be 36000 entries, a maximum of 1024, 2000, or 3000 different point codes (depending on whether the XMAP Table Expansion feature is enabled for 2000 or 3000 mated applications) can be provisioned for mated applications. To verify the number of different point codes that can be provisioned for mated applciations, enter the `rtrv-tbl-capacity` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0

MAP table is (3000 of 3000) 100% full
```

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

   - If the `rtrv-map` output in step 1 or the `rtrv-tbl-capacity` output in step 2 shows that the maximum number of mated applications is 3000, and the current number of provisioned mated applications is 3000, no new point codes can be used to provision mated applications. Skip step 3 and go to step 4.
   - If the If the `rtrv-map` output in step 1 or the `rtrv-tbl-capacity` output in step 2 shows that the maximum number of mated applications is either 1024 or 2000, and the mated application being added increases the number beyond 1024 or 2000, do not perform step 3, but perform the *Enabling the XMAP Table Expansion Feature* on page 771 procedure and enable XMAP Table Expansion feature for 3000 mated applications. Then go to step 4. If the maximum number of mated applications is not increased, no new point codes can be used to provision mated applications.
   - If the `rtrv-map` output in step 1 or the `rtrv-tbl-capacity` output in step 2 shows that the maximum number of mated applications is either 1024, 2000, or 3000 and the mated application being added will not increase the number beyond the quantity shown in the `rtrv-map` output in step 1 or the `rtrv-tbl-capacity` output in step 2, skip step 3 and go to step 4.

3. Display the status of the XMAP Table Expansion feature by entering the `rtrv-ctrl-feat` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
XGTT Table Expansion      893006101  off     ----
```

```
XMAP Table Expansion      893007701  off     ----
Large System # Links      893005910  on      2000
HC-MIM SLK Capacity       893012707  on      64

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 XMAP Table Expansion controlled feature is not enabled or on, refer to the *Enabling the XMAP Table Expansion Feature* on page 771 procedure and enable XMAP Table Expansion controlled feature for either 2000 or 3000 mated applications as required. Then go to step 4.

Note: If a new point code is being added to a new MAP group or MAP set, skip step 4 and step 5, and go to step 6.

Note: If an existing point code in the `rtrv-map` output on Sheet 1 is being added to a new MAP group or MAP set, skip this step and go to step 5.

4. A MAP group, without the Flexible GTT Load Sharing feature enabled, a MAP set, other than the default MAP set, and a MAP group contained in the default MAP set can contain a maximum of 32 entries.

   Verify the number of entries that the MAP group or MAP set contains by entering the `rtrv-map` command with the primary point code and SSN assigned to the MAP group or MAP set. If the Flexible GTT Load Sharing feature is enabled, the `mapset` parameter and MAP set ID of the MAP set that the new mated application will be added to.

   If the specified MAP set is not the default MAP set, only the `mapset` parameter needs to be specified with the `rtrv-map` command. The point code and SSN does not need to be specified. For this example, enter one of these commands.

   `rtrv-map:pca=002-002-007:ssn=50`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   2 % FULL    (25 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF
```

   `rtrv-map:pca=002-002-007:ssn=50:mapset=dflt`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0
MAP TABLE IS   2 % FULL    (25 of 1024)
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=DFLT
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
```

```
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF
```

`rtrv-map:mapset=7`

The following is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0
MAP TABLE IS   2 % FULL    (25 of 1024)
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=7
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF
```

If the MAP group or MAP set contains 32 entries, no more entries can be added to the specified MAP group or MAP set. Entries can be removed from the specified MAP group or MAP set or the new mated application can be added another MAP group or MAP set, or can be added to a new MAP group or MAP set.

Perform the *Removing a Mated Application* on page 256 procedure to remove any entries from the MAP group or MAP set. If a new point code is being added to this MAP group or MAP set, go to step 6. If an existing point code is being added to this MAP group or MAP set, go to step 5.

If the point code will be added to another MAP group or MAP set, repeat this step for the other MAP group or MAP set.

If the point code will be added to a new MAP group or MAP set, go to step 5. If none of these actions will be performed, then this procedure cannot be performed.

If the MAP group or MAP set contains less than 32 entries, and a new point code is being added to this MAP group or MAP set, go to step 6. If an existing point code is being added to this MAP group or MAP set, go to step 5.

Note: If a new point code is being provisioned for the mated application, skip step 5 and go to step 6.

5. A mated application can be provisioned with a point code that is assigned to other mated applications as long as the SSN is not assigned to other mated applications.

   A point code can be assigned to maximum of 12 different SSNs.

   Verify the number of SSNs assigned to the point code that will be specified for the mated application in this procedure by entering the `rtrv-map` command with the point code of the new mated application. For this example, enter this command.

   `rtrv-map:pca=255-001-000`

   This is an example of the possible output.

```
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
255-001-000               250 10  SOL --- --- grp01    ON
255-001-000               251 10  SHR --- --- grp01    OFF
             253-001-002  254 10  SHR --- --- grp01    OFF
255-001-000               252 10  SOL --- --- grp01    ON
```

```
255-001-000               253 10  SHR --- --- grp01    OFF
            253-001-004   254 10  SHR --- --- grp01    OFF
```

If the Flexible GTT Load Sharing feature is enabled, the MAPSETIDs for the mated applications are shown in the `rtrv-map` output.

If the Weighted GTT Load Sharing feature is enabled and turned, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output.

If the point code is assigned to less than 12 different SSNs, then the existing point code in the `rtrv-map` output can be used to provision the mated application. Go to step 6.

If the point code is assigned to 12 different SSNs, another existing point code in the `rtrv-map` output or a new point code must be used to provision the mated application. If an existing point code in the `rtrv-map` output will be used to provision the mated application, repeat this step for that point code. Then go to step 6.

If a new point code will be used to provision the mated application, go to step 6.

If the point code is assigned to 12 different SSNs, and neither an existing point code in the `rtrv-map` output nor a new point code will be used to provision the mated application, then this procedure cannot be performed

Note: If a concerned signaling point code (CSPC) group is not being assigned to the mated application, skip steps 6 and 7, and go to step 8.

Note: If the mated point code is not assigned to a CSPC group, that point code will not be notified of the subsystem's status.

6. Display the point codes in the CSPC group that you wish to assign to the mated application by first entering the `rtrv-cspc` command with no parameters.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:48:31  GMT  EAGLE5 36.0.0
CSPC GRP   NETWORK               PERCENT FULL
grp01      ANSI                    6%
grp02      ITU-I                   9%
grp03      ITU-N                  12%
grp04      ANSI                   15%
grp05      ANSI                   15%
grp10      ANSI                   15%
grp15      ANSI                   15%
```

   If the desired CSPC group is shown in the `rtrv-cspc` output, re-enter the `rtrv-cspc` command with the CSPC group name. For this example, enter these commands.`rtrv-cspc:grp=grp05`This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:48:31  GMT  EAGLE5 36.0.0
CSPC GRP      PCA
grp05         005-005-005
              007-007-007
              008-008-008
              009-009-009
```

   `rtrv-cspc:grp=grp10`

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:59:31  GMT  EAGLE5 36.0.0
CSPC GRP      PCA
```

```
grp10          003-003-003
               004-004-004
               008-008-008
               009-009-009
```

`rtrv-cspc:grp=grp15`

This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:48:31  GMT  EAGLE5 36.0.0
CSPC GRP       PCA
grp15          005-005-005
               006-006-006
               008-008-008
               009-009-009
```

Note: If the ANSI-ITU-China SCCP Conversion feature is enabled, then point codes of multiple network types can be displayed in the `rtrv-cspc` output, if point codes of multiple network types are assigned to the CSPC group.

If the CSPC group is not in the database, or if the required point code is not assigned to the CSPC group, perform the *Adding a Concerned Signaling Point Code* on page 100 procedure and add the required CSPC group or point code to the database.

Note: If the output of the `rtrv-cspc` command performed in step 6 shows CSPC groups containing a mixture of point code types, or if the new CSPC group that was added in step 6 contains a mixture of point code types, skip step 7 and go to step 8.

7. The format of the point codes in the CSPC group specified with the `grp` parameter must be the same as the primary point code specified with the `ent-map` command only if the ANSI-ITU-China SCCP Conversion feature is not enabled.

   If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (refer to the *Adding a Concerned Signaling Point Code* on page 100 procedure), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application.

   Verify the status of the ANSI-ITU-China SCCP Conversion feature by entering this command:

   `rtrv-ctrl-feat:partnum=893012001`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
SCCP Conversion           893012001  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 ANSI-ITU-China SCCP Conversion feature is not enabled, perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure to enable the ANSI-ITU-China SCCP Conversion feature.

8. If the MAPSET column is shown in the `rtrv-map` output in step 1, the Flexible GTT Load Sharing feature is enabled. Go to step 9.

   If the MAPSET column is not shown in step 1 and you do not wish to provision MAP sets in this procedure, skip this step and go to step 9.

   If the MAPSET column is not shown in step 1 and you wish to provision MAP sets in this procedure, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure and enable the Flexible GTT Load Sharing feature. After the Flexible GTT Load Sharing feature is enabled, go to step 9.

   Note: If you do not wish to assign weight and in-service threshold values to the MAP entries in the MAP group or MAP set, skip step 9 and go to step 10.

9. If you wish to assign weight and in-service threshold values to the entries in the MAP group or MAP set, and the WT, %WT, and THR columns are shown in the `rtrv-map` output in step 1, then the Weighted GTT Load Sharing feature is enabled and turned on. Go to step 10.

   If the WT, %WT, and THR columns are not shown in the `rtrv-map` output in step 1, perform the *Activating the Weighted GTT Load Sharing Feature* on page 813 procedure to enable and turn on the Weighted GTT Load Sharing feature. After the Weighted GTT Load Sharing feature is enabled and turned on, go to step 10.

   - If the both point codes that will be specified for the mated application are point codes assigned to other mated applications, skip steps 10 through 12 and go to step 13.
   - If only one of the point codes that will be specified for the mated application is assigned to other mated applications, perform step 10 for the new point code that is not assigned to other mated applications.

10. Display the destination point codes in the database by entering the `rtrv-dstn` command. This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN          DOMAIN
   001-207-000   ----------- no  ---   -------      -----------     SS7
   001-001-001   ----------- no  ---   -------      -----------     SS7
   001-001-002   ----------- no  ---   -------      -----------     SS7
   001-005-000   ----------- no  ---   -------      -----------     SS7
   001-007-000   ----------- no  ---   -------      -----------     SS7
   008-012-003   ----------- no  ---   -------      -----------     SS7
   003-002-004   ----------- no  ---   -------      -----------     SS7
   009-002-003   ----------- no  ---   -------      -----------     SS7
   010-020-005   ----------- no  ---   -------      -----------     SS7

   DPCI          CLLI        BEI ELEI  ALIASI       ALIASN          DOMAIN
   1-207-0       ----------- no  ---   -------      -----------     SS7
   0-015-0       ----------- no  ---   -------      -----------     SS7
   0-017-0       ----------- no  ---   -------      -----------     SS7
   1-011-1       ----------- no  ---   -------      -----------     SS7
   1-011-2       ----------- no  ---   -------      -----------     SS7

   DPCN          CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN
```

```
   DPCN24        CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the required point code is not shown in the `rtrv-dstn` output, perform the "Adding a Destination Point Code" procedure in the *Database Administration Manual - SS7* to add the required point code. A proxy point code cannot be assigned to the point code.

After the new point code has been added, skip steps11and 12, and perform one of the Adding a Route procedures in the Database *Administration Manual - SS7* and add the required route to the database. After the route has been added, continue the procedure with step 13.

11. Display the point code that will be assigned to the mated application by using the `rtrv-dstn` command and specifying the point code. For this example, enter this command.

`rtrv-dstn:dpca=010-020-005`

This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
   010-020-005   ----------- no  ---   -------      -----------    SS7

   PPC           NCAI           PRX
   009-002-003   ----           no

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the point code is not shown in the `rtrv-dstn` command output, the following output is displayed.

```
DPCA          CLLI        BEI ELEI  ALIASI       ALIASN/N24    DOMAIN

No destinations meeting the requested criteria were found

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

A proxy point code (a point code value is shown in the `PPC` column) cannot be assigned to the point code. If a proxy point code is shown in this step, choose another point code from the `rtrv-dstn` output in the previous step and repeat this step.

After the new point code has been added, skip step 12 and perform one of the Adding a Route procedures in the Database *Administration Manual - SS7* and add the required route to the database. After the route has been added, continue the procedure with step 13.

12. Enter the `rtrv-rte` command with the `dpc` parameter specifying the point codes to be used with the `ent-map` or `chg-map` commands to verify whether or not the point code is the DPC of a route.

For this example, enter these commands.

`rtrv-rte:dpca=008-008-008`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   008-008-008 ---------  ------------   ls20       10    008-008-008
                                              RTX:No  CLLI=ls20clli
```

`rtrv-rte:dpca=031-049-100`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   031-049-100 ---------- ------------   ls10       10    031-049-100
                                              RTX:No  CLLI=ls10clli
```

`rtrv-rte:dpca=056-113-200`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   056-113-200 ---------- ------------   ls12       10    056-113-200
                                              RTX:No  CLLI=ls12clli
```

`rtrv-rte:dpca=179-183-050`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   179-183-050 ---------- ------------   ls18       10    179-183-050
                                              RTX:No  CLLI=ls18clli
```

`rtrv-rte:dpca=002-002-002`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   002-002-002 ---------- ------------   ls02       10    002-002-002
                                              RTX:No  CLLI=ls02clli
```

`rtrv-rte:dpca=004-004-004`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   004-004-004 ---------- -------------   ls04     10 004-004-004
                                              RTX:No  CLLI=ls04clli
                                              RTX:No  CLLI=ls13clli
```

`rtrv-rte:dpca=068-135-094`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
```

```
   068-135-094 ---------- ------------   ls14       10    068-135-094
                                                 RTX:No  CLLI=ls14clli
```

`rtrv-rte:dpca=100-100-100`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   100-100-100 ---------- ------------   ls16       10    100-100-100
                                                 RTX:No  CLLI=ls16clli
```

`rtrv-rte:dpca=100-130-079`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   100-130-079 ---------- ------------   ls17       10    100-130-079
                                                 RTX:No  CLLI=ls17clli
```

`rtrv-rte:dpca=200-147-100`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   200-147-100 ---------- ------------   ls19       10    200-147-100
                                                 RTX:No  CLLI=ls19clli
```

If the point code is not shown in the `rtrv-rte` output, perform one of the Adding a Route procedures in the Database *Administration Manual - SS7* and add the required route to the database.

Note: If an entry is being added to an existing mated application, skip step 13 and go to step 14.

13. Add the mated application to the database using the `ent-map` command.

If the Flexible GTT Load Sharing feature is not enabled for this example, enter these commands.

```
ent-map:pca=004-004-004:ssn=254:rc=10:mpc=100-100-100:mssn=254
:materc=10:grp=grp10:sso=off
```

```
ent-map:pca=002-002-002:ssn=250:rc=10:mpc=100-130-079:mssn=250
:materc=10:grp=grp15:sso=on:wt=10:mwt=10:thr=40
```

```
ent-map:pca=008-008-008:ssn=254:rc=10:mpc=200-147-100:mssn=254
:materc=10:grp=grp10:sso=on:wt=10:mwt=20
```

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

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
ENT-MAP:  MASP A - COMPLTD
```

If the Flexible GTT Load Sharing feature is enabled for this example, enter these commands.

```
ent-map:pca=004-004-004:ssn=254:rc=10:mpc=100-100-100:mssn=254
:materc=10:grp=grp10:sso=off:mapset=new
```

```
ent-map:pca=002-002-002:ssn=250:rc=10:mpc=100-130-079:mssn=250
:materc=10:grp=grp15:sso=on:mapset=dflt:wt=10:mwt=10:thr=40
```

```
ent-map:pca=008-008-008:ssn=254:rc=10:mpc=200-147-100:mssn=254
:materc=10:grp=grp10:sso=on:mapset=new:wt=10:mwt=20
```

If the Flexible GTT Load Sharing feature is enabled when each of these commands have successfully completed, and a new MAP set was created, a message similar to the following should appear.

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
New MAPSET Created : MAPSETID = 9
ENT-MAP:  MASP A - COMPLTD
```

If the Flexible GTT Load Sharing feature is enabled when each of these commands have successfully completed, and the mated application was added to the default MAP set, this message should appear.

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
ENT-MAP:  MASP A - COMPLTD
```

Note:

- To create a load shared mated application, the `rc`, `mpc/mpca/mpci/mpcn/mpcn24`, `mssn`, and `materc` parameters must be specified. The `materc` values must be equal to the `rc` value. The `mrc` and `srm` parameters cannot be specified for a load shared mated application.
- The format of the point codes in the CSPC group specified with the `grp` parameter must be the same as the primary point code specified with the `ent-map` command only if the ANSI-ITU-China SCCP Conversion feature is not enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (refer to the *Adding a Concerned Signaling Point Code* on page 100 procedure), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application.
- The point code type of the mate point code must be the same as the point code type of the primary point code. For example, if the primary point code is a 24-bit ITU-N point code (`pcn24`), the mate point code must be a 24-bit ITU-N point code (`mpcn24`). If spare point codes are being used, both the primary and mate point codes must be spare point codes. For example, if the primary point code is an ITU-I spare point code, the mate point code must be an ITU-I spare point code.
- If the Flexible GTTLoad Sharing is enabled, the `mapset` parameter must be specified with the `ent-map` command.

  If the Flexible GTT Load Sharing is not enabled, the `mapset` parameter cannot be specified with the `ent-map` command. To provision entries in the default MAP set, the `mapset=dflt` parameter must be specified with the `ent-map` command. To provision entries in a new MAP set, the `mapset=new` parameter must be specified with the `ent-map` command. The `mapset=new` parameter can be specified only with the `ent-map` command. When the `ent-map` command is executed with the `mapset=new` parameter, the new MAP set ID is automatically generated and displayed in the output of the `ent-map` command as follows.

  ```
  New MAPSET Created : MAPSETID = <new MAP set ID>
  ```

  A MAP set, other than the default MAP set, is a MAP group provisioned with the MAP set ID and can contain a maximum of 32 point code and subsystem entries. The default MAP set can contain multiple MAP groups. Each group in the default MAP set can contain a maximum of 32 point code and subsystem entries. The point code and subsystem entry can appear only once in the default MAP set, so the point code and subsystem entry can appear in only one MAP group in the default MAP set. The point code and subsystem entry

provisioned in a MAP set can be provisioned in multiple MAP sets. If a point code and subsystem entry is provisioned in different MAP sets, the relative cost value of the entry in each MAP set can be different. All the point code and subystem entries in a MAP set, including the default MAP set, must be different.

- Refer to the Provisioning Weights and In-Service Thresholds for Mated Applications section for information about using the weight (`wt` and `mwt`) and in-service threshold (`thr`) parameters.

Note: If no other entries are being added to the mated application, skip step 14 and go to step 15.

14. Add the mated point code and subsystem to the mated application using the `chg-map` command according to the notes in step 13.

If the Flexible GTT Load Sharing feature is not enabled for this example, enter these commands.

```
chg-map:pca=002-002-002:ssn=250:mpca=068-135-094:mssn=251
:materc=10:grp=grp05:sso=off:mwt=20

chg-map:pca=008-008-008:ssn=254:mpc=179-183-050:mssn=250
:materc=10:grp=grp15:sso=off:mwt=30

chg-map:pca=008-008-008:ssn=254:mpca=031-049-100:mssn=250
:materc=10:grp=grp15:sso=on:mwt=40

chg-map:pca=008-008-008:ssn=254:mpca=056-113-200:mssn=251
:materc=10:grp=grp05:sso=off:mwt=50

chg-map:pca=255-001-000:ssn=251:mpca=255-001-001:mssn=56
:materc=10:grp=grp05:sso=off:wt=30:mwt=50
```

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

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
CHG-MAP:  MASP A - COMPLTD
```

If the Flexible GTT Load Sharing feature is enabled for this example, enter these commands.

```
chg-map:pca=002-002-002:ssn=250:mpca=068-135-094:mssn=251
:materc=10:grp=grp05:sso=off:mapset=dflt:mwt=20

chg-map:pca=008-008-008:ssn=254:mpc=179-183-050:mssn=250
:materc=10:grp=grp15:sso=off:mapset=12:mwt=30

chg-map:pca=008-008-008:ssn=254:mpca=031-049-100:mssn=250
:materc=10:grp=grp15:sso=on:mapset=13:mwt=40

chg-map:pca=008-008-008:ssn=254:mpca=056-113-200:mssn=251
:materc=10:grp=grp05:sso=off:mapset=13:mwt=50

chg-map:pca=255-001-000:ssn=251:mpca=255-001-001
:mssn=56:materc=10:grp=grp05:sso=off:wt=30:mwt=50:mapset=1
```

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

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
CHG-MAP:  MASP A - COMPLTD
```

Repeat this step for all new entries being added to the existing mated application.

If the Flexible GTT Load Sharing feature is not enabled, the mated application can contain a maximum of 32 entries.

If the Flexible GTT Load Sharing feature is enabled, and the MAP set is not the default MAP set, the MAP set can contain a maximum of 32 entries.

If the Flexible GTT Load Sharing feature is enabled, and the MAP set is the default MAP set, the default MAP set can contain multiple MAP groups. Each group in the default MAP set can contain a maximum of 32 point code and subsystem entries.

15. Verify the changes using the `rtrv-map` command with the primary point code and subsystem specified in steps 13 and 14.

    If a new MAP set was created in step 13, the `mapset` parameter should be specified with the `rtrv-map` command. The value for the mapset parameter should be the MAP set ID generated in step 13.

    If the mated application was added to an existing MAP set in step 14, the `mapset` parameter and value specified in step 14 should be specified with the `rtrv-map` command.

    If the Flexible GTT Load Sharing feature is not enabled for this example, enter these commands.

    `rtrv-map:pca=004-004-004:ssn=254`

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
004-004-004               254 10  SHR --- --- grp10    OFF -- ---  --
             100-100-100  254 10  SHR --- --- grp10    OFF -- ---  --
```

    `rtrv-map:pca=002-002-002:ssn=250`

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
002-002-002               250 10  SHR --- --- grp15    ON  10  50  40
             100-130-079  250 10  SHR --- --- grp15    ON  10  50  40
             068-135-094  251 10  SHR --- --- grp05    OFF 20 100  40
```

    `rtrv-map:pca=008-008-008:ssn=254`

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
008-008-008               254 10  SHR --- --- grp10    ON  10   6   1
             200-147-100  254 10  SHR --- --- grp10    ON  20  13   1
             179-183-050  250 10  SHR --- --- grp15    OFF 30  20   1
```

```
             031-049-100  250 10  SHR --- --- grp15    ON  40  26   1
             056-113-200  251 10  SHR --- --- grp05    OFF 50  33   1
```

`rtrv-map:pca=255-001-000:ssn=251`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
255-001-000               251 10  SHR --- --- grp01    OFF 50  55  20
             253-001-002  254 10  SHR --- --- grp01    OFF 10  11  20
             255-001-001   56 10  SHR --- --- grp05    OFF 30  33  20
```

Note: If the Weighted GTTLoad Sharing feature is not enabled or turned on, the `WT`, `%WT`, and `THR` columns are not shown in the `rtrv-map` output

If the Flexible GTT Load Sharing feature is enabled for this example, enter these commands.

`rtrv-map:pca=004-004-004:ssn=254:mapset=10`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
MAPSET ID=10
004-004-004               254 10  SHR --- --- grp10    OFF -- ---  --
             100-100-100  254 10  SHR --- --- grp10    OFF -- ---  --
```

`rtrv-map:pca=002-002-002:ssn=250:mapset=dflt`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
MAPSET ID=DFLT
002-002-002               250 10  SHR --- --- grp15    ON  10  50  40
             100-130-079  250 10  SHR --- --- grp15    ON  10  50  40
             068-135-094  251 10  SHR --- --- grp05    OFF 20 100  40
```

`rtrv-map:pca=008-008-008:ssn=254:mapset=11`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
MAPSET ID=11
008-008-008               254 10  SHR --- --- grp10    ON  10   6   1
             200-147-100  254 10  SHR --- --- grp10    ON  20  13   1
             179-183-050  250 10  SHR --- --- grp15    OFF 30  20   1
```

```
             031-049-100  250 10  SHR --- --- grp15    ON  40  26   1
             056-113-200  251 10  SHR --- --- grp05    OFF 50  33   1
```

`rtrv-map:pca=255-001-000:ssn=251:mapset=1`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
MAPSET ID=1
255-001-000               251 10  SHR --- --- grp01    OFF 50  55  20
             253-001-002  254 10  SHR --- --- grp01    OFF 10  11  20
             255-001-001   56 10  SHR --- --- grp05    OFF 30  33  20
```

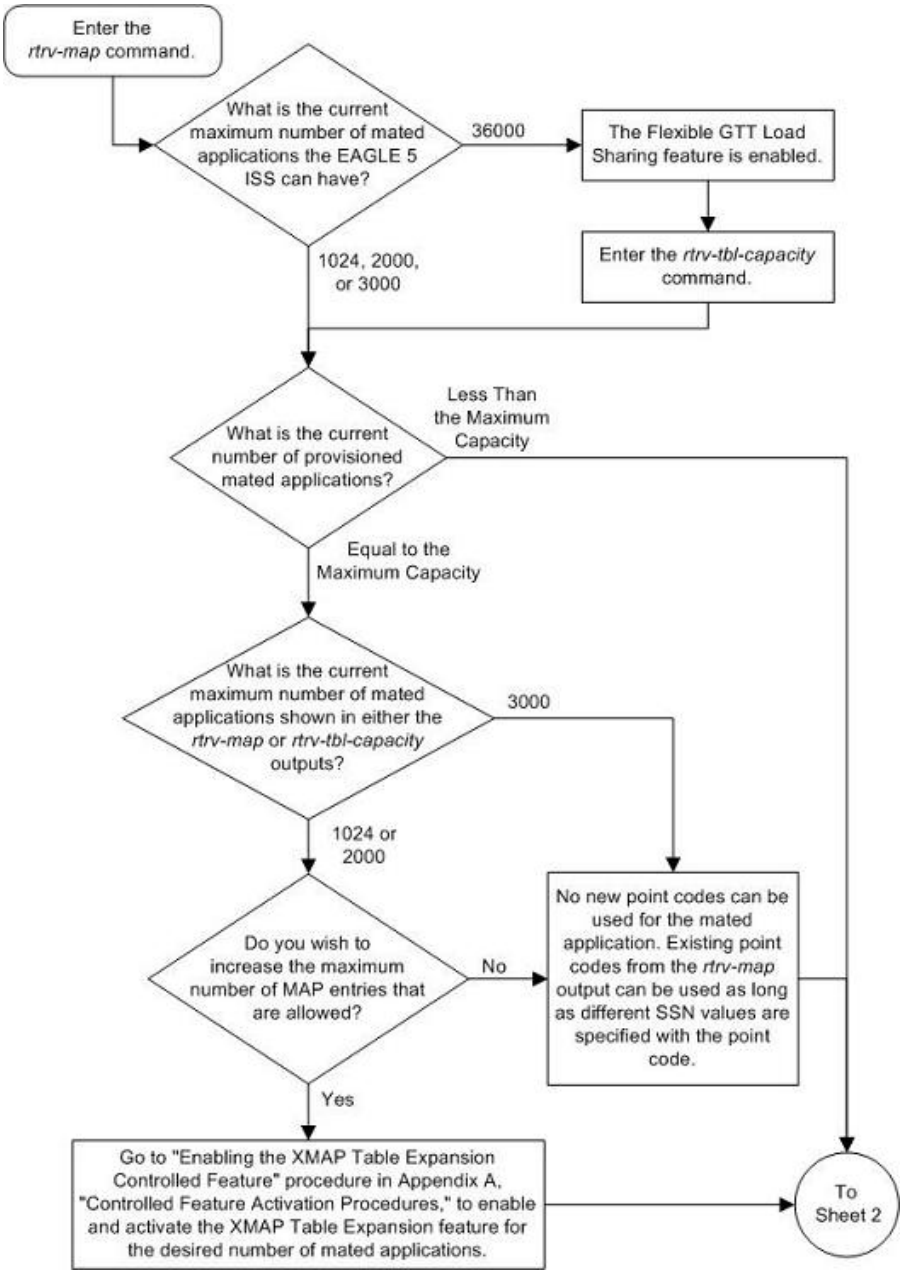
Note: If the Weighted GTTLoad Sharing feature is not enabled or turned on, the `WT`, `%WT`, and `THR` columns are not shown in the `rtrv-map` output

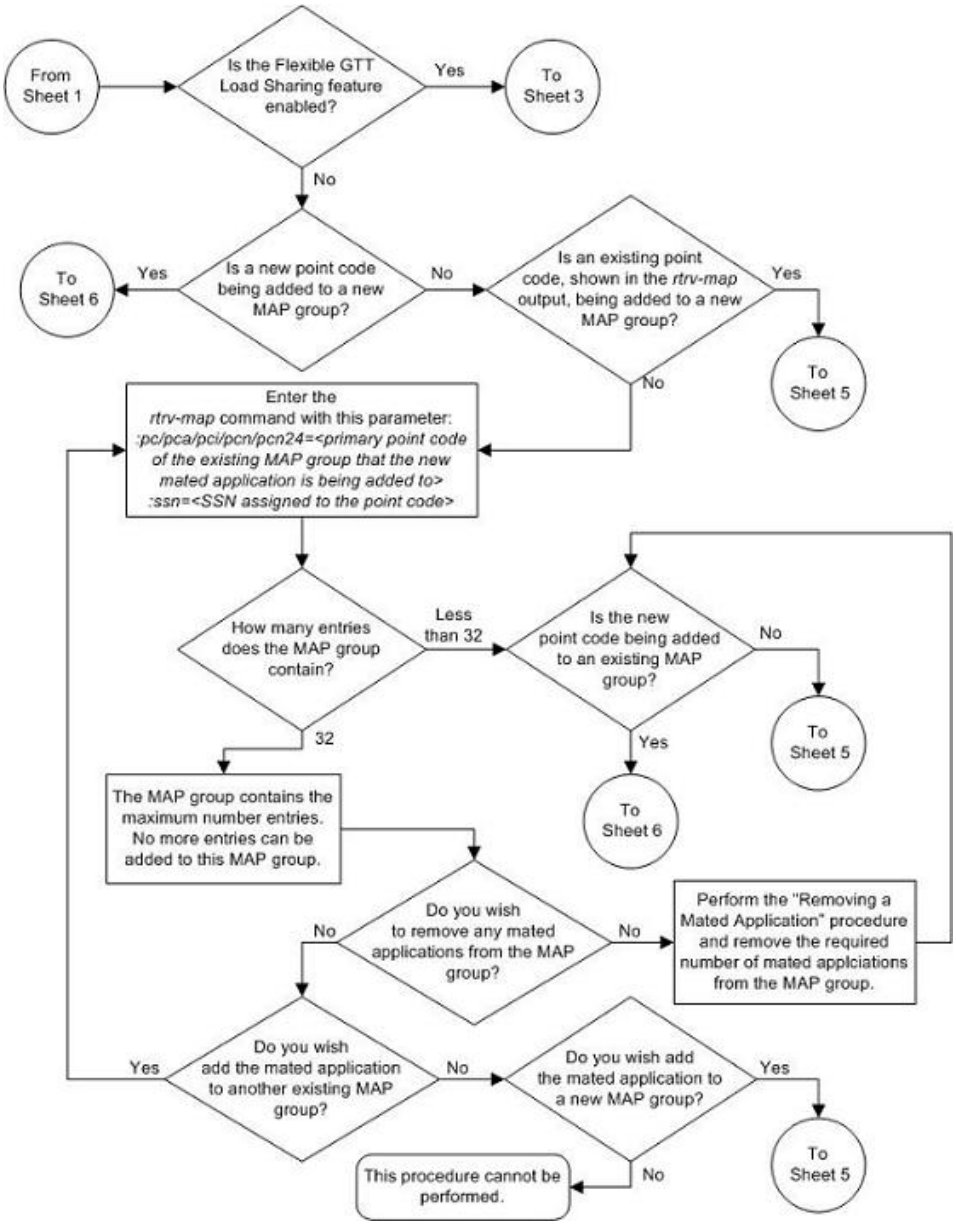
16. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

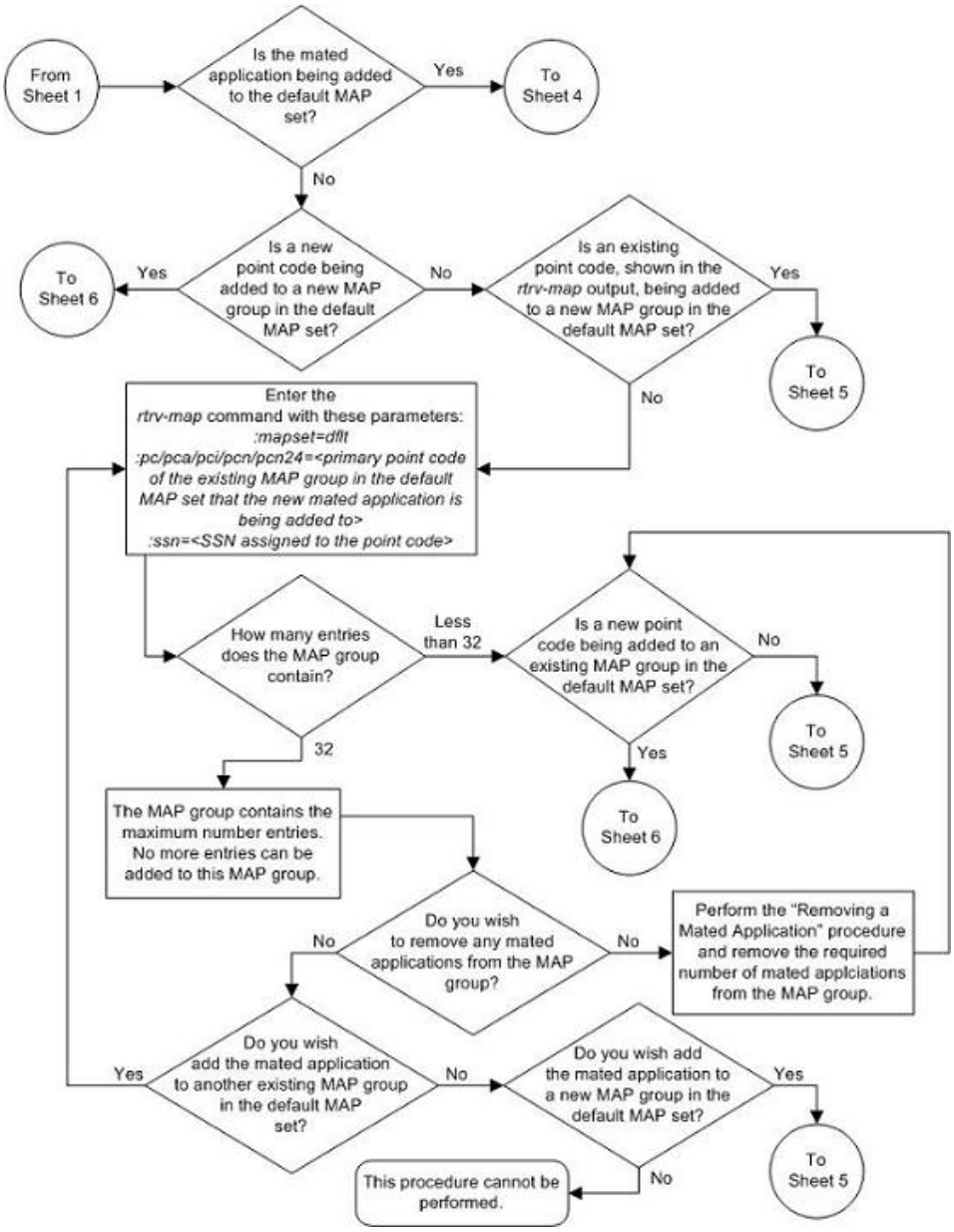
    These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

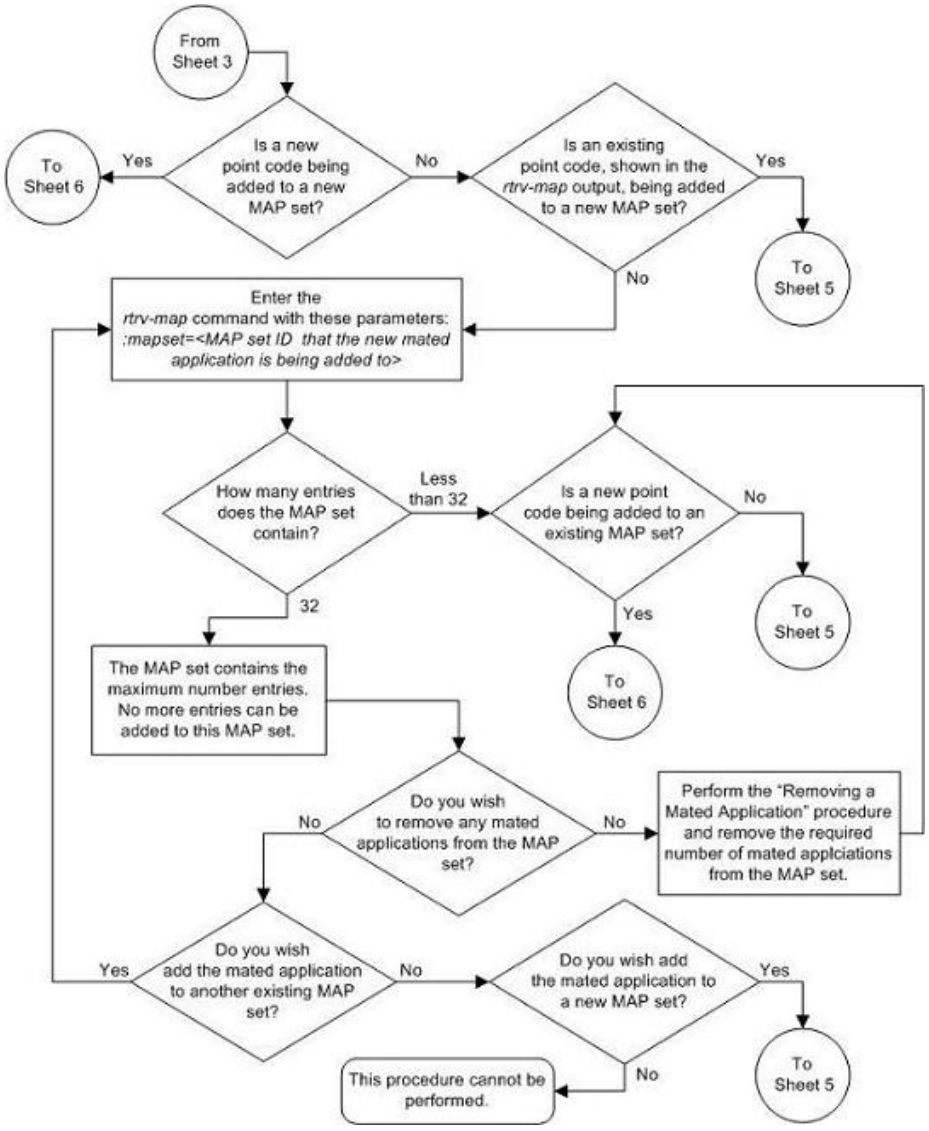
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

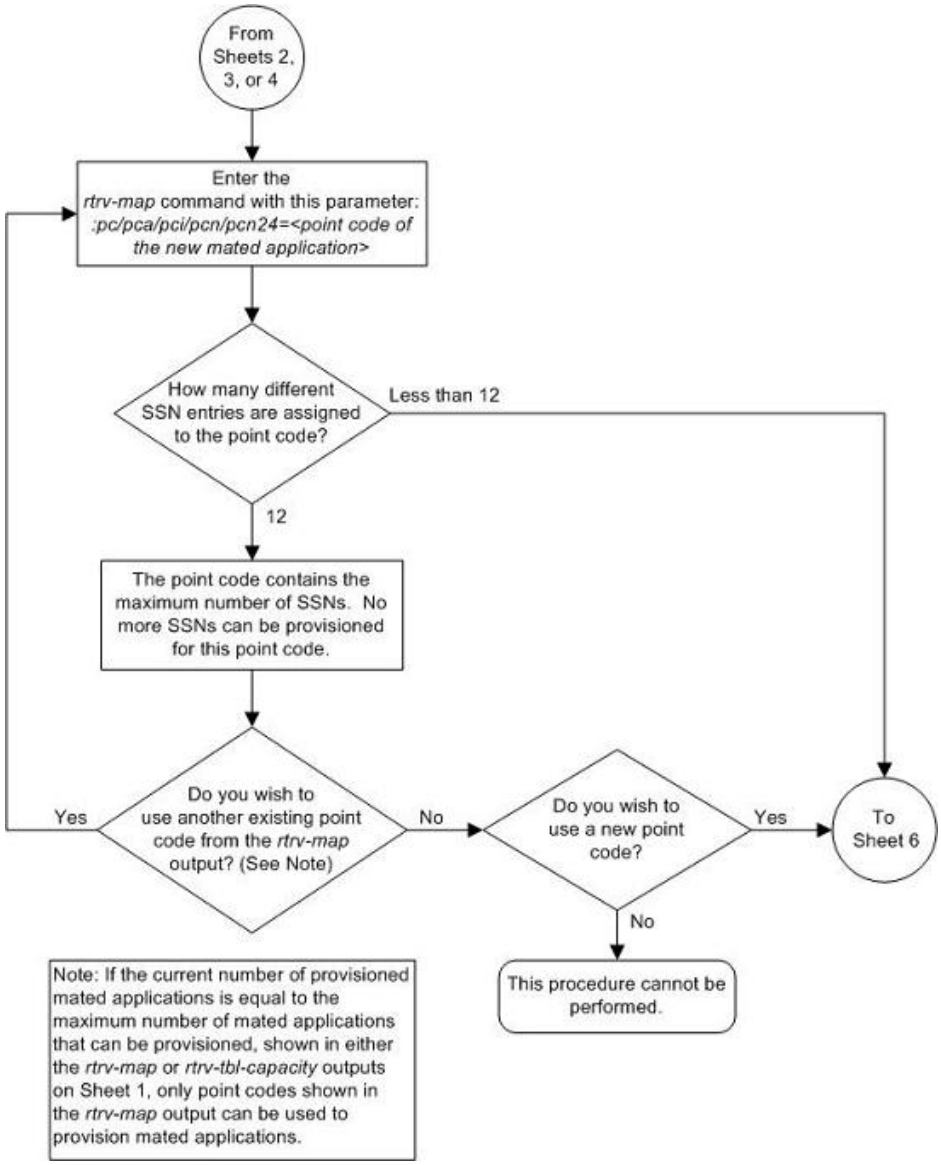
Figure 21: Provisioning a Load Shared Mated Application

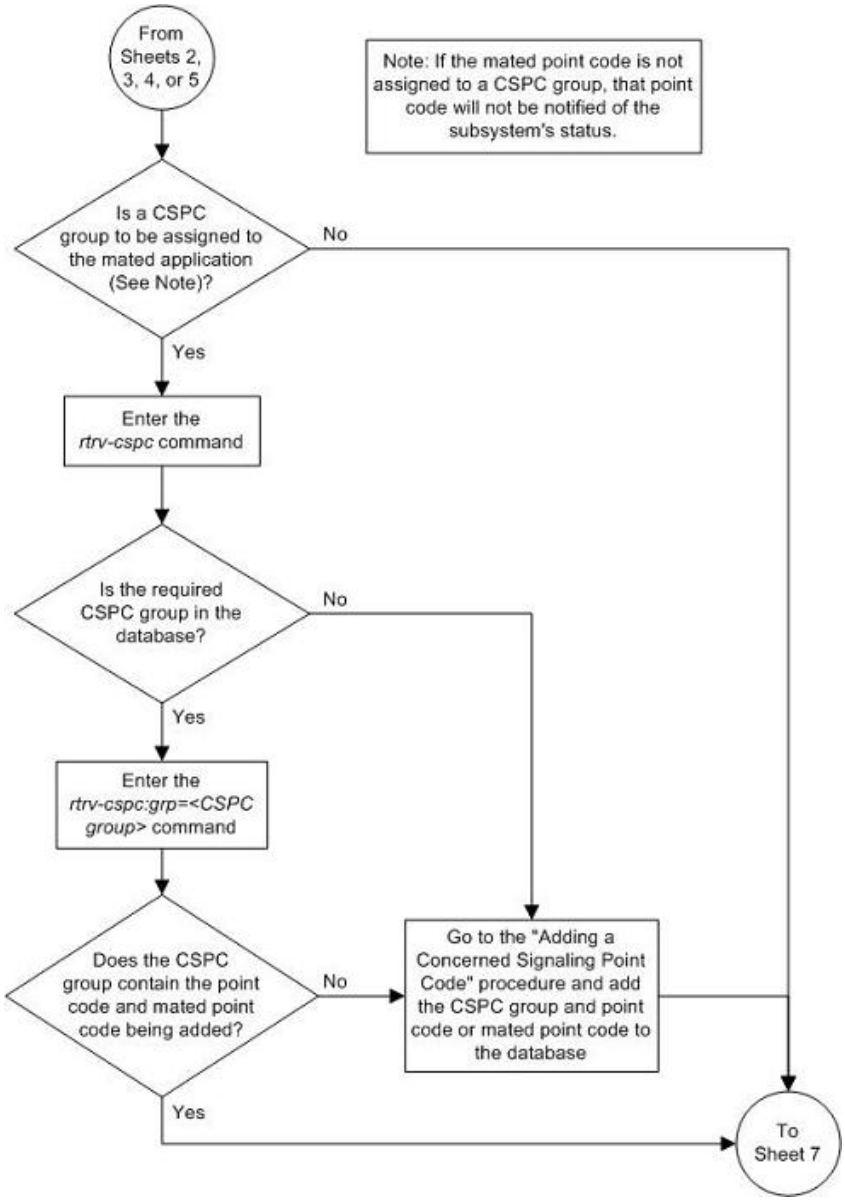

Enter the *rtrv-map* command.
What is the current maximum number of mated applications the EAGLE 5 ISS can have?
36000
The Flexible GTT Load Sharing feature is enabled.
Enter the *rtrv-tbl-capacity* command.
1024, 2000, or 3000
What is the current number of provisioned mated applications?
Less Than the Maximum Capacity
Equal to the Maximum Capacity
What is the current maximum number of mated applications shown in either the *rtrv-map* or *rtrv-tbl-capacity* outputs?
3000
1024 or 2000
Do you wish to increase the maximum number of MAP entries that are allowed?
No
No new point codes can be used for the mated application. Existing point codes from the *rtrv-map* output can be used as long as different SSN values are specified with the point code.
Yes
Go to "Enabling the XMAP Table Expansion Controlled Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," to enable and activate the XMAP Table Expansion feature for the desired number of mated applications.
To Sheet 2

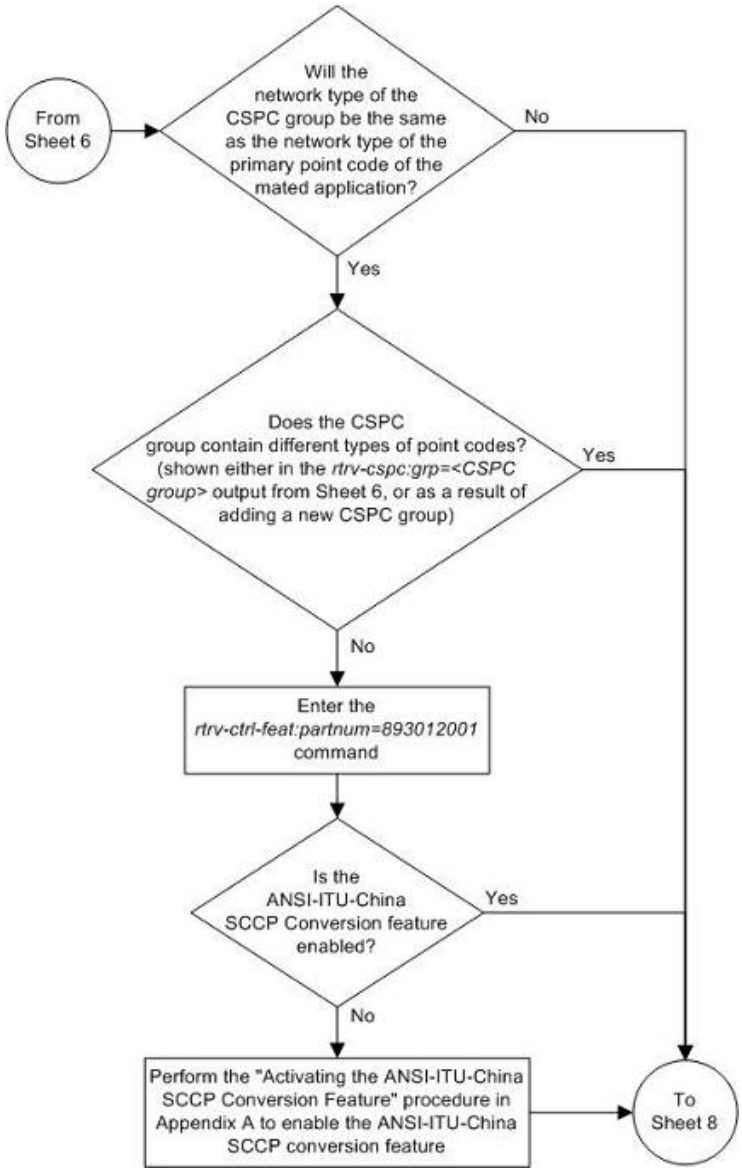

From Sheet 1
Is the Flexible GTT Load Sharing feature enabled?
Yes
To Sheet 3
No
To Sheet 6
Yes
Is a new point code being added to a new MAP group?
No
Is an existing point code, shown in the rtrv-map output, being added to a new MAP group?
Yes
To Sheet 5
No
Enter the rtrv-map command with this parameter: :pc/pca/pci/pcn/pcn24=<primary point code of the existing MAP group that the new mated application is being added to> :ssn=<SSN assigned to the point code>
How many entries does the MAP group contain?
Less than 32
Is the new point code being added to an existing MAP group?
No
To Sheet 5
32
Yes
To Sheet 6
The MAP group contains the maximum number entries. No more entries can be added to this MAP group.
Do you wish to remove any mated applications from the MAP group?
No
No
Perform the "Removing a Mated Application" procedure and remove the required number of mated applciations from the MAP group.
Yes
Do you wish add the mated application to another existing MAP group?
No
Do you wish add the mated application to a new MAP group?
Yes
To Sheet 5
This procedure cannot be performed.
No

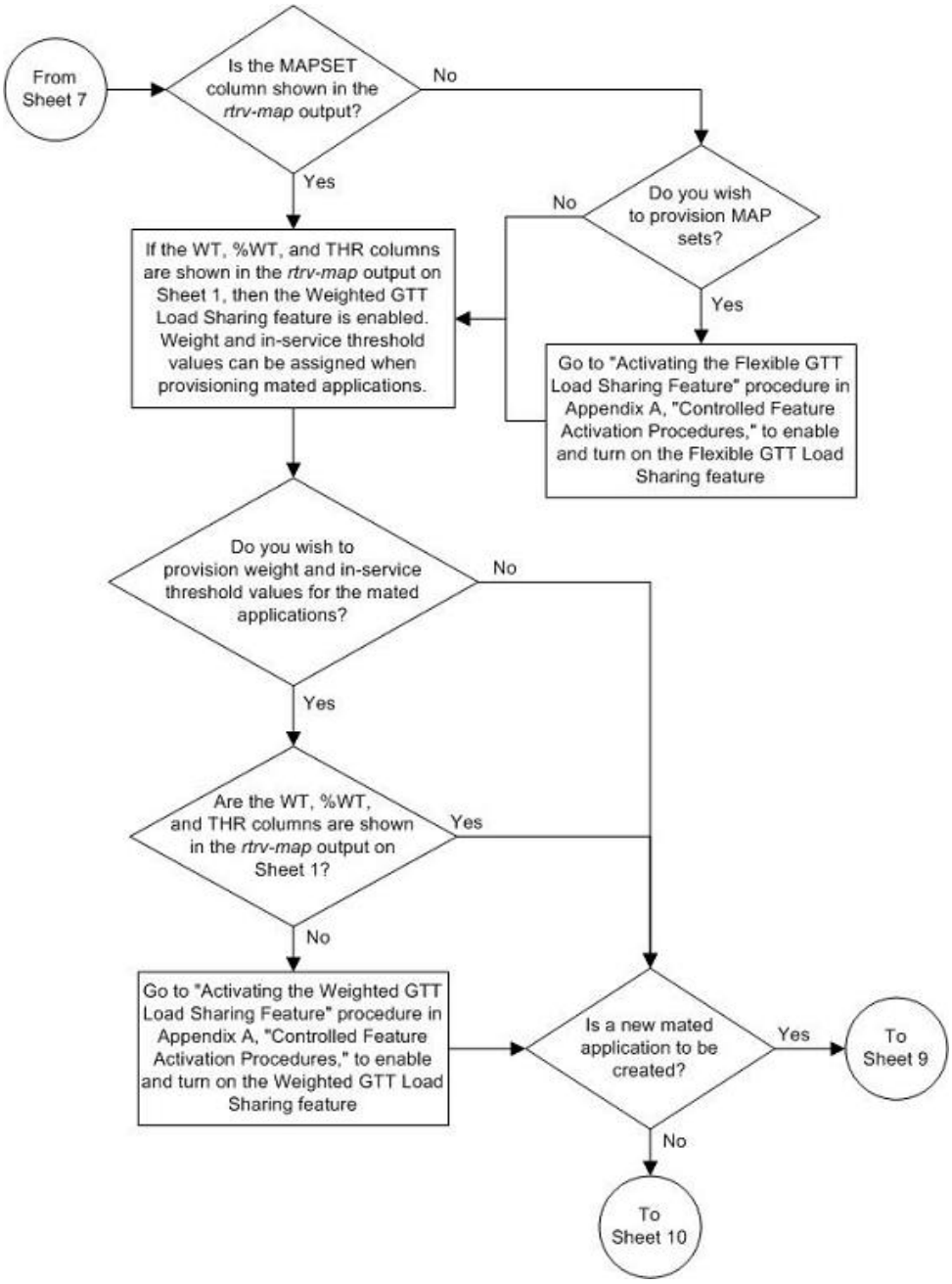

From Sheet 1
Is the mated application being added to the default MAP set?
Yes
To Sheet 4
No
Is a new point code being added to a new MAP group in the default MAP set?
Yes
To Sheet 6
No
Is an existing point code, shown in the rtrv-map output, being added to a new MAP group in the default MAP set?
Yes
To Sheet 5
No
Enter the rtrv-map command with these parameters:
:mapset=dflt
:pc/pca/pci/pcn/pcn24=<primary point code of the existing MAP group in the default MAP set that the new mated application is being added to>
:ssn=<SSN assigned to the point code>
How many entries does the MAP group contain?
Less than 32
Is a new point code being added to an existing MAP group in the default MAP set?
No
To Sheet 5
Yes
To Sheet 6
32
The MAP group contains the maximum number entries. No more entries can be added to this MAP group.
Do you wish to remove any mated applications from the MAP group?
No
No
Perform the "Removing a Mated Application" procedure and remove the required number of mated applciations from the MAP group.
Do you wish add the mated application to another existing MAP group in the default MAP set?
Yes
No
Do you wish add the mated application to a new MAP group in the default MAP set?
Yes
To Sheet 5
No
This procedure cannot be performed.

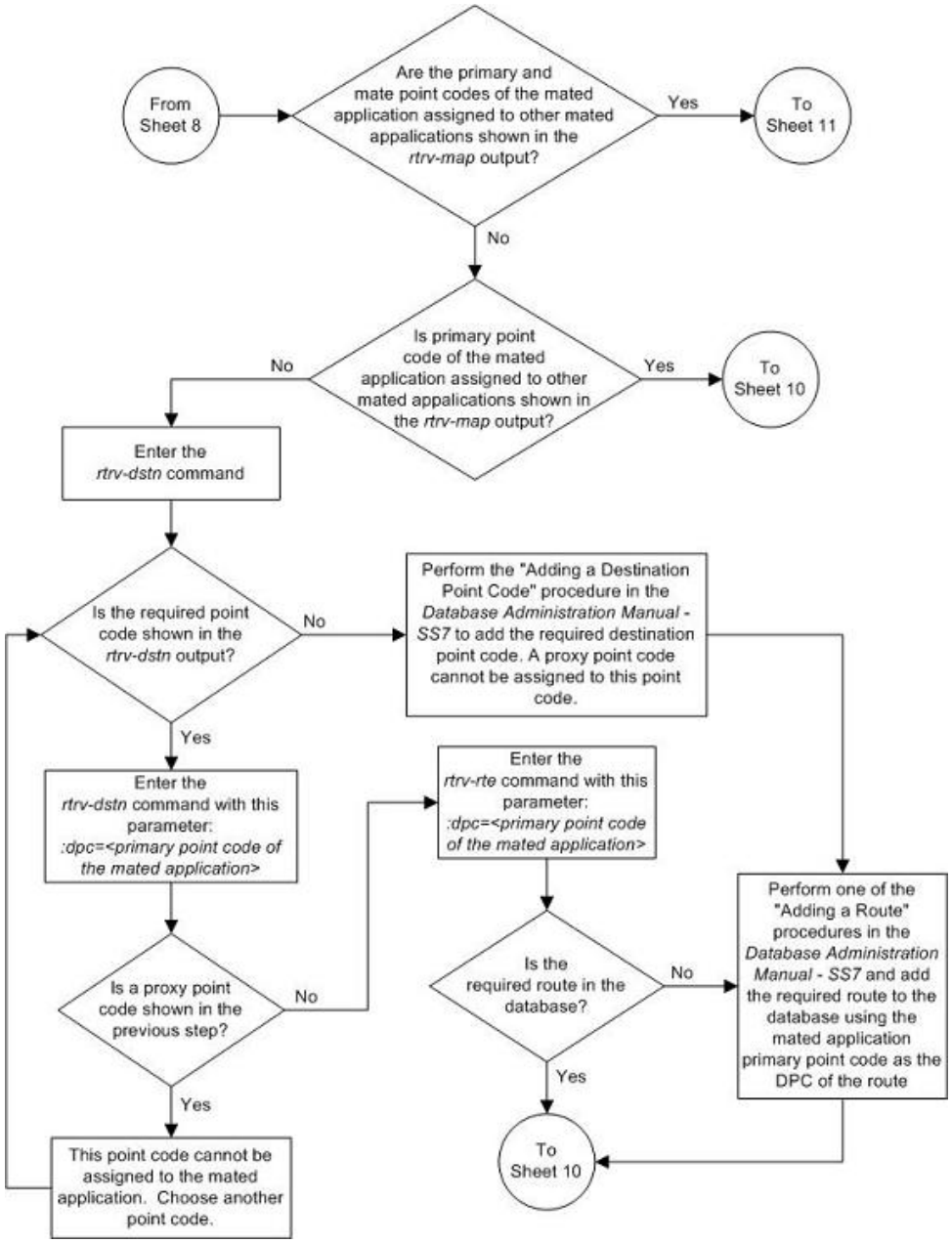

From Sheet 3
Is a new point code being added to a new MAP set?
Yes
To Sheet 6
No
Is an existing point code, shown in the rtrv-map output, being added to a new MAP set?
Yes
To Sheet 5
No
Enter the rtrv-map command with these parameters: :mapset=<MAP set ID that the new mated application is being added to>
How many entries does the MAP set contain?
Less than 32
Is a new point code being added to an existing MAP set?
No
To Sheet 5
Yes
To Sheet 6
32
The MAP set contains the maximum number entries. No more entries can be added to this MAP set.
Do you wish to remove any mated applications from the MAP set?
No
No
Perform the "Removing a Mated Application" procedure and remove the required number of mated applciations from the MAP set.
Do you wish add the mated application to another existing MAP set?
Yes
No
Do you wish add the mated application to a new MAP set?
Yes
To Sheet 5
No
This procedure cannot be performed.

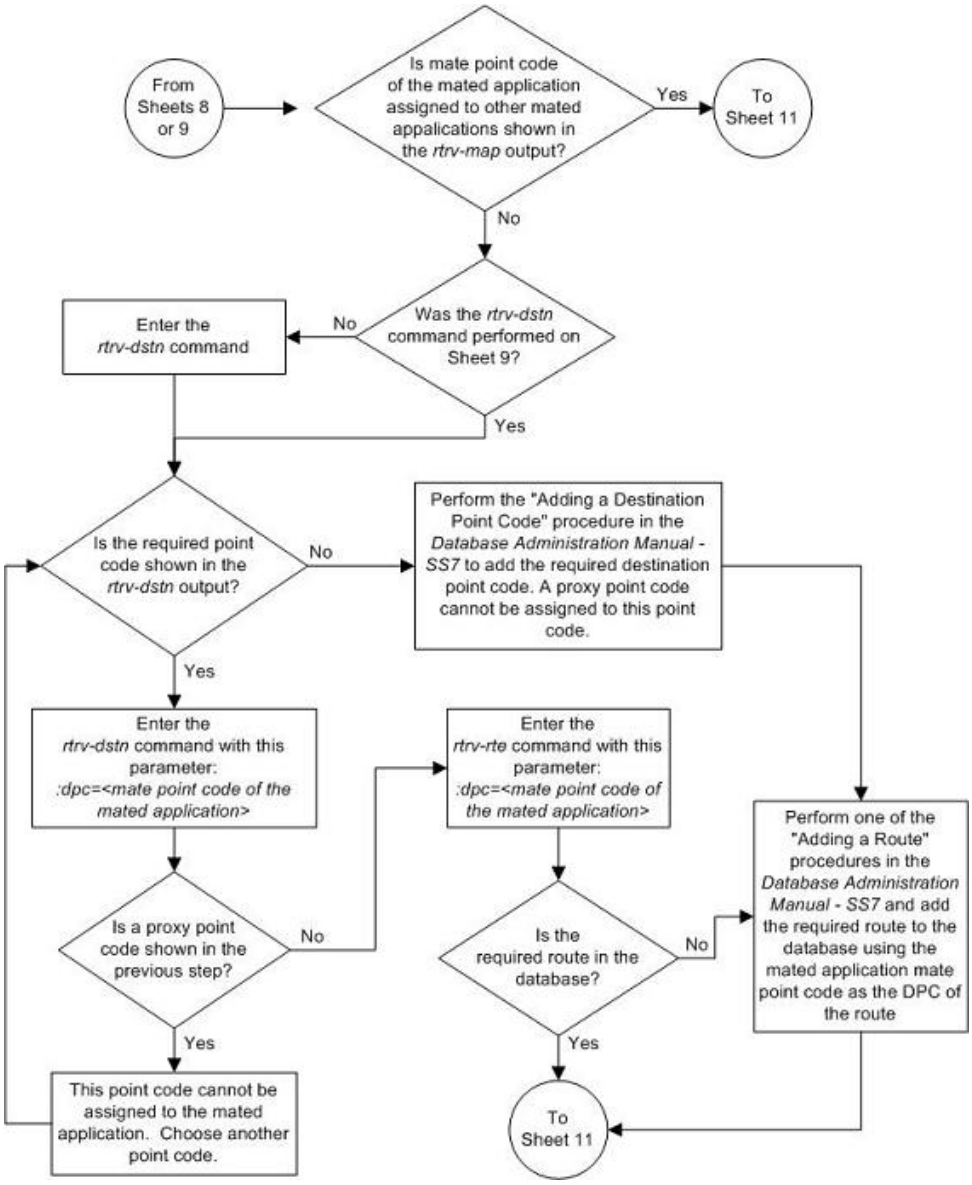

From Sheets 2, 3, or 4
Enter the rtrv-map command with this parameter: :pc/pca/pci/pcn/pcn24=<point code of the new mated application>
How many different SSN entries are assigned to the point code?
Less than 12
12
The point code contains the maximum number of SSNs. No more SSNs can be provisioned for this point code.
Do you wish to use another existing point code from the rtrv-map output? (See Note)
Yes
No
Do you wish to use a new point code?
Yes
To Sheet 6
No
This procedure cannot be performed.
Note: If the current number of provisioned mated applications is equal to the maximum number of mated applications that can be provisioned, shown in either the rtrv-map or rtrv-tbl-capacity outputs on Sheet 1, only point codes shown in the rtrv-map output can be used to provision mated applications.

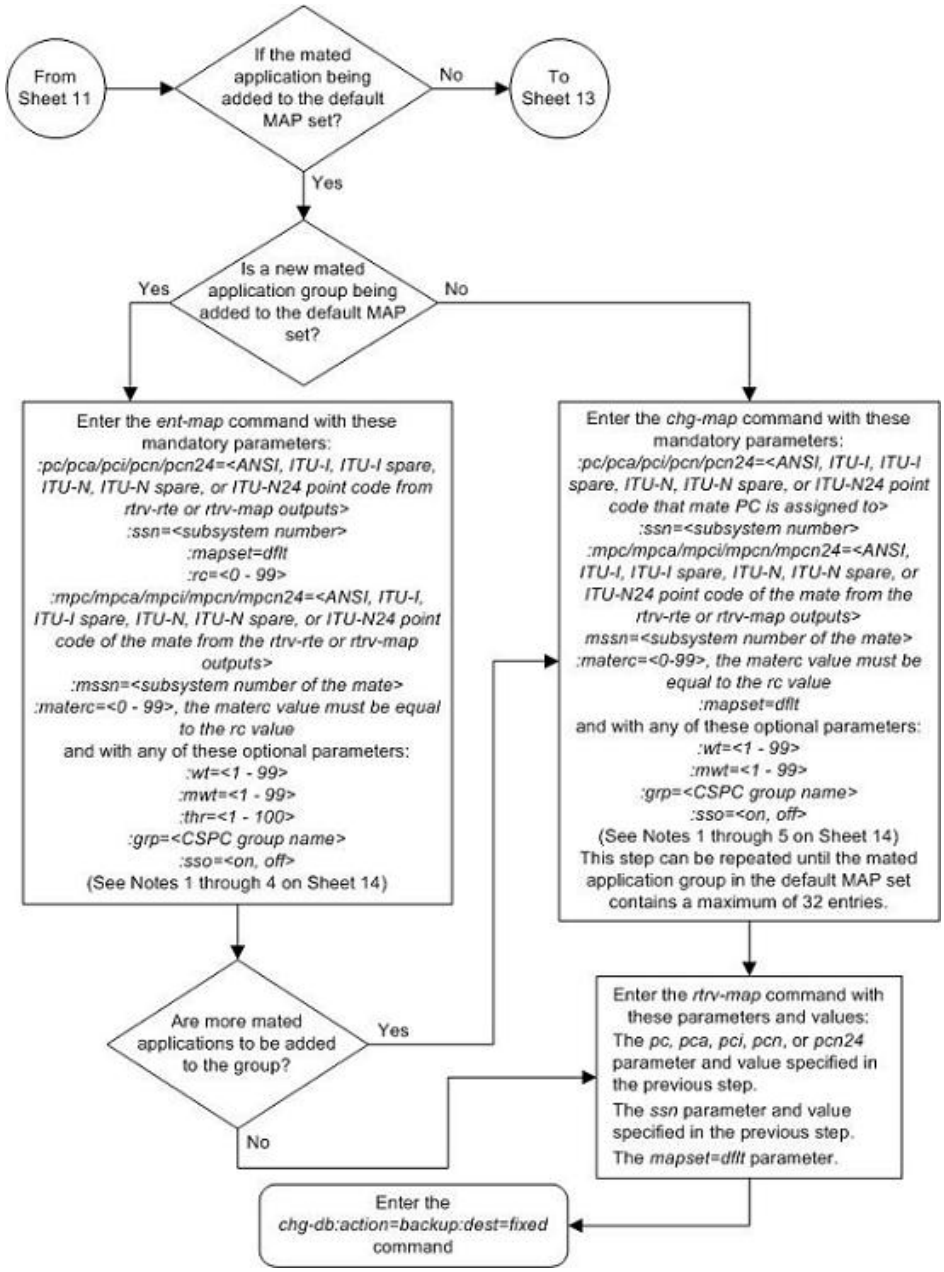

From Sheets 2, 3, 4, or 5
Note: If the mated point code is not assigned to a CSPC group, that point code will not be notified of the subsystem's status.
Is a CSPC group to be assigned to the mated application (See Note)?
No
Yes
Enter the rtrv-cspc command
Is the required CSPC group in the database?
No
Yes
Enter the rtrv-cspc:grp=<CSPC group> command
Does the CSPC group contain the point code and mated point code being added?
No
Go to the "Adding a Concerned Signaling Point Code" procedure and add the CSPC group and point code or mated point code to the database
Yes
To Sheet 7

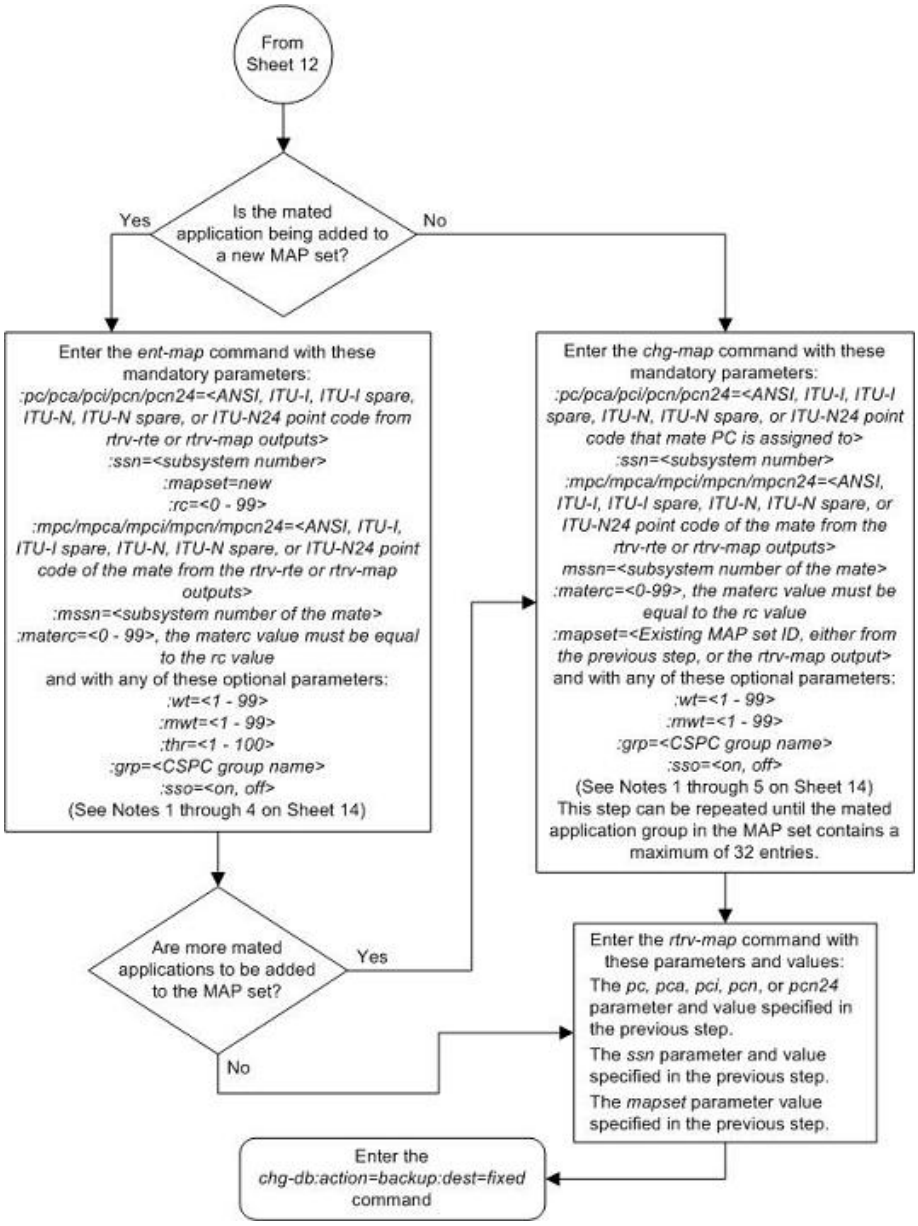

From Sheet 6
Will the network type of the CSPC group be the same as the network type of the primary point code of the mated application?
No
Yes
Does the CSPC group contain different types of point codes? (shown either in the rtrv-cspc:grp=<CSPC group> output from Sheet 6, or as a result of adding a new CSPC group)
Yes
No
Enter the rtrv-ctrl-feat:partnum=893012001 command
Is the ANSI-ITU-China SCCP Conversion feature enabled?
Yes
No
Perform the "Activating the ANSI-ITU-China SCCP Conversion Feature" procedure in Appendix A to enable the ANSI-ITU-China SCCP conversion feature
To Sheet 8


From Sheet 7
Is the MAPSET column shown in the rtrv-map output?
No
Yes
Do you wish to provision MAP sets?
No
Yes
If the WT, %WT, and THR columns are shown in the rtrv-map output on Sheet 1, then the Weighted GTT Load Sharing feature is enabled. Weight and in-service threshold values can be assigned when provisioning mated applications.
Go to "Activating the Flexible GTT Load Sharing Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," to enable and turn on the Flexible GTT Load Sharing feature
Do you wish to provision weight and in-service threshold values for the mated applications?
No
Yes
Are the WT, %WT, and THR columns are shown in the rtrv-map output on Sheet 1?
Yes
No
Go to "Activating the Weighted GTT Load Sharing Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," to enable and turn on the Weighted GTT Load Sharing feature
Is a new mated application to be created?
Yes
To Sheet 9
No
To Sheet 10


From Sheet 8
Are the primary and mate point codes of the mated application assigned to other mated appalications shown in the rtrv-map output?
Yes
To Sheet 11
No
Is primary point code of the mated application assigned to other mated appalications shown in the rtrv-map output?
No
Yes
To Sheet 10
Enter the rtrv-dstn command
Is the required point code shown in the rtrv-dstn output?
No
Perform the "Adding a Destination Point Code" procedure in the Database Administration Manual - SS7 to add the required destination point code. A proxy point code cannot be assigned to this point code.
Yes
Enter the rtrv-dstn command with this parameter: :dpc=<primary point code of the mated application>
Enter the rtrv-rte command with this parameter: :dpc=<primary point code of the mated application>
Is a proxy point code shown in the previous step?
No
Is the required route in the database?
No
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 and add the required route to the database using the mated application primary point code as the DPC of the route
Yes
Yes
This point code cannot be assigned to the mated application. Choose another point code.
To Sheet 10


From Sheets 8 or 9
Is mate point code of the mated application assigned to other mated appalications shown in the rtrv-map output?
Yes
To Sheet 11
No
Was the rtrv-dstn command performed on Sheet 9?
No
Enter the rtrv-dstn command
Yes
Is the required point code shown in the rtrv-dstn output?
No
Perform the "Adding a Destination Point Code" procedure in the Database Administration Manual - SS7 to add the required destination point code. A proxy point code cannot be assigned to this point code.
Yes
Enter the rtrv-dstn command with this parameter: :dpc=<mate point code of the mated application>
Enter the rtrv-rte command with this parameter: :dpc=<mate point code of the mated application>
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 and add the required route to the database using the mated application mate point code as the DPC of the route
Is a proxy point code shown in the previous step?
No
Is the required route in the database?
No
Yes
Yes
This point code cannot be assigned to the mated application. Choose another point code.
To Sheet 11


From Sheet 11
If the mated application being added to the default MAP set?
No
To Sheet 13
Yes
Is a new mated application group being added to the default MAP set?
Yes
No
Enter the ent-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from rtrv-rte or rtrv-map outputs>
:ssn=<subsystem number>
:mapset=dflt
:rc=<0 - 99>
:mpc/mpca/mpci/mpcn/mpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
:mssn=<subsystem number of the mate>
:materc=<0 - 99>, the materc value must be equal to the rc value
and with any of these optional parameters:
:wt=<1 - 99>
:mwt=<1 - 99>
:thr=<1 - 100>
:grp=<CSPC group name>
:sso=<on, off>
(See Notes 1 through 4 on Sheet 14)
Enter the chg-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code that mate PC is assigned to>
:ssn=<subsystem number>
:mpc/mpca/mpci/mpcn/mpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
mssn=<subsystem number of the mate>
:materc=<0-99>, the materc value must be equal to the rc value
:mapset=dflt
and with any of these optional parameters:
:wt=<1 - 99>
:mwt=<1 - 99>
:grp=<CSPC group name>
:sso=<on, off>
(See Notes 1 through 5 on Sheet 14)
This step can be repeated until the mated application group in the default MAP set contains a maximum of 32 entries.
Are more mated applications to be added to the group?
Yes
No
Enter the rtrv-map command with these parameters and values:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
The mapset=dflt parameter.
Enter the chg-db:action=backup:dest=fixed command


From Sheet 12
Is the mated application being added to a new MAP set?
Yes
No
Enter the ent-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from rtrv-rte or rtrv-map outputs>
:ssn=<subsystem number>
:mapset=new
:rc=<0 - 99>
:mpc/mpca/mpci/mpcn/mpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
:mssn=<subsystem number of the mate>
:materc=<0 - 99>, the materc value must be equal to the rc value
and with any of these optional parameters:
:wt=<1 - 99>
:mwt=<1 - 99>
:thr=<1 - 100>
:grp=<CSPC group name>
:sso=<on, off>
(See Notes 1 through 4 on Sheet 14)
Enter the chg-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code that mate PC is assigned to>
:ssn=<subsystem number>
:mpc/mpca/mpci/mpcn/mpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
mssn=<subsystem number of the mate>
:materc=<0-99>, the materc value must be equal to the rc value
:mapset=<Existing MAP set ID, either from the previous step, or the rtrv-map output>
and with any of these optional parameters:
:wt=<1 - 99>
:mwt=<1 - 99>
:grp=<CSPC group name>
:sso=<on, off>
(See Notes 1 through 5 on Sheet 14)
This step can be repeated until the mated application group in the MAP set contains a maximum of 32 entries.
Are more mated applications to be added to the MAP set?
Yes
No
Enter the rtrv-map command with these parameters and values:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
The mapset parameter value specified in the previous step.
Enter the chg-db:action=backup:dest=fixed command

Notes:

1. The format of the point codes in the CSPC group specified with the *grp* parameter must be the same as the primary point code specified for the mated application only if the ANSI-ITU-China SCCP Conversion feature is not enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (see the "Adding a Concerned Signaling Point Code" procedure in this chapter), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application.

2. The point code type of the mate point code must be the same as the point code type of the primary point code. For example, if the primary point code is a 24-bit ITU-N point code (*pcn24*), the mate point code must be a 24-bit ITU-N point code (*mpcn24*). This is also true for spare point codes. For example, if the primary point code is an ITU-I spare point code, the mate point code must be an ITU-I spare point code.

3. If the point code selected from either the *rtrv-rte* or *rtrv-map* outputs is a 14-bit ITU-N point code, then the *pcn*/*mpcn* parameters must be specified. If the point code selected from either the *rtrv-rte* or *rtrv-map* outputs is a 24-bit ITU-N point code, then the *pcn24*/*mpcn24* parameters must be specified.

4. Refer to the "Provisioning Weights and In-Service Thresholds for Mated Applications" section in this procedure for information about using the weight (*wt* and *mwt*) and in-service threshold (*thr*) parameters.

5. If the CSPC group name (*grp*) or *sso* values for a specific point code and SSN in a mated application are changed, these parameter values for this specific point code and SSN in all applicable mated applications will be changed to the new values.

Provisioning a Combined Dominant/Load Shared Mated Application

This procedure is used to provision a combined dominant/load shared mated application in the database using the `ent-map` and `chg-map` commands. A combined dominant/load shared mated application is a mated application that contains a minimum of two RC (relative cost) values that are equal and a minimum of one RC value that is different. The `ent-map` and `chg-map` commands use these parameters to provision a combined dominant/load shared mated application.

`:pc/pca/pci/pcn/pcn24` – The point code of the primary signaling point that is to receive the message.

`:mpc/mpca/mpci/mpcn/mpcn24` – The point code of the backup signaling point that is to receive the message.

Note: The point codes can be either an ANSI point code (pc/pca, mpc/mpca), ITU-I or ITU-I spare point code (pci, mpci), a 14-bit ITU-N or 14-bit ITU-N spare point code (pcn, mpcn), or a 24-bit ITU-N (`pcn24`, `mpcn24`) point code.

Note: Refer to Chapter 2, Configuring Destination Tables in the Database *Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

`:ssn` – Subsystem number – the subsystem address of the primary point code that is to receive the message.

`:mssn` – Mate subsystem number – the subsystem address of the backup point code that is to receive the message.

`:rc` – The relative cost value of the primary point code and subsystem, defined by the `pc/pca/pci/pcn/pcn24` and `ssn` parameters. The `rc` parameter has a range of values from 0 to 99, with the default value being 10.

`:materc` – The relative cost value of the backup point code and subsystem, defined by the `mpc/mpca/mpci/mpcn/mpcn24` and `mssn` parameters. The `materc` parameter has a range of values from 0 to 99, with the default value being 50.

`:grp` – The name of the concerned signaling point code group that contains the point codes that should be notified of the subsystem status. This parameter applies to both RPCs/SSNs.

`:mrc` – Message routing under congestion – defines the handling of Class 0 messages during congestion conditions.

`:srm` – Subsystem routing messages – defines whether subsystem routing messages (SBR, SNR) are transmitted between the mated applications.

`:sso` – Subsystem Status Option – defines whether the subsystem status option is on or off. This parameter allows the user the option to have the specified subsystem marked as prohibited even though an MTP-RESUME message has been received by the indicating that the specified point code is allowed. The `sso` parameter cannot be specified if the `pc/pca/pci/pcn/pcn24` value is the EAGLE 5 ISS's true point code, shown in the `rtrv-sid` output.

`:mapset` – The MAP set ID that the mated applications are assigned to. This parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled. If the Flexible GTT Load Sharing feature is enabled, the point code and subsystem specified for the global title translation must be assigned to the MAP set specified by this parameter. The status of the Flexible GTT Load Sharing feature is shown in the `rtrv-ctrl-feat` output. To enable the Flexible GTT Load Sharing feature, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure.

The `mapset` parameter has three values:

- `dflt` – to assign the MAP to the default MAP set. This value can be specified with both the `ent-map` and `chg-map` commands.
- `new` – to assign the mated application to a new MAP set. This value can be specified only with the `ent-map` command.
- the specific number of an existing MAP set if you are assigning the mated application to an existing MAP set. This value can be specified only with the `chg-map` command.

Refer to the Provisioning a MAP Set section for information on provisioning MAP sets.

`:wt` – The weight value assigned to the `pc/pca/pci/pcn/pcn24` parameter value. The value of this parameter is from 1 - 99.

`:mwt` – The weight value assigned to the `mpc/mpca/mpci/mpcn/mpcn24` parameter value. The value of this parameter is from 1 - 99.

`:thr` – The in-service threshold assigned to the MAP group or MAP set. The in-service threshold is the minimum percentage (from 1 - 100) of weight that must be available for an RC group (a group of entries in the MAP group or MAP set that have the same RC value assigned) to be considered available to carry traffic. If the percentage of the available weight is less than the in-service threshold, then the entire RC group is considered unavailable for traffic. If the percentage of the available weight is equal to or greater than the in-service threshold, then the RC group is considered available, and traffic can be sent to any available entity in the RC group. The value of the `thr` parameter is assigned to all entries that have the same RC (relative cost) value in the MAP group or MAP set that contain the point code specified in the `ent-map` or `chg-map` command.

Refer to the Provisioning Weights and In-Service Thresholds for Mated Applications section for information on provisioning MAP groups or MAP sets with weight and in-service threshold values.

A combined dominant/load shared mated application can contain up to 32 point codes and subsystems, a primary point code and subsystem, and up to 31 mated point codes and subsystems. When a new combined dominant/load shared mated application is added to the database, the

first two entries, the primary point code and subsystem and a mate point code and subsystem are added using the `ent-map` command. All other mated point code and subsystem entries that are being assigned to the primary point code and subsystem are added to the combined dominant/load shared mated application using the `chg-map` command.

A combined dominant/load shared mated application is a combination of the dominant and load sharing mated applications. This mated application must contain a minimum of two RC values that are equal and a minimum of one RC value that is different. The traffic is shared between the point codes with the lowest relative cost values. If these point codes and subsystems become unavailable, the traffic is routed to the other point codes and subsystems in the mated application and shared between these point codes and subsystems.

The examples in this procedure are used to add the mated applications shown in *Table 21: Combined Dominant/Load Shared Mated Application Configuration Table* on page 225.

Table 21: Combined Dominant/Load Shared Mated Application Configuration Table

Point Code	SSN	RC	Mated Point Code	Mated SSN	MATE RC	CSPC Group	MRC	SRM	SSO
008-008-008	254	10	200-147-100	254	10	grp10	yes	yes	on
			179-183-050	250	10	grp15	yes	yes	off
			031-049-100	250	20	grp15	yes	yes	on
			056-113-200	251	20	grp05	yes	yes	off

If the Flexible GTT Load Sharing feature is not enabled, the mated applications, either primary or the mate, cannot be in the database. If the Flexible GTT Load Sharing feature is enabled, the mated applications, either primary or the mate, can be in other MAP sets. Refer to the Provisioning a MAP Set section for information on provisioning MAP sets.

The point codes specified in the `ent-map` or `chg-map` commands (`pc/pca`, `pci`, `pcn`, or `pcn24`, and `mpc/mpca`, `mpci`, `mpcn`, or `mpcn24`) must be either a full point code in the routing point code table or the EAGLE 5 ISS's true point code. Cluster point codes or network routing point codes cannot be specified with this command. The `rtrv-rte` command can be used to verify the point codes in the routing table. The point codes in the routing table are shown in the `DPCA`, `DPCI`, `DPCN`, or `DPCN24` fields of the `rtrv-rte` command output. The EAGLE 5 ISS's true point code is shown in the `PCA`, `PCI`, `PCN`, or `PCN24` fields of the `rtrv-sid` command output.

A combined dominant/load shared mated application can be provisioned with a point code that is assigned to other mated applications as long as the SSN is not assigned to other mated applications. A point code can be assigned to maximum of 12 different SSNs.

The format of the point codes specified in the `ent-map` command must be the same. For example, if the primary point code is a 24-bit ITU-N point code (`pcn24`), the mate point code must be a 24-bit ITU-N point code (`mpcn24`).

The format of the point codes in the CSPC group specified with the `grp` parameter must be the same as the primary point code specified with the `ent-map` command only if the ANSI-ITU-China SCCP Conversion feature is not enabled. If the ANSI-ITU-China SCCP

Conversion feature is enabled, the CSPC group may contain a mixture of point code types (refer to the *Adding a Concerned Signaling Point Code* on page 100 procedure), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application. The status of the ANSI-ITU-China SCCP Conversion feature can be verified with the `rtrv-ctrl-feat` command.

The values for the primary point code and subsystem combination (`pc/ssn`) cannot be the same as the mated point code and subsystem combination (`mpc/mssn`). However, the primary and mated point codes can be the same as long as the subsystem numbers are different.

If the point code values are ITU values (`pci , pcn`, or `pcn24`), the `srm=yes` parameter cannot be specified.

If a mate point code (`mpc/mpca/mpci/mpcn/mpcn24`) is specified, the `mssn` parameter must be specified. Also, the point code type of the mate point code must be the same as the point code type of the primary point code. For example, if the primary point code is a 24-bit ITU-N point code (`pcn24`), the mate point code must be a 24-bit ITU-N point code (`mpcn24`). If spare point codes are being used, both the primary and mate point codes must be spare point codes. For example, if the primary point code is an ITU-I spare point code, the mate point code must be an ITU-I spare point code.

If the `mssn` parameter is specified, the mate point code (`mpc/mpca/mpci/mpcn/mpcn24`) must be specified.

If the `grp`, `srm`, `mrc`, and `sso` parameter values are specified, and the specified point code and SSN is assigned to multiple mated applications, the `grp`, `srm`, `mrc`, and `sso` values for all mated applications containing the specified point code and SSN will be changed to the values specified in this procedure.

The values of the `ssn` and `mssn` parameters must be from 2 to 255.

The EAGLE 5 ISS can contain 1024, 2000, or 3000 mated applications. The EAGLE 5 ISS default is 1024 mated applications. This quantity can be increased to 2000 by enabling the feature access key for part number 893-0077-01, or to 3000 by enabling the feature access key for part number 893-0077-10. For more information on enabling these feature access keys, refer to the *Enabling the XMAP Table Expansion Feature* on page 771 procedure.

Provisioning a MAP Set

The Flexible GTT Load Sharing feature provides the ability to define multiple load sharing sets in the MAP table where the same point code and subsystem can be assigned to different load sharing sets.

The MAP table contains specific load sharing sets, designated by numbers, and a default MAP set.

The Flexible Final GTT Load Sharing provides flexible load sharing for global title translations defined in the GTT table and not for the MPS based features. The MPS based features do not support the MAP set ID parameter. The MPS based features perform lookups for load sharing in the default MAP set and the GTT table. The entries in the GTT table can be linked to a MAP set ID, allowing lookups in a specific MAP set other than the default MAP set.

Any MAP entries that were provisioned in the database before the Flexible GTT Load Sharing feature is enabled are placed in the default MAP set when the Flexible GTT Load Sharing feature is enabled.

To provision entries in the default MAP set, the `mapset=dflt` parameter must be specified with the `ent-map` or `chg-map` commands.

To provision entries in an existing MAP set other than the default MAP set, the `mapset=<MAP set ID>` parameter must be specified with the `chg-map` command. Provisioning entries in an existing MAP set can be performed only with the `chg-map` command.

To provision entries in a new MAP set, the `mapset=new` parameter must be specified with the `ent-map` command. The `mapset=new` parameter can be specified only with the `ent-map` command. When the `ent-map` command is executed with the `mapset=new` parameter, the new MAP set ID is automatically generated and displayed in the output of the `ent-map` command as follows.

```
New MAPSET Created : MAPSETID = <new MAP set ID>
```

A MAP set, other than the default MAP set, is a MAP group provisioned with the MAP set ID and can contain a maximum of 32 point codes.

The default MAP set can contain multiple MAP groups. The point code can appear in only one MAP group in the default MAP set.

The point code provisioned in a MAP set can be provisioned in multiple MAP sets. All the point codes in a MAP set must be different.

Provisioning Weights and In-Service Thresholds for Mated Applications

Weighted GTT Load Sharing allows unequal traffic loads to be provisioned in MAP load sharing groups or MAP load sharing sets. This feature also allows provisioning control over load sharing groups or sets so that if insufficient capacity within the load sharing group or set is available, the load sharing group or set is not used.

To provision the weight values and in-service threshold values for MAP groups or MAP sets in this procedure, the `wt`, `mwt`, and `thr` parameters are used.

The `wt`, `mwt`, and `thr` parameters can be used only:

- If the MAP group or MAP set is either a load shared or combined dominant/load shared MAP group or MAP set.
- If the Weighted GTTLoad Sharing feature is enabled and turned on.

The status of the Weighted GTT Load Sharing feature can be verified by entering the `rtrv-ctrl-feat` command. If the Weighted GTT Load Sharing feature is not enabled or not turned on, perform the *Activating the Weighted GTT Load Sharing Feature* on page 813 procedure to enable and turn on the Weighted GTT Load Sharing feature.

If either the `wt` or `mwt` parameters are specified with the `ent-map` command, both parameters must be specified with the `ent-map` command.

To assign an in-service threshold value to the entries of a MAP group or MAP set that contains the point code value specified in the `ent-map` command, use the `thr` parameter with the `wt` and `mwt` parameters. When the `thr` parameter is specified with the `ent-map` command, the in-service threshold value is assigned to both entries specified in the `ent-map` command. The `thr` parameter cannot be specified with the `chg-map` command when adding additional entries to the MAP group or MAP set. When additional entries are added to the MAP group or MAP set with the `chg-map` command, the `thr` value that was specified in the `ent-map` command is assigned to the additional entries. For information on using the `thr` parameter with the `chg-map` command, refer to the *Changing a Mated Application* on page 278 procedure.

The thr parameter does not have to be specified with the ent-map command. If the thr parameter is not specified with the ent-map command, the THR parameter value for the MAP group or MAP set is set to 1.

Specifying the wt and mwt parameters assigns a weight value to the point codes specified in the ent-map command. The wt parameter value is assigned to the mpc/mpca/mpci/mpcn/mpcn24 parameter value and the mwt parameter value is assigned to the mpc/mpca/mpci/mpcn/mpcn24 parameter value.

When additional entries are added to the MAP group or MAP set with the chg-map command, and the MAP group or MAP set entries have weight and in-service threshold values assigned, a weight value must be assigned to the mpc/mpca/mpci/mpcn/mpcn24 parameter value using the mwt parameter.

The wt parameter does not have to be specified with the chg-map command. If the wt parameter is specified with the chg-map command, the weight value for the pc/pca/pci/pcn/pcn24 parameter is not changed.

If the wt parameter is specified with the chg-map command and the wt value is the same as the value currently assigned to the pc/pca/pci/pcn/pcn24 parameter, the weight value for the pc/pca/pci/pcn/pcn24 parameter is not changed.

If the wt parameter is specified with the chg-map command and the wt value is different from the value currently assigned to the pc/pca/pci/pcn/pcn24 parameter, the weight value for the pc/pca/pci/pcn/pcn24 parameter is changed to the new wt value.

The weight values assigned to the entires in the MAP group or MAP set are shown in the WT column in the rtrv-map output.

The in-service threshold values assigned to the entires in the MAP group or MAP set are shown in the THR column in the rtrv-map output.

The %WT column in the rtrv-map output shows the percentage of the traffic the particular entry in the MAP group or MAP set will handle.

The WT, %WT, and THR columns are shown in the rtrv-map output only if the Weighted GTT Load Sharing feature is enabled and turned on.

For more information on the Weighted GTT Load Sharing feature, refer to the *Weighted GTT Load Sharing* on page 42 section.

Canceling the RTRV-MAP Command

Because the rtrv-map command used in this procedure can output information for a long period of time, the rtrv-map command can be canceled and the output to the terminal stopped. There are three ways that the rtrv-map command can be canceled.

- Press the F9 function key on the keyboard at the terminal where the rtrv-map command was entered.
- Enter the canc-cmd without the trm parameter at the terminal where the rtrv-map command was entered.
- Enter the canc-cmd:trm=<xx>, where <xx> is the terminal where the rtrv-map command was entered, from another terminal other that the terminal where the rtrv-map 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, refer to the *Commands Manual*.

1. Display the mated applications in the database using the `rtrv-map` command.

   If the Flexible GTT Load Sharing feature is not enabled, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   2 % FULL    (25 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF
255-001-000                250 10  SOL --- --- grp01    ON
255-001-000                251 10  SHR --- --- grp01    OFF
             253-001-002   254 10  SHR --- --- grp01    OFF
255-001-000                252 10  SOL --- --- grp01    ON
255-001-000                253 10  SHR --- --- grp01    OFF
             253-001-004   254 10  SHR --- --- grp01    OFF
255-001-001                255 10  DOM YES YES grp01    ON
             253-001-005   254 20  DOM YES YES grp01    ON
255-001-001                250 10  DOM YES YES grp01    OFF
             253-001-001   254 20  DOM YES YES grp01    OFF
255-001-002                251 10  SHR --- --- grp01    OFF
             255-001-002   254 10  SHR --- --- grp01    OFF
255-001-002                252 10  DOM YES YES grp01    ON
             255-001-003   254 20  DOM YES YES grp01    ON
255-001-002                253 10  SHR --- --- grp01    ON
             255-001-004   254 10  SHR --- --- grp01    ON

PCI          Mate PCI     SSN RC MULT SRM MRC GRP NAME SSO
2-001-2                   255 10  DOM YES YES grp03    OFF
             2-001-1      254 20  DOM YES YES grp03    OFF

PCN          Mate PCN     SSN RC MULT SRM MRC GRP NAME SSO
00347                     253 10  SHR --- --- grp05    OFF
             01387        254 10  SHR --- --- grp05    OFF
```

   Note: If the Weighted GTTLoad Sharing feature is enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output as shown in the following example.

```
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
002-002-007                50 10  COM YES YES grp01    OFF 10  33  20
             002-002-008   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-009   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-010   30 20  COM YES YES grp01    OFF 10  50  20
             002-002-011   30 20  COM YES YES grp01    OFF 10  50  20

255-001-000                250 10  SOL --- --- grp01    ON  -- ---  --

255-001-000                251 10  SHR --- --- grp01    OFF  10  50  20
             253-001-002   254 10  SHR --- --- grp01    OFF  10  50  20

255-001-000                252 10  SOL --- --- grp01    ON  -- ---  --

255-001-000                253 10  SHR --- --- grp01    OFF  10  50  20
```

```
             253-001-004  254 10  SHR --- --- grp01    OFF  10  50  20

255-001-001               255 10  DOM YES YES grp01    ON  -- ---  --
             253-001-005  254 20  DOM YES YES grp01    ON  -- ---  --
```

If the Flexible GTT Load Sharing feature is enabled, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   1 % FULL    (20 of 36000)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=DFLT
255-001-000               250 10  SOL --- --- grp01    ON

MAPSET ID=1
255-001-000               251 10  SHR --- --- grp01    OFF
             253-001-002  254 10  SHR --- --- grp01    OFF

MAPSET ID=2
255-001-000               252 10  SOL --- --- grp01    ON

MAPSET ID=DFLT
255-001-000               253 10  SHR --- --- grp01    OFF
             253-001-004  254 10  SHR --- --- grp01    OFF

MAPSET ID=3
255-001-001               255 10  DOM YES YES grp01    ON
             253-001-005  254 20  DOM YES YES grp01    ON

MAPSET ID=4
255-001-001               250 10  DOM YES YES grp01    OFF
             253-001-001  254 20  DOM YES YES grp01    OFF

MAPSET ID=DFLT
255-001-002               251 10  SHR --- --- grp01    OFF
             255-001-002  254 10  SHR --- --- grp01    OFF

MAPSET ID=5
255-001-002               252 10  DOM YES YES grp01    ON
             255-001-003  254 20  DOM YES YES grp01    ON

MAPSET ID=6
255-001-002               253 10  SHR --- --- grp01    ON
             255-001-004  254 10  SHR --- --- grp01    ON

MAPSET ID=7
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF

PCI          Mate PCI     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=8
2-001-2                   255 10  DOM YES YES grp03    OFF
             2-001-1      254 20  DOM YES YES grp03    OFF

PCN          Mate PCN     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=9
```

```
00347                     253 10  SHR --- --- grp05    OFF
             01387        254 10  SHR --- --- grp05    OFF
```

Note: If the Flexible GTTLoad Sharing and Weighted GTTLoad Sharing features are enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output as shown in the following example.

```
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
MAPSET ID=7
002-002-007                50 10  COM YES YES grp01    OFF 10  33  20
             002-002-008   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-009   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-010   30 20  COM YES YES grp01    OFF 10  50  20
             002-002-011   30 20  COM YES YES grp01    OFF 10  50  20

MAPSET ID=DFLT
255-001-000               250 10  SOL --- --- grp01    ON  -- ---  --

MAPSET ID=1
255-001-000               251 10  SHR --- --- grp01    OFF  10  50  20
             253-001-002  254 10  SHR --- --- grp01    OFF  10  50  20

MAPSET ID=2
255-001-000               252 10  SOL --- --- grp01    ON  -- ---  --

MAPSET ID=DFLT
255-001-000               253 10  SHR --- --- grp01    OFF  10  50  20
             253-001-004  254 10  SHR --- --- grp01    OFF  10  50  20

MAPSET ID=3
255-001-001               255 10  DOM YES YES grp01    ON  -- ---  --
             253-001-005  254 20  DOM YES YES grp01    ON  -- ---  --
```

Note: If the maximum number of mated applications shown in the `rtrv-map` output in step 1 is 1024, 2000, or 3000, skip step 2 and go to step 3.

2. If the maximum number of mated applications shown in the `rtrv-map` output in step 1 is 36000, the Flexible GTT Load Sharing feature is enabled.

   Although the `rtrv-map` output shows there can be 36000 entries, a maximum of 1024, 2000, or 3000 different point codes (depending on whether the XMAP Table Expansion feature is enabled for 2000 or 3000 mated applications) can be provisioned for mated applications. To verify the number of different point codes that can be provisioned for mated applications, enter the `rtrv-tbl-capacity` command. The following is an example of the possible output.

```
rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0

MAP table is (3000 of 3000) 100% full
```

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

   - If the `rtrv-map` output in step 1 or the `rtrv-tbl-capacity` output in step 2 shows that the maximum number of mated applications is 3000, and the current number of provisioned mated applications is 3000, no new point codes can be used to provision mated applications. Skip step 3 and go to step 4.
   - If the If the `rtrv-map` output in step 1 or the `rtrv-tbl-capacity` output in step 2 shows that the maximum number of mated applications is either 1024 or 2000, and the mated

application being added increases the number beyond 1024 or 2000, do not perform step 3, but perform the *Enabling the XMAP Table Expansion Feature* on page 771 procedure and enable XMAP Table Expansion feature for 3000 mated applications. Then go to step 4. If the maximum number of mated applications is not increased, no new point codes can be used to provision mated applications.

- If the `rtrv-map` output in step 1 or the `rtrv-tbl-capacity` output in step 2 shows that the maximum number of mated applications is either 1024, 2000, or 3000 and the mated application being added will not increase the number beyond the quantity shown in the `rtrv-map` output in step 1 or the `rtrv-tbl-capacity` output in step 2, skip step 3 and go to step 4.

3. Display the status of the XMAP Table Expansion feature by entering the `rtrv-ctrl-feat` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
XGTT Table Expansion      893006101  off     ----
XMAP Table Expansion      893007701  off     ----
Large System # Links      893005910  on      2000
HC-MIM SLK Capacity       893012707  on      64

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 XMAP Table Expansion controlled feature is not enabled or on, refer to the *Enabling the XMAP Table Expansion Feature* on page 771 procedure and enable XMAP Table Expansion controlled feature for either 2000 or 3000 mated applications as required. Then go to step 4.

   - If a new point code is being added to a new MAP group or MAP set, skip step 4 and step 5, and go to step 6.
   - If an existing point code in the `rtrv-map` output on Sheet 1 is being added to a new MAP group or MAP set, skip step 4 and go to step 5.

4. A MAP group, without the Flexible GTT Load Sharing feature enabled, a MAP set, other than the default MAP set, and a MAP group contained in the default MAP set can contain a maximum of 32 entries.

   Verify the number of entries that the MAP group or MAP set contains by entering the `rtrv-map` command with the primary point code and SSN assigned to the MAP group or MAP set. If the Flexible GTT Load Sharing feature is enabled, the `mapset` parameter and MAP set ID of the MAP set that the new mated application will be added to.

   If the specified MAP set is not the default MAP set, only the `mapset` parameter needs to be specified with the `rtrv-map` command. The point code and SSN does not need to be specified.

For this example, enter one of these commands.

```
rtrv-map:pca=002-002-007:ssn=50
```

The following is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   2 % FULL    (25 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF
```

```
rtrv-map:pca=002-002-007:ssn=50:mapset=dflt
```

The following is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   2 % FULL    (25 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=DFLT
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF
```

```
rtrv-map:mapset=7
```

The following is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   2 % FULL    (25 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=7
002-002-007                50 10  COM YES YES grp01    OFF
             002-002-008   30 10  COM YES YES grp01    OFF
             002-002-009   30 10  COM YES YES grp01    OFF
             002-002-010   30 20  COM YES YES grp01    OFF
             002-002-011   30 20  COM YES YES grp01    OFF
```

If the MAP group or MAP set contains 32 entries, no more entries can be added to the specified MAP group or MAP set. Entries can be removed from the specified MAP group or MAP set or the new mated application can be added another MAP group or MAP set, or can be added to a new MAP group or MAP set.

Perform the *Removing a Mated Application* on page 256 procedure to remove any entries from the MAP group or MAP set. If a new point code is being added to this MAP group or MAP set, go to step 6. If an existing point code is being added to this MAP group or MAP set, go to step 5.

If the point code will be added to another MAP group or MAP set, repeat this step for the other MAP group or MAP set.

If the point code will be added to a new MAP group or MAP set, go to step 5.

If none of these actions will be performed, then this procedure cannot be performed.

If the MAP group or MAP set contains less than 32 entries, and a new point code is being added to this MAP group or MAP set, go to step 6. If an existing point code is being added to this MAP group or MAP set, go to step 5.

Note: If a new point code is being provisioned for the mated application, skip this step and go to step 6.

5. A mated application can be provisioned with a point code that is assigned to other mated applications as long as the SSN is not assigned to other mated applications.

   A point code can be assigned to maximum of 12 different SSNs.

   Verify the number of SSNs assigned to the point code that will be specified for the mated application in this procedure by entering the `rtrv-map` command with the point code of the new mated application. For this example, enter this command.

   ```
   rtrv-map:pca=255-001-000
   ```

   This is an example of the possible output.

   ```
   PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
   255-001-000               250 10  SOL --- --- grp01    ON
   255-001-000               251 10  SHR --- --- grp01    OFF
                253-001-002  254 10  SHR --- --- grp01    OFF
   255-001-000               252 10  SOL --- --- grp01    ON
   255-001-000               253 10  SHR --- --- grp01    OFF
                253-001-004  254 10  SHR --- --- grp01    OFF
   ```

   If the Flexible GTT Load Sharing feature is enabled, the MAPSETIDs for the mated applications are shown in the `rtrv-map` output.

   If the Weighted GTT Load Sharing feature is enabled and turned, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output.

   If the point code is assigned to less than 12 different SSNs, then the existing point code in the `rtrv-map` output can be used to provision the mated application. Go to step 6.

   If the point code is assigned to 12 different SSNs, another existing point code in the `rtrv-map` output or a new point code must be used to provision the mated application. If an existing point code in the `rtrv-map` output will be used to provision the mated application, repeat this step for that point code. Then go to step 6.

   If a new point code will be used to provision the mated application, go to step 6.

   If the point code is assigned to 12 different SSNs, and neither an existing point code in the `rtrv-map` output nor a new point code will be used to provision the mated application, then this procedure cannot be performed.

   Note: If a concerned signaling point code (CSPC) group is not being assigned to the mated application, skip steps 6 and 7, and go to step 8.

   Note: If the mated point code is not assigned to a CSPC group, that point code will not be notified of the subsystem's status.

6. Display the point codes in the CSPC group that you wish to assign to the mated application by first entering the `rtrv-cspc` command with no parameters.

This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:48:31  GMT  EAGLE5 36.0.0
CSPC GRP
NETWORK
PERCENT FULL
grp01      ANSI                   6%
grp02      ITU-I                  9%
grp03      ITU-N                 12%
grp04      ANSI                  15%
grp05      ANSI                  15%
grp10      ANSI                  15%
grp15      ANSI                  15%
```

If the desired CSPC group is shown in the `rtrv-cspc` output, re-enter the `rtrv-cspc` command with the CSPC group name. For this example, enter these commands.

`rtrv-cspc:grp=grp05`

This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:48:31  GMT  EAGLE5 36.0.0
CSPC GRP      PCA
grp05         005-005-005
              007-007-007
              008-008-008
              009-009-009
```

`rtrv-cspc:grp=grp10`

This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:59:31  GMT  EAGLE5 36.0.0
CSPC GRP      PCA
grp10         003-003-003
              004-004-004
              008-008-008
              009-009-009
```

`rtrv-cspc:grp=grp15`

This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:48:31  GMT  EAGLE5 36.0.0
CSPC GRP      PCA
grp15         005-005-005
              006-006-006
              008-008-008
              009-009-009
```

Note: If the ANSI-ITU-China SCCP Conversion feature is enabled, then point codes of multiple network types can be displayed in the `rtrv-cspc` output, if point codes of multiple network types are assigned to the CSPC group.

If the CSPC group is not in the database, or if the required point code is not assigned to the CSPC group, perform the *Adding a Concerned Signaling Point Code* on page 100 procedure and add the required CSPC group or point code to the database.

Note: If the output of the `rtrv-cspc` command performed in step 6 shows CSPC groups containing a mixture of point code types, or if the new CSPC group that was added in step 6 contains a mixture of point code types, skip this step and go to step 8.

7. The format of the point codes in the CSPC group specified with the `grp` parameter must be the same as the primary point code specified with the `ent-map` command only if the ANSI-ITU-China SCCP Conversion feature is not enabled.

   If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (refer to the *Adding a Concerned Signaling Point Code* on page 100 procedure), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application.

   Verify the status of the ANSI-ITU-China SCCP Conversion feature by entering this command:

   `rtrv-ctrl-feat:partnum=893012001`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
SCCP Conversion           893012001  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 ANSI-ITU-China SCCP Conversion feature is not enabled, perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure to enable the ANSI-ITU-China SCCP Conversion feature.

8. If the `MAPSET` column is shown in the `rtrv-map` output in step 1, the Flexible GTT Load Sharing feature is enabled. Go to step 9.

   If the `MAPSET` column is not shown in step 1 and you do not wish to provision MAP sets in this procedure, skip this step and go to step 9.

   If the `MAPSET` column is not shown in step 1 and you wish to provision MAP sets in this procedure, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 and enable the Flexible GTT Load Sharing feature. After the Flexible GTT Load Sharing feature is enabled, go to step 9.

   Note: If you do not wish to assign weight and in-service threshold values to the MAP entries in the MAP group or MAP set, skip step 9 and go to step 10.

9. If you wish to assign weight and in-service threshold values to the entries in the MAP group or MAP set, and the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output in step 1, then the Weighted GTT Load Sharing feature is enabled and turned on. Go to step 10.

   If the `WT`, `%WT`, and `THR` columns are not shown in the `rtrv-map` output in step 1, perform the *Activating the Weighted GTT Load Sharing Feature* on page 813 procedure to enable and turn on the Weighted GTT Load Sharing feature. After the Weighted GTT Load Sharing feature is enabled and turned on, go to step 10.

   - If the both point codes that will be specified for the mated application are point codes assigned to other mated applications, skip steps 10 through 12, and go to step 13.

- If only one of the point codes that will be specified for the mated application is assigned to other mated applications, perform step 10 for the new point code that is not assigned to other mated applications.

10. Display the destination point codes in the database by entering the `rtrv-dstn` command. This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
   001-207-000   ----------- no  ---   -------      -----------    SS7
   001-001-001   ----------- no  ---   -------      -----------    SS7
   001-001-002   ----------- no  ---   -------      -----------    SS7
   001-005-000   ----------- no  ---   -------      -----------    SS7
   001-007-000   ----------- no  ---   -------      -----------    SS7
   008-012-003   ----------- no  ---   -------      -----------    SS7
   003-002-004   ----------- no  ---   -------      -----------    SS7
   009-002-003   ----------- no  ---   -------      -----------    SS7
   010-020-005   ----------- no  ---   -------      -----------    SS7

   DPCI          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
   1-207-0       ----------- no  ---   -------      -----------    SS7
   0-015-0       ----------- no  ---   -------      -----------    SS7
   0-017-0       ----------- no  ---   -------      -----------    SS7
   1-011-1       ----------- no  ---   -------      -----------    SS7
   1-011-2       ----------- no  ---   -------      -----------    SS7

   DPCN          CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

   DPCN24        CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the required point code is not shown in the `rtrv-dstn` output, perform the "Adding a Destination Point Code" procedure in the *Database Administration Manual - SS7* to add the required point code. A proxy point code cannot be assigned to the point code.

After the new point code has been added, skip steps11 and 12, and perform one of the Adding a Route procedures in the Database *Administration Manual - SS7* and add the required route to the database. After the route has been added, continue the procedure with step 13.

11. Display the point code that will be assigned to the mated application by using the `rtrv-dstn` command and specifying the point code. For this example, enter this command.

```
rtrv-dstn:dpca=010-020-005
```

This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
   010-020-005   ----------- no  ---   -------      -----------    SS7

   PPC           NCAI           PRX
   009-002-003   ----           no

Destination table is (14 of 2000) 1% full
```

```
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the point code is not shown in the `rtrv-dstn` command output, the following output is displayed.

```
DPCA          CLLI        BEI ELEI  ALIASI       ALIASN/N24    DOMAIN

No destinations meeting the requested criteria were found

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

A proxy point code (a point code value is shown in the PPC column) cannot be assigned to the point code. If a proxy point code is shown in this step, choose another point code from the `rtrv-dstn` output in the previous step and repeat this step.

After the new point code has been added, skip step12 and perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database. After the route has been added, continue the procedure with step 13.

12. Enter the `rtrv-rte` command with the `dpc` parameter specifying the point codes to be used with the `ent-map` or `chg-map` commands to verify whether or not the point code is the DPC of a route.

    For this example, enter these commands.

    `rtrv-rte:dpca=008-008-008`

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   008-008-008 ---------- --------------   ls20       10    008-008-008
                                               RTX:No  CLLI=ls20clli
```

    `rtrv-rte:dpca=031-049-100`

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   031-049-100 ---------- --------------   ls10       10    031-049-100
                                               RTX:No  CLLI=ls10clli
```

    `rtrv-rte:dpca=056-113-200`

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   056-113-200 ---------- --------------   ls12       10    056-113-200
                                               RTX:No  CLLI=ls12clli
```

    `rtrv-rte:dpca=179-183-050`

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
```

```
   179-183-050 ---------- --------------   ls18       10    179-183-050
                                              RTX:No  CLLI=ls18clli
```

`rtrv-rte:dpca=200-147-100`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   200-147-100 ---------- --------------   ls19       10    200-147-100
                                              RTX:No  CLLI=ls19clli
```

If the point code is not shown in the `rtrv-rte` output, perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database.

Note: If an entry is being added to an existing mated application, skip step 13 and go to step 14.

13. Add the mated application to the database using the `ent-map` command.

If the Flexible GTT Load Sharing feature is not enabled for this example, enter these commands.

```
ent-map:pca=008-008-008:ssn=254:rc=10:mpc=200-147-100:mssn=254
:materc=10:grp=grp10:sso=on:wt=10:mwt=30:thr=50
```

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

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
ENT-MAP:  MASP A - COMPLTD
```

If the Flexible GTT Load Sharing feature is enabled for this example, enter these commands.

```
ent-map:pca=008-008-008:ssn=254:rc=10:mpc=200-147-100:mssn=254
:materc=10:grp=grp10:sso=on:mapset=new:wt=10:mwt=30:thr=50
```

If the Flexible GTT Load Sharing feature is enabled when each of these commands have successfully completed, and a new MAP set was created, a message similar to the following should appear.

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
New MAPSET Created : MAPSETID = 10
ENT-MAP:  MASP A - COMPLTD
```

If the Flexible GTT Load Sharing feature is enabled when each of these commands have successfully completed, and the mated application was added to the default MAP set, this message should appear.

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
ENT-MAP:  MASP A - COMPLTD
```

Note:

1. To create a combined dominant/load shared mated application, the `rc`, `mpc/mpca/mpci/mpcn/mpcn24`, `mssn`, and `materc` parameters must be specified. The combined dominant/load shared mated application must contain a minimum of two entries with RC values that are equal and a minimum of one entry with an RC value that is different.
2. The format of the point codes in the CSPC group specified with the `grp` parameter must be the same as the primary point code specified with the `ent-map` command only if the ANSI-ITU-China SCCP Conversion feature is not enabled. If the ANSI-ITU-China SCCP

Conversion feature is enabled, the CSPC group may contain a mixture of point code types (refer to the *Adding a Concerned Signaling Point Code* on page 100 procedure), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application.

3. The point code type of the mate point code must be the same as the point code type of the primary point code. For example, if the primary point code is a 24-bit ITU-N point code (`pcn24`), the mate point code must be a 24-bit ITU-N point code (`mpcn24`). If spare point codes are being used, both the primary and mate point codes must be spare point codes. For example, if the primary point code is an ITU-I spare point code, the mate point code must be an ITU-I spare point code.
4. If the Flexible GTTLoad Sharing is enabled, the `mapset` parameter must be specified with the `ent-map` command.

   If the Flexible GTT Load Sharing is not enabled, the `mapset` parameter cannot be specified with the `ent-map` command.

   To provision entries in the default MAP set, the `mapset=dflt` parameter must be specified with the `ent-map` command.

   To provision entries in a new MAP set, the `mapset=new` parameter must be specified with the `ent-map` command. The `mapset=new` parameter can be specified only with the `ent-map` command. When the `ent-map` command is executed with the `mapset=new` parameter, the new MAP set ID is automatically generated and displayed in the output of the `ent-map` command as follows.

   ```
   New MAPSET Created : MAPSETID = <new MAP set ID>
   ```

   A MAP set, other than the default MAP set, is a MAP group provisioned with the MAP set ID and can contain a maximum of 32 point code and subsystem entries.

   The default MAP set can contain multiple MAP groups. Each group in the default MAP set can contain a maximum of 32 point code and subsystem entries.

   The point code and subsystem entry can appear only once in the default MAP set, so the point code and subsystem entry can appear in only one MAP group in the default MAP set.

   The point code and subsystem entry provisioned in a MAP set can be provisioned in multiple MAP sets. If a point code and subsystem entry is provisioned in different MAP sets, the relative cost value of the entry in each MAP set can be different. All the point code and subsystem entries in a MAP set, including the default MAP set, must be different.
5. Refer to the Provisioning Weights and In-Service Thresholds for Mated Applications section for information about using the weight (`wt` and `mwt`) and in-service threshold (`thr`) parameters.

Note: If no other entries are being added to the mated application, skip step 14 and go to step 15.

14. Add the mated point code and subsystem to the mated application using the `chg-map` command according to Notes 1 through 5 in step 13.

    If the Flexible GTT Load Sharing feature is not enabled for this example, enter these commands.

    ```
    chg-map:pca=008-008-008:ssn=254:rc=10:mpca=179-183-050
    :mssn=250:materc=10:grp=grp15:sso=off:mwt=40
    ```

```
chg-map:pca=008-008-008:ssn=254:rc=10:mpca=031-049-100
:mssn=250:materc=20:grp=grp15:mrc=yes:srm=yes:sso=on:mwt=60
```

```
chg-map:pca=008-008-008:ssn=254:rc=10:mpca=056-113-200
:mssn=251:materc=20:grp=grp05:mrc=yes:srm=yes:sso=off:mwt=70
```

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

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
CHG-MAP:  MASP A - COMPLTD
```

If the Flexible GTT Load Sharing feature is enabled for this example, enter these commands.

```
chg-map:pca=008-008-008:ssn=254:rc=10:mpc=179-183-050:mssn=250
:materc=11:grp=grp15:sso=off:mapset=10:mwt=40
```

```
chg-map:pca=008-008-008:ssn=254:rc=10:mpca=031-049-100
:mssn=250:materc=20:grp=grp15:mrc=yes:srm=yes:sso=on:mapset=10:mwt=60
```

```
chg-map:pca=008-008-008:ssn=254:rc=10:mpca=056-113-200
:mssn=251:materc=20:grp=grp05:mrc=yes:srm=yes:sso=off :mapset=10:mwt=70
```

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

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
CHG-MAP:  MASP A - COMPLTD
```

Repeat this step for all new entries being added to the existing mated application.

If the Flexible GTT Load Sharing feature is not enabled, the mated application can contain a maximum of 32 entries.

If the Flexible GTT Load Sharing feature is enabled, and the MAP set is not the default MAP set, the MAP set can contain a maximum of 32 entries.

If the Flexible GTT Load Sharing feature is enabled, and the MAP set is the default MAP set, the default MAP set can contain multiple MAP groups. Each group in the default MAP set can contain a maximum of 32 point code and subsystem entries.

15. Verify the changes using the `rtrv-map` command with the primary point code and subsystem specified in steps 13 and 14.

If the `mapset=dflt` parameter was specified in steps 13 and 14, the `mapset=dflt` parameter should be specified with the `rtrv-map` command.

If a new MAP set was created in step 13, the `mapset` parameter should be specified with the `rtrv-map` command. The value for the mapset parameter should be the MAP set ID generated in step 13.

If the mated application was added to an existing MAP set in step 14, the `mapset` parameter and value specified in step 14 should be specified with the `rtrv-map` command.

If the Flexible GTT Load Sharing feature is not enabled for this example, enter this command.

```
rtrv-map:pca=008-008-008:ssn=254
```

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)
```

```
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
008-008-008               254 10  COM YES YES grp10    ON  10   4 50
             200-147-100  254 10  COM YES YES grp10    ON  30  14 50
             179-183-050  250 10  COM YES YES grp15    OFF 40  19 50
             031-049-100  250 20  COM YES YES grp15    ON  60  28 50
             056-113-200  251 20  COM YES YES grp05    OFF 70  33 50
```

Note: If the Weighted GTTLoad Sharing feature is not enabled or turned on, the `WT`, `%WT`, and `THR` columns are not shown in the `rtrv-map` output.

If the Flexible GTT Load Sharing feature is enabled for this example, enter this command.

```
rtrv-map:pca=008-008-008:ssn=254:mapset=10
```

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   1 % FULL    (37 of 36000)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
MAPSET ID=10
008-008-008               254 10  COM YES YES grp10    ON  10   4 50
             200-147-100  254 10  COM YES YES grp10    ON  30  14 50
             179-183-050  250 10  COM YES YES grp15    OFF 40  19 50
             031-049-100  250 20  COM YES YES grp15    ON  60  28 50
             056-113-200  251 20  COM YES YES grp05    OFF 70  33 50
```

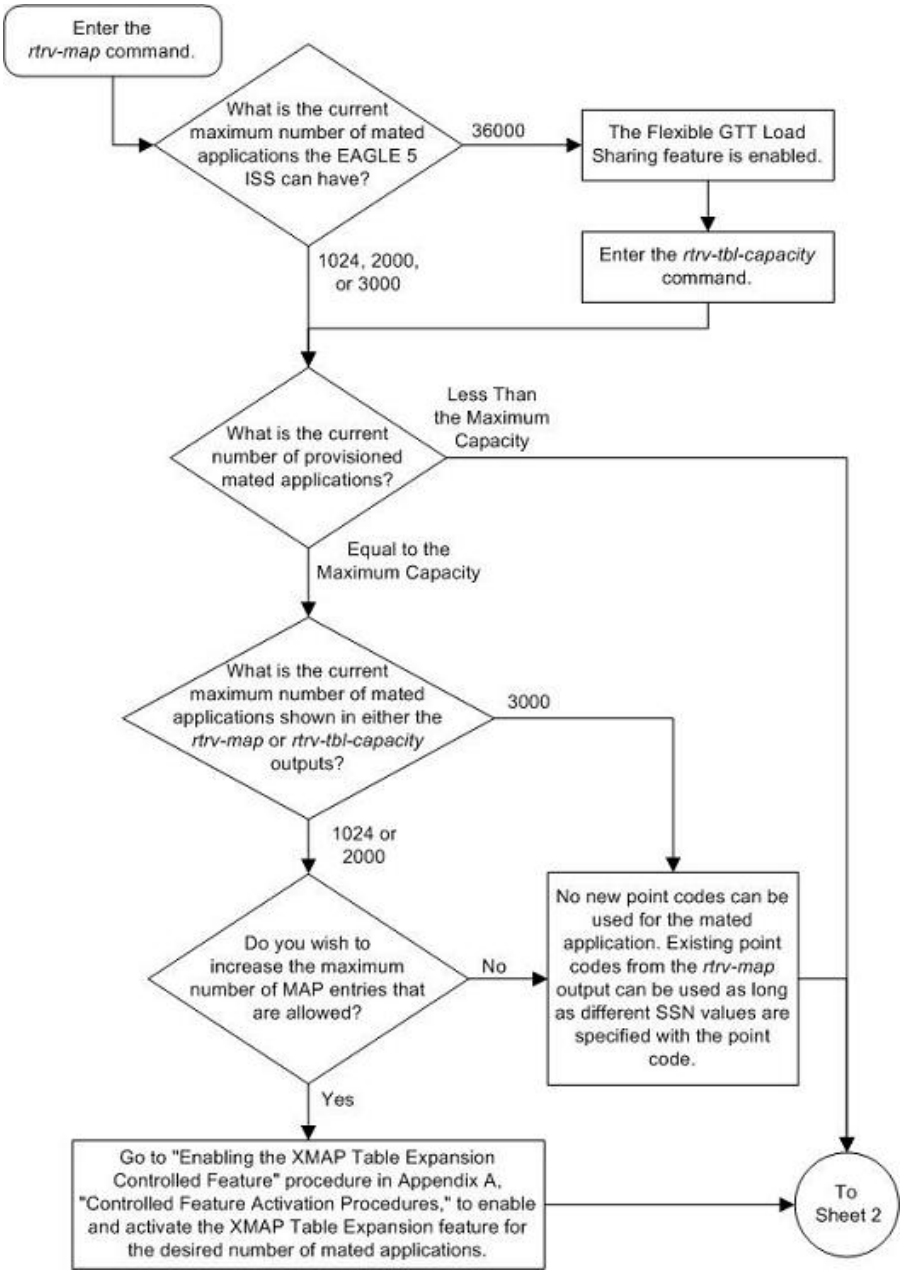
Note: If the Weighted GTTLoad Sharing feature is not enabled or turned on, the `WT`, `%WT`, and `THR` columns are not shown in the `rtrv-map` output.

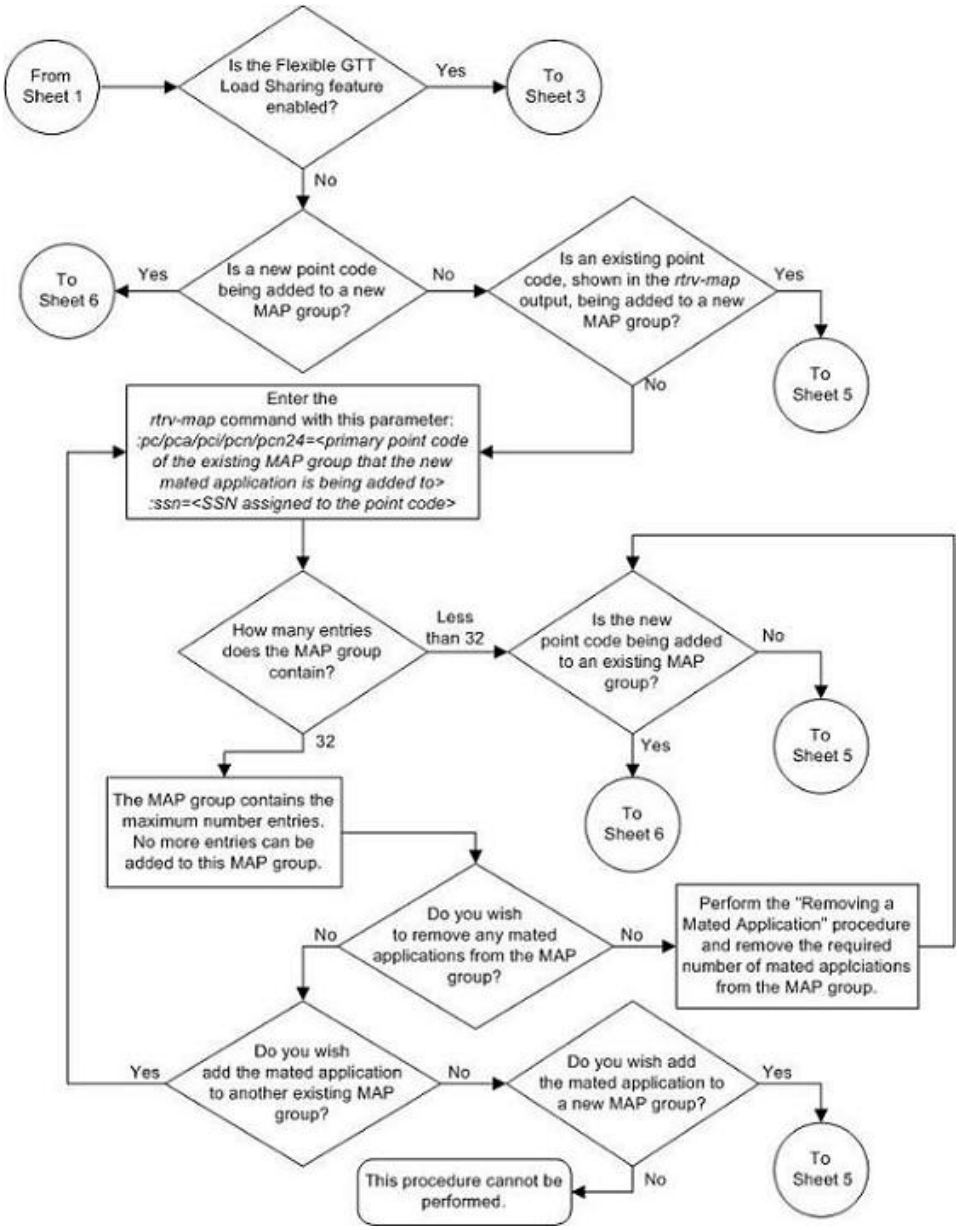
16. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

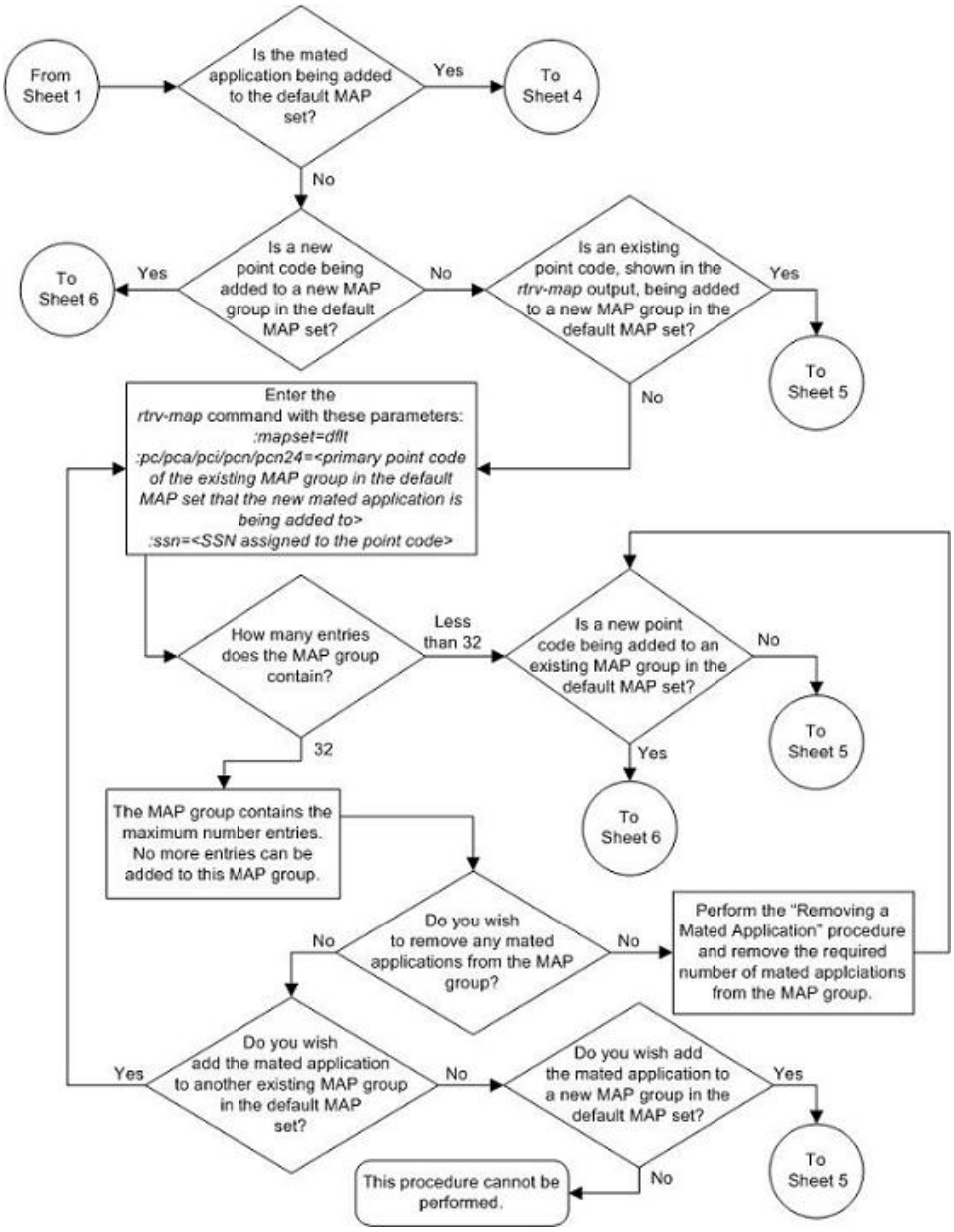
    These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

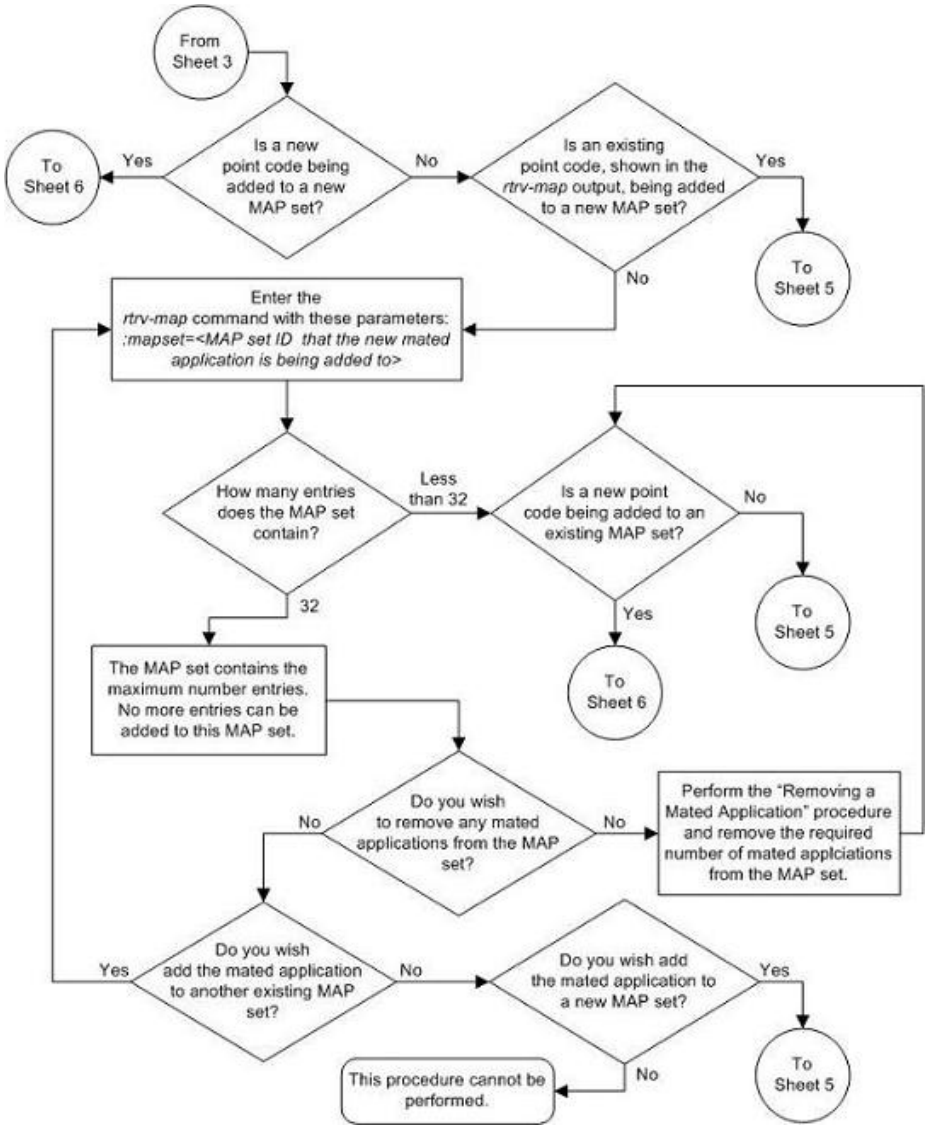
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

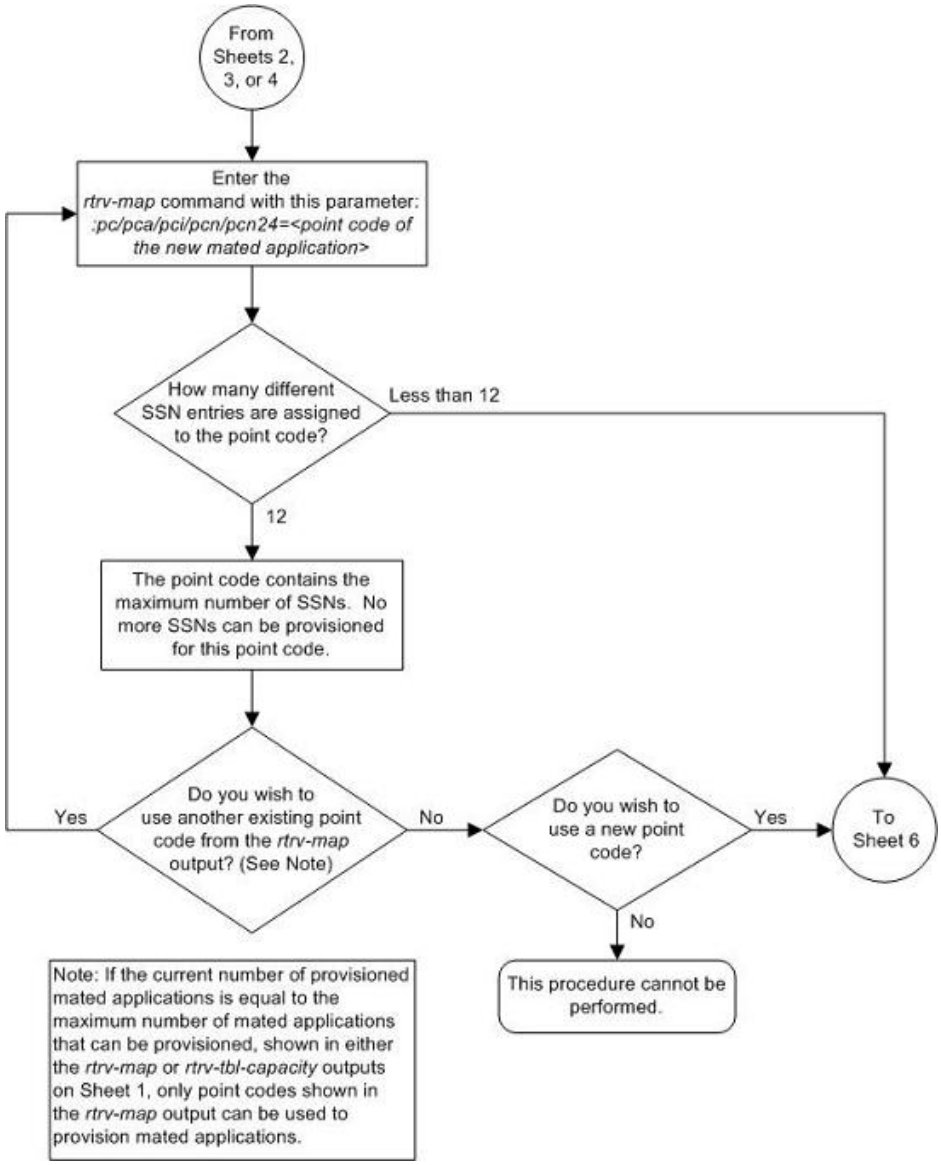
Figure 22: Provisioning a Combined Dominant/Load Shared Mated Application

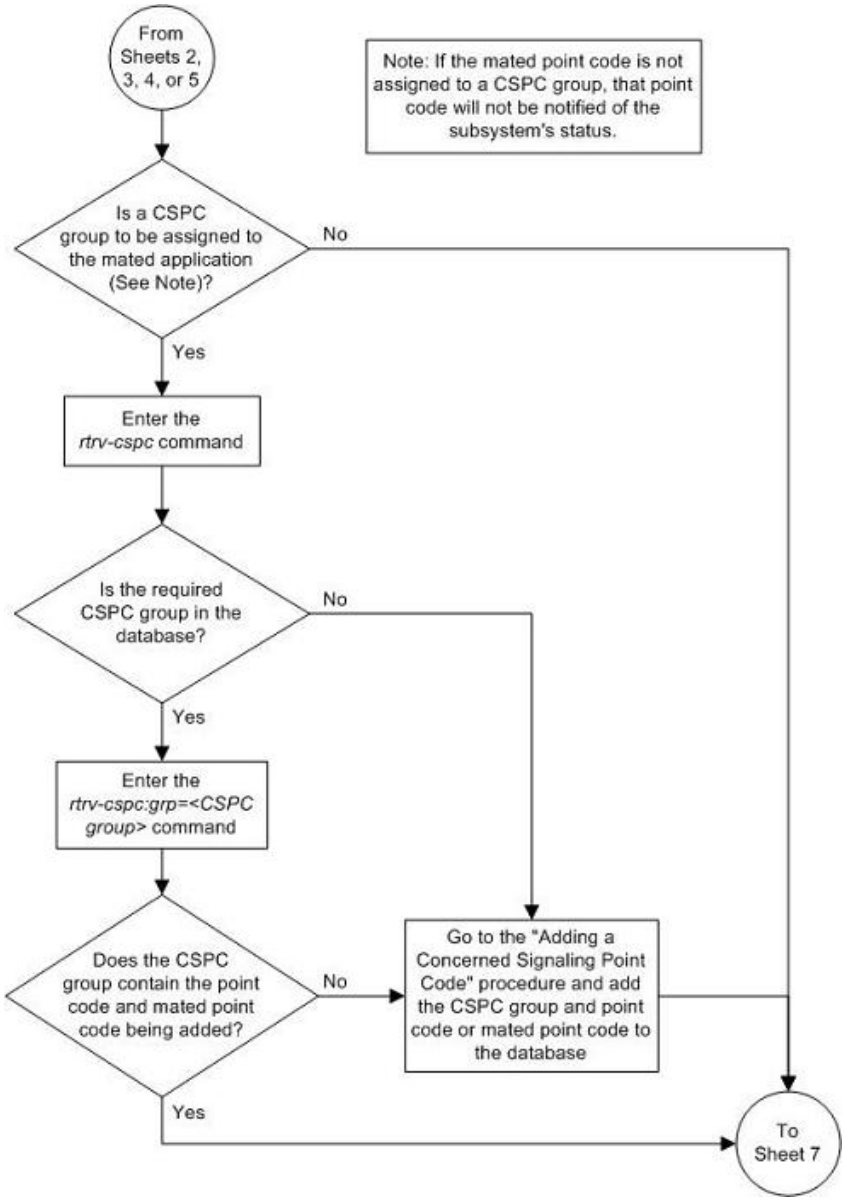

Enter the *rtrv-map* command.
What is the current maximum number of mated applications the EAGLE 5 ISS can have?
36000
The Flexible GTT Load Sharing feature is enabled.
Enter the *rtrv-tbl-capacity* command.
1024, 2000, or 3000
What is the current number of provisioned mated applications?
Less Than the Maximum Capacity
Equal to the Maximum Capacity
What is the current maximum number of mated applications shown in either the *rtrv-map* or *rtrv-tbl-capacity* outputs?
3000
1024 or 2000
Do you wish to increase the maximum number of MAP entries that are allowed?
No
No new point codes can be used for the mated application. Existing point codes from the *rtrv-map* output can be used as long as different SSN values are specified with the point code.
Yes
Go to "Enabling the XMAP Table Expansion Controlled Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," to enable and activate the XMAP Table Expansion feature for the desired number of mated applications.
To Sheet 2

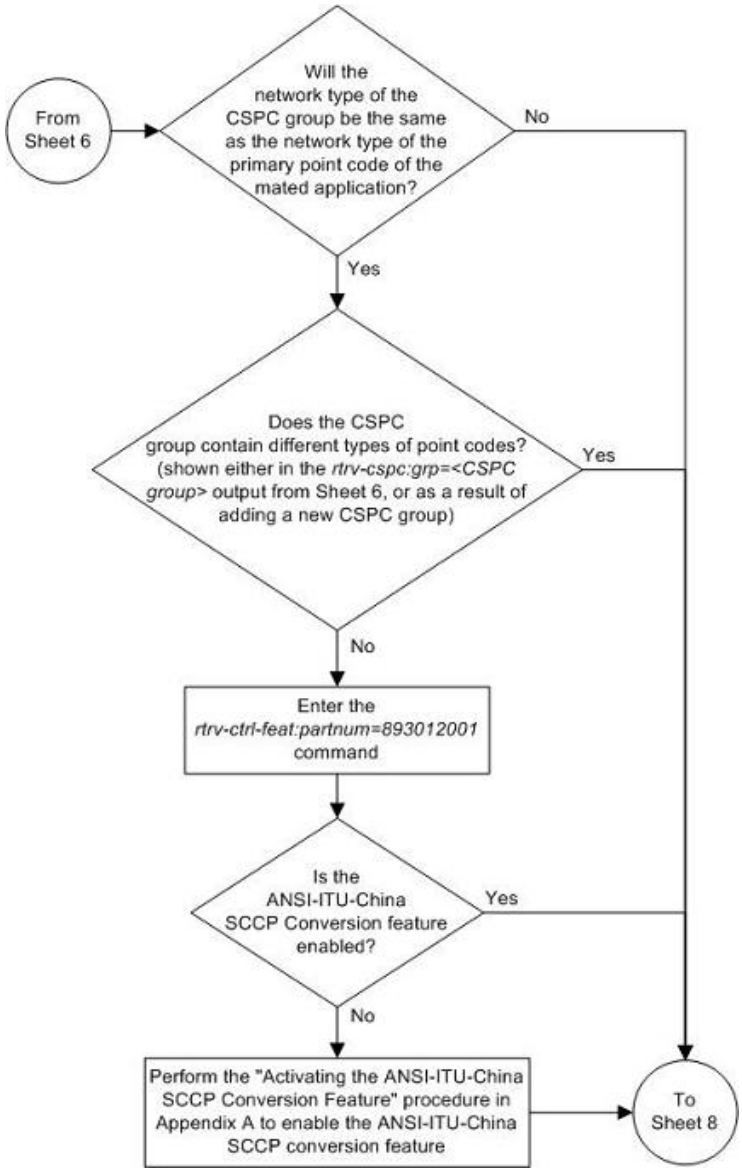

From Sheet 1
Is the Flexible GTT Load Sharing feature enabled?
Yes
To Sheet 3
No
To Sheet 6
Yes
Is a new point code being added to a new MAP group?
No
Is an existing point code, shown in the rtrv-map output, being added to a new MAP group?
Yes
To Sheet 5
No
Enter the rtrv-map command with this parameter: :pc/pca/pci/pcn/pcn24=<primary point code of the existing MAP group that the new mated application is being added to> :ssn=<SSN assigned to the point code>
How many entries does the MAP group contain?
Less than 32
Is the new point code being added to an existing MAP group?
No
To Sheet 5
32
Yes
To Sheet 6
The MAP group contains the maximum number entries. No more entries can be added to this MAP group.
Do you wish to remove any mated applications from the MAP group?
No
Perform the "Removing a Mated Application" procedure and remove the required number of mated applciations from the MAP group.
No
Do you wish add the mated application to another existing MAP group?
Yes
No
Do you wish add the mated application to a new MAP group?
Yes
To Sheet 5
No
This procedure cannot be performed.

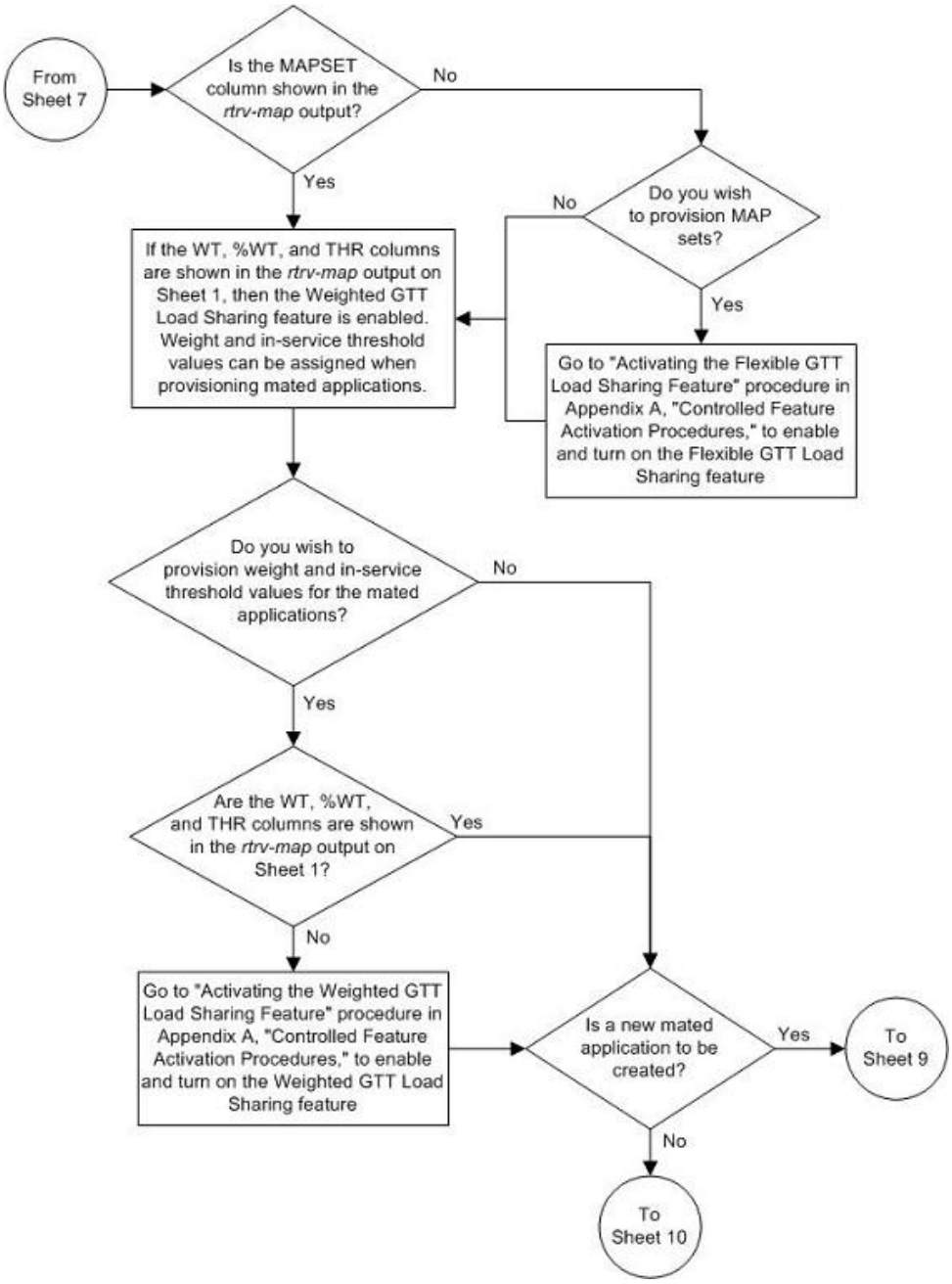

From Sheet 1
Is the mated application being added to the default MAP set?
Yes
To Sheet 4
No
Is a new point code being added to a new MAP group in the default MAP set?
Yes
To Sheet 6
No
Is an existing point code, shown in the rtrv-map output, being added to a new MAP group in the default MAP set?
Yes
To Sheet 5
No
Enter the rtrv-map command with these parameters:
:mapset=dflt
:pc/pca/pci/pcn/pcn24=<primary point code of the existing MAP group in the default MAP set that the new mated application is being added to>
:ssn=<SSN assigned to the point code>
How many entries does the MAP group contain?
Less than 32
Is a new point code being added to an existing MAP group in the default MAP set?
No
To Sheet 5
Yes
To Sheet 6
32
The MAP group contains the maximum number entries. No more entries can be added to this MAP group.
Do you wish to remove any mated applications from the MAP group?
No
No
Perform the "Removing a Mated Application" procedure and remove the required number of mated applciations from the MAP group.
Do you wish add the mated application to another existing MAP group in the default MAP set?
Yes
No
Do you wish add the mated application to a new MAP group in the default MAP set?
Yes
To Sheet 5
No
This procedure cannot be performed.

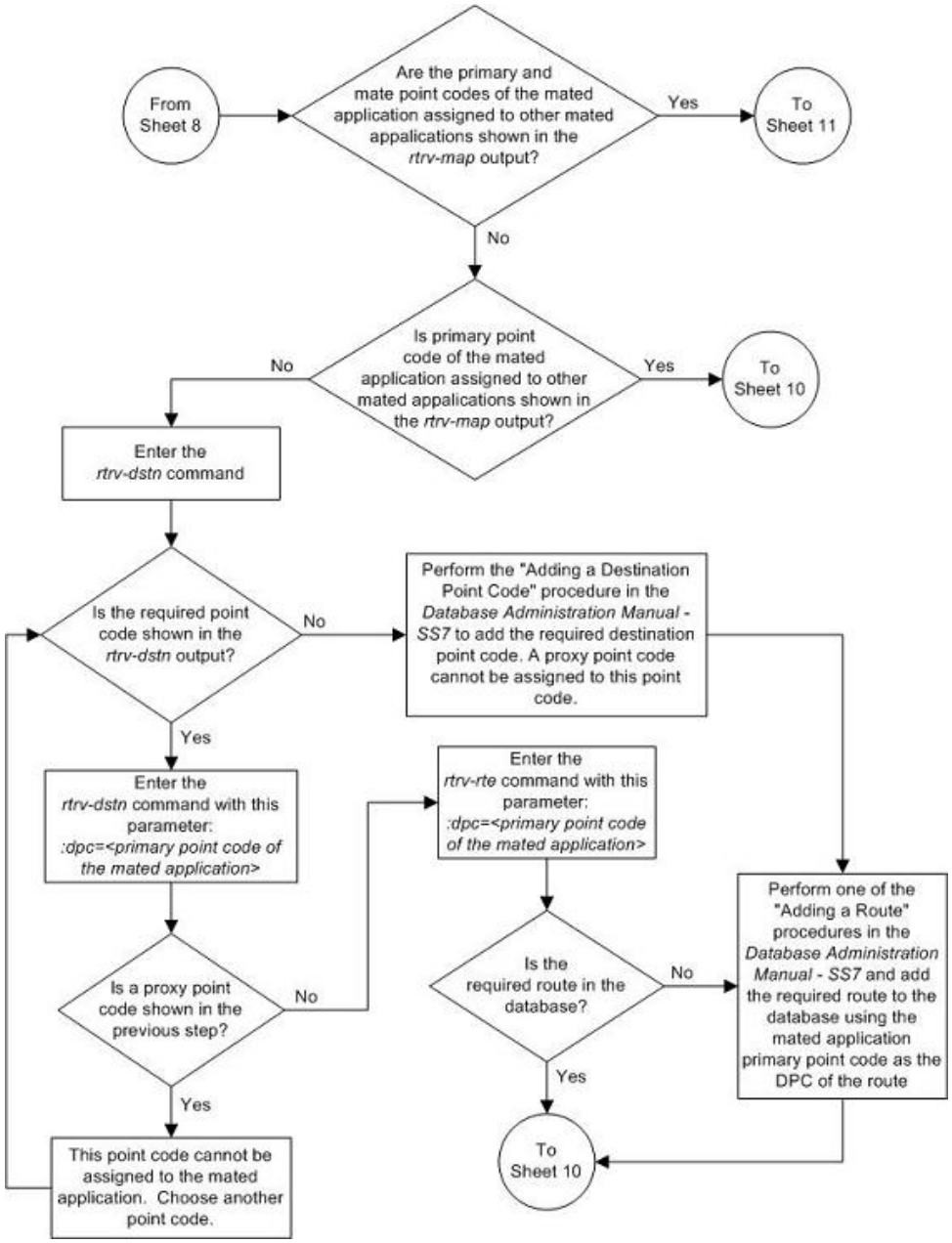

From Sheet 3
Is a new point code being added to a new MAP set?
Yes
To Sheet 6
No
Is an existing point code, shown in the rtrv-map output, being added to a new MAP set?
Yes
To Sheet 5
No
Enter the rtrv-map command with these parameters: :mapset=<MAP set ID that the new mated application is being added to>
How many entries does the MAP set contain?
Less than 32
Is a new point code being added to an existing MAP set?
No
To Sheet 5
Yes
To Sheet 6
32
The MAP set contains the maximum number entries. No more entries can be added to this MAP set.
Do you wish to remove any mated applications from the MAP set?
No
No
Perform the "Removing a Mated Application" procedure and remove the required number of mated applciations from the MAP set.
Do you wish add the mated application to another existing MAP set?
Yes
No
Do you wish add the mated application to a new MAP set?
Yes
To Sheet 5
No
This procedure cannot be performed.

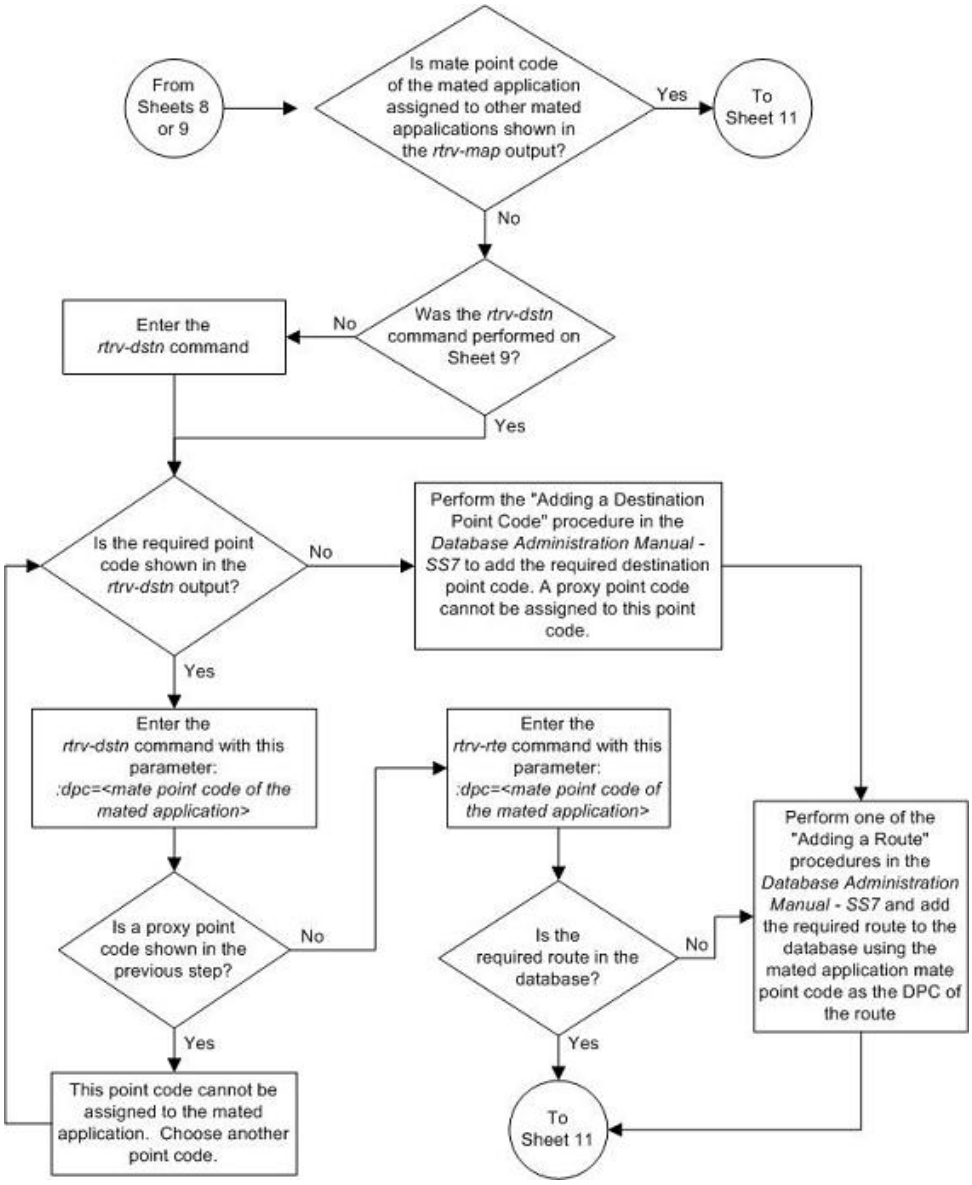

From Sheets 2, 3, or 4
Enter the rtrv-map command with this parameter: :pc/pca/pci/pcn/pcn24=<point code of the new mated application>
How many different SSN entries are assigned to the point code?
Less than 12
12
The point code contains the maximum number of SSNs. No more SSNs can be provisioned for this point code.
Do you wish to use another existing point code from the rtrv-map output? (See Note)
Yes
No
Do you wish to use a new point code?
Yes
To Sheet 6
No
This procedure cannot be performed.
Note: If the current number of provisioned mated applications is equal to the maximum number of mated applications that can be provisioned, shown in either the rtrv-map or rtrv-tbl-capacity outputs on Sheet 1, only point codes shown in the rtrv-map output can be used to provision mated applications.

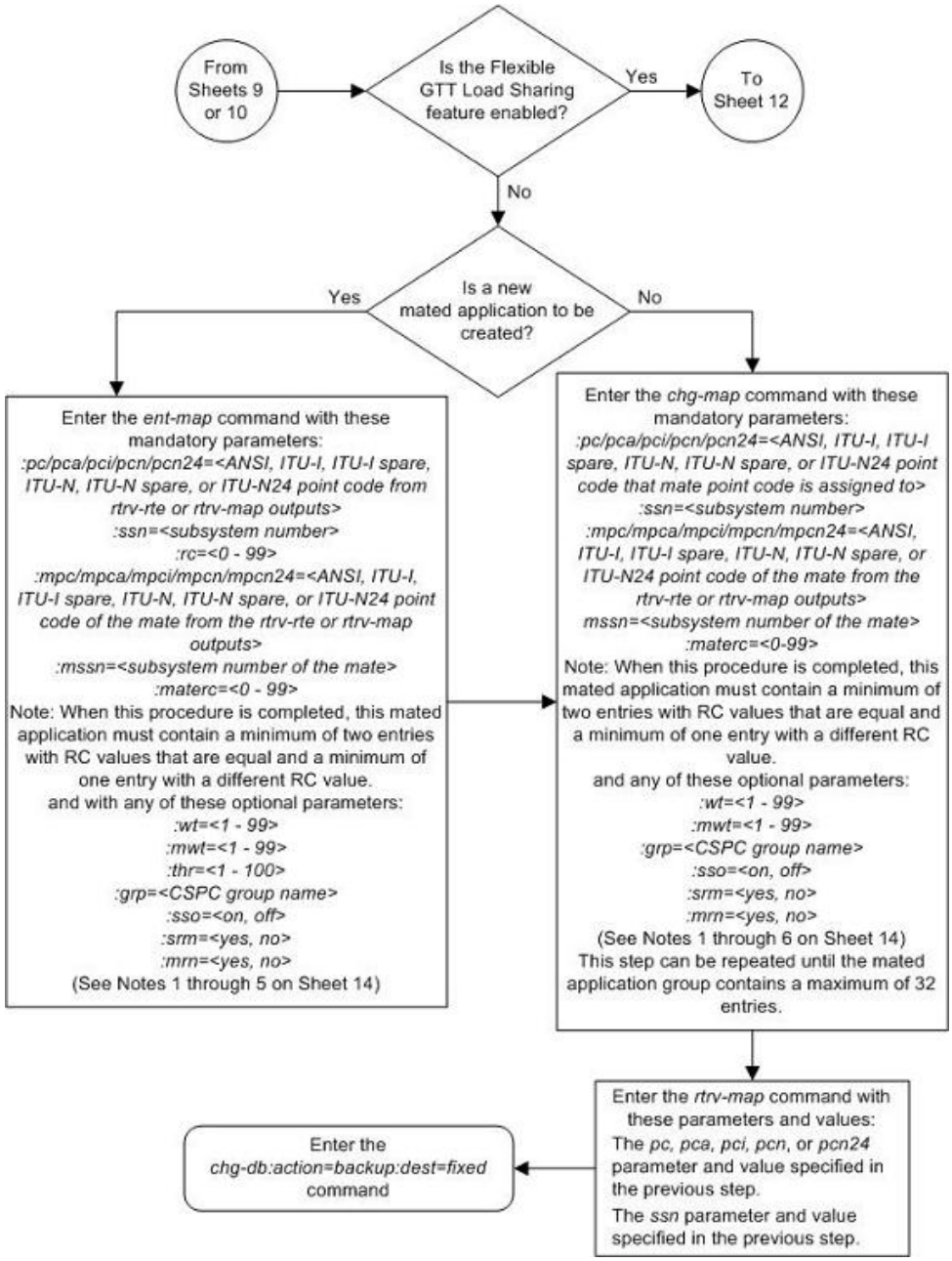

From Sheets 2, 3, 4, or 5
Note: If the mated point code is not assigned to a CSPC group, that point code will not be notified of the subsystem's status.
Is a CSPC group to be assigned to the mated application (See Note)?
No
Yes
Enter the rtrv-cspc command
Is the required CSPC group in the database?
No
Yes
Enter the rtrv-cspc:grp=<CSPC group> command
Does the CSPC group contain the point code and mated point code being added?
No
Go to the "Adding a Concerned Signaling Point Code" procedure and add the CSPC group and point code or mated point code to the database
Yes
To Sheet 7

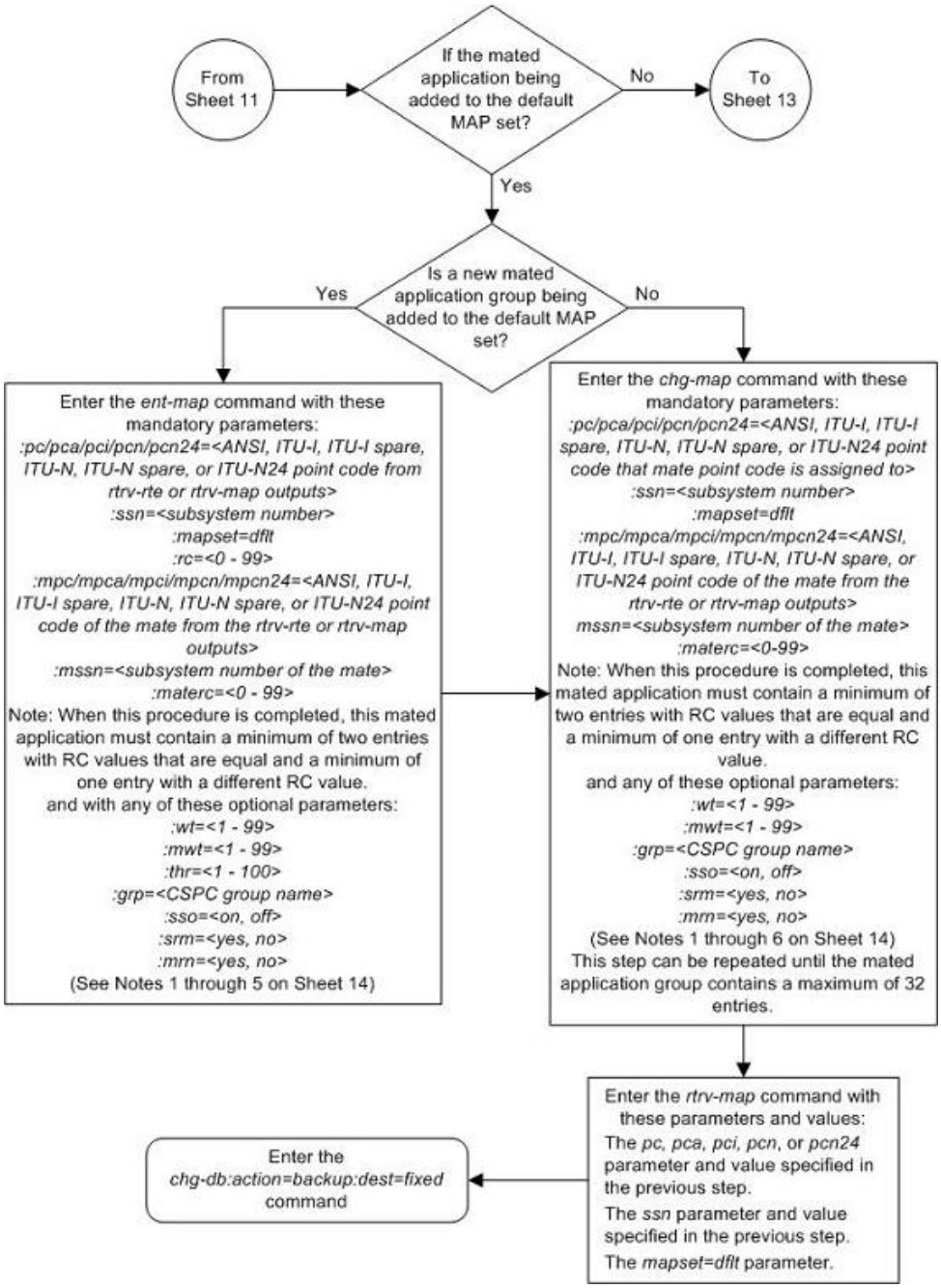

From Sheet 6
Will the network type of the CSPC group be the same as the network type of the primary point code of the mated application?
No
Yes
Does the CSPC group contain different types of point codes? (shown either in the rtrv-cspc:grp=<CSPC group> output from Sheet 6, or as a result of adding a new CSPC group)
Yes
No
Enter the rtrv-ctrl-feat:partnum=893012001 command
Is the ANSI-ITU-China SCCP Conversion feature enabled?
Yes
No
Perform the "Activating the ANSI-ITU-China SCCP Conversion Feature" procedure in Appendix A to enable the ANSI-ITU-China SCCP conversion feature
To Sheet 8

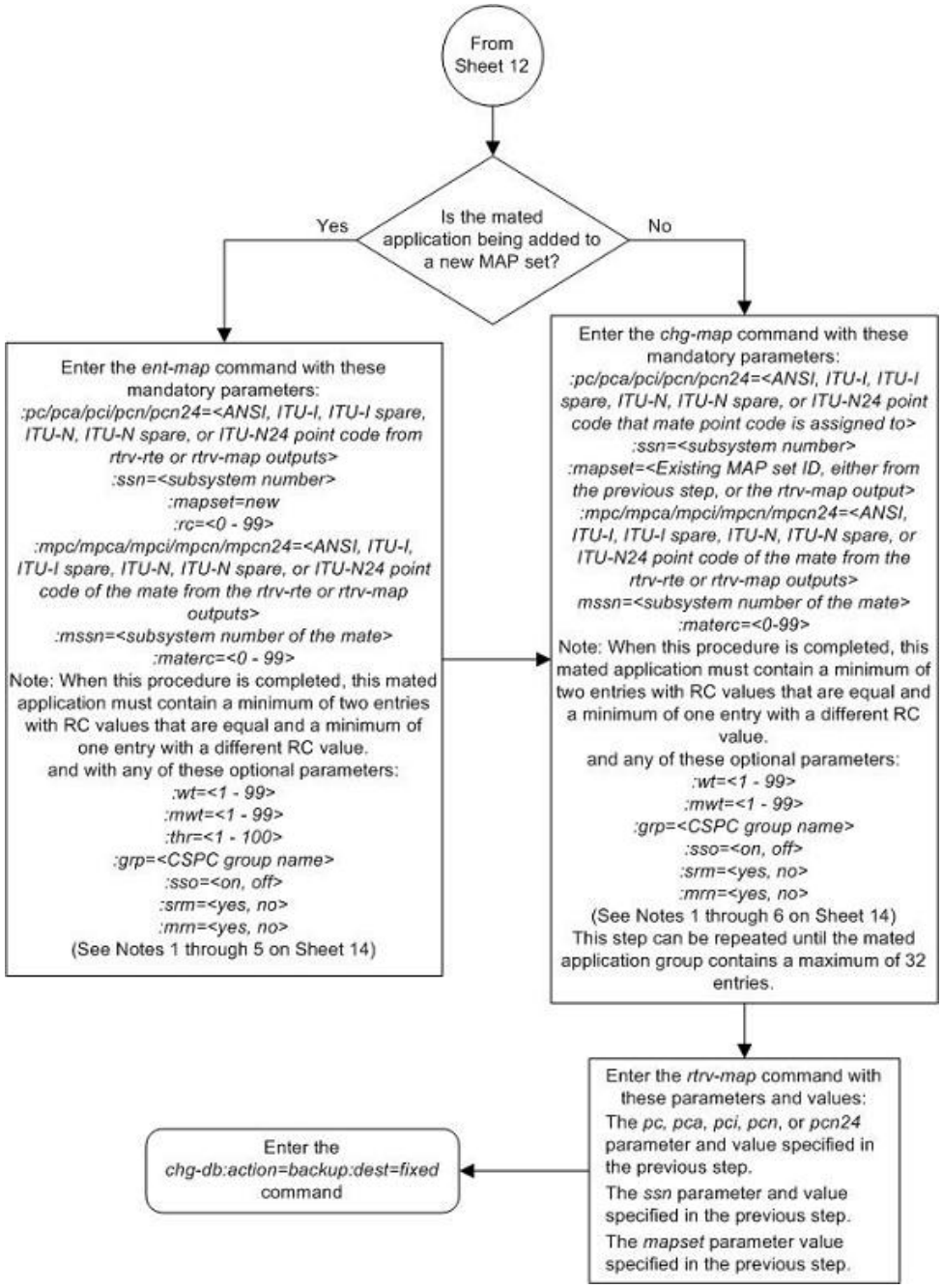

From Sheet 7
Is the MAPSET column shown in the rtrv-map output?
No
Yes
Do you wish to provision MAP sets?
No
Yes
If the WT, %WT, and THR columns are shown in the rtrv-map output on Sheet 1, then the Weighted GTT Load Sharing feature is enabled. Weight and in-service threshold values can be assigned when provisioning mated applications.
Go to "Activating the Flexible GTT Load Sharing Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," to enable and turn on the Flexible GTT Load Sharing feature
Do you wish to provision weight and in-service threshold values for the mated applications?
No
Yes
Are the WT, %WT, and THR columns are shown in the rtrv-map output on Sheet 1?
Yes
No
Go to "Activating the Weighted GTT Load Sharing Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," to enable and turn on the Weighted GTT Load Sharing feature
Is a new mated application to be created?
Yes
To Sheet 9
No
To Sheet 10


From Sheet 8
Are the primary and mate point codes of the mated application assigned to other mated appalications shown in the rtrv-map output?
Yes
To Sheet 11
No
Is primary point code of the mated application assigned to other mated appalications shown in the rtrv-map output?
No
Yes
To Sheet 10
Enter the rtrv-dstn command
Is the required point code shown in the rtrv-dstn output?
No
Perform the "Adding a Destination Point Code" procedure in the Database Administration Manual - SS7 to add the required destination point code. A proxy point code cannot be assigned to this point code.
Yes
Enter the rtrv-dstn command with this parameter: :dpc=<primary point code of the mated application>
Enter the rtrv-rte command with this parameter: :dpc=<primary point code of the mated application>
Is a proxy point code shown in the previous step?
No
Is the required route in the database?
No
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 and add the required route to the database using the mated application primary point code as the DPC of the route
Yes
Yes
This point code cannot be assigned to the mated application. Choose another point code.
To Sheet 10


From Sheets 8 or 9
Is mate point code of the mated application assigned to other mated appalications shown in the rtrv-map output?
Yes
To Sheet 11
No
Was the rtrv-dstn command performed on Sheet 9?
No
Enter the rtrv-dstn command
Yes
Is the required point code shown in the rtrv-dstn output?
No
Perform the "Adding a Destination Point Code" procedure in the Database Administration Manual - SS7 to add the required destination point code. A proxy point code cannot be assigned to this point code.
Yes
Enter the rtrv-dstn command with this parameter: :dpc=<mate point code of the mated application>
Enter the rtrv-rte command with this parameter: :dpc=<mate point code of the mated application>
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 and add the required route to the database using the mated application mate point code as the DPC of the route
Is a proxy point code shown in the previous step?
No
Is the required route in the database?
No
Yes
Yes
This point code cannot be assigned to the mated application. Choose another point code.
To Sheet 11


From Sheets 9 or 10
Is the Flexible GTT Load Sharing feature enabled?
Yes
To Sheet 12
No
Is a new mated application to be created?
Yes
No
Enter the ent-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from rtrv-rte or rtrv-map outputs>
:ssn=<subsystem number>
:rc=<0 - 99>
:mpc/mpca/mpci/mpcn/mpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
:mssn=<subsystem number of the mate>
:materc=<0 - 99>
Note: When this procedure is completed, this mated application must contain a minimum of two entries with RC values that are equal and a minimum of one entry with a different RC value.
and with any of these optional parameters:
:wt=<1 - 99>
:mwt=<1 - 99>
:thr=<1 - 100>
:grp=<CSPC group name>
:sso=<on, off>
:srm=<yes, no>
:mrn=<yes, no>
(See Notes 1 through 5 on Sheet 14)
Enter the chg-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code that mate point code is assigned to>
:ssn=<subsystem number>
:mpc/mpca/mpci/mpcn/mpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
mssn=<subsystem number of the mate>
:materc=<0-99>
Note: When this procedure is completed, this mated application must contain a minimum of two entries with RC values that are equal and a minimum of one entry with a different RC value.
and any of these optional parameters:
:wt=<1 - 99>
:mwt=<1 - 99>
:grp=<CSPC group name>
:sso=<on, off>
:srm=<yes, no>
:mrn=<yes, no>
(See Notes 1 through 6 on Sheet 14)
This step can be repeated until the mated application group contains a maximum of 32 entries.
Enter the rtrv-map command with these parameters and values:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
Enter the chg-db:action=backup:dest=fixed command


From Sheet 11
If the mated application being added to the default MAP set?
No
To Sheet 13
Yes
Is a new mated application group being added to the default MAP set?
Yes
No
Enter the ent-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from rtrv-rte or rtrv-map outputs>
:ssn=<subsystem number>
:mapset=dflt
:rc=<0 - 99>
:mpc/mpca/mpci/mpcn/mpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
:mssn=<subsystem number of the mate>
:materc=<0 - 99>
Note: When this procedure is completed, this mated application must contain a minimum of two entries with RC values that are equal and a minimum of one entry with a different RC value.
and with any of these optional parameters:
:wt=<1 - 99>
:mwt=<1 - 99>
:thr=<1 - 100>
:grp=<CSPC group name>
:sso=<on, off>
:srm=<yes, no>
:mrn=<yes, no>
(See Notes 1 through 5 on Sheet 14)
Enter the chg-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code that mate point code is assigned to>
:ssn=<subsystem number>
:mapset=dflt
:mpc/mpca/mpci/mpcn/mpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
mssn=<subsystem number of the mate>
:materc=<0-99>
Note: When this procedure is completed, this mated application must contain a minimum of two entries with RC values that are equal and a minimum of one entry with a different RC value.
and any of these optional parameters:
:wt=<1 - 99>
:mwt=<1 - 99>
:grp=<CSPC group name>
:sso=<on, off>
:srm=<yes, no>
:mrn=<yes, no>
(See Notes 1 through 6 on Sheet 14)
This step can be repeated until the mated application group contains a maximum of 32 entries.
Enter the rtrv-map command with these parameters and values:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
The mapset=dflt parameter.
Enter the chg-db:action=backup:dest=fixed command


From Sheet 12
Is the mated application being added to a new MAP set?
Yes
No
Enter the ent-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from rtrv-rte or rtrv-map outputs>
:ssn=<subsystem number>
:mapset=new
:rc=<0 - 99>
:mpc/mpca/mpci/mpcn/mpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
:mssn=<subsystem number of the mate>
:materc=<0 - 99>
Note: When this procedure is completed, this mated application must contain a minimum of two entries with RC values that are equal and a minimum of one entry with a different RC value.
and with any of these optional parameters:
:wt=<1 - 99>
:mwt=<1 - 99>
:thr=<1 - 100>
:grp=<CSPC group name>
:sso=<on, off>
:srm=<yes, no>
:mrn=<yes, no>
(See Notes 1 through 5 on Sheet 14)
Enter the chg-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code that mate point code is assigned to>
:ssn=<subsystem number>
:mapset=<Existing MAP set ID, either from the previous step, or the rtrv-map output>
:mpc/mpca/mpci/mpcn/mpcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code of the mate from the rtrv-rte or rtrv-map outputs>
mssn=<subsystem number of the mate>
:materc=<0-99>
Note: When this procedure is completed, this mated application must contain a minimum of two entries with RC values that are equal and a minimum of one entry with a different RC value.
and any of these optional parameters:
:wt=<1 - 99>
:mwt=<1 - 99>
:grp=<CSPC group name>
:sso=<on, off>
:srm=<yes, no>
:mrn=<yes, no>
(See Notes 1 through 6 on Sheet 14)
This step can be repeated until the mated application group contains a maximum of 32 entries.
Enter the rtrv-map command with these parameters and values:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
The mapset parameter value specified in the previous step.
Enter the chg-db:action=backup:dest=fixed command

Notes:

1. The format of the point codes in the CSPC group specified with the *grp* parameter must be the same as the primary point code specified for the mated application if the ANSI-ITU-China SCCP Conversion feature is not enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (see the "Adding a Concerned Signaling Point Code" procedure in this chapter), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application.

2. The point code type of the mate point code must be the same as the point code type of the primary point code. For example, if the primary point code is a 24-bit ITU-N point code (*pcn24*), the mate point code must be a 24-bit ITU-N point code (*mpcn24*). This is also true for spare point codes. For example, if the primary point code is an ITU-I spare point code, the mate point code must be an ITU-I spare point code.

3. If the point code selected from either the *rtrv-rte* or *rtrv-map* outputs is a 14-bit ITU-N point code, then the *pcn*/*mpcn* parameters must be specified. If the point code selected from either the *rtrv-rte* or *rtrv-map* outputs is a 24-bit ITU-N point code, then the *pcn24*/*mpcn24* parameters must be specified.

4. Refer to the "Provisioning Weights and In-Service Thresholds for Mated Applications" section in this procedure for information about using the weight (*wt* and *mwt*) and in-service threshold (*thr*) parameters.

5. The *srm=yes* parameter can be specified only for mated applications containing ANSI point codes.

6. If the CSPC group name (*grp*), *mrc*, *srm*, or *sso* values for a specific point code and SSN in a mated application are changed, these parameter values for this specific point code and SSN in all applicable mated applications will be changed to the new values.

Removing a Mated Application

This procedure is used to remove a mated application from the database using the `dlt-map` command.

The `dlt-map` command uses these parameters.

`:pc/pca/pci/pcn/pcn24` – The point code (primary or mate point code) in the mated application group.

Note: Refer to Chapter 2, Configuring Destination Tables, in the Database *Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

`:ssn` – Subsystem number – the subsystem number of the point code being removed.

`:all` – Removes all subsystems assigned to the point code being removed. If this parameter is not specified, only the specified subsystem number is removed.

`:mapset` – The MAP set ID that the mated application is assigned to, shown in the `rtrv-map` output. MAP set IDs are shown only if the Flexible GTT Load Sharing feature is enabled. If the Flexible GTT Load Sharing feature is enabled, the `mapset` parameter must be specified with the `dlt-map` command.

If an entire MAP set is being removed in this procedure (with the `all=yes` parameter), the reference to the MAP set specified in this procedure must be removed from any GTT, GTA, GSM OPCODE, or GSM MAP screening entries before an entire MAP set can be removed.

Perform one of these procedures to remove the reference to the MAP set.

- If the EGTT feature is not on – Enter the `rtrv-gtt` command to verify the MAP set ID references in the GTT entries. Perform the *Changing a Global Title Translation* on page 524 procedure to remove the references to the MAP set.

- If the EGTT feature is on – Enter the `rtrv-gta` command to verify the MAP set ID references in the GTA entries. Perform the *Changing Global Title Address Information* on page 681 procedure to remove the references to the MAP set.
- Enter the `rtrv-gsms-opcode` command to verify the MAP set ID references in the GSM OPCODE entries. Perform the "Changing a GSM MAP Screening Operation Code" procedure in the Database *Administration Manual - Features* to remove the references to the MAP set.
- Enter the `rtrv-gsmmap-scrn` command to verify the MAP set ID references in the GSM MAP screening entries. Perform the "Changing a GSM MAP Screening Entry" procedure in the Database *Administration Manual - Features* to remove the references to the MAP set.
- Enter the `rtrv-ppsopts` command to verify that the mated application's point code (if the Flexible GTT Load Sharing feature is not enabled) or the point code and MAP set ID (if the Flexible GTT Load Sharing feature is enabled) is not shown in the `rtrv-ppsopts` output. Any references to the mated application's point code or the point code and MAP set ID in the `rtrv-ppsopts` output are removed in *Step 13* on page 267.

Note: If weight and threshold values are assigned to a load shared or combined dominant/load shared mated application, and if by removing entries from this mated application the mated application becomes either a solitary or dominant mated application, all weight and threshold values are removed from the remaining entries in the mated application.

If the `mapset=dflt` and `all=yes` parameters are specified with the `dlt-map` command, only the MAP group containing the point code value specified in the `dlt-map` command is removed from the default MAP set.

The examples in this procedure are used to remove the mated application defined by the point code `255-001-002` and the subsystem number `253` from the database.

The mated application must be in the database.

Either the `ssn` or `all` parameters can be specified with the `dlt-map` command, but not both.

If the `ssn` parameter is specified, the point code and subsystem pair must exist in the mate application entity set. The point code and subsystem entry is then removed.

The value of the `ssn` parameter must be from 2 to 255.

Removing all point codes but one from a dominant, load shared, or combined dominant/load shared mated application group creates a solitary mated application.

If the primary point code is removed from a dominant mated application group containing more than one mate point code, the mate point code with the lowest relative cost value becomes the new primary point code.

If the primary point code is removed from a load shared mated application group containing more than one mate point code, the next mate point code in the group becomes the new primary point code.

If the primary point code is removed from a combined dominant/load shared mated application group containing more than one mate point code, which mate point code, and the resulting mated application group depends on the resulting relative cost values remaining in the group.

- If the mated application group contains mate point codes with the same relative cost value as the primary point code being removed, the next point code in the group with the same relative cost value as the primary point code becomes the new primary point code, and the mated application group remains a combined dominant/load shared mated application group.
- If the relative cost values of the mate point codes in the group are different from the relative cost value as the primary point code being removed, the next point code in the group with the

lowest relative cost value becomes the new primary point code, and the mated application group becomes a load shared mated application group.

- If all the mate point codes in the resulting mated application group have the same relative cost values, the first point code in the resulting group becomes the new primary point code, and the mated application group becomes a load shared mated application group.
- If the primary point code is removed, and the resulting mated application group contains one point code with one relative cost value and a point code with another relative cost value, a dominant mated application group is created. The mate point code with the lowest relative cost value becomes the new primary point code.

Mated applications that contain the EAGLE 5 ISS's true point code and the subsystem number of one of the subsystems shown in *Table 22: Subsystem Features* on page 258 cannot be removed from the database unless the subsystem has been removed from the database. The EAGLE 5 ISS's true point code is shown in the `PCA`, `PCI`, `PCN`, or `PCN24` fields of the `rtrv-sid` output. The subsystem number is shown in the `SSN` field of the `rtrv-ss-appl` output.

Table 22: Subsystem Features

Feature	Subsystem	Feature Status	Manual that Contains the Procedures to Remove the Subsystem
LNP	LNP	Enabled	LNP Feature Activation Guide
INP	INP	Enabled and Turned On	Feature Manual - INP/AINPQ
ANSI-41 INP Query			
EIR	EIR	Enabled and Turned On	Feature Manual - EIR
V-Flex	V-Flex	Enabled and Turned On	Feature Manual - V-Flex
ATINP	ATINPQ	Enabled	Feature Manual - ATINP

Canceling the `RTRV-MAP` Command

Because the `rtrv-map` command used in this procedure can output information for a long period of time, the `rtrv-map` command can be canceled and the output to the terminal stopped. There are three ways that the `rtrv-map` command can be canceled.

- Press the `F9` function key on the keyboard at the terminal where the `rtrv-map` command was entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rtrv-map` command was entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rtrv-map` command was entered, from another terminal other that the terminal where the `rtrv-map` 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, refer to the *Commands Manual*.

1. Display the mated applications in the database using the `rtrv-map` command.

If the Flexible GTT Load Sharing feature is not enabled, this is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
002-002-002               250 10  SHR --- --- grp15    ON
             100-130-079  250 10  SHR --- --- grp15    ON
             068-135-094  251 10  SHR --- --- grp05    OFF

003-003-003               254 10  DOM YES YES grp10    ON
             040-040-040  254 20  DOM YES YES grp10    ON

004-004-004               254 10  SHR --- --- grp10    OFF
             100-100-100  254 10  SHR --- --- grp10    OFF

005-005-005               250 10  DOM YES YES grp15    OFF
             060-060-060  250 20  DOM YES YES grp15    OFF
             070-070-070  251 30  DOM YES YES grp05    ON

006-006-006               250 10  SOL --- --- grp15    OFF

007-007-007               251 10  SOL --- --- grp05    ON

008-008-008               254 10  COM
             200-147-100  254 10  COM YES YES grp10    ON
             179-183-050  250 10  COM YES YES grp15    OFF
             031-049-100  250 20  COM YES YES grp15    ON
             056-113-200  251 20  COM YES YES grp05    OFF

255-001-000               250 10  SOL --- --- grp01    ON

255-001-000               251 10  SHR --- --- grp01    OFF
             253-001-002  254 10  SHR --- --- grp01    OFF

255-001-000               252 10  SOL --- --- grp01    ON

255-001-000               253 10  SHR --- --- grp01    OFF
             253-001-004  254 10  SHR --- --- grp01    OFF

255-001-001               255 10  DOM YES YES grp01    ON
             253-001-005  254 20  DOM YES YES grp01    ON
255-001-001               250 10  DOM YES YES grp01    OFF
             253-001-001  254 20  DOM YES YES grp01    OFF

255-001-002               251 10  SHR --- --- grp01    OFF
             255-001-002  254 10  SHR --- --- grp01    OFF

255-001-002               252 10  DOM YES YES grp01    ON
             255-001-003  254 20  DOM YES YES grp01    ON

255-001-002               253 10  SHR --- --- grp01    ON
             255-001-004  254 10  SHR --- --- grp01    ON

PCI          Mate PCI     SSN RC MULT SRM MRC GRP NAME SSO
2-001-2                   255 10  DOM YES YES grp03    OFF
             2-001-1      254 20  DOM YES YES grp03    OFF

PCN          Mate PCN     SSN RC MULT SRM MRC GRP NAME SSO
```

```
00347                    253 10  SHR --- --- grp05    OFF
            01387        254 10  SHR --- --- grp05    OFF
```

Note: If the Weighted GTTLoad Sharing feature is enabled, the WT, %WT, and THR columns are shown in the rtrv-map output as shown in the following example.

```
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
002-002-007                50 10  COM YES YES grp01    OFF 10  33  20
             002-002-008   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-009   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-010   30 20  COM YES YES grp01    OFF 10  50  20
             002-002-011   30 20  COM YES YES grp01    OFF 10  50  20

255-001-000               250 10  SOL --- --- grp01    ON  -- ---  --


255-001-000               251 10  SHR --- --- grp01    OFF  10  50  20
             253-001-002  254 10  SHR --- --- grp01    OFF  10  50  20

255-001-000               252 10  SOL --- --- grp01    ON  -- ---  --

255-001-000               253 10  SHR --- --- grp01    OFF  10  50  20
             253-001-004  254 10  SHR --- --- grp01    OFF  10  50  20

255-001-001               255 10  DOM YES YES grp01    ON  -- ---  --
             253-001-005  254 20  DOM YES YES grp01    ON  -- ---  --
```

If the Flexible GTT Load Sharing feature is enabled, this is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

MAP TABLE IS   1 % FULL    (37 of 36000)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=DFLT
002-002-002               250 10  SHR --- --- grp15    ON
             100-130-079  250 10  SHR --- --- grp15    ON
             068-135-094  251 10  SHR --- --- grp05    OFF

MAPSET ID=10
003-003-003               254 10  DOM YES YES grp10    ON
             040-040-040  254 20  DOM YES YES grp10    ON

MAPSET ID=11
004-004-004               254 10  SHR --- --- grp10    OFF
             100-100-100  254 10  SHR --- --- grp10    OFF

MAPSET ID=DFLT
005-005-005               250 10  DOM YES YES grp15    OFF
             060-060-060  250 20  DOM YES YES grp15    OFF
             070-070-070  251 30  DOM YES YES grp05    ON

MAPSET ID=9
006-006-006               250 10  SOL --- --- grp15    OFF

MAPSET ID=DFLT
007-007-007               251 10  SOL --- --- grp05    ON

MAPSET ID=12
008-008-008               254 10  COM
             200-147-100  254 10  COM YES YES grp10    ON
             179-183-050  250 10  COM YES YES grp15    OFF
             031-049-100  250 20  COM YES YES grp15    ON
             056-113-200  251 20  COM YES YES grp05    OFF
```

```
MAPSET ID=DFLT
255-001-000               250 10  SOL --- --- grp01    ON

MAPSET ID=1
255-001-000               251 10  SHR --- --- grp01    OFF
            253-001-002   254 10  SHR --- --- grp01    OFF

MAPSET ID=2
255-001-000               252 10  SOL --- --- grp01    ON

MAPSET ID=DFLT
255-001-000               253 10  SHR --- --- grp01    OFF
            253-001-004   254 10  SHR --- --- grp01    OFF

MAPSET ID=3
255-001-001               255 10  DOM YES YES grp01    ON
            253-001-005   254 20  DOM YES YES grp01    ON

MAPSET ID=4
255-001-001               250 10  DOM YES YES grp01    OFF
            253-001-001   254 20  DOM YES YES grp01    OFF

MAPSET ID=DFLT
255-001-002               251 10  SHR --- --- grp01    OFF
            255-001-002   254 10  SHR --- --- grp01    OFF

MAPSET ID=5
255-001-002               252 10  DOM YES YES grp01    ON
            255-001-003   254 20  DOM YES YES grp01    ON
MAPSET ID=6
255-001-002               253 10  SHR --- --- grp01    ON
            255-001-004   254 10  SHR --- --- grp01    ON

PCI         Mate PCI      SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=7
2-001-2                   255 10  DOM YES YES grp03    OFF
            2-001-1       254 20  DOM YES YES grp03    OFF

PCN         Mate PCN      SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=8
00347                     253 10  SHR --- --- grp05    OFF
            01387         254 10  SHR --- --- grp05    OFF
```

Note: If the Flexible GTTLoad Sharing and Weighted GTTLoad Sharing features are enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output as shown in the following example.

```
PCA         Mate PCA      SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
MAPSET ID=7
002-002-007                50 10  COM YES YES grp01    OFF 10  33  20
            002-002-008    30 10  COM YES YES grp01    OFF 10  33  20
            002-002-009    30 10  COM YES YES grp01    OFF 10  33  20
            002-002-010    30 20  COM YES YES grp01    OFF 10  50  20
            002-002-011    30 20  COM YES YES grp01    OFF 10  50  20

MAPSET ID=DFLT
255-001-000               250 10  SOL --- --- grp01    ON  -- ---  --

MAPSET ID=1
255-001-000               251 10  SHR --- --- grp01    OFF  10  50  20
            253-001-002   254 10  SHR --- --- grp01    OFF  10  50  20

MAPSET ID=2
255-001-000               252 10  SOL --- --- grp01    ON  -- ---  --
```

```
MAPSET ID=DFLT
255-001-000              253 10  SHR --- --- grp01    OFF  10  50  20
            253-001-004  254 10  SHR --- --- grp01    OFF  10  50  20

MAPSET ID=3
255-001-001              255 10  DOM YES YES grp01    ON   -- ---  --
            253-001-005  254 20  DOM YES YES grp01    ON   -- ---  --
```

2. Display the EAGLE 5 ISS's true point code by entering the `rtrv-sid` command This is an example of the possible output.

```
rlghncxa03w 07-02-10 11:43:04 GMT EAGLE5 37.0.0

PCA               PCI          PCN           CLLI         PCTYPE
010-020-030     1-023-1      12-0-14-1     rlghncxa03w    OTHER
              s-1-023-1    s-12-0-14-1

CPCA
002-002-002       002-002-003       002-002-004      002-002-005
002-002-006       002-002-007       002-002-008      002-002-009
004-002-001       004-003-003       050-060-070

CPCI
1-001-1           1-001-2           1-001-3          1-001-4
1-002-1           1-002-2           1-002-3          1-002-4
2-001-1           7-222-7

CPCN
2-0-10-3          2-0-11-0          2-0-11-2          2-0-12-1
2-2-3-3           2-2-4-0           10-14-10-1
```

Continue the procedure by performing one of these steps.

- If the mated application that is being removed contains a point code that is shown in the `PCA`, `PCI`, `PCN`, or `PCN24` columns of the `rtrv-sid` output, continue the procedure by performing *Step 3* on page 262.
- If the mated application that is being removed does not contain a point code that is shown in the `PCA`, `PCI`, `PCN`, or `PCN24` columns of the `rtrv-sid` output, continue the procedure by performing *Step 5* on page 263.

3. Verify whether or not the any of the features shown in *Table 22: Subsystem Features* on page 258 are enabled, and turned on if required, by entering the `rtrv-ctrl-feat` command.

   The entry `LNP TNs` is shown with a quantity greater than zero if the LNP feature is enabled. If the EIR feature is enabled and turned on, the status of the EIR feature should be on. The entry `ANSI-41 INP Query` is shown if the ANSI-41 INP Query feature is enabled. The entry `INP` is shown if the INP feature is enabled. If the V-Flex feature is enabled and turned on, the status of the V-Flex feature should be on. The entry `ATINP` is shown if the ATINP feature is enabled.

   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, refer to the `rtrv-ctrl-feat` command description in the *Commands Manual*.

   Continue the procedure by performing one of these steps.

   - If none of the features shown in *Table 22: Subsystem Features* on page 258 are enabled, and turned on if required, continue the procedure by performing *Step 5* on page 263.

- If any of the features shown in *Table 22: Subsystem Features* on page 258 are enabled, and turned on if required, continue the procedure by performing *Step 4* on page 263.

4. Verify that the subsystem number of the mated application is in the subsystem application table by entering the rtrv-ss-appl command.

   This is an example of the possible output.

```
rlghncxa03w 08-09-28 14:42:38 GMT EAGLE5 39.2.0
APPL         SSN        STAT
LNP          254        ONLINE
SS-APPL table is 20% FULL (1 of 5)
```

   If a subsystem number is not shown in the `rtrv-ss-appl` output, continue the procedure with *Step 5* on page 263.

   If the LNP feature is enabled and the LNP subsystem number is shown in the `rtrv-ss-appl` output, perform the procedures in the *LNP Feature Activation Guide* and remove the LNP subsystem number from the subsystem application table.

   If the INP or ANSI-41 INP Query feature is enabled and turned on, and the INP subsystem number is shown in the `rtrv-ss-appl` output, perform the procedures in the *Feature Manual - INP/AINPQ* and remove the INP subsystem number from the subsystem application table.

   If the EIR feature is enabled and turned on and the EIR subsystem number is shown in the `rtrv-ss-appl` output, perform the procedures in the *Feature Manual - EIR* and remove the EIR subsystem number from the subsystem application table.

   If the V-Flex feature is enabled and turned on and the V-Flex subsystem number is shown in the `rtrv-ss-appl` output, perform the procedures in the *Feature Manual - V-Flex* and remove the V-Flex subsystem number from the subsystem application table.

   If the ATINP feature is enabled and the ATINPQ subsystem number is shown in the `rtrv-ss-appl` output, perform the procedures in the *Feature Manual - ATINP* and remove the ATINP subsystem number from the subsystem application table.

5. Verify whether or not the EGTT feature is on by entering the `rtrv-feat` command.

   The entry `EGTT = on` is shown if the EGTT feature is on.

   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, refer to the `rtrv-feat` command description in the *Commands Manual*.

   - If the `MAPSET` field is not shown in the `rtrv-map` output in *Step 1* on page 258, continue the procedure with *Step 14* on page 268.
   - If the `MAPSET` field is shown in the `rtrv-map` output in *Step 1* on page 258, and an entire MAP set is being removed using the `all=yes` parameter with the `dlt-map` command, continue the procedure with *Step 14* on page 268.
   - If the `MAPSET` field is shown in the `rtrv-map` output in *Step 1* on page 258, and a specific point code and subsystem entry is being removed from the MAP set, and the EGTT feature is on (shown in the `rtrv-feat` output in this step), *Step 6* on page 263 and *Step 7* on page 264 cannot be performed. Continue the procedure with *Step 8* on page 264.

6. Display the translation types in the database using the `rtrv-tt` command.

This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:42:31 GMT  EAGLE5 37.0.0
TYPEA      TTN        NDGT
1          lidb       5
2          c800       10
3          d700       6
5          scp1       6
10         scp2       6
15         scp3       3

ALIAS      TYPEA
30         5
40         10
50         3
65         3

TYPEI      TTN        NDGT
105        itudb      8

ALIAS      TYPEI
7          105

TYPEN      TTN        NDGT
120        dbitu      7

ALIAS      TYPEN
8          120
```

7. Display the global title translations in the database using the `rtrv-gtt` command specifying a translation type from the `rtrv-tt` command output shown in *Step 6* on page 263, and the MAP set ID that will be removed in *Step 14* on page 268.

   For this example, enter this command.

   `rtrv-gtt:typea=10:mapset=6`

   This is an example of the possible output.

```
rlghncxa03w 08-10-25 09:43:31 GMT  EAGLE5 39.2.0
TYPEA  TTN        NDGT
10     scp2       6

GTT TABLE IS  10 % FULL    (27000 of 269999)

START GTA             END GTA               XLAT   RI     PC
615370                615380                DPCSSN SSN    003-003-003
     MAPSET=6      SSN=254 NGT=---

Command Retrieved 1 Entries
```

   If the `rtrv-gtt` output shows any entries, perform the *Changing a Global Title Translation* on page 524 procedure and change the MAP set assignment for the global title translations displayed in this step.

   Repeat *Step 6* on page 263 and *Step 7* on page 264 for the other translation types shown in *Step 6* on page 263.

   When *Step 6* on page 263 and *Step 7* on page 264 have been performed for all the translation types shown in *Step 6* on page 263, continue the procedure with *Step 10* on page 265.

8. Display the GTT sets in the database using the `rtrv-gttset` command.

This is an example of the possible output.

```
rlghncxa03w 07-05-07 00:27:31 GMT EAGLE5 37.0.0
GTTSN     NETDOM  NDGT
lidb      ansi    10
t800      ansi    10
si000     itu     15
imsi      itu     15
abcd1234  itu     12
```

9. Display the global title address (GTA) information for a GTT set from *Step 8* on page 264.

   Use the `rtrv-gta` command with the `gttsn` parameter value shown in the output of *Step 8* on page 264, and the MAP set ID that will be removed in *Step 14* on page 268. For this example, enter this command.

   `rtrv-gta:gttsn=t800:mapset=6`

   This is an example of the possible output.

```
rlghncxa03w 08-10-07 00:27:31 GMT EAGLE5 39.2.0
GTTSN     NETDOM  NDGT
t800      ansi    10
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
3365840000 3365849999 dpc    ssn    001-255-001
     MAPSET=6     SSN=0   CCGT=no  NTT=---

Command Retrieved 1 Entries
```

   If the `rtrv-gta` output shows any entries, perform the *Changing Global Title Address Information* on page 681 procedure and change the MAP set assignment for the global title translations displayed in this step.

   Repeat *Step 8* on page 264 and *Step 9* on page 265 for the other GTT set names shown in *Step 8* on page 264.

   When *Step 8* on page 264 and *Step 9* on page 265 have been performed for all the GTT set names shown in *Step 8* on page 264, continue the procedure with *Step 10* on page 265.

10. Display the GSM MAP screening operation codes assigned to the MAP set that will be removed in this procedure using the `rtrv-gsms-opcode` command with the MAP set ID that will be removed in *Step 14* on page 268.

    For this example, enter this command.

    `rtrv-gsms-opcode:mapset=6`

    This is an example of the possible output.

```
rlghncxa03w 08-10-10 11:43:04 GMT EAGLE5 39.2.0

OPCODE  OPNAME     DFLTACT       PCA             SSN   MAPSET RI  TT
 36     for1       fwd           002-002-002     10    6      ssn -

OPCODE  OPNAME     DFLTACT       PCI             SSN   MAPSET RI  TT

OPCODE  OPNAME     DFLTACT       PCN             SSN   MAPSET RI  TT

OPCODE  OPNAME     DFLTACT       PCN24           SSN   MAPSET RI  TT
```

```
OPCODE  OPNAME     DFLTACT

GSMMS OPCODE Table (10 of 257) is 4% full
```

If the `rtrv-gsms-opcode` output shows any entries, perform the "Changing a GSM MAP Screening Operation Code" procedure in the Database *Administration Manual - Features* and change the MAP set assignment for the operation code entries displayed in this step.

11. GSM MAP screening entries cannot reference the MAP set being removed in this procedure.

The `opname` parameter value from the `rtrv-gsms-opcode` output must be used to display the GSM MAP screening entries. Display the GSM MAP screening operation codes in the database using the `rtrv-gsms-opcode` command without the `mapset` parameter. This is an example of the possible output.

```
rlghncxa03w 08-10-10 11:43:04 GMT EAGLE5 39.2.0

OPCODE  OPNAME     DFLTACT       PCA             SSN   MAPSET RI  TT
 36     for1       fwd           002-002-002     10    6      ssn -

OPCODE  OPNAME     DFLTACT       PCI             SSN   MAPSET RI  TT
 93     dd93       dupdc         5-25-3          200   DFLT
 139    fwd139     fwd           3-159-7         128    3     gt  10

OPCODE  OPNAME     DFLTACT       PCN             SSN   MAPSET RI  TT
 187    dup187     dupl          11519           79    DFLT

OPCODE  OPNAME     DFLTACT       PCN24           SSN   MAPSET RI  TT

OPCODE  OPNAME     DFLTACT
 22     sri        disc
 25     route25    route
 50     pass50     pass
 71     ati        atierr
 150    discard1   disc
 *      star       pass

GSMMS OPCODE Table (10 of 257) is 4% full
```

12. Display the GSM MAP screening entries assigned to the MAP set being removed in this procedure.

Enter the `rtrv-gsmmap-scrn` command with an `opname` value shown in the `rtrv-gsms-opcode` command output in *Step 11* on page 266 and with the MAP set ID that will be removed in *Step 14* on page 268.

For this example, enter this command.

`rtrv-gsmmap-scrn:opname=dd93:mapset=6`

This is an example of the possible output.

```
rlghncxa03w 08-10-20 09:07:58 GMT  EAGLE5 39.2.0

Single CgPA Entries for OPNAME=dd93
-----------------------------------

SADDR           NP NAI FORBD ACT      PCA           SSN CGSR    MAPSET   RI
92546           *  *   all   fwd      001-001-001   5   cg07    6        ssn
TT=-

SADDR           NP NAI FORBD ACT      PCI           SSN CGSR    MAPSET
```

```
SADDR           NP NAI FORBD ACT      PCN           SSN CGSR    MAPSET

SADDR           NP NAI FORBD ACT      PCN24         SSN CGSR    MAPSET

SADDR           NP NAI FORBD ACT  CGSR

Range CgPA Entries for OPNAME=dd93
----------------------------------

SADDR           EADDR           NP NAI FORBD ACT      PCA           SSN CGSR
3234567         3345678         *  *   all   dupl     001-001-001   30  cg15
MAPSET=6 RI=ssn TT=-

SADDR           EADDR           NP NAI FORBD ACT      PCI           SSN CGSR

SADDR           EADDR           NP NAI FORBD ACT      PCN           SSN CGSR

SADDR           EADDR           NP NAI FORBD ACT      PCN24         SSN CGSR

SADDR           EADDR           NP NAI FORBD ACT   CGSR

GSM MAP Screening Table (9 of 4000) is 1% full
```

If the `rtrv-gsmmap-scrn` output shows any entries, perform the "Changing a GSM MAP Screening Entry" procedure in the *Database Administration Manual - Features* and change the MAP set assignment for the GSM MAP screening entries displayed in this step.

Repeat *Step 11* on page 266 and *Step 12* on page 266 for the other GSM operation code entries shown in *Step 11* on page 266.

When *Step 11* on page 266 and *Step 12* on page 266 have been performed for all the GSM operation code entries shown in *Step 11* on page 266, continue the procedure with *Step 13* on page 267.

13. The mated application cannot be removed if the point code of the mated application (if the Flexible GTT Load Sharing feature is not enabled) or the point code and MAP set ID of the mated application (if the Flexible GTT Load Sharing feature is enabled) is shown in the `rtrv-ppsopts` command output. Enter the `rtrv-ppsopts` command to verify that the mated application's point code or point code and MAP set ID is not shown in the `rtrv-ppsopts` output. This is an example of the possible output.

```
rlghncxa03w 07-05-20 09:07:58 GMT  EAGLE5 37.0.0
Prepaid SMS Options
-------------------
PPT       PCI/PCN                     RI        Set ID
---       --------------------        ---       ------
1         PCI:    1-001-1             SSN       DFLT
2         --------------------        GT        DFLT
3         --------------------        GT        DFLT
4         PCI:    1-001-1             GT        1
5         --------------------        GT        DFLT
6         --------------------        GT        DFLT
7         --------------------        GT        DFLT
8         PCI:    1-001-1             SSN       1
9         --------------------        GT        DFLT
10        --------------------        GT        DFLT
```

Note: If the Flexible GTT Load Sharing feature is not enabled, the Set ID column is not displayed in the `rtrv-ppsopts` output.

If the `rtrv-ppsopts` output shows any entries that reference the mated application's point code (if the Flexible GTT Load Sharing feature is not enabled) or the mated application's point code and MAP set ID (if the Flexible GTT Load Sharing feature is enabled), remove the reference

using the chg-ppsopts command with the prepaid portability type (the PPT value) that contains the reference and either the pci=none or pcn=none parameters (depending on the type of point code the prepaid portability type contains).

```
chg-ppsopts:ppt=4:pci=none
```

This is an example of the possible output.

```
rlghncxa03w 07-05-20 09:07:58 GMT  EAGLE5 37.0.0
CHG-PPSOPTS: MASP A - COMPLTD
```

Repeat this step for other entries shown in the rtrv-ppsopts output that contain the mated application's point code or point code and MAP set ID.

14. Remove the mated application from the database using the dlt-map command with a point code and subsystem number from the rtrv-map command output shown in *Step 1* on page 258.

    If the MAPSET field is shown in the rtrv-map output in *Step 1* on page 258, showing that the Flexible GTT Load Sharing feature is enabled, the mapset parameter must be specified with the dlt-map command.

    If the Flexible GTT Load Sharing feature is not enabled, for this example, enter this command.

    ```
    dlt-map:pca=255-001-002:ssn=253
    ```

    This message should appear.

    ```
    rlghncxa03w 07-05-07  11:48:16 GMT  EAGLE5 37.0.0
    DLT-MAP:  MASP A - COMPLTD
    ```

    If the Flexible GTT Load Sharing feature is enabled, for this example, enter this command.

    ```
    dlt-map:pca=255-001-002:ssn=253:mapset=6
    ```

    This message should appear.

    ```
    rlghncxa03w 07-05-07  11:48:16 GMT  EAGLE5 37.0.0
    DLT-MAP:  MASP A - COMPLTD
    ```

    Note: If all the subsystems for a specified point code (pc, pca, pci, or pcn) are being removed from the mated application table, enter the dlt-map command with the point code and the all=yes parameter. This results in removing the point code from the mated application table. For this example, enter the dlt-map:pca=255-001-002:all=yes command. If the Flexible GTTLoad Sharing feature is enabled, enter the dlt-map:pca=255-001-002:all=yes:mapset=6 command.

    Note: Removing the last subsystem assigned to a point code removes the point code from the mated application table.

15. Verify the changes using the rtrv-map command with the point code and subsystem specified in *Step 14* on page 268.

    If the mapset parameter was specified in *Step 14* on page 268, the mapset parameter should be specified with the rtrv-map command.

    If the mapset parameter was not specified in *Step 14* on page 268, for this example, enter this command.

    ```
    rtrv-map:pca=255-001-002:ssn=253
    ```

If the `mapset` parameter was specified in *Step 14* on page 268, for this example, enter this command.

```
rtrv-map:pca=255-001-002:ssn=253:mapset=6
```

The EAGLE 5 ISS responds with this message showing that the subsystem assigned to the point code is no longer in the database.

```
E2456 Cmd Rej: SSN does not exist for given remote point code
```

Note: If all the subsystems for a specified point code (`pc`, `pca`, `pci`, or `pcn`) were removed from the mated application table in *Step 14* on page 268 (either by specifying the `all=yes` parameter, or by removing the last subsystem assigned to the point code from the mated application table), resulting in removing the point code from the mated application table, enter the `rtrv-map` command with the point code specified in *Step 14* on page 268. For this example, enter the `rtrv-map:pca=255-001-002` command. If the `mapset` parameter was specified in *Step 14* on page 268, enter the `rtrv-map:pca=255-001-002:mapset=6` command.

The EAGLE 5 ISS responds with this message showing that the point code is no longer in the database.

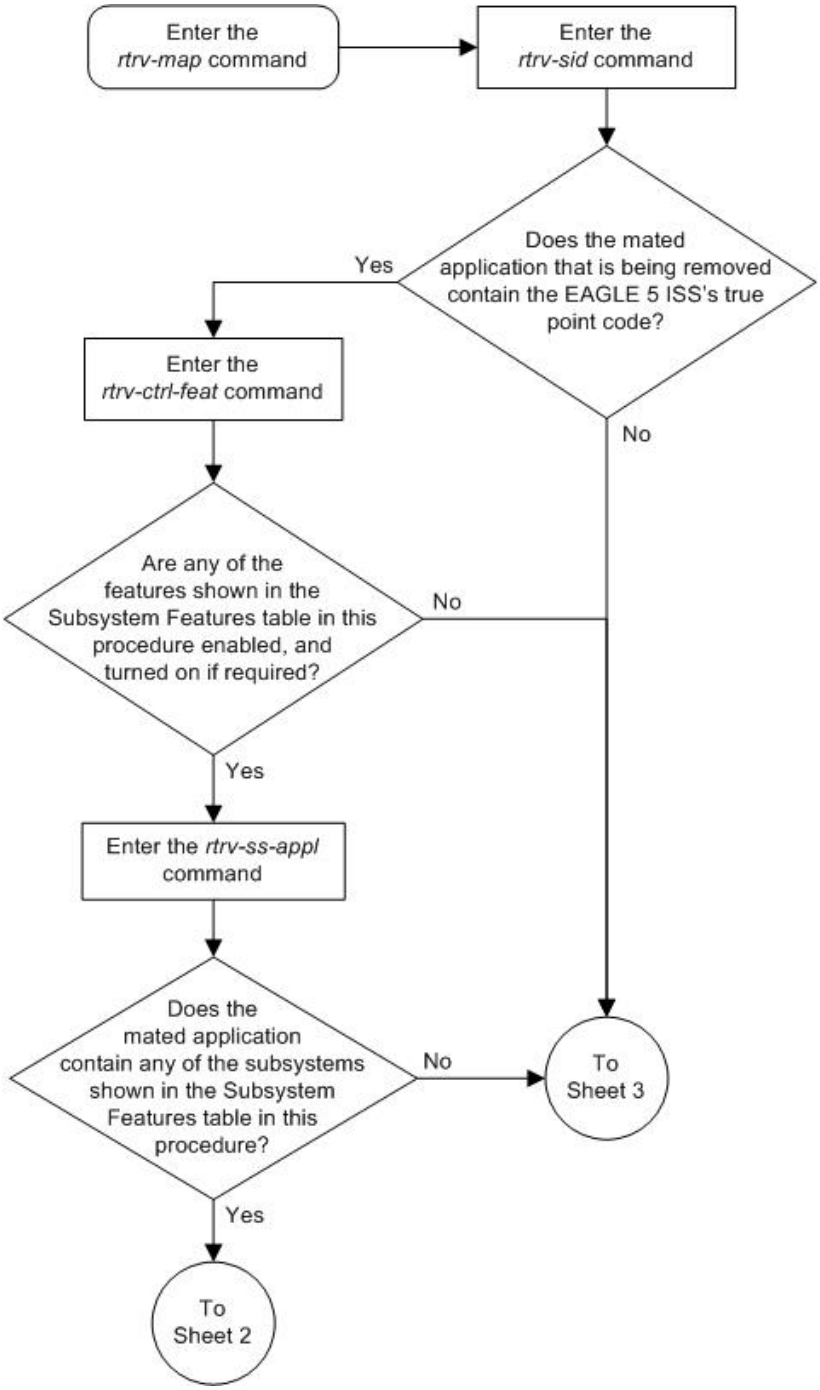
```
E2452 Cmd Rej: Remote point code does not exist
```

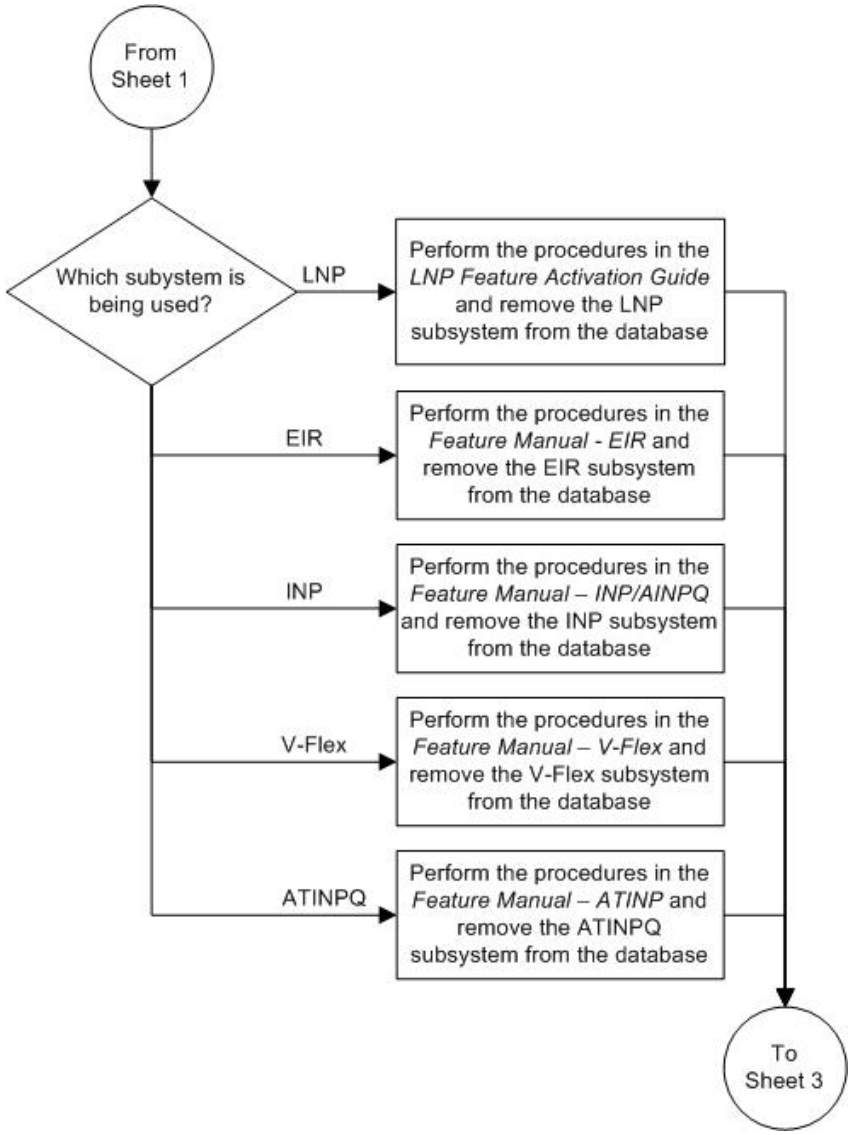
16. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

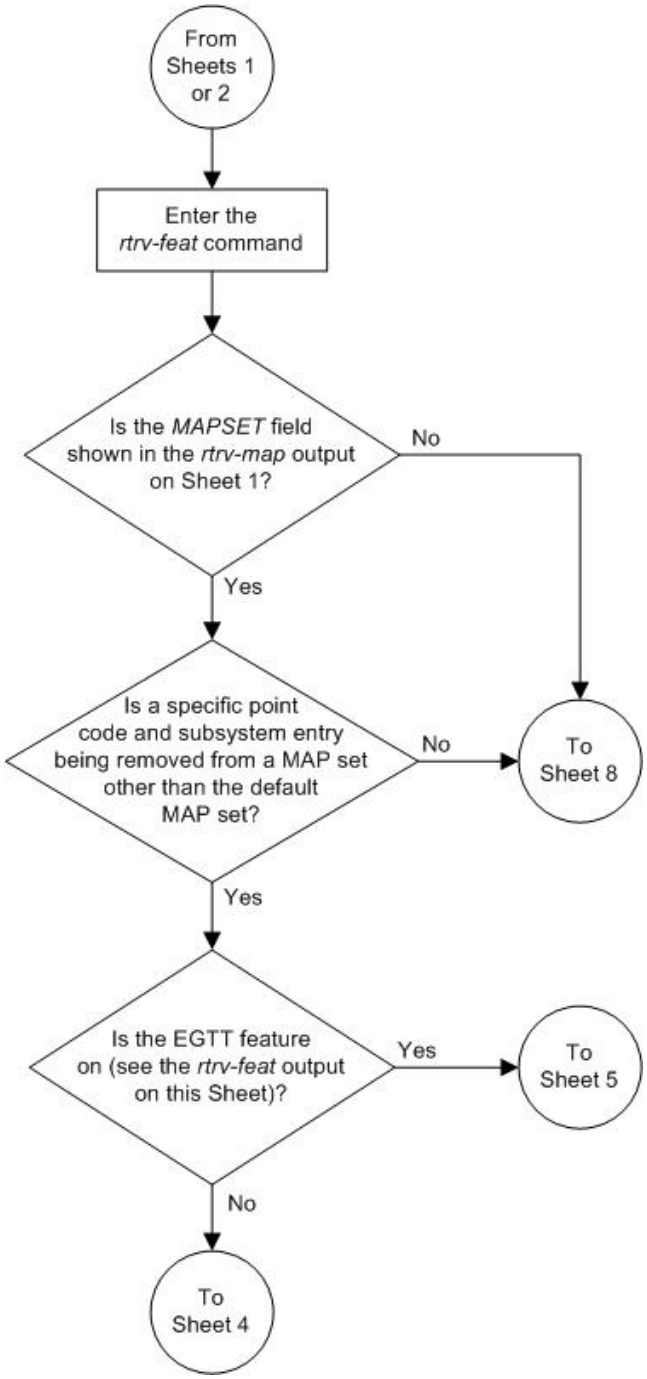
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

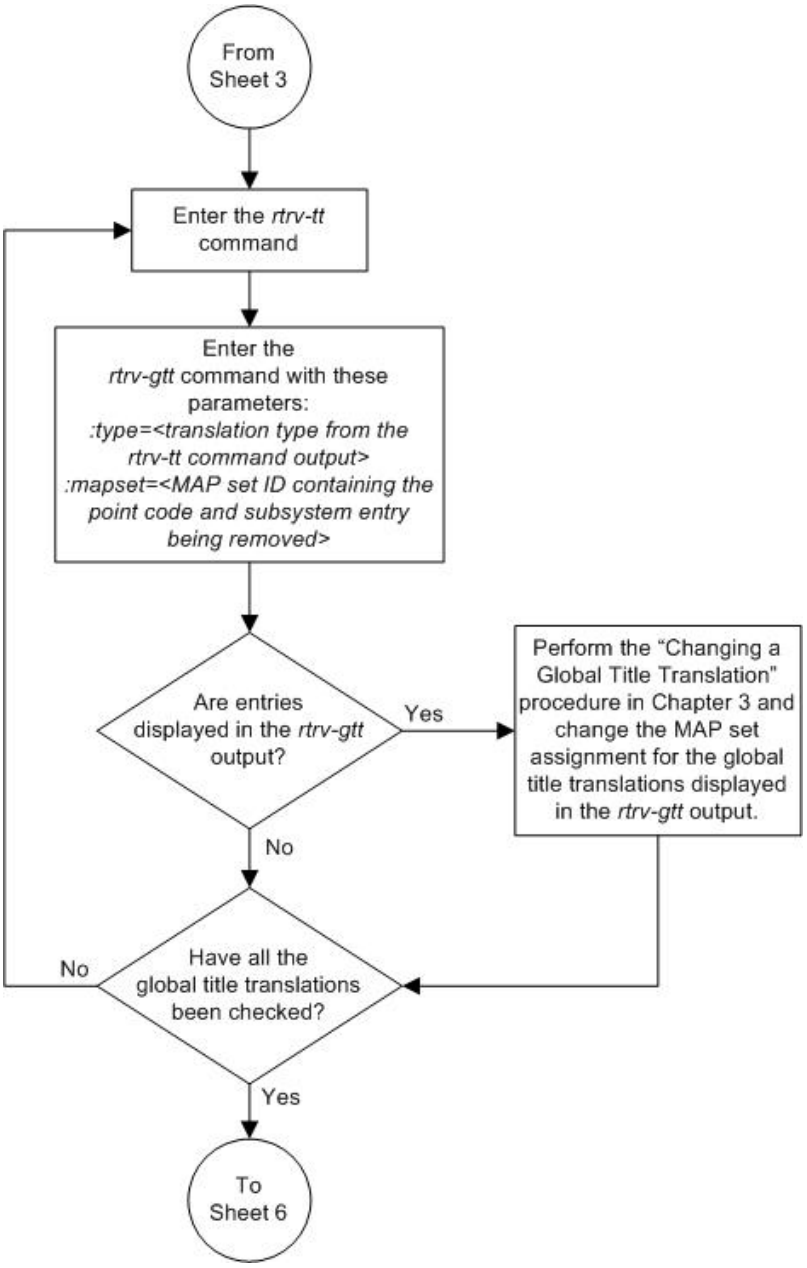
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

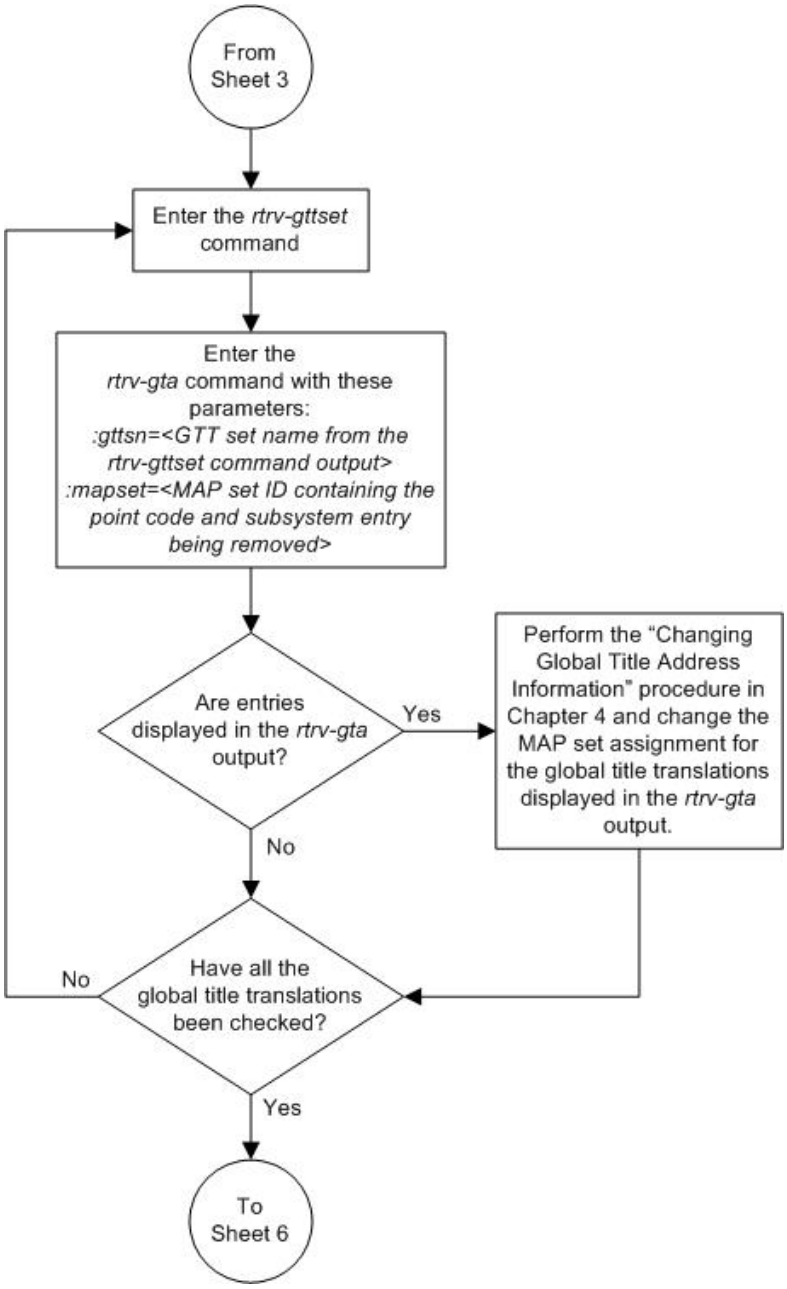
Figure 23: Removing a Mated Application

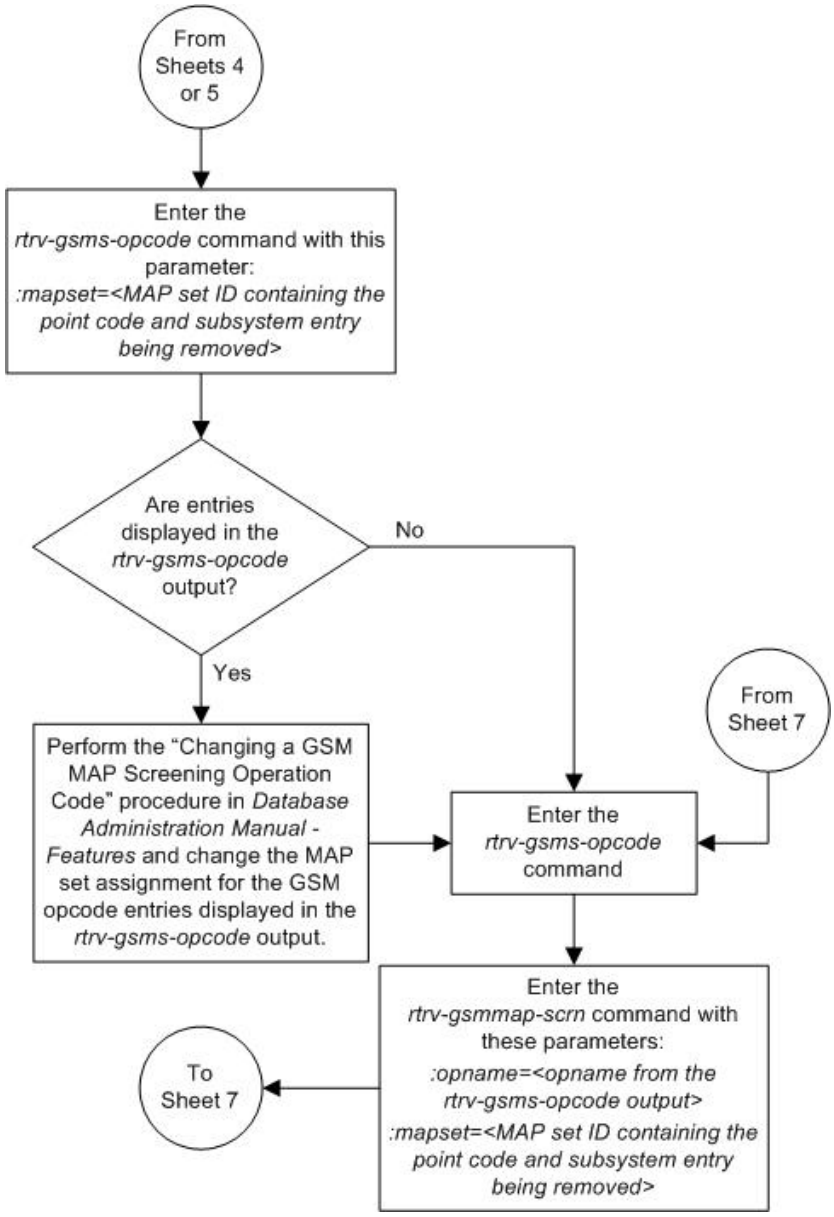

Enter the rtrv-map command
Enter the rtrv-sid command
Does the mated application that is being removed contain the EAGLE 5 ISS's true point code?
Yes
No
Enter the rtrv-ctrl-feat command
Are any of the features shown in the Subsystem Features table in this procedure enabled, and turned on if required?
No
Yes
Enter the rtrv-ss-appl command
Does the mated application contain any of the subsystems shown in the Subsystem Features table in this procedure?
No
To Sheet 3
Yes
To Sheet 2

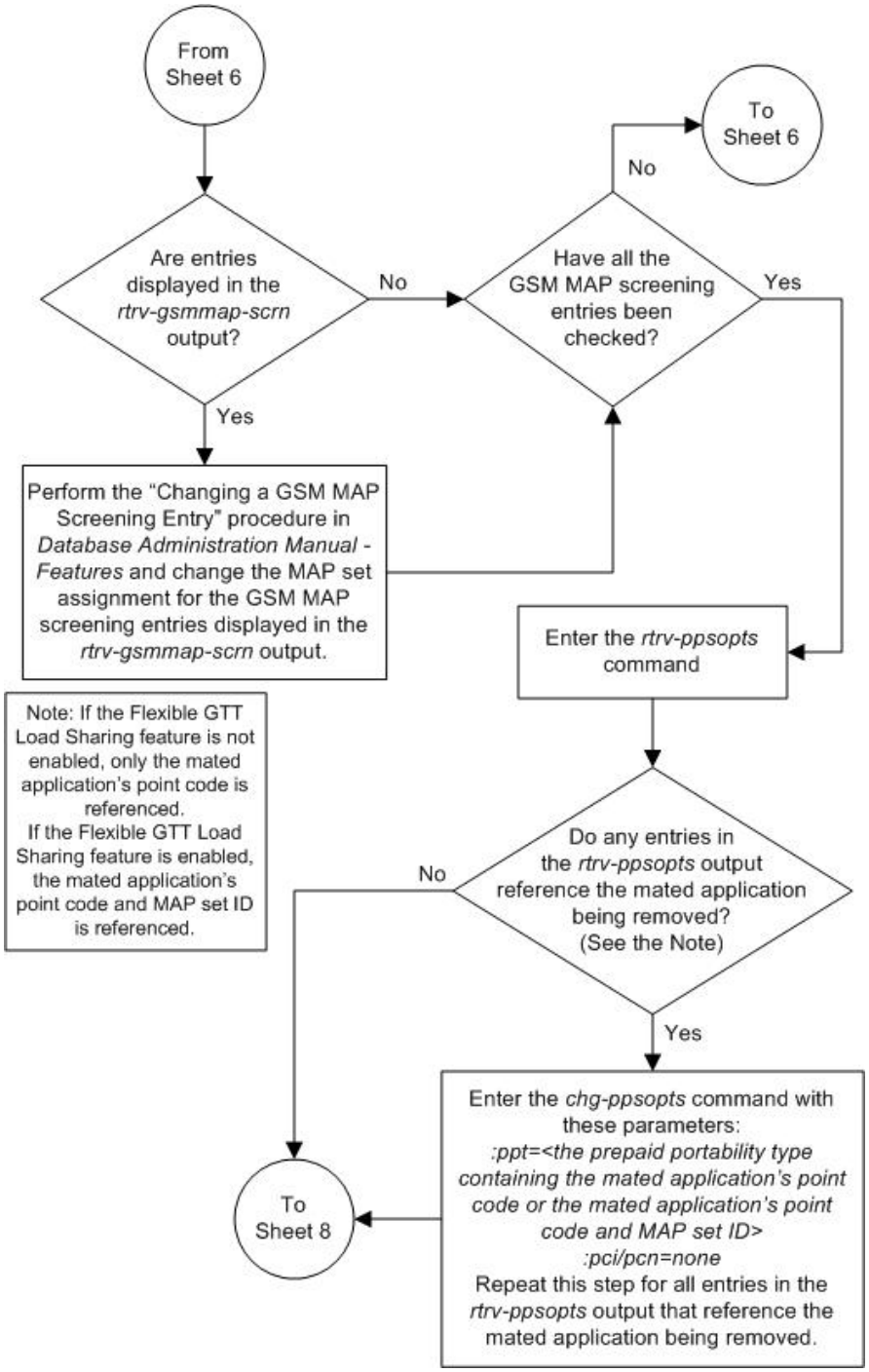

From Sheet 1
Which subystem is being used?
LNP
Perform the procedures in the *LNP Feature Activation Guide* and remove the LNP subsystem from the database
EIR
Perform the procedures in the *Feature Manual - EIR* and remove the EIR subsystem from the database
INP
Perform the procedures in the *Feature Manual – INP/AINPQ* and remove the INP subsystem from the database
V-Flex
Perform the procedures in the *Feature Manual – V-Flex* and remove the V-Flex subsystem from the database
ATINPQ
Perform the procedures in the *Feature Manual – ATINP* and remove the ATINPQ subsystem from the database
To Sheet 3

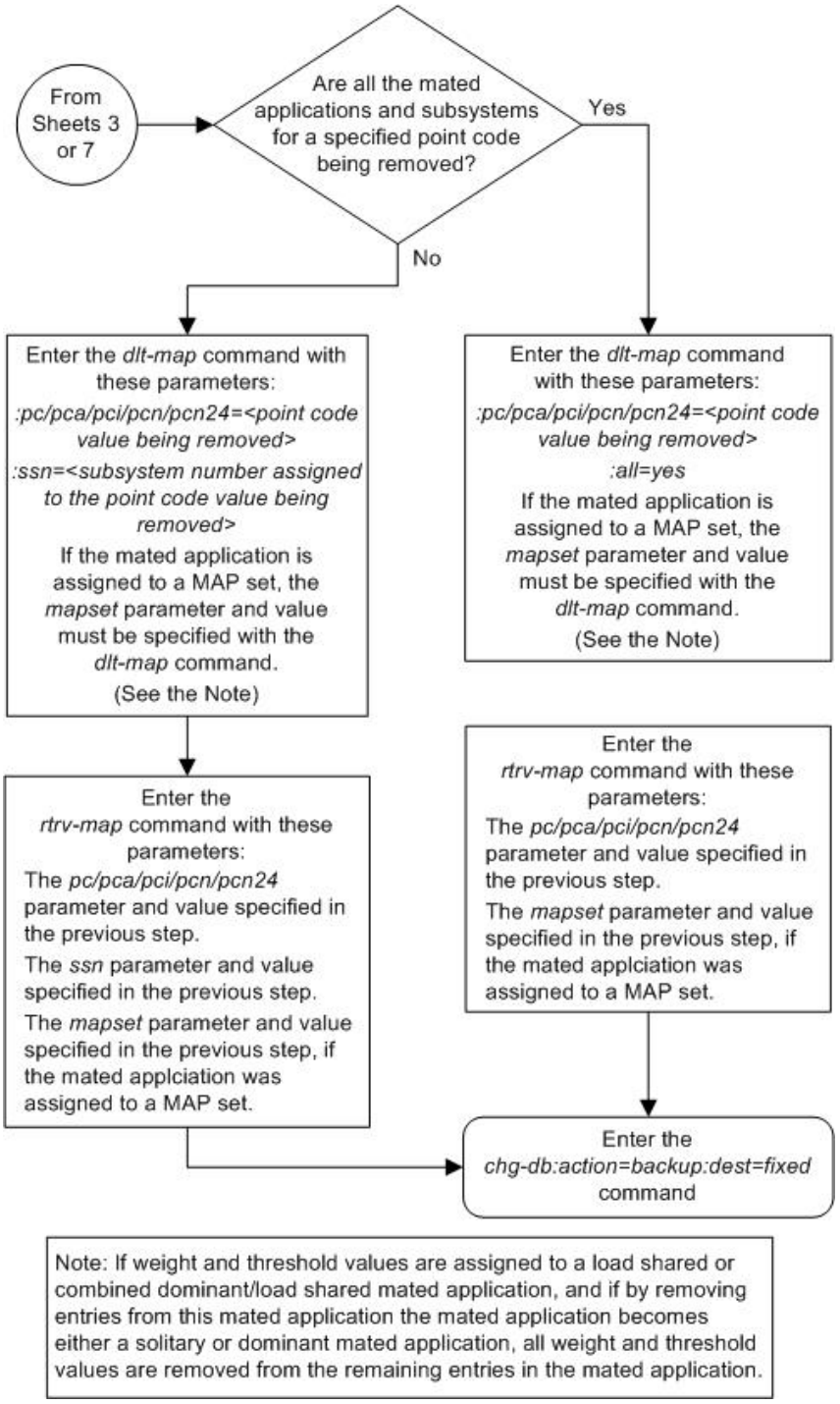

From Sheets 1 or 2
Enter the *rtrv-feat* command
Is the *MAPSET* field shown in the *rtrv-map* output on Sheet 1?
No
Yes
Is a specific point code and subsystem entry being removed from a MAP set other than the default MAP set?
No
To Sheet 8
Yes
Is the EGTT feature on (see the *rtrv-feat* output on this Sheet)?
Yes
To Sheet 5
No
To Sheet 4


From Sheet 3
Enter the *rtrv-tt* command
Enter the *rtrv-gtt* command with these parameters: *:type=<translation type from the rtrv-tt command output> :mapset=<MAP set ID containing the point code and subsystem entry being removed>*
Are entries displayed in the *rtrv-gtt* output?
Yes
Perform the "Changing a Global Title Translation" procedure in Chapter 3 and change the MAP set assignment for the global title translations displayed in the *rtrv-gtt* output.
No
Have all the global title translations been checked?
No
Yes
To Sheet 6


From Sheet 3
Enter the *rtrv-gttset* command
Enter the *rtrv-gta* command with these parameters: *:gttsn=<GTT set name from the rtrv-gttset command output> :mapset=<MAP set ID containing the point code and subsystem entry being removed>*
Are entries displayed in the *rtrv-gta* output?
Yes
Perform the "Changing Global Title Address Information" procedure in Chapter 4 and change the MAP set assignment for the global title translations displayed in the *rtrv-gta* output.
No
Have all the global title translations been checked?
No
Yes
To Sheet 6


From Sheets 4 or 5
Enter the *rtrv-gsms-opcode* command with this parameter: *:mapset=<MAP set ID containing the point code and subsystem entry being removed>*
Are entries displayed in the *rtrv-gsms-opcode* output?
No
Yes
From Sheet 7
Perform the "Changing a GSM MAP Screening Operation Code" procedure in *Database Administration Manual - Features* and change the MAP set assignment for the GSM opcode entries displayed in the *rtrv-gsms-opcode* output.
Enter the *rtrv-gsms-opcode* command
Enter the *rtrv-gsmmap-scrn* command with these parameters: *:opname=<opname from the rtrv-gsms-opcode output>* *:mapset=<MAP set ID containing the point code and subsystem entry being removed>*
To Sheet 7


From Sheet 6
To Sheet 6
No
Are entries displayed in the *rtrv-gsmmap-scrn* output?
No
Have all the GSM MAP screening entries been checked?
Yes
Yes
Perform the "Changing a GSM MAP Screening Entry" procedure in *Database Administration Manual - Features* and change the MAP set assignment for the GSM MAP screening entries displayed in the *rtrv-gsmmap-scrn* output.
Enter the *rtrv-ppsopts* command
Note: If the Flexible GTT Load Sharing feature is not enabled, only the mated application's point code is referenced.
If the Flexible GTT Load Sharing feature is enabled, the mated application's point code and MAP set ID is referenced.
Do any entries in the *rtrv-ppsopts* output reference the mated application being removed? (See the Note)
No
Yes
Enter the *chg-ppsopts* command with these parameters:
:ppt=<the prepaid portability type containing the mated application's point code or the mated application's point code and MAP set ID>
:pci/pcn=none
Repeat this step for all entries in the *rtrv-ppsopts* output that reference the mated application being removed.
To Sheet 8


From Sheets 3 or 7
Are all the mated applications and subsystems for a specified point code being removed?
Yes
No
Enter the dlt-map command with these parameters:
:pc/pca/pci/pcn/pcn24=<point code value being removed>
:ssn=<subsystem number assigned to the point code value being removed>
If the mated application is assigned to a MAP set, the mapset parameter and value must be specified with the dlt-map command.
(See the Note)
Enter the dlt-map command with these parameters:
:pc/pca/pci/pcn/pcn24=<point code value being removed>
:all=yes
If the mated application is assigned to a MAP set, the mapset parameter and value must be specified with the dlt-map command.
(See the Note)
Enter the rtrv-map command with these parameters:
The pc/pca/pci/pcn/pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
The mapset parameter and value specified in the previous step, if the mated applciation was assigned to a MAP set.
Enter the rtrv-map command with these parameters:
The pc/pca/pci/pcn/pcn24 parameter and value specified in the previous step.
The mapset parameter and value specified in the previous step, if the mated applciation was assigned to a MAP set.
Enter the chg-db:action=backup:dest=fixed command
Note: If weight and threshold values are assigned to a load shared or combined dominant/load shared mated application, and if by removing entries from this mated application the mated application becomes either a solitary or dominant mated application, all weight and threshold values are removed from the remaining entries in the mated application.

Changing a Mated Application

This procedure is used to change the attributes of entries in an existing mated application (MAP) group or MAP set using the `chg-map` command.

The `chg-map` command can also be used to add point code/SSN entries to an existing MAP group or MAP set. This action is not covered in this procedure. If you wish to add point code/SSN entries to an existing MAP group or MAP set, perform one of these procedures:

- *Provisioning a Solitary Mated Application* on page 112
- *Provisioning a Dominant Mated Application* on page 142
- *Provisioning a Load Shared Mated Application* on page 189
- *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223

The `chg-map` command uses these parameters.

`:pc/pca/pci/pcn/pcn24` – The point code of the primary signaling point that is to receive the message.

Note: The point codes can be either an ANSI point code (pc/pca, mpc/mpca), ITU-I or ITU-I spare point code (pci, mpci), a 14-bit ITU-N or 14-bit ITU-N spare point code (pcn, mpcn), or a 24-bit ITU-N (`pcn24`, `mpcn24`) point code.

Note: Refer to Chapter 2, Configuring Destination Tables, in the Database *Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

`:ssn` – Subsystem number – the subsystem address of the primary point code that is to receive the message.

`:rc` – The relative cost value of the primary point code and subsystem, defined by the `pc/pca/pci/pcn/pcn24` and `ssn` parameters. The `rc` parameter has a range of values from 0 to 99.

`:grp` – The name of the concerned signaling point code group that contains the point codes that should be notified of the subsystem status. This parameter applies to both RPCs/SSNs.

`:mrc` – Message routing under congestion – defines the handling of Class 0 messages during congestion conditions.

`:srm` – Subsystem routing messages – defines whether subsystem routing messages (SBR, SNR) are transmitted between the mated applications.

`:sso` – Subsystem Status Option – defines whether the subsystem status option is on or off. This parameter allows the user the option to have the specified subsystem marked as prohibited even though an MTP-RESUME message has been received by the indicating that the specified point code is allowed. The `sso` parameter cannot be specified if the `pc/pca/pci/pcn/pcn24` value is the EAGLE 5 ISS's true point code, shown in the `rtrv-sid` output.

`:mapset` – The MAP set ID that the mated applications are assigned to, shown in the `rtrv-map` output. MAP set IDs are shown only if the Flexible GTT Load Sharing feature is enabled. The `mapset` parameter has two values:

- `dflt` – to change the mated application in the default MAP set.

- the specific number of an existing MAP set if you are changing the mated application in an existing MAP set.

The `mapset` parameter value cannot be changed in this procedure.

If the `rtrv-map` output shows the `MAPSET` field, the `mapset` parameter must be specified with the `chg-map` command.

If the `rtrv-map` output does not show the `MAPSET` field, the Flexible GTT Load Sharing feature is not enabled. The `mapset` parameter cannot be specified with the `chg-map` command.

The EAGLE 5 ISS's true point code (shown in the `rtrv-sid` output) and subsystem can be assigned only to the default MAP set.

`:eswt` – The entity set weight value. When this parameter is specified, the same weight value is assigned to all entries in the MAP group or MAP set that contain the point code value specified in the `chg-map` command. A MAP group or MAP set can also be referred to as an entity set. The value of this parameter is from 1 - 99.

`:grpwt` – The group weight value. When this parameter is specified, the same weight value is assigned to all entries that have the same RC (relative cost) value in the MAP group or MAP set that contain the point code specified in the `chg-map` command. The value of this parameter is from 1 - 99.

`:wt` – The weight value assigned to the point code specified in this procedure. The value of this parameter is from 1 - 99.

`:thr` – The in-service threshold assigned to the MAP group or MAP set. The in-service threshold is the minimum percentage (from 1 - 100) of weight that must be available for an RC group (a group of entries in the MAP group or MAP set that have the same RC value assigned) to be considered available to carry traffic. If the percentage of the available weight is less than the in-service threshold, then the entire RC group is considered unavailable for traffic. If the percentage of the available weight is equal to or greater than the in-service threshold, then the RC group is considered available, and traffic can be sent to any available entity in the RC group. The value of the `thr` parameter is assigned to all entries that have the same RC (relative cost) value in the MAP group or MAP set that contain the point code specified in the `chg-map` command.

Refer to the Provisioning a MAP Set section for information on provisioning MAP groups or MAP sets with weight and in-service threshold values.

`:force=yes` – This parameter must be specified if the `rc` parameter is specified with either the `srm`, `mrc`, or `wt` parameters.

The `chg-map` command also contains these parameters: `mpc/mpca/mpci/ mpcn/mpcn24`, `mssn`, `materc`, and `mwt`. These parameters are not used in this procedure. If you wish to use these parameters, perform one of these procedures.

- *Provisioning a Solitary Mated Application* on page 112
- *Provisioning a Dominant Mated Application* on page 142
- *Provisioning a Load Shared Mated Application* on page 189
- *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223

At least one optional parameter must be specified.

The mated application to be changed must be in the database.

If the primary point code and subsystem are being changed, the current mated application must be removed from the database and a new mated application with the new primary point code and

subsystem, containing the mated point codes and subsystems from the mated application that was removed, should be added to the database.

If an existing dominant, load shared, or combined dominant/load shared mated application is being changed to a solitary mated application, the existing mated application must be removed from the database, and the new solitary mated application, containing the primary point code and subsystem from the mated application that was removed, must be added to the database.

If a solitary mated application is being changed and is to remain a solitary mated application, only the `sso` parameter value and CSPC group name can be changed. The CSPC group name is changed with the `grp` parameter.

If the point code is entered with the`pc` or`pca` parameters, the specified point codes in the concerned point code broadcast group must have been entered with the `pc` or`pca` parameters of the `ent-cspc` command. If the point code is entered with the `pci`,`pcn`, or`pcn24` parameters, the specified point codes in the concerned point code broadcast group must have been entered with the`pci`,`pcn`, or `pcn24` parameters of the `ent-cspc` command, respectively.

If the mated application contains the EAGLE 5 ISS's true point code, the relative cost value assigned to this point code must be the lowest value in the mated application.

The format of the point codes in the CSPC group specified with the `grp` parameter must be the same as the primary point code specified with the `chg-map` command only if the ANSI-ITU-China SCCP Conversion feature is not enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (refer to the *Adding a Concerned Signaling Point Code* on page 100 procedure), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application. The status of the ANSI-ITU-China SCCP Conversion feature can be verified with the `rtrv-ctrl-feat` command.

If the point code values are ITU values (`pci , pcn ,` or `pcn24`), the `srm=yes` parameter cannot be specified.

The EAGLE 5 ISS can contain 1024, 2000, or 3000 mated applications. The EAGLE 5 ISS default is 1024 mated applications. This quantity can be increased to 2000 by enabling the feature access key for part number 893-0077-01, or to 3000 by enabling the feature access key for part number 893-0077-10. For more information on enabling these feature access keys, refer to the *Enabling the XMAP Table Expansion Feature* on page 771 procedure.

Provisioning Weights and In-Service Thresholds for Mated Applications

Weighted GTT Load Sharing allows unequal traffic loads to be provisioned in MAP load sharing groups or MAP load sharing sets. This feature also allows provisioning control over load sharing groups or sets so that if insufficient capacity within the load sharing group or set is available, the load sharing group or set is not used.

To provision the weight values and in-service threshold values for existing MAP groups or MAP sets, the `eswt`, `grpwt`, `wt`, and `thr` parameters are used.

The `eswt`, `grpwt`, `wt`, and `thr` parameters can be used only:

- If the MAP group or MAP set is either a load shared or combined dominant/load shared MAP group or MAP set.
- If the Weighted GTT Load Sharing feature is enabled and turned on.

The status of the Weighted GTT Load Sharing feature can be verified by entering the `rtrv-ctrl-feat` command. If the Weighted GTT Load Sharing feature is not enabled or not

turned on, perform the *Activating the Weighted GTT Load Sharing Feature* on page 813 procedure to enable and turn on the Weighted GTT Load Sharing feature.

To assign the same weight value to all the entries in the MAP group or MAP set that contains the point code value specified in the `chg-map` command, use the `eswt` parameter.

To assign the same weight value to all the entries of the MAP group or MAP set that have the same RC value as the point code value specified in the `chg-map` command, use the `grpwt` parameter.

To assign an in-service threshold value to the entries of a MAP group or MAP set that contains the point code value specified in the `chg-map` command, use the `thr` parameter. When the `thr` parameter is specified with the `eswt` parameter, the in-service threshold value is assigned to all the entries of the MAP group or MAP set. When the `thr` parameter is specified with the `grpwt` parameter, or without either the `eswt` or `grpwt` parameters, the in-service threshold value is assigned to all the entries of the MAP group or MAP set that have the same RC value as the point code specified with the `chg-map` command.

To assign different weight values to the entries in the MAP group or MAP set, use the `wt` parameter with the corrsponding point code parameters.

The `eswt` or `grpwt` parameters and the individual weight parameter (`wt`) cannot be specified together in the `chg-map` command.

Specifying the `eswt`, `grpwt`, or `thr` parameter with the `chg-map` command can be done when specifying only the point code and SSN parameters.

The weight values assigned to the entiries in the MAP group or MAP set are shown in the `WT` column in the `rtrv-map` output.

The in-service threshold values assigned to the entiries in the MAP group or MAP set are shown in the `THR` column in the `rtrv-map` output.

The `%WT` column in the `rtrv-map` output shows the percentage of the traffic the particular entry in the entity set will handle.

The `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output only if the Weighted GTT Load Sharing feature is enabled and turned on.

For more information on the Weighted GTT Load Sharing feature, refer to the *Weighted GTT Load Sharing* on page 42 section.

Canceling the `RTRV-MAP` Command

Because the `rtrv-map` command used in this procedure can output information for a long period of time, the `rtrv-map` command can be canceled and the output to the terminal stopped. There are three ways that the `rtrv-map` command can be canceled.

- Press the `F9` function key on the keyboard at the terminal where the `rtrv-map` command was entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rtrv-map` command was entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rtrv-map` command was entered, from another terminal other that the terminal where the `rtrv-map` 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, refer to the *Commands Manual*.

1. Display the mated applications in the database using the `rtrv-map` command.

   If the Flexible GTT Load Sharing feature is not enabled, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
002-002-002               250 10  SHR --- --- grp15    ON
             100-130-079  250 10  SHR --- --- grp15    ON
             068-135-094  251 10  SHR --- --- grp05    OFF

003-003-003               254 10  DOM YES YES grp10    ON
             040-040-040  254 20  DOM YES YES grp10    ON

004-004-004               254 10  SHR --- --- grp10    OFF
             100-100-100  254 10  SHR --- --- grp10    OFF

005-005-005               250 10  DOM YES YES grp15    OFF
             060-060-060  250 20  DOM YES YES grp15    OFF
             070-070-070  251 30  DOM YES YES grp05    ON

006-006-006               250 10  SOL --- --- grp15    OFF

007-007-007               251 10  SOL --- --- grp05    ON

008-008-008               254 10  COM YES YES grp10    ON
             200-147-100  254 10  COM YES YES grp10    ON
             179-183-050  250 10  COM YES YES grp15    OFF
             031-049-100  250 20  COM YES YES grp15    ON
             056-113-200  251 20  COM YES YES grp05    OFF

255-001-000               250 10  SOL --- --- grp01    ON

255-001-000               251 10  SHR --- --- grp01    OFF
             253-001-002  254 10  SHR --- --- grp01    OFF

255-001-000               252 10  SOL --- --- grp01    ON

255-001-000               253 10  SHR --- --- grp01    OFF
             253-001-004  254 10  SHR --- --- grp01    OFF

255-001-001               255 10  DOM YES YES grp01    ON
             253-001-005  254 20  DOM YES YES grp01    ON

255-001-001               250 10  DOM NO  NO  grp01    OFF
             253-001-001  254 20  DOM NO  NO  grp01    OFF

255-001-002               251 10  SHR --- --- grp01    OFF
             255-001-002  254 10  SHR --- --- grp01    OFF

255-001-002               252 10  DOM YES YES grp01    ON

             255-001-003  254 20  DOM YES YES grp01    ON

255-001-002               253 10  SHR --- --- grp01    ON
             255-001-004  254 10  SHR --- --- grp01    ON
```

```
PCI          Mate PCI     SSN RC MULT SRM MRC GRP NAME SSO
2-001-2                   255 10  DOM YES YES grp03    OFF
             2-001-1      254 20  DOM YES YES grp03    OFF

PCN          Mate PCN     SSN RC MULT SRM MRC GRP NAME SSO
00347                     253 10  SHR --- --- grp05    OFF
             01387        254 10  SHR --- --- grp05    OFF
```

Note: If the Weighted GTTLoad Sharing feature is enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output as shown in the following example.

```
PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
002-002-007                50 10  COM YES YES grp01    OFF 10  33  20
             002-002-008   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-009   30 10  COM YES YES grp01    OFF 10  33  20
             002-002-010   30 20  COM YES YES grp01    OFF 10  50  20
             002-002-011   30 20  COM YES YES grp01    OFF 10  50  20

255-001-000               250 10  SOL --- --- grp01    ON  -- ---  --

255-001-000               251 10  SHR --- --- grp01    OFF  10  50  20
             253-001-002  254 10  SHR --- --- grp01    OFF  10  50  20

255-001-000               252 10  SOL --- --- grp01    ON  -- ---  --

255-001-000               253 10  SHR --- --- grp01    OFF  10  50  20
             253-001-004  254 10  SHR --- --- grp01    OFF  10  50  20

255-001-001               255 10  DOM YES YES grp01    ON  -- ---  --
             253-001-005  254 20  DOM YES YES grp01    ON  -- ---  --
```

If the Flexible GTT Load Sharing feature is enabled, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   1 % FULL    (37 of 36000)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=DFLT
002-002-002               250 10  SHR --- --- grp15    ON
             100-130-079  250 10  SHR --- --- grp15    ON
             068-135-094  251 10  SHR --- --- grp05    OFF

MAPSET ID=10
003-003-003               254 10  DOM YES YES grp10    ON
             040-040-040  254 20  DOM YES YES grp10    ON

MAPSET ID=11
004-004-004               254 10  SHR --- --- grp10    OFF
             100-100-100  254 10  SHR --- --- grp10    OFF

MAPSET ID=DFLT
005-005-005               250 10  DOM YES YES grp15    OFF
             060-060-060  250 20  DOM YES YES grp15    OFF
             070-070-070  251 30  DOM YES YES grp05    ON

MAPSET ID=9
006-006-006               250 10  SOL --- --- grp15    OFF

MAPSET ID=DFLT
007-007-007               251 10  SOL --- --- grp05    ON

MAPSET ID=12
```

```
008-008-008               254 10  COM YES YES grp10    ON
            200-147-100   254 10  COM YES YES grp10    ON
            179-183-050   250 10  COM YES YES grp15    OFF
            031-049-100   250 20  COM YES YES grp15    ON
            056-113-200   251 20  COM YES YES grp05    OFF

MAPSET ID=DFLT
255-001-000               250 10  SOL --- --- grp01    ON

MAPSET ID=1
255-001-000               251 10  SHR --- --- grp01    OFF
            253-001-002   254 10  SHR --- --- grp01    OFF

MAPSET ID=2
255-001-000               252 10  SOL --- --- grp01    ON

MAPSET ID=DFLT
255-001-000               253 10  SHR --- --- grp01    OFF
            253-001-004   254 10  SHR --- --- grp01    OFF
MAPSET ID=3
255-001-001               255 10  DOM YES YES grp01    ON
            253-001-005   254 20  DOM YES YES grp01    ON
MAPSET ID=4
255-001-001               250 10  DOM NO  NO  grp01    OFF
            253-001-001   254 20  DOM NO  NO  grp01    OFF

MAPSET ID=DFLT
255-001-002               251 10  SHR --- --- grp01    OFF
            255-001-002   254 10  SHR --- --- grp01    OFF

MAPSET ID=5
255-001-002               252 10  DOM YES YES grp01    ON
            255-001-003   254 20  DOM YES YES grp01    ON

MAPSET ID=6
255-001-002               253 10  SHR --- --- grp01    ON
            255-001-004   254 10  SHR --- --- grp01    ON

PCI         Mate PCI      SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=7
2-001-2                   255 10  DOM YES YES grp03    OFF
            2-001-1       254 20  DOM YES YES grp03    OFF

PCN         Mate PCN      SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=8
00347                     253 10  SHR --- --- grp05    OFF
            01387         254 10  SHR --- --- grp05    OFF
```

Note: If the Flexible GTTLoad Sharing and Weighted GTTLoad Sharing features are enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output as shown in the following example.

```
PCA         Mate PCA      SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR MAPSET
 ID=7
002-002-007                50 10  COM YES YES grp01    OFF 10  33  20
            002-002-008    30 10  COM YES YES grp01    OFF 10  33  20
            002-002-009    30 10  COM YES YES grp01    OFF 10  33  20
            002-002-010    30 20  COM YES YES grp01    OFF 10  50  20
            002-002-011    30 20  COM YES YES grp01    OFF 10  50  20

MAPSET ID=DFLT
255-001-000               250 10  SOL --- --- grp01    ON  -- ---  --

MAPSET ID=1
255-001-000               251 10  SHR --- --- grp01    OFF  10  50  20
```

```
             253-001-002  254 10  SHR --- --- grp01    OFF  10  50  20

MAPSET ID=2
255-001-000               252 10  SOL --- --- grp01    ON  -- ---  --

MAPSET ID=DFLT
255-001-000               253 10  SHR --- --- grp01    OFF  10  50  20
             253-001-004  254 10  SHR --- --- grp01    OFF  10  50  20

MAPSET ID=3
255-001-001               255 10  DOM YES YES grp01    ON  -- ---  --
             253-001-005  254 20  DOM YES YES grp01    ON  -- ---  --
```

This procedure is used only to change the `rc`, `grp`, `sso`, `srm`, `mrc` values in the MAP group or MAP set, or if Weighted GTT Load Sharing feature is enabled and turned on, to change the weight and in-service threshold values assigned to the MAP entries. Adding new point code/SSN entries to the MAP groups or MAP sets is not discussed in this procedure. If you wish to add new point code/SSN entries to existing MAP groups or MAP sets, do not perform this procedure but perform one of these procedures in this chapter:

- *Provisioning a Solitary Mated Application* on page 112
- *Provisioning a Dominant Mated Application* on page 142
- *Provisioning a Load Shared Mated Application* on page 189
- *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223

If you wish to change the point code and SSN of a mated application, record the data for the mated application. Remove the mated application by performing the *Removing a Mated Application* on page 256 procedure. Add the mated application with the new point code and SSN by performing the one of the Provisioning a Mated Application procedures.

A solitary mated application has only one entry. If you wish to change a solitary mated application to a dominant, load shared, or combined dominant/load shared mated application, perform the one of the Provisioning a Mated Application procedures.

If you wish to change a dominant, load shared, or combined dominant/load shared mated application to a solitary mated application, record the data for the mated application. Remove the mated application by performing the *Removing a Mated Application* on page 256 procedure. Add the solitary mated application with the point code and SSN from the previous mated application by performing the *Provisioning a Solitary Mated Application* on page 112 procedure.

2. Display the point codes in the CSPC group that you wish to assign to the mated application by first entering the `rtrv-cspc` command with no parameters.

   Note: If a concerned signaling point code (CSPC) group name is not being changed, skip steps 2 and 3, and go to step 4. If a solitary mated application being changed is to remain a solitary mated application, only the CSPC group name and `sso` parameter value can be changed. If you do not wish to change the CSPC group name, but wish to change the `sso` parameter value for the solitary mated application, skip steps 2 and 3, and go to step 4. If the CSPC group name and `sso` parameter value are not being changed for the solitary mated application, no further action can be performed. This procedure is finished.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:48:31  GMT  EAGLE5 36.0.0
CSPC GRP   NETWORK                PERCENT FULL
grp01      ANSI                     6%
grp02      ITU-I                    9%
grp03      ITU-N                   12%
```

```
grp04      ANSI                    15%
grp05      ANSI                    15%
grp10      ANSI                    15%
grp15      ANSI                    15%
```

If the desired CSPC group is shown in the `rtrv-cspc` output, re-enter the `rtrv-cspc` command with the CSPC group name. For this example, enter this command.

```
rtrv-cspc:grp=grp05
```

This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:48:31  GMT  EAGLE5 36.0.0
CSPC GRP      PCA
grp05         005-005-005
              007-007-007
              008-008-008
              009-009-009
```

Note: If the ANSI-ITU-China SCCP Conversion feature is enabled, then point codes of multiple network types can be displayed in the `rtrv-cspc` output, if point codes of multiple network types are assigned to the CSPC group.

If the CSPC group is not in the database, or if the required point code is not assigned to the CSPC group, perform the *Adding a Concerned Signaling Point Code* on page 100 procedure and add the required CSPC group or point code to the database.

3. The format of the point codes in the CSPC group specified with the `grp` parameter must be the same as the primary point code specified with the `ent-map` command only if the ANSI-ITU-China SCCP Conversion feature is not enabled.

   Note: If the output of the `rtrv-cspc` command performed in step 7 shows CSPC groups containing a mixture of point code types, or if the new CSPC group that was added in step 7 contains a mixture of point code types, skip this step and go to step 9.

   If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (refer to the *Adding a Concerned Signaling Point Code* on page 100 procedure), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application.

   Verify the status of the ANSI-ITU-China SCCP Conversion feature by entering this command:

   ```
   rtrv-ctrl-feat:partnum=893012001
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   The following features have been permanently enabled:

   Feature Name              Partnum    Status  Quantity
   SCCP Conversion           893012001  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 ANSI-ITU-China SCCP Conversion feature is not enabled, perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure to enable the ANSI-ITU-China SCCP Conversion feature.

4. The `sso` parameter cannot be specified for a mated application if the `pc/pca/pci/pcn/pcn24` value is the EAGLE 5 ISS's point code. A load shared or combined dominant/load shared mated application cannot contain the EAGLE 5 ISS's point code. A dominant mated application containing the EAGLE 5 ISS's point code can contain only one mate point code and SSN. The EAGLE 5 ISS's point code in the dominant mated application must have the lowest RC value.

   Verify the EAGLE 5 ISS's point code by entering the `rtrv-sid` command. The EAGLE 5 ISS's point code is shown in the `PCA`, `PCI`, `PCN`, and `PCN24` fields. This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 36.0.0
   PCA             PCI          PCN                CLLI               PCTYPE
   010-020-030     1-023-1      12-0-14-1          rlghncxa03w        OTHER
                 s-1-023-1    s-12-0-14-1

   CPCA
   001-001-001       002-002-003       002-002-004       002-002-005
   002-002-006       002-002-007       002-002-008       002-002-009
   004-002-001       004-003-003       050-060-070

   CPCI
   1-001-1           1-001-2           1-001-3           1-001-4
   1-002-1           1-002-2           1-002-3           1-002-4
   2-001-1           7-222-7

   CPCN
   2-0-10-3          2-0-11-0          2-0-11-2           2-0-12-1
   2-2-3-3           2-2-4-0           10-14-10-1
```

5. If you wish to assign weight and in-service threshold values to the entries in the MAP group or MAP set, and the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output in step 1, then the Weighted GTT Load Sharing feature is enabled and turned on. Go to step 6.

   Note: If you do not wish to assign weight and in-service threshold values to the MAP entries in the MAP group or MAP set, skip steps 5 through 10, and go to step 11.

   If the `WT`, `%WT`, and `THR` columns are not shown in the `rtrv-map` output in step 1, perform the *Activating the Weighted GTT Load Sharing Feature* on page 813 procedure to enable and turn on the Weighted GTT Load Sharing feature. After the Weighted GTT Load Sharing feature is enabled and turned on, go to step 6.

6. To assign weight and in-service threshold values to a dominant MAP group or MAP set, the dominant MAP group or MAP set must be changed to either a load shared or combined dominant/load shared MAP group or MAP set.

   Note: If existing MAP group or MAP set that the weight and in-service threshold values are being assigned to is a load shared or combined dominant/load shared MAP group or MAP set, and the MAP group or MAP set type will not be changed, skip this step and go to step 7.

   To change the MAP group or MAP set to a load shared or combined dominant/load shared MAP group or MAP set, enter the `chg-map` command specifying the point code in the MAP group or MAP set with the new RC value.

To create a load shared MAP group or MAP set, the new RC values for all the entries in the MAP group or MAP set must be equal. The `grp` and `sso` parameter values can also be changed.

To create a combined dominant/load shared MAP group or MAP set, the MAP group or MAP set must contain a minimum of two RC values that are equal and a minimum of one RC value that is different. The `grp`, `srm`, `mrc`, and `sso` parameter values can also be changed.

If the `MAPSET` column is not shown in the `rtrv-map` output in step 1, the `mapset` parameter cannot be specified with the `chg-map` command.

For this example, enter this command.

```
chg-map:pca=060-060-060:ssn=250:rc=10
```

If the MAPSET column is shown in the `rtrv-map` output in step 1, the `mapset=<MAP Set ID>` parameter, specifying the MAP set containing the point code specified in this step, must be specified with the `chg-map` command. To change the RC values in an MAP set, for this example enter this command.

```
chg-map:pca=060-060-060:ssn=250:rc=10:mapset=dflt
```

This step must be repeated until the RC values for all the entries in the MAP group or MAP set have been changed as necessary.

After this step is performed, go to step 7.

7. Change the weight and in-service threshold values of the load shared or combined dominant/load shared MAP group or MAP set by entering the `chg-map` command with the `eswt` and `thr` parameters.

   Note: If the mated application being changed has weight and in-service threshold values assigned to it, and you do not wish to change the weight values of all the entries in the mated application, skip this step and go to step 8.

   The `eswt` parameter assigns the same weight value to all the entries in the MAP group or MAP set. If step 6 was performed, or if the Weighted GTT Load Sharing feature was enabled and turned on in step 5, the `eswt` parameter must be used to assign weight values to the MAP group or MAP set.

   For this example, enter one of these commands.

   To assign only weight values to all entries in the MAP group without the Flexible GTT Load Sharing feature enabled, enter this command.

   ```
   chg-map:pca=005-005-005:ssn=250:eswt=30
   ```

   To change the weight and in-service threshold values of all the entries in the MAP group without the Flexible GTT Load Sharing feature enabled, enter this command.

   ```
   chg-map:pca=005-005-005:ssn=250:eswt=20:thr=30
   ```

   To change only weight values of all the entries in the MAP set with the Flexible GTT Load Sharing feature enabled, enter this command.

   ```
   chg-map:pca=005-005-005:ssn=250:eswt=30:mapset=dflt
   ```

   To change the weight and in-service threshold values of all the entries in the MAP set with the Flexible GTT Load Sharing feature enabled, enter this command.

   ```
   chg-map:pca=005-005-005:ssn=250:eswt=20:thr=30:mapset=dflt
   ```

If the MAP group or MAP set did not have weight and in-service threshold values assigned before this step was performed, and the `thr` parameter is not specified in this step, the in-service threshold value 1 (1%) is assigned to the entries.

When the `chg-map` command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
CHG-MAP:  MASP A - COMPLTD
```

If step 6 was performed, or if the Weighted GTT Load Sharing feature was enabled and turned on in step 5, individual weight values in the MAP group or MAP set can be changed, or the weight values in an RC group can be changed.

- To change the weight values of all entries in an RC group - perform step 9.
- To change the individual weight values of entries in an MAP group or MAP set - perform step 10.

If the MAP group or MAP set changed in this step had weight and in-service threshold values assigned before this step was performed, one or more of the following steps can be performed.

- To change only the in-service threshold value in the MAP group or MAP set - perform step 8.
- To change the weight values of all entries in an RC group - perform step 9.
- To change the individual weight values of entries in an MAP group or MAP set - perform step 10.

8. The in-service threshold value is changed by specifying the `thr` parameter. The `thr` parameter can be specified by itself only if the MAP set or MAP group currently has weight values assigned.

   The new `thr` value is assigned to all entries in the MAP group or MAP set that have the same RC value as the specified point code (an RC group).

   For this example, enter one of these commands.

   To change the in-service threshold value of all entries in the MAP group that have the same RC value as the point code specified in this step without the Flexible GTT Load Sharing feature enabled, enter this command.

   ```
   chg-map:pca=008-008-008:ssn=254:thr=50
   ```

   To change the in-service threshold value of all entries in the MAP set that have the same RC value as the point code specified in this step with the Flexible GTT Load Sharing feature enabled, enter this command.

   ```
   chg-map:pca=008-008-008:ssn=254:thr=30:mapset=12
   ```

   When the `chg-map` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
   CHG-MAP:  MASP A - COMPLTD
   ```

   If the mated application is a combined dominant/load shared mated application, this step can be repeated for other RC groups in the MAP group or MAP set.

   If the mated application is a load shared mated application, the in-service threshold value was changed for all entries in the MAP group or MAP set.

   After this step has been performed. one or more of the following steps can be performed.

- To change the weight values of all entries in an RC group - perform step 9.
- To change the individual weight values of entries in an MAP group or MAP set - perform step 10.

If you wish to change the non-Weighted GTT Load Sharing feature parameter values: `rc`, `grp`, `srm`, `mrc`, and `sso`, go to step 11.

If no other actions are being performed on the MAP group or MAP set, go to step 12.

9. An RC group is a group of point code entries that have the same RC value. This step is used to change the weight values of all the point codes in a combined dominant/load shared MAP group or MAP set that have the same RC value to the same weight value using the `chg-map` command with the `grpwt` parameter.

A load shared MAP group or MAP set can be considered an RC group as all the entries in the group or set have the same RC value, but changing all the weight values in a load shared group or set to the same weight value can be accompished by using the `eswt` parameter as described in step 7.

The in-service threshold value of the MAP group or MAP set can be changed by specifying the `thr` parameter with the `chg-map` command.

For this example, enter one of these commands.

To change only weight values of all entries in an RC group of the MAP group without the Flexible GTT Load Sharing feature enabled, enter this command.

```
chg-map:pca=008-008-008:ssn=254:grpwt=30
```

To change the weight and in-service threshold values of all entries in an RC group of the MAP group without the Flexible GTT Load Sharing feature enabled, enter this command.

```
chg-map:pca=008-008-008:ssn=254:grpwt=20:thr=30
```

To change only weight values of all entries in an RC group of the MAP set with the Flexible GTT Load Sharing feature enabled, enter this command.

```
chg-map:pca=008-008-008:ssn=254:grpwt=30:mapset=12
```

To change the weight and in-service threshold values of all entries in an RC group of the MAP set with the Flexible GTT Load Sharing feature enabled, enter this command.

```
chg-map:pca=008-008-008:ssn=254:grpwt=20:thr=30:mapset=12
```

If the MAP group or MAP set did not have weight and in-service threshold values assigned before this step was performed, and the `thr` parameter is not specified in this step, the in-service threshold value 1 (1%) is assigned to the entries.

When the `chg-map` command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
CHG-MAP:  MASP A - COMPLTD
```

This step can be repeated for other RC groups in the MAP group or MAP set.

After this step has been performed, the individual weight values of entries in an MAP group or MAP set can be changed.

To change the individual weight values of entries in an MAP group or MAP set - perform step 10.

If you wish to change the non-Weighted GTT Load Sharing feature parameter values: `rc`, `grp`, `srm`, `mrc`, and `sso`, go to step 11.

If no other actions are being performed on the MAP group or MAP set, go to step 12.

10. Change the individual weight values of the MAP group or MAP set by entering the `chg-map` command with the point code parameters and the weight parameter `wt`.

    If step 6 was performed, or if the Weighted GTT Load Sharing feature was enabled and turned on in step 5, and step 7 was not performed, this step cannot be performed. The `wt` parameter can be specified only for MAP groups or MAP sets that currently have weight values assigned.

    The `thr` parameter cannot be specified with the `wt` parameter.

    For this example, enter one of these commands.

    To change the individual weight values of the entries in the MAP group without the Flexible GTT Load Sharing feature enabled, enter this command.

    ```
    chg-map:pca=008-008-008:ssn=254:wt=30
    ```

    To change the individual weight values of the entries in the MAP set with the Flexible GTT Load Sharing feature enabled, enter this command.

    ```
    chg-map:pca=008-008-008:ssn=254:wt=30:mapset=12
    ```

    When the `chg-map` command has successfully completed, this message should appear.

    ```
    rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
    CHG-MAP:  MASP A - COMPLTD
    ```

    This step can be repeated for other entries in the MAP group or MAP set.

    Note: The `rc` parameter can be specified with the `wt` parameter in this step. The `force=yes` parameter must be specified if the `rc` and `wt` parameters are specified with the `chg-map` command. However, if a dominant mated application results from changing the mated appplication, it is recommended that you skip this step and perform step 11.

    Note: A weight value cannot be assigned to a dominant mated application. If a dominant mated application is created in this step, the WT, %WT, and THR values are removed from the mated application and are not displayed in the `rtrv-map` output.

11. Change the `rc`, `grp`, `sso`, `srm`, or `mrc` parameter values, as applicable, in the mated application using the `chg-map` command with the point code and subsystem number from the `rtrv-map` command output shown in step 1.

    If the `MAPSET` field is shown in the `rtrv-map` output in step 1, the `mapset` parameter must be specified with the `chg-map` command. If the `MAPSET` field is not shown in the `rtrv-map` output in step 1, the `mapset` parameter cannot be specified with the `chg-map` command.

    If a solitary mated application is being changed, only the `grp` and `sso` parameter values can be changed. If the point code of the solitary mated application is the EAGLE 5 ISS's point code, only the `grp` parameter value can be changed.

    If a dominant mated application is being changed, or a load shared or combined dominant/load shared mated application is being changed to a dominant mated application, the `rc`, `grp`, `mrc`, `srm`, and `sso` parameter values can be changed. The `rc` parameter values for this mated application must be unique. If the EAGLE 5 ISS's point code is assigned to the mated application, only the `sso` parameter cannot be specified.

If the mated application being changed is a load shared or combined dominant/load shared mated application and this mated application has weight and in-service threshold values assigned to it, when this mated application is changed to a dominant mated application, the `WT`, `%WT`, and `THR` values are removed from the mated application and are not displayed in the `rtrv-map` output.

If this dominant mated application is changed to a load shared or combined dominant/load shared mated application in the future, weight and threshold values can be applied to the mated application only by specifying the `eswt` and `thr` parameters with the `chg-map` command as shown in step 7.

If a load shared mated application is being changed, and will remain a load shared mated application, the `rc`, `grp`, and `sso` parameter values can be changed. The `rc` parameter values for this mated application must be equal.

If a combined dominant/load shared mated application is being changed, and will remain a combined dominant/load shared mated application, the `rc`, `grp`, `srm`, `mrc`, and `sso` parameter values can be changed. This mated application must contain a minimum of two RC values that are equal and a minimum of one RC value that is different.

If the `MAPSET` field is not shown in the `rtrv-map` output in step 1, meaning that the Flexible GTT Load Sharing feature is not enabled, for this example, enter this command.

```
chg-map:pca=255-001-001:ssn=250:grp=grp05:srm=yes:mrc=yes :sso=on
```

This message should appear.

```
rlghncxa03w 06-10-25 09:43:31  GMT  EAGLE5 36.0.0
CHG-MAP:  MASP A - COMPLTD
```

If the `MAPSET` field is shown in the `rtrv-map` output in step 1, meaning that the Flexible GTT Load Sharing feature is enabled, for this example, enter this command.

```
chg-map:pca=255-001-001:ssn=250:grp=grp05:srm=yes:mrc=yes
:sso=on:mapset=4
```

This message should appear.

```
rlghncxa03w 06-10-25 09:43:31  GMT  EAGLE5 36.0.0
CHG-MAP:  MASP A - COMPLTD
```

Note: The `force=yes` parameter must be specified when the `rc` parameter is specified with either the `srm` or `mrc` parameters.

If a load shared mated application is created in this step and the `srm` and `mrc` parameters are specified in this step, the changes to the `srm` and `mrc` parameters are accepted, but the `srm` and `mrc` parameter values are not displayed in the `rtrv-map` output for this mated application.

If this load shared mated application is changed to either a dominant or combined dominant/load shared mated application in the future, and no SRM and MRC values are specified

If this load shared mated application is changed to either a dominant or combined dominant/load shared mated application in the future, and no SRM and MRC values are specified at the time, the SRM and MRC values that were assigned to the mated application when the mated application was changed to a load shared mated application are displayed in the `rtrv-map` output.

If the Flexible GTT Load Sharing feature is enabled, the changes to the `srm` and `mrc` parameter values, as well as the `grp` and `sso` parameter values if they are changed, are made to all mated applications containing the point code and subsystem number specified in this step.

This step can be repeated to change other entries in the MAP group or MAP set.

12. Verify the changes using the `rtrv-map` command with the primary point code and subsystem specified in steps 7, 8, 9, 10 or 11. If the `mapset` parameter was specified in steps 7, 8, 9, 10 or 11, the `mapset` parameter and value specified in steps 7, 8, 9, 10 or 11 must be specified with the `rtrv-map` command in this step..

    For the examples specified in step 7, enter these commands.

    `rtrv-map:pca=005-005-005:ssn=250 (if only the weights of all entries were changed)`

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

   PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
   005-005-005               250 10  SHR --- --- grp15    OFF 30  33   1
                060-060-060  250 10  SHR --- --- grp15    OFF 30  33   1
                070-070-070  251 10  SHR --- --- grp05    ON  30  33   1
```

    `rtrv-map:pca=005-005-005:ssn=250` (if the weights and in-service thresholds of all entries were changed)

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

   PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
   005-005-005               250 10  SHR --- --- grp15    OFF 20  33  30
                060-060-060  250 10  SHR --- --- grp15    OFF 20  33  30
                070-070-070  251 10  SHR --- --- grp05    ON  20  33  30
```

    `rtrv-map:pca=005-005-005:ssn=250:mapset=dflt` (if only the weights of all entries were changed)

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

   PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
   MAPSET ID=DFLT
   005-005-005               250 10  SHR --- --- grp15    OFF 30  33   1
                060-060-060  250 10  SHR --- --- grp15    OFF 30  33   1
                070-070-070  251 10  SHR --- --- grp05    ON  30  33   1
```

    `rtrv-map:pca=005-005-005:ssn=250:mapset=dflt` (if the weights and in-service thresholds of all entries were changed)

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0
```

```
MAP TABLE IS   4 % FULL    (37 of 1024)

   PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
   MAPSET ID=DFLT
   005-005-005               250 10  SHR --- --- grp15    OFF 20  33  30
                060-060-060  250 10  SHR --- --- grp15    OFF 20  33  30
                070-070-070  251 10  SHR --- --- grp05    ON  20  33  30
```

For the examples specified in step 8, enter these commands.

`rtrv-map:pca=008-008-008:ssn=254`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

   PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
   008-008-008               254 10  COM YES YES grp10    ON  10  33  50
                200-147-100  254 10  COM YES YES grp10    ON  10  33  50
                179-183-050  250 10  COM YES YES grp15    OFF 10  33  50
                031-049-100  250 20  COM YES YES grp15    ON  10  50  20
                056-113-200  251 20  COM YES YES grp05    OFF 10  50  20
```

`rtrv-map:pca=008-008-008:ssn=254:mapset=dflt`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

   PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
   MAPSET ID=12
   008-008-008               254 10  COM YES YES grp10    ON  10  33  30
                200-147-100  254 10  COM YES YES grp10    ON  10  33  30
                179-183-050  250 10  COM YES YES grp15    OFF 10  33  30
                031-049-100  250 20  COM YES YES grp15    ON  10  50  20
                056-113-200  251 20  COM YES YES grp05    OFF 10  50  20
```

For the examples specified in step 9, enter these commands.

`rtrv-map:pca=008-008-008:ssn=254` (if only the weights of an RC group were changed)

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

   PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
   008-008-008               254 10  COM YES YES grp10    ON  30  33  20
                200-147-100  254 10  COM YES YES grp10    ON  30  33  20
                179-183-050  250 10  COM YES YES grp15    OFF 30  33  20
                031-049-100  250 20  COM YES YES grp15    ON  10  50  20
                056-113-200  251 20  COM YES YES grp05    OFF 10  50  20
```

`rtrv-map:pca=008-008-008:ssn=254` (if only the weights and in-service thresholds of an RC group were changed)

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

   PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
   008-008-008               254 10  COM YES YES grp10    ON  20  33  30
                200-147-100  254 10  COM YES YES grp10    ON  20  33  30
                179-183-050  250 10  COM YES YES grp15    OFF 20  33  30
                031-049-100  250 20  COM YES YES grp15    ON  10  50  20
                056-113-200  251 20  COM YES YES grp05    OFF 10  50  20
```

`rtrv-map:pca=008-008-008:ssn=254:mapset=12` (if only the weights of an RC group were changed)

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

   PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
   MAPSET ID=12
   008-008-008               254 10  COM YES YES grp10    ON  30  33  20
                200-147-100  254 10  COM YES YES grp10    ON  30  33  20
                179-183-050  250 10  COM YES YES grp15    OFF 30  33  20
                031-049-100  250 20  COM YES YES grp15    ON  10  50  20
                056-113-200  251 20  COM YES YES grp05    OFF 10  50  20
```

`rtrv-map:pca=008-008-008:ssn=254:mapset=12` (if only the weights and in-service thresholds of an RC group were changed)

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

   PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
   MAPSET ID=12
   008-008-008               254 10  COM YES YES grp10    ON  20  33  30
                200-147-100  254 10  COM YES YES grp10    ON  20  33  30
                179-183-050  250 10  COM YES YES grp15    OFF 20  33  30
                031-049-100  250 20  COM YES YES grp15    ON  10  50  20
                056-113-200  251 20  COM YES YES grp05    OFF 10  50  20
```

For the examples specified in step 10, enter these commands.

`rtrv-map:pca=008-008-008:ssn=254`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

   PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
   008-008-008               254 10  COM YES YES grp10    ON  30  60  50
                200-147-100  254 10  COM YES YES grp10    ON  10  20  50
                179-183-050  250 10  COM YES YES grp15    OFF 10  20  50
```

```
                031-049-100  250 20  COM YES YES grp15    ON  10  50  20
                056-113-200  251 20  COM YES YES grp05    OFF 10  50  20
```

`rtrv-map:pca=008-008-008:ssn=254:mapset=dflt`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

   PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
   MAPSET ID=12
   008-008-008               254 10  COM YES YES grp10    ON  30  60  30
                200-147-100  254 10  COM YES YES grp10    ON  10  20  30
                179-183-050  250 10  COM YES YES grp15    OFF 10  20  30
                031-049-100  250 20  COM YES YES grp15    ON  10  50  20
                056-113-200  251 20  COM YES YES grp05    OFF 10  50  20
```

For the examples specified in step 11, enter these commands.

`rtrv-map:pca=255-001-001:ssn=250`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

MAP TABLE IS   4 % FULL    (37 of 1024)

   PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
   255-001-001               250 10  DOM YES YES grp05    ON  -- ---  --
                253-001-001  254 20  DOM NO  NO  grp01    OFF -- ---  --
```

`rtrv-map:pca=255-001-001:ssn=250:mapset=4`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

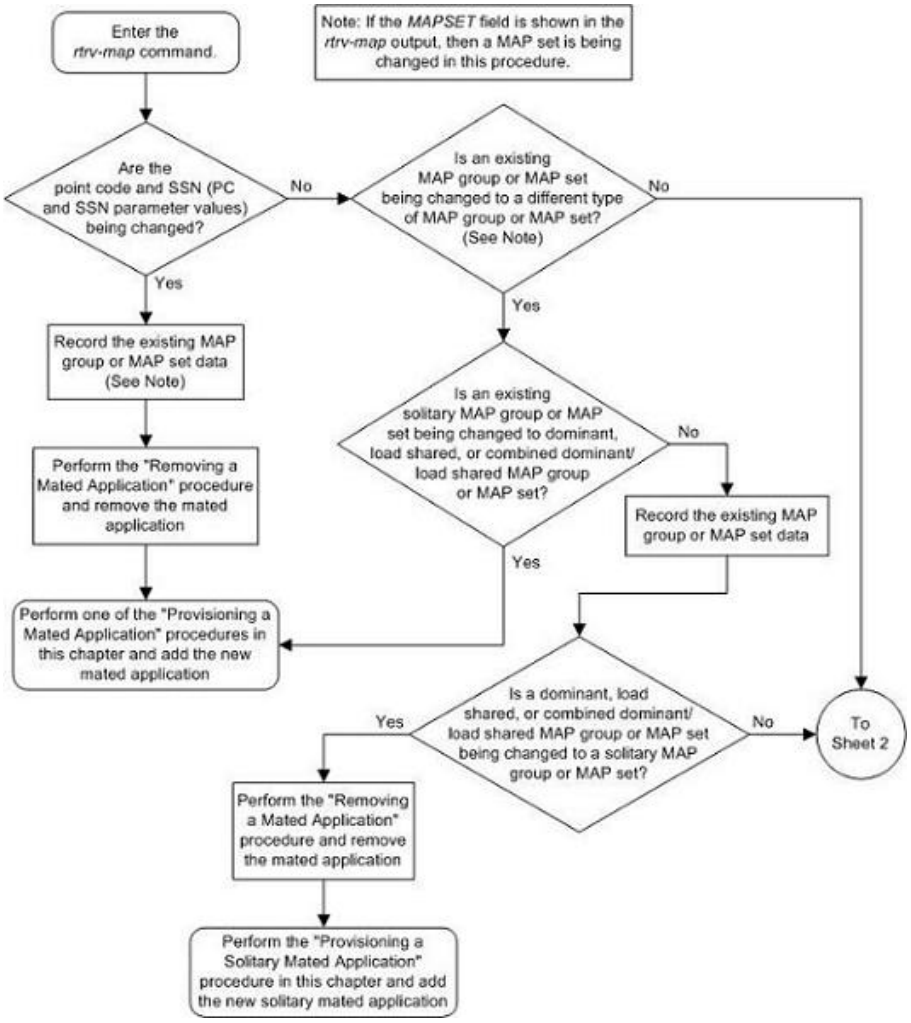
MAP TABLE IS   1 % FULL    (37 of 36000)

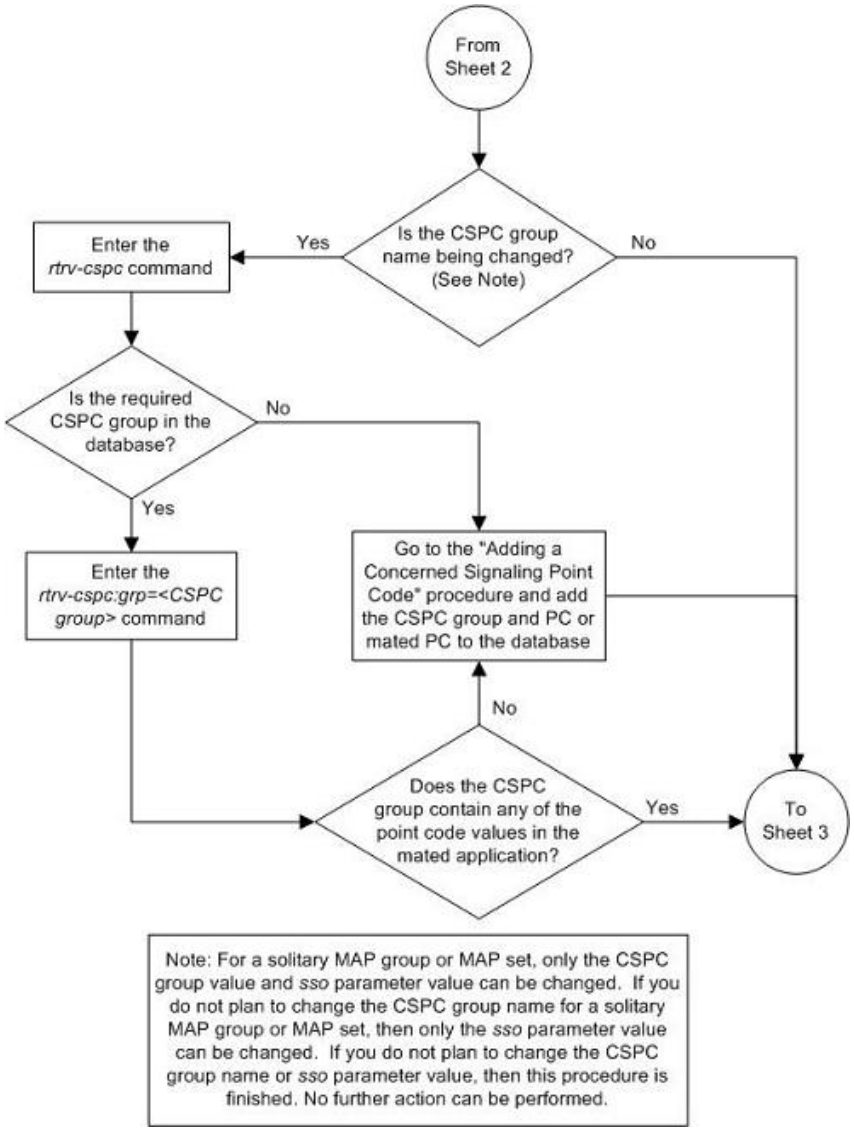
   PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO WT %WT THR
   MAPSET ID=4
   255-001-001               250 10  DOM YES YES grp05    ON  -- ---  --
                253-001-001  254 20  DOM NO  NO  grp01    OFF -- ---  --
```

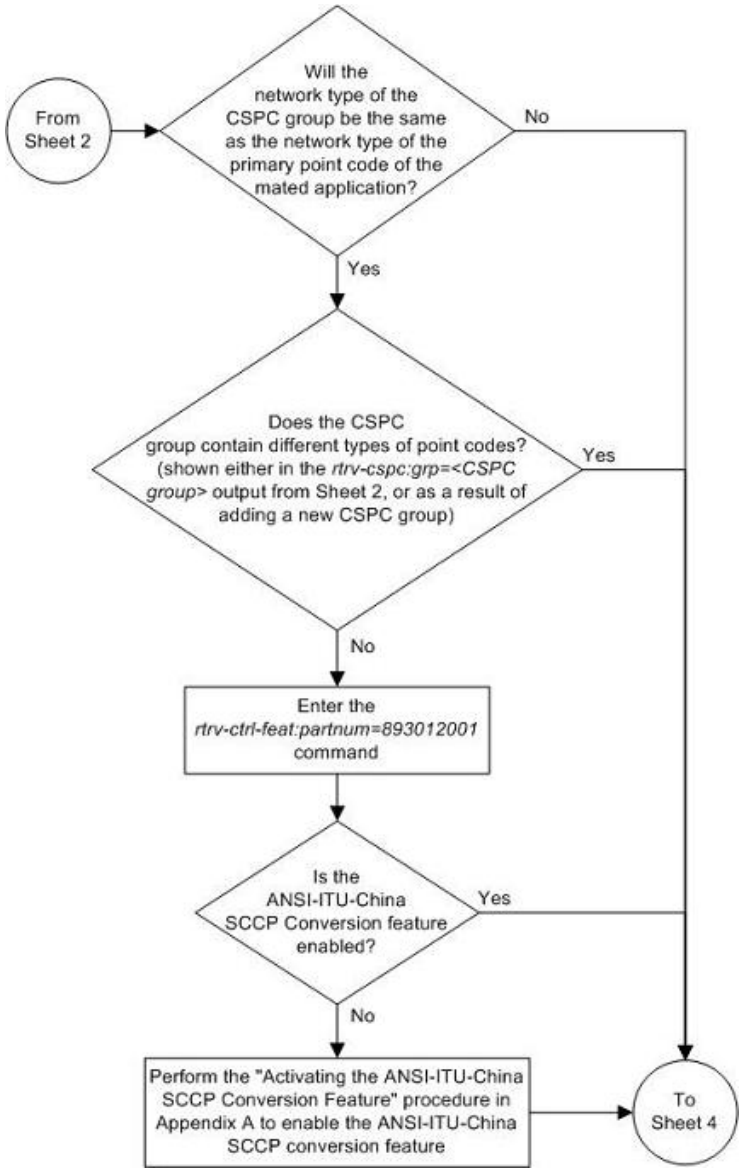
13. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

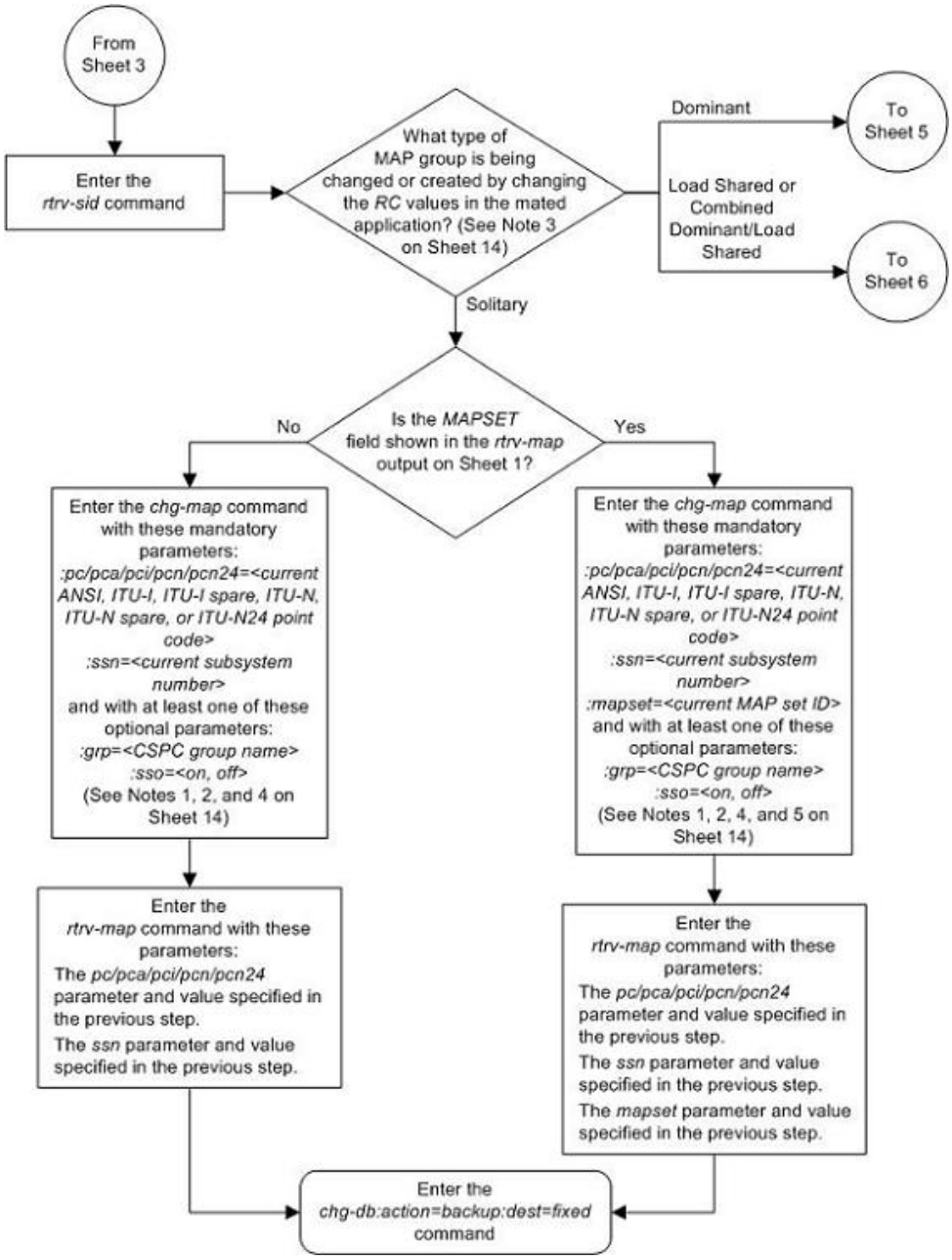
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

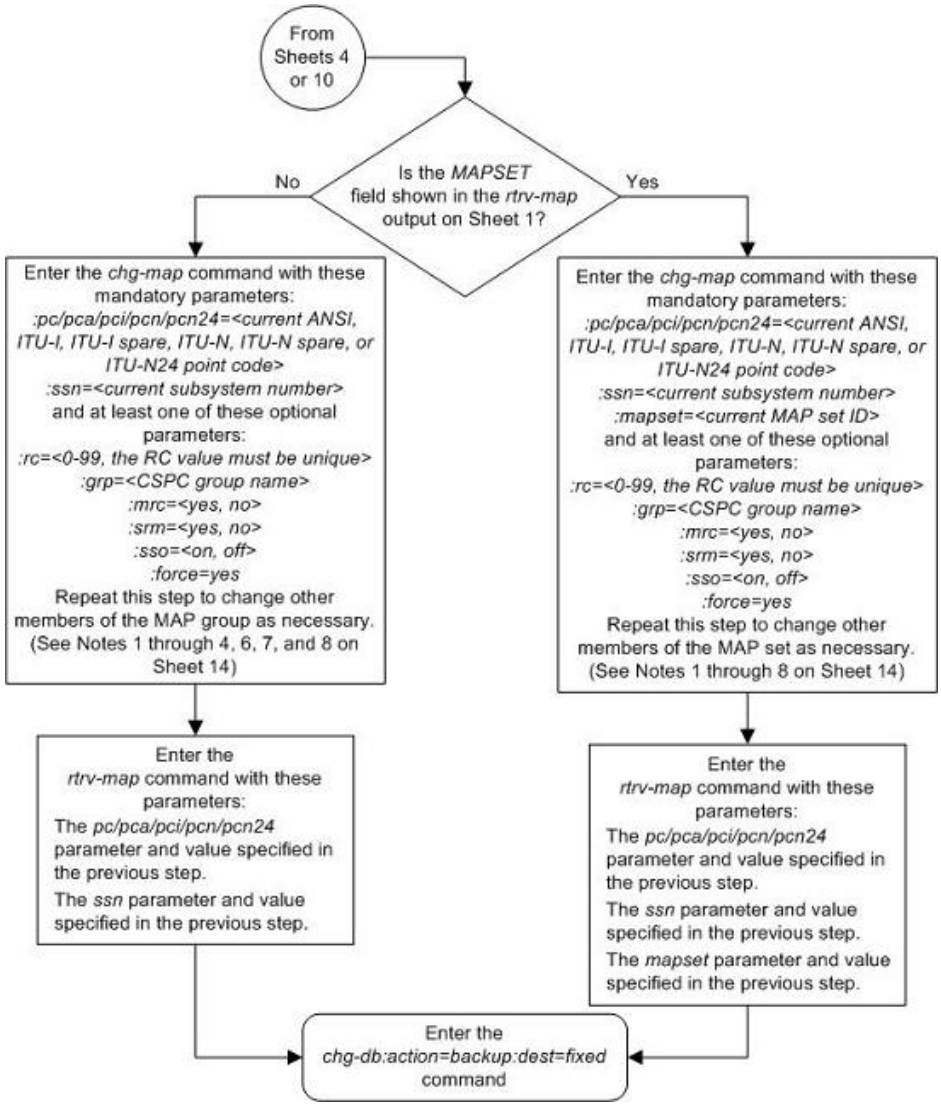
Figure 24: Changing a Mated Application

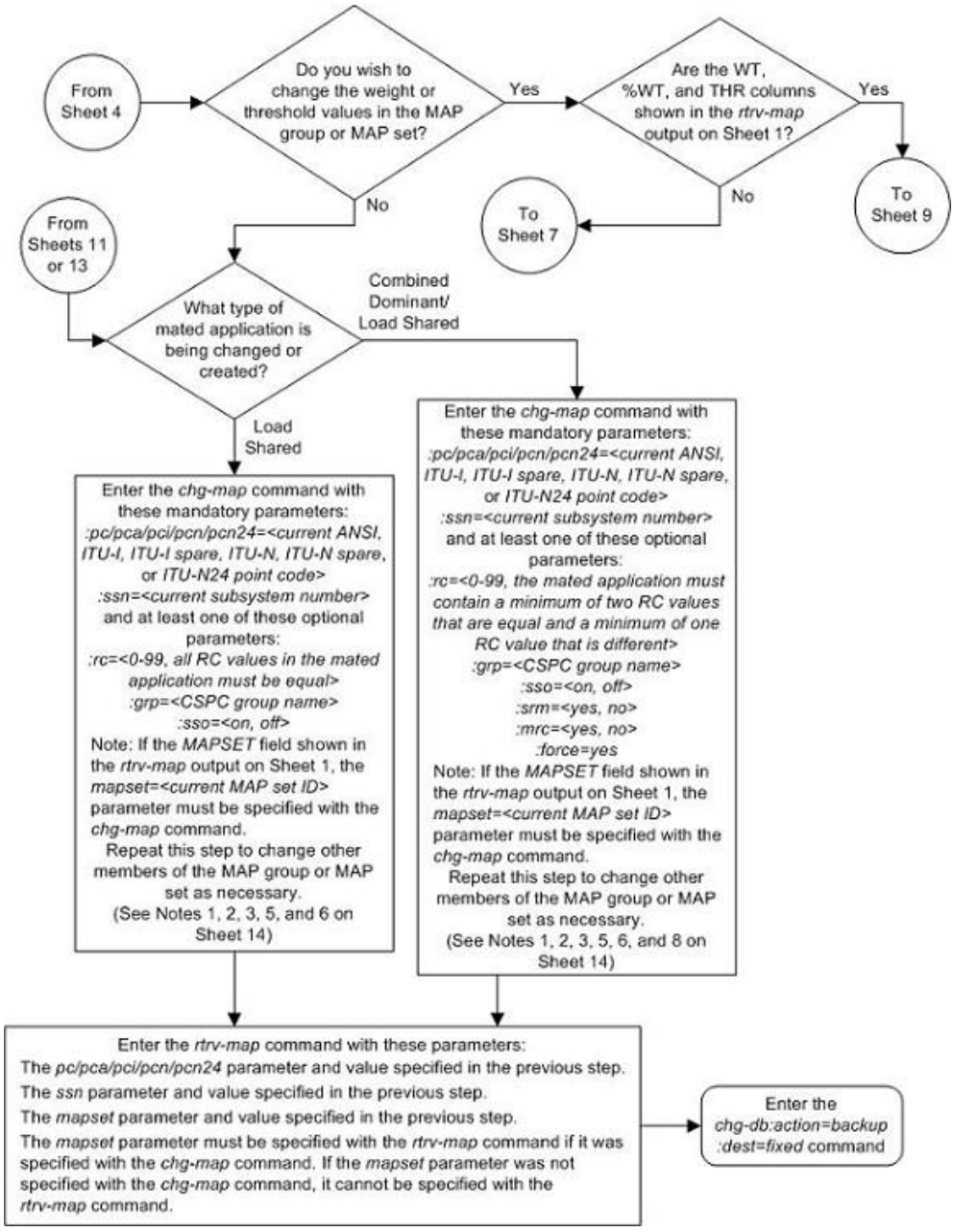

Enter the rtrv-map command.
Note: If the MAPSET field is shown in the rtrv-map output, then a MAP set is being changed in this procedure.
Are the point code and SSN (PC and SSN parameter values) being changed?
No
Is an existing MAP group or MAP set being changed to a different type of MAP group or MAP set? (See Note)
No
Yes
Yes
Record the existing MAP group or MAP set data (See Note)
Is an existing solitary MAP group or MAP set being changed to dominant, load shared, or combined dominant/ load shared MAP group or MAP set?
No
Perform the "Removing a Mated Application" procedure and remove the mated application
Record the existing MAP group or MAP set data
Yes
Perform one of the "Provisioning a Mated Application" procedures in this chapter and add the new mated application
Is a dominant, load shared, or combined dominant/ load shared MAP group or MAP set being changed to a solitary MAP group or MAP set?
Yes
No
To Sheet 2
Perform the "Removing a Mated Application" procedure and remove the mated application
Perform the "Provisioning a Solitary Mated Application" procedure in this chapter and add the new solitary mated application

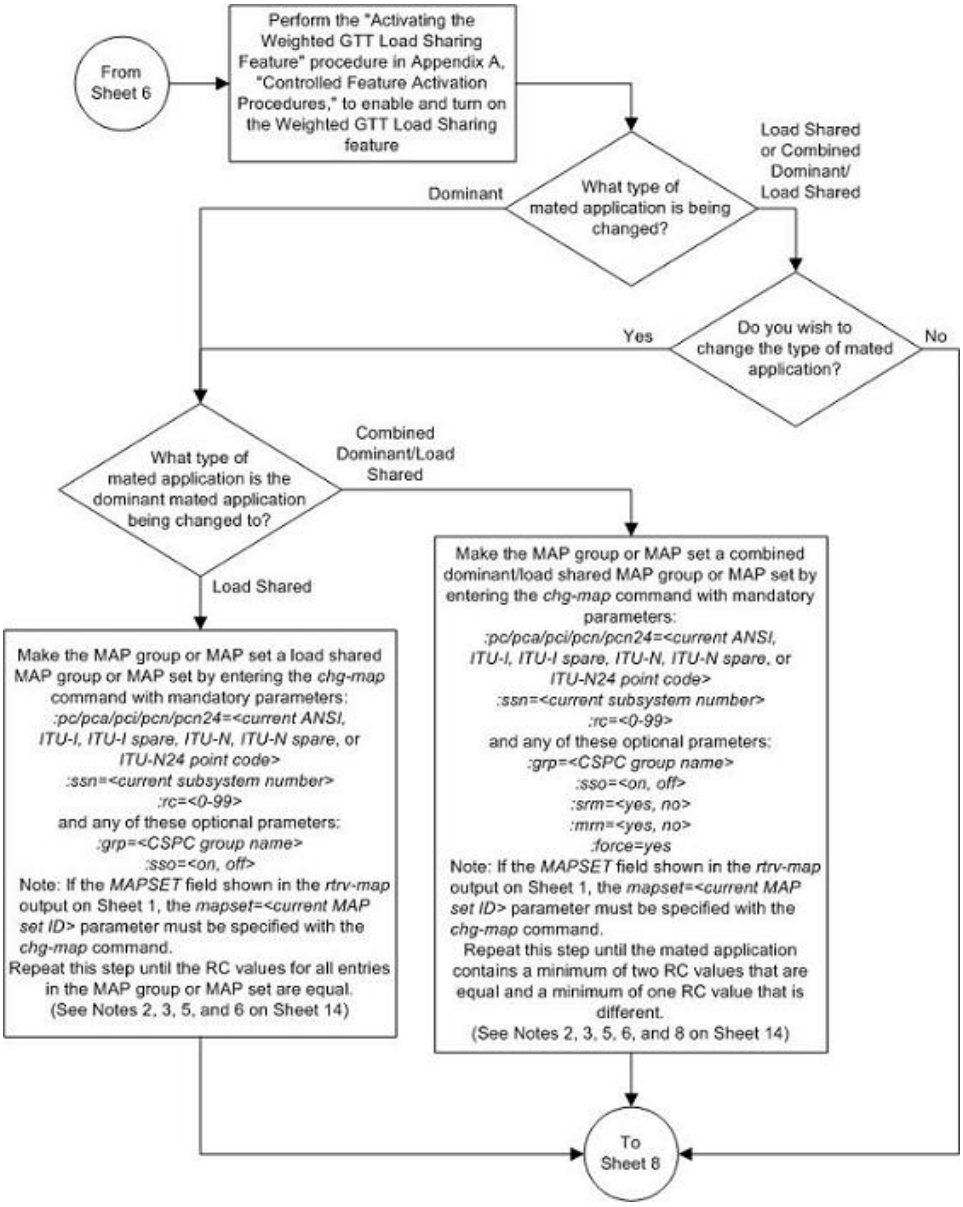

From Sheet 2
Is the CSPC group name being changed? (See Note)
Yes
No
Enter the rtrv-cspc command
Is the required CSPC group in the database?
No
Yes
Enter the rtrv-cspc:grp=<CSPC group> command
Go to the "Adding a Concerned Signaling Point Code" procedure and add the CSPC group and PC or mated PC to the database
No
Does the CSPC group contain any of the point code values in the mated application?
Yes
To Sheet 3
Note: For a solitary MAP group or MAP set, only the CSPC group value and sso parameter value can be changed. If you do not plan to change the CSPC group name for a solitary MAP group or MAP set, then only the sso parameter value can be changed. If you do not plan to change the CSPC group name or sso parameter value, then this procedure is finished. No further action can be performed.

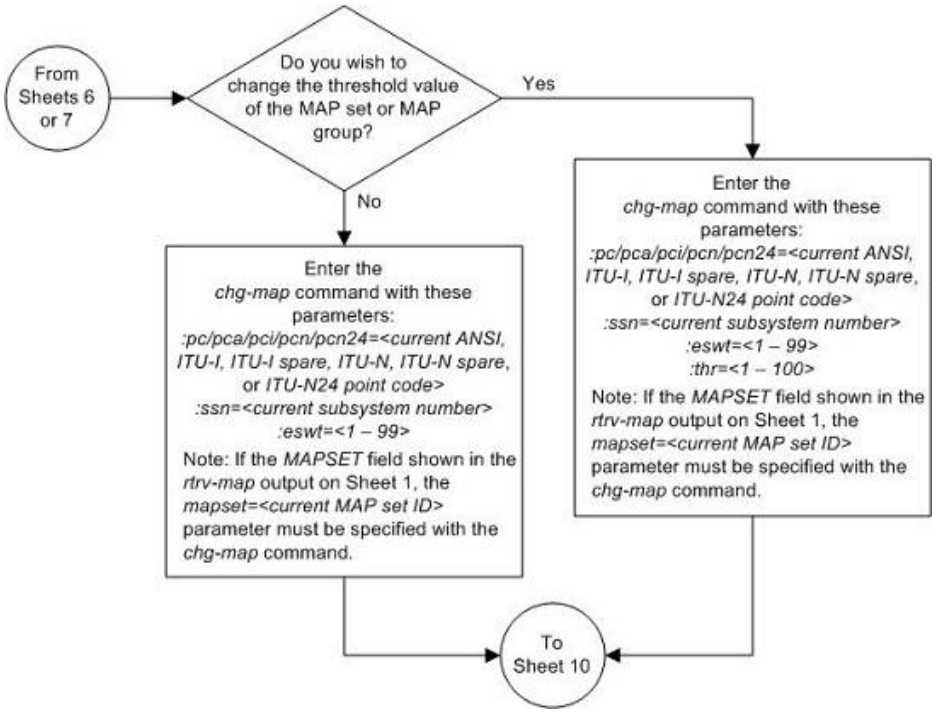

From Sheet 2
Will the network type of the CSPC group be the same as the network type of the primary point code of the mated application?
No
Yes
Does the CSPC group contain different types of point codes? (shown either in the rtrv-cspc:grp=<CSPC group> output from Sheet 2, or as a result of adding a new CSPC group)
Yes
No
Enter the rtrv-ctrl-feat:partnum=893012001 command
Is the ANSI-ITU-China SCCP Conversion feature enabled?
Yes
No
Perform the "Activating the ANSI-ITU-China SCCP Conversion Feature" procedure in Appendix A to enable the ANSI-ITU-China SCCP conversion feature
To Sheet 4

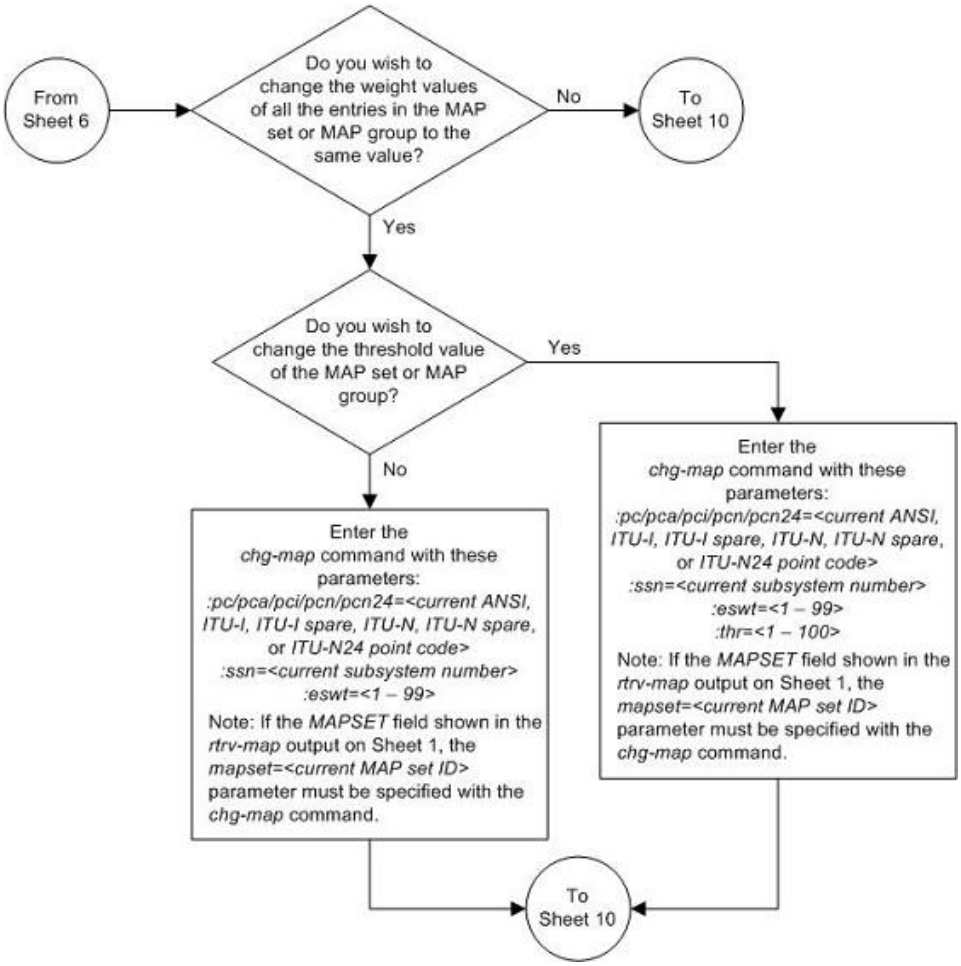

From Sheet 3
Enter the rtrv-sid command
What type of MAP group is being changed or created by changing the RC values in the mated application? (See Note 3 on Sheet 14)
Dominant
To Sheet 5
Load Shared or Combined Dominant/Load Shared
To Sheet 6
Solitary
Is the MAPSET field shown in the rtrv-map output on Sheet 1?
No
Yes
Enter the chg-map command with these mandatory parameters: :pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code> :ssn=<current subsystem number> and with at least one of these optional parameters: :grp=<CSPC group name> :sso=<on, off> (See Notes 1, 2, and 4 on Sheet 14)
Enter the chg-map command with these mandatory parameters: :pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code> :ssn=<current subsystem number> :mapset=<current MAP set ID> and with at least one of these optional parameters: :grp=<CSPC group name> :sso=<on, off> (See Notes 1, 2, 4, and 5 on Sheet 14)
Enter the rtrv-map command with these parameters: The pc/pca/pci/pcn/pcn24 parameter and value specified in the previous step. The ssn parameter and value specified in the previous step.
Enter the rtrv-map command with these parameters: The pc/pca/pci/pcn/pcn24 parameter and value specified in the previous step. The ssn parameter and value specified in the previous step. The mapset parameter and value specified in the previous step.
Enter the chg-db:action=backup:dest=fixed command

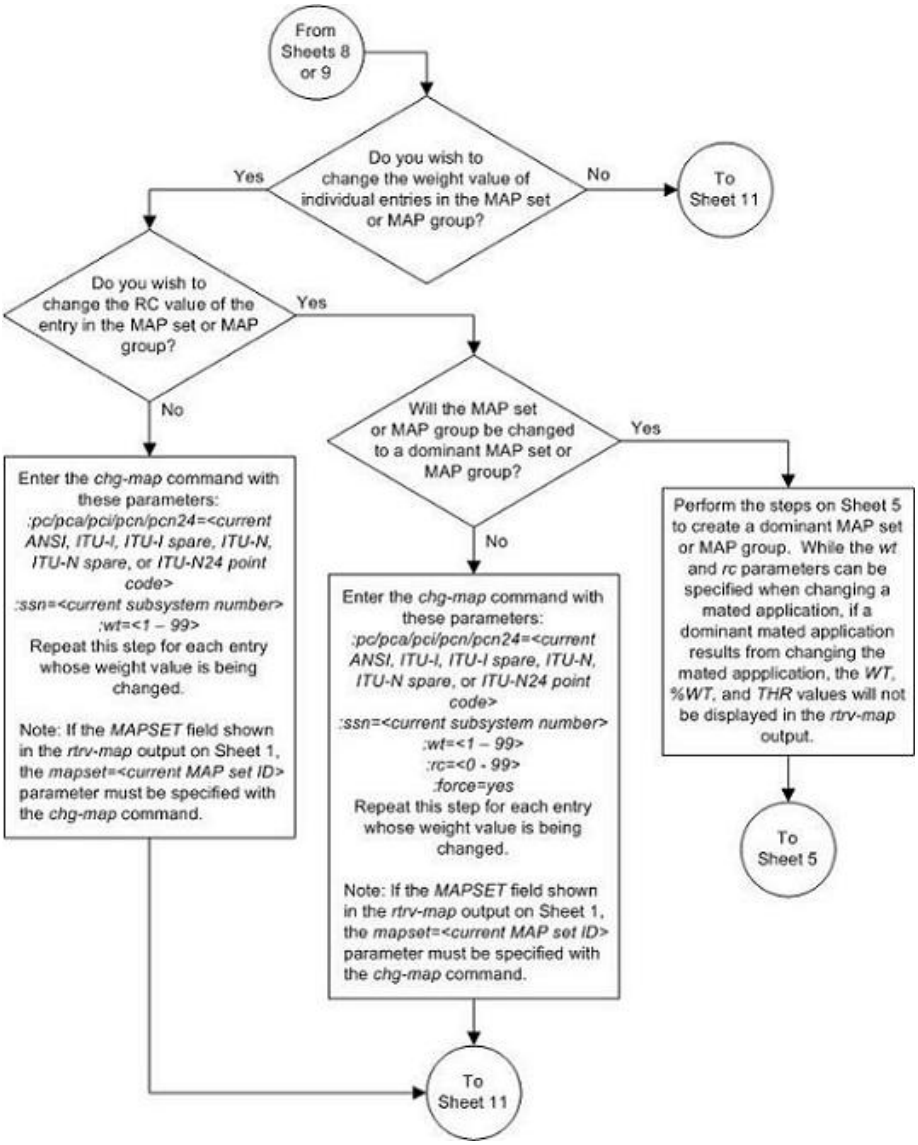

From Sheets 4 or 10
Is the MAPSET field shown in the rtrv-map output on Sheet 1?
No
Yes
Enter the chg-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code>
:ssn=<current subsystem number>
and at least one of these optional parameters:
:rc=<0-99, the RC value must be unique>
:grp=<CSPC group name>
:mrc=<yes, no>
:srm=<yes, no>
:sso=<on, off>
:force=yes
Repeat this step to change other members of the MAP group as necessary. (See Notes 1 through 4, 6, 7, and 8 on Sheet 14)
Enter the chg-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code>
:ssn=<current subsystem number>
:mapset=<current MAP set ID>
and at least one of these optional parameters:
:rc=<0-99, the RC value must be unique>
:grp=<CSPC group name>
:mrc=<yes, no>
:srm=<yes, no>
:sso=<on, off>
:force=yes
Repeat this step to change other members of the MAP set as necessary. (See Notes 1 through 8 on Sheet 14)
Enter the rtrv-map command with these parameters:
The pc/pca/pci/pcn/pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
Enter the rtrv-map command with these parameters:
The pc/pca/pci/pcn/pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
The mapset parameter and value specified in the previous step.
Enter the chg-db:action=backup:dest=fixed command

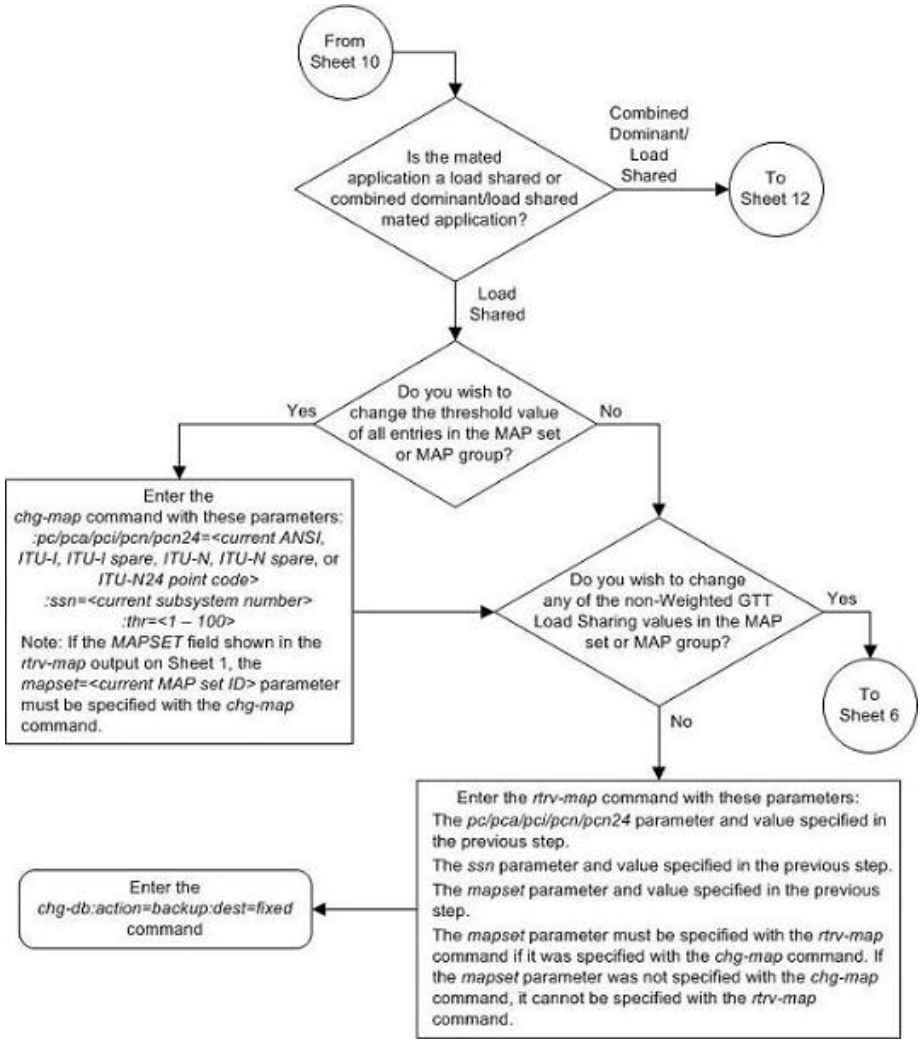

From Sheet 4
Do you wish to change the weight or threshold values in the MAP group or MAP set?
Yes
Are the WT, %WT, and THR columns shown in the rtrv-map output on Sheet 1?
Yes
To Sheet 9
No
To Sheet 7
No
From Sheets 11 or 13
What type of mated application is being changed or created?
Combined Dominant/ Load Shared
Load Shared
Enter the chg-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code>
:ssn=<current subsystem number>
and at least one of these optional parameters:
:rc=<0-99, all RC values in the mated application must be equal>
:grp=<CSPC group name>
:sso=<on, off>
Note: If the MAPSET field shown in the rtrv-map output on Sheet 1, the mapset=<current MAP set ID> parameter must be specified with the chg-map command.
Repeat this step to change other members of the MAP group or MAP set as necessary.
(See Notes 1, 2, 3, 5, and 6 on Sheet 14)
Enter the chg-map command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code>
:ssn=<current subsystem number>
and at least one of these optional parameters:
:rc=<0-99, the mated application must contain a minimum of two RC values that are equal and a minimum of one RC value that is different>
:grp=<CSPC group name>
:sso=<on, off>
:srm=<yes, no>
:mrc=<yes, no>
:force=yes
Note: If the MAPSET field shown in the rtrv-map output on Sheet 1, the mapset=<current MAP set ID> parameter must be specified with the chg-map command.
Repeat this step to change other members of the MAP group or MAP set as necessary.
(See Notes 1, 2, 3, 5, 6, and 8 on Sheet 14)
Enter the rtrv-map command with these parameters:
The pc/pca/pci/pcn/pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
The mapset parameter and value specified in the previous step.
The mapset parameter must be specified with the rtrv-map command if it was specified with the chg-map command. If the mapset parameter was not specified with the chg-map command, it cannot be specified with the rtrv-map command.
Enter the chg-db:action=backup :dest=fixed command

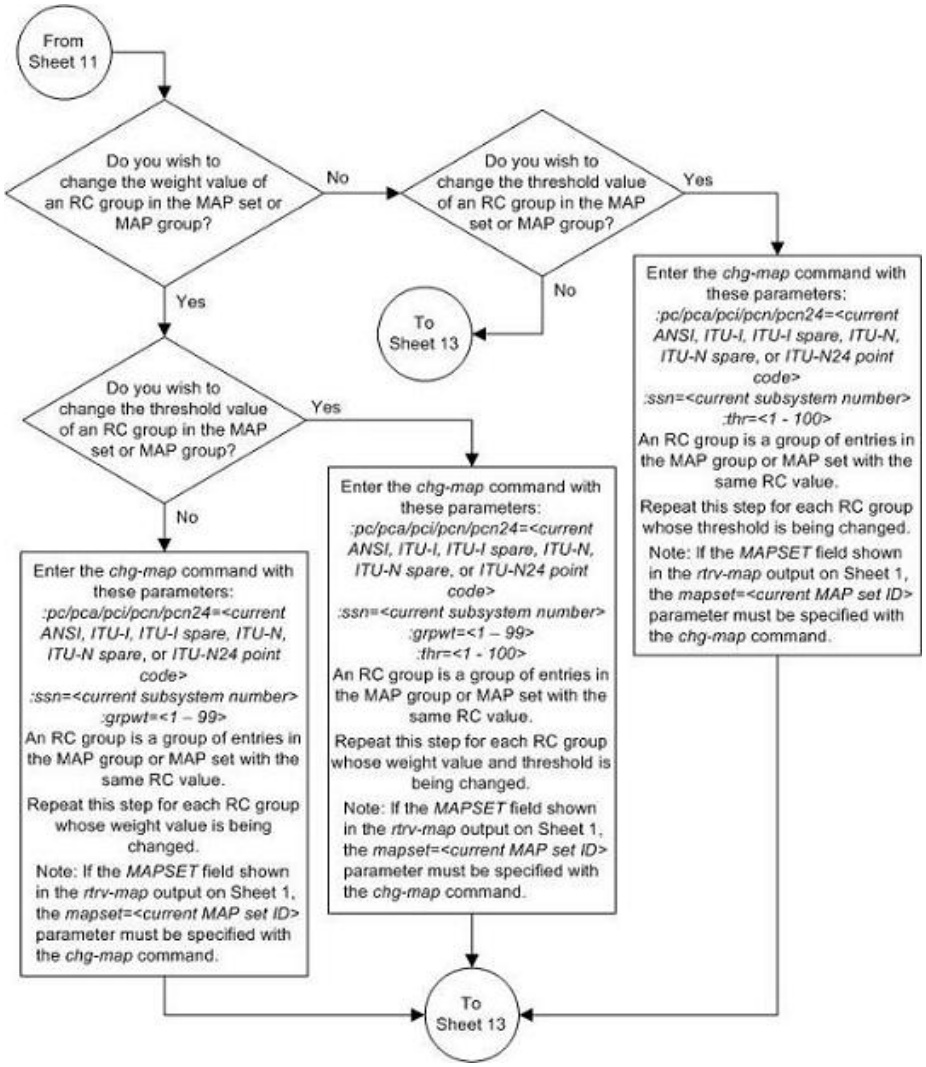

From Sheet 6
Perform the "Activating the Weighted GTT Load Sharing Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," to enable and turn on the Weighted GTT Load Sharing feature
What type of mated application is being changed?
Dominant
Load Shared or Combined Dominant/ Load Shared
Do you wish to change the type of mated application?
Yes
No
What type of mated application is the dominant mated application being changed to?
Combined Dominant/Load Shared
Load Shared
Make the MAP group or MAP set a load shared MAP group or MAP set by entering the chg-map command with mandatory parameters:
:pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code>
:ssn=<current subsystem number>
:rc=<0-99>
and any of these optional prameters:
:grp=<CSPC group name>
:sso=<on, off>
Note: If the MAPSET field shown in the rtrv-map output on Sheet 1, the mapset=<current MAP set ID> parameter must be specified with the chg-map command.
Repeat this step until the RC values for all entries in the MAP group or MAP set are equal.
(See Notes 2, 3, 5, and 6 on Sheet 14)
Make the MAP group or MAP set a combined dominant/load shared MAP group or MAP set by entering the chg-map command with mandatory parameters:
:pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code>
:ssn=<current subsystem number>
:rc=<0-99>
and any of these optional prameters:
:grp=<CSPC group name>
:sso=<on, off>
:srm=<yes, no>
:mrn=<yes, no>
:force=yes
Note: If the MAPSET field shown in the rtrv-map output on Sheet 1, the mapset=<current MAP set ID> parameter must be specified with the chg-map command.
Repeat this step until the mated application contains a minimum of two RC values that are equal and a minimum of one RC value that is different.
(See Notes 2, 3, 5, 6, and 8 on Sheet 14)
To Sheet 8

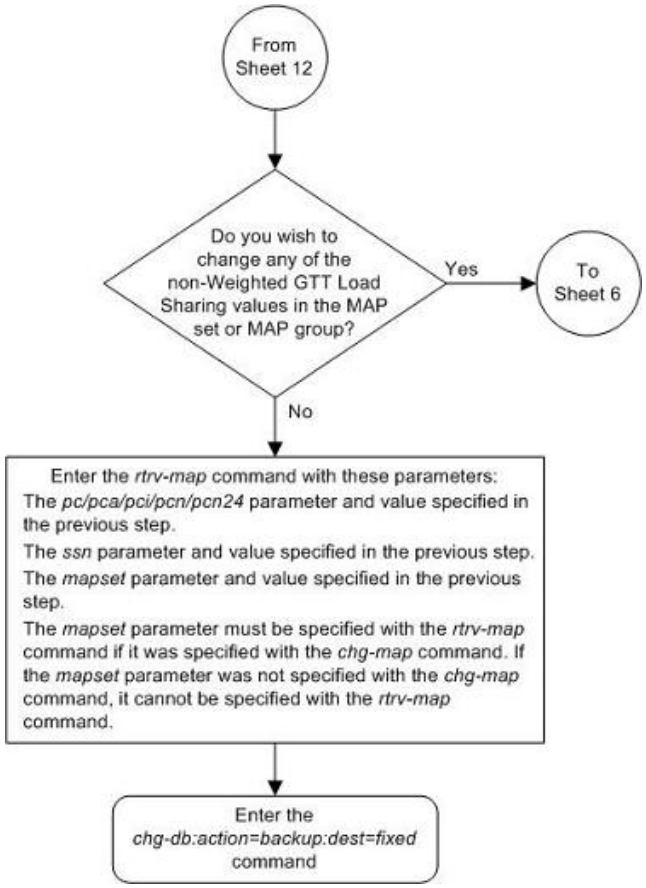

From Sheets 6 or 7
Do you wish to change the threshold value of the MAP set or MAP group?
Yes
No
Enter the chg-map command with these parameters:
:pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code>
:ssn=<current subsystem number>
:eswt=<1 – 99>
Note: If the MAPSET field shown in the rtrv-map output on Sheet 1, the mapset=<current MAP set ID> parameter must be specified with the chg-map command.
Enter the chg-map command with these parameters:
:pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code>
:ssn=<current subsystem number>
:eswt=<1 – 99>
:thr=<1 – 100>
Note: If the MAPSET field shown in the rtrv-map output on Sheet 1, the mapset=<current MAP set ID> parameter must be specified with the chg-map command.
To Sheet 10


From Sheet 6
Do you wish to change the weight values of all the entries in the MAP set or MAP group to the same value?
No
To Sheet 10
Yes
Do you wish to change the threshold value of the MAP set or MAP group?
Yes
No
Enter the chg-map command with these parameters:
:pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code>
:ssn=<current subsystem number>
:eswt=<1 – 99>
Note: If the MAPSET field shown in the rtrv-map output on Sheet 1, the mapset=<current MAP set ID> parameter must be specified with the chg-map command.
Enter the chg-map command with these parameters:
:pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code>
:ssn=<current subsystem number>
:eswt=<1 – 99>
:thr=<1 – 100>
Note: If the MAPSET field shown in the rtrv-map output on Sheet 1, the mapset=<current MAP set ID> parameter must be specified with the chg-map command.
To Sheet 10


From Sheets 8 or 9
Do you wish to change the weight value of individual entries in the MAP set or MAP group?
Yes
No
To Sheet 11
Do you wish to change the RC value of the entry in the MAP set or MAP group?
Yes
No
Will the MAP set or MAP group be changed to a dominant MAP set or MAP group?
Yes
No
Enter the chg-map command with these parameters:
:pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code>
:ssn=<current subsystem number>
:wt=<1 – 99>
Repeat this step for each entry whose weight value is being changed.
Note: If the MAPSET field shown in the rtrv-map output on Sheet 1, the mapset=<current MAP set ID> parameter must be specified with the chg-map command.
Enter the chg-map command with these parameters:
:pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code>
:ssn=<current subsystem number>
:wt=<1 – 99>
:rc=<0 - 99>
:force=yes
Repeat this step for each entry whose weight value is being changed.
Note: If the MAPSET field shown in the rtrv-map output on Sheet 1, the mapset=<current MAP set ID> parameter must be specified with the chg-map command.
Perform the steps on Sheet 5 to create a dominant MAP set or MAP group. While the wt and rc parameters can be specified when changing a mated application, if a dominant mated application results from changing the mated appplication, the WT, %WT, and THR values will not be displayed in the rtrv-map output.
To Sheet 5
To Sheet 11


From Sheet 10
Is the mated application a load shared or combined dominant/load shared mated application?
Combined Dominant/ Load Shared
To Sheet 12
Load Shared
Do you wish to change the threshold value of all entries in the MAP set or MAP group?
Yes
No
Enter the chg-map command with these parameters: :pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code> :ssn=<current subsystem number> :thr=<1 – 100>
Note: If the MAPSET field shown in the rtrv-map output on Sheet 1, the mapset=<current MAP set ID> parameter must be specified with the chg-map command.
Do you wish to change any of the non-Weighted GTT Load Sharing values in the MAP set or MAP group?
Yes
To Sheet 6
No
Enter the rtrv-map command with these parameters:
The pc/pca/pci/pcn/pcn24 parameter and value specified in the previous step.
The ssn parameter and value specified in the previous step.
The mapset parameter and value specified in the previous step.
The mapset parameter must be specified with the rtrv-map command if it was specified with the chg-map command. If the mapset parameter was not specified with the chg-map command, it cannot be specified with the rtrv-map command.
Enter the chg-db:action=backup:dest=fixed command


From Sheet 11
Do you wish to change the weight value of an RC group in the MAP set or MAP group?
No
Do you wish to change the threshold value of an RC group in the MAP set or MAP group?
Yes
No
To Sheet 13
Enter the chg-map command with these parameters:
:pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code>
:ssn=<current subsystem number>
:thr=<1 - 100>
An RC group is a group of entries in the MAP group or MAP set with the same RC value.
Repeat this step for each RC group whose threshold is being changed.
Note: If the MAPSET field shown in the rtrv-map output on Sheet 1, the mapset=<current MAP set ID> parameter must be specified with the chg-map command.
Yes
Do you wish to change the threshold value of an RC group in the MAP set or MAP group?
Yes
No
Enter the chg-map command with these parameters:
:pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code>
:ssn=<current subsystem number>
:grpwt=<1 – 99>
:thr=<1 - 100>
An RC group is a group of entries in the MAP group or MAP set with the same RC value.
Repeat this step for each RC group whose weight value and threshold is being changed.
Note: If the MAPSET field shown in the rtrv-map output on Sheet 1, the mapset=<current MAP set ID> parameter must be specified with the chg-map command.
Enter the chg-map command with these parameters:
:pc/pca/pci/pcn/pcn24=<current ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code>
:ssn=<current subsystem number>
:grpwt=<1 – 99>
An RC group is a group of entries in the MAP group or MAP set with the same RC value.
Repeat this step for each RC group whose weight value is being changed.
Note: If the MAPSET field shown in the rtrv-map output on Sheet 1, the mapset=<current MAP set ID> parameter must be specified with the chg-map command.
To Sheet 13



Notes:

1. The *sso* parameter cannot be specified if the point code value for the mated application is the EAGLE 5 ISS's point code, shown in the *rtrv-sid* output.

2. The format of the point codes in the CSPC group specified with the *grp* parameter must be the same as the primary point code specified with the *chg-map* command only if the ANSI-ITU-China SCCP Conversion feature is not enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, the CSPC group may contain a mixture of point code types (see the "Adding a Concerned Signaling Point Code" procedure in this chapter), and the network type of the CSPC group can be different from the network type of the primary point code of the mated application.

3. The mated application containing the EAGLE 5 ISS's point code can have only one mate point code assigned to it. The relative cost value assigned to the EAGLE 5 ISS's point code must be less than the relative cost value the mate point code. The EAGLE 5 ISS's true point code and subsystem cannot be specified for a load shared or combined dominant/load shared mated application.

4. The *mapset* parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled. If the *rtrv-map* output contains the *MAPSET* column, the Flexible GTT Load Sharing feature is enabled.

5. If the Flexible GTT Load Sharing feature is enabled, the new *grp*, *mrc*, *srm*, or *sso* values specified in the *chg-map* command are applied to all mated applications containing the point code and SSN specified in the *chg-map* command.

6. The *srm=yes* parameter cannot be specified for mated applications containing ITU point codes (*pci*/*mpci*, *pcn*/*mpcn*, or *pcn24*/*mpcn24* parameter values).

7. If the mated application being changed is either a load shared or combined dominant/load shared mated application, and this mated application has weight and in-service threshold values assigned, when this mated application is changed to a dominant mated application, the weight and in-service threshold values will be removed from the mated application.

8. The *force=yes* parameter must be specified and can be specified only when the *rc* and either the *srm*, *mrc*, or *wt* parameters are specified.

Provisioning MRN Entries

This procedure is used to provision an Mated Relay Node (MRN) group or MRN set in the database or to add a point code to an existing MRN group or MRN set for the Intermediate Global Title Load Sharing feature using the `ent-mrn` and `chg-mrn` commands.

An MRN group or MRN set contains alternate point codes, up to 32, that are used for load sharing between multiple nodes when the EAGLE 5 ISS is performing intermediate global title translation. This load sharing is performed after intermediate global title translation is performed on the message. The point code in the message is changed to the selected point code in the MRN table. If the translated point code is not found in the MRN table, the translated point code in the message is not changed, the message is routed using route for the translated point code.

The `ent-mrn` and `chg-mrn` command uses these parameters.

`:pc/pca/pci/pcn/pcn24` – The point code in the message after intermediate global title translation has been performed.

`:rc` – The relative cost value of point code in the message

`:pc1/pca1/pci1/pcn1/pcn241` – The first alternate point code value

`:rc1` – The relative cost value of the first alternate point code

`:pc2/pca2/pci2/pcn2pcn242` – The second alternate point code value

`:rc2` – The relative cost value of the second alternate point code

`:pc3/pca3/pci3/pcn3/pcn243` – The third alternate point code value

`:rc3` – The relative cost value of the third alternate point code

`:pc4/pca4/pci4/pcn4/pcn244` – The fourth alternate point code value

`:rc4` – The relative cost value of the fourth alternate point code

Note: Refer to Chapter 2, Configuring Destination Tables in the Database *Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

`:mrnset` – The MRN set ID that the point codes are assigned to. This parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled. If the Flexible GTT Load Sharing feature is enabled, the point code specified for the global title translation must be assigned to the MRN set specified by this parameter. The status of the Flexible GTT Load Sharing feature is shown in the `rtrv-ctrl-feat` output. To enable the Flexible GTT Load Sharing feature, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure.

The MRN set ID has one of three values:

- `dflt` – to assign the MRN to the default MRN set.
- `new` – to assign the MRN to a new MRN set. This value can be specified only with the `ent-mrn` command.
- the specific number of an existing MRN set if you are assigning the point codes to an existing MRN set.

  Refer to the Provisioning an MRN Set section for information on provisioning MRN sets.

`:dfltwt` – The default weight value. When this parameter is specified, the same weight value is assigned to all entries specified in the `ent-mrn` command. The value of this parameter is from 1 - 99. This parameter can be specified only with the `ent-mrn` command.

`:wt` – The weight value assigned to the `pc/pca/pci/pcn/pcn24` parameter value. The value of this parameter is from 1 - 99.

`:wt1` – The weight value assigned to the `pc1/pca1/pci1/pcn1/pcn241` parameter value. The value of this parameter is from 1 - 99.

`:wt2` – The weight value assigned to the `pc2/pca2/pci2/pcn2/pcn242` parameter value. The value of this parameter is from 1 - 99.

`:wt3` – The weight value assigned to the `pc3/pca3/pci3/pcn3/pcn243` parameter value. The value of this parameter is from 1 - 99.

`:wt4` – The weight value assigned to the `pc4/pca4/pci4/pcn4/pcn244` parameter value.

`:thr` – The in-service threshold assigned to the MRN group or MRN set. The in-service threshold is the minimum percentage (from 1 - 100) of weight that must be available for an RC group (a group of entries in the MRN group or MRN set that have the same RC value assigned) to be considered available to carry traffic. If the percentage of the available weight is less than the in-service threshold, then the entire RC group is considered unavailable for traffic. If the percentage of the available weight is equal to or greater than the in-service threshold, then the RC group is considered available, and traffic can be sent to any available entity in the RC group. The value of the `thr` parameter is assigned to all entries in the MRN group or MRN set that have the same RC value that is specified in the `ent-mrn` command. The `thr` parameter can be used in this procedure only with the `ent-mrn` command.

Refer to the "Provisioning Weights and In-Service Thresholds for MRN Entries" section for information on provisioning MRN groups or MRN sets with weight and in-service threshold values.

Note: The following parameters of the `chg-mrn` command cannot be used in this procedure: `thr`, `grpwt`, `eswt`, and `force=yes`. These parameters can be used with the `chg-mrn` command only when changing the attributes of specific entries in an existing MRN group or MRN set, and not when adding entries to an existing MRN group or MRN set. If you wish to change specific entries in an existing MRN group or MRN set, perform either the *Changing MRN Entries with the ESWT Parameter* on page 368 procedure or the *Changing the Weight and Threshold Values of MRN Entries* on page 381 procedure.

To add a new MRN group, the group must be provisioned in the database with the `ent-mrn` command, specifying up to four alternate point codes. If more point codes are to be added to the MRN group, either the `ent-mrn` or `chg-mrn` command to add the additional point codes to the MRN group. A maximum of 32 point codes can be assigned to an MRN group. If the Flexible GTT Load Sharing feature is enabled, refer to the "Provisoning an MRN Set" section for information on provisioning MRN sets.

A point code and `rc` value must be entered as a pair. For example, the `pc3` and `rc3` parameters must be specified together in the `ent-mrn` or `chg-mrn` commands if the alternate point code value is being specified.

The point codes specified with the `ent-mrn` or `chg-mrn` commands can be in only one MRN group. If the Flexible GTT Load Sharing feature is enabled, refer to the "Provisoning an MRN Set" section for information on provisioning point codes in MRN sets.

The relative cost parameters (`rc/rc1/rc2/rc3/rc4`) determine how the global title translation load is to be shared among the alternate point codes. There are three types of load sharing that can be performed: dominant, load shared, or combined dominant/load shared.

All the point codes in a dominant MRN group or MRN set have different relative cost values. The translated point code in the message is the preferred point code that the message is routed on. The relative cost value assigned to the preferred point code does not have to be the lowest value in the MRN group or MRN set. All traffic is routed to the preferred point code, if it is available. If the preferred point code becomes unavailable, the traffic is routed to highest priority alternate point code that is available. When the preferred point code becomes available again, the traffic is then routed back to the preferred point code. For example, the MRN table contains the following entries.

```
PC            RC
005-005-005   10
006-001-001   20
006-001-002   30
006-001-003   40
006-001-004   50
006-001-005   60
006-001-006   70
006-001-007   80
```

If the preferred point code is 006-001-001 and it becomes unavailable, the traffic will be routed to point code 006-001-002.

All the point codes in a load shared MRN group or MRN set have the same relative cost value. Traffic is shared equally between the point codes in this MRN group or MRN set.

A combined dominant/load shared MRN group or MRN set is a combination of the dominant and load sharing MRN groups or MRN sets. A combined dominant/load shared MRN group or MRN set must contain a minimum of two entries with the same relative cost value and a minimum of one entry with a different relative cost value. Traffic is routed to the point code or point codes with the lowest relative cost value. If more than one point code has the lowest relative cost value, the traffic is shared between these point codes. If the point code or point codes with the lowest relative cost value become unavailable, traffic is routed to the the point code or point codes with the next higher relative cost value. If more than one point code has this relative cost value, the traffic is shared between these point codes. For example, the MRN table contains the following entries.

```
PC            RC
005-005-005   10
006-001-001   10
006-001-002   10
006-001-003   20
006-001-004   20
006-001-005   20
006-001-006   20
006-001-007   20
```

If the preferred point code is 006-001-001, the traffic is shared equally between point codes 005-005-005, 006-001-001, and 006-001-002. If point codes 005-005-005, 006-001-001, and 006-001-002 become unavailable, the traffic will be shared equally between point codes, 006-001-003, 006-001-004, 006-001-005, 006-001-006, and 006-001-007.

The point codes in the MRN group or MRN set must be a full point code with a route assigned to it. Cluster point codes, network routing point codes, or the EAGLE 5 ISS's true point code cannot be specified in an MRN group or MRN set. The `rtrv-rte` command can be used to verify the

point codes in the routing table. The point codes in the routing table are shown in the DPCA, DPCI, DPCN, or DPCN24 fields of the rtrv-rte command output. The EAGLE 5 ISS's true point code is shown in the PCA, PCI, PCN, or PCN24 fields of the rtrv-sid command output.

The Intermediate GTT Load Sharing controlled feature must be enabled and activated before an MRN group can be provisioned in the database. This can be verified with the rtrv-ctrl-feat command. If this controlled feature is enabled and activated, the Intermediate GTT Load Sharing feature is shown as either temporarily or permanently enabled in the rtrv-ctrl-feat output, and the entry on is shown in the Status column for this feature. If this controlled feature is off, perform the *Activating the IGTTLS feature* on page 750 procedure and enable and activate this feature.

The point code type of the alternate point codes must be the same as the point code type of the primary point code. For example, if the primary point code is a 24-bit ITU-N point code (pcn24), the alternate point codes must be 24-bit ITU-N point codes (mpcn24). If spare point codes are being used, both the primary and mate point codes must be spare point codes. For example, if the primary point code is an ITU-I spare point code, the alternate point codes must be ITU-I spare point codes.

If only the Intermediate GTT Load Sharing feature is enabled and turned on, the MRN table can contain a maximum of 3000 entries. If the Flexible GTT Load Sharing feature is enabled, the MRN table can contain a maximum of 6000 entries. If entries are provisioned in the SCCP-SERV table, shown by the rtrv-sccp-serv command output, the maximum number of entries that the MRN table can contain is reduced by the number of entries shown in the rtrv-sccp-serv command output.

If adding the new MRN entries will exceed the maximum capacity of the MRN table, shown in the rtrv-mrn command output, entries in the MRN or SCCP-SERV tables must be removed so that the new MRN entries can be added. Perform the "Removing MRN Entries" procedure and remove the required number of MRN entries to allow the addition of the new MRN entries or enter the dlt-sccp-serv command to remove the required number of entries in the SCCP-SERV table to allow the addition of the new MRN entries.

Provisoning an MRN Set

The Flexible GTT Load Sharing feature provides the ability to define multiple load sharing sets in the MRN table where the same point code can be assigned to different load sharing sets.

The MRN table contains specific load sharing sets, designated by numbers, and a default MRN set.

The MRN table without the Flexible GTT Load Sharing feature enabled, is used by MPS-based features and all global title translation features.

The Flexible GTT Load Sharing feature provides flexible load sharing for global title translations defined in the GTT table and not for the MPS based features. The MPS based features do not support the MRN set ID parameter. The MPS based features perform lookups for load sharing in the default MRN set and the GTT table. The entries in the GTT table can be linked to an MRN set ID, allowing lookups in a specific MRN set other than the default MRN set.

Any MRN entries that were provisioned in the database before the Flexible GTT Load Sharing feature is enabled are placed in the default MRN set when the Flexible GTT Load Sharing feature is enabled.

Any GTT entries that were provisioned in the database before the Flexible GTT Load Sharing feature is enabled are assigned to the default MRN set when the Flexible GTT Load Sharing feature is enabled.

To provision entries in the default MRN set, the `mrnset=dflt` parameter must be specified with the `ent-mrn` or `chg-mrn` commands.

To provision entries in an existing MRN set other than the default MRN set, the `mrnset=<MRN set ID>` parameter must be specified with the `ent-mrn` or `chg-mrn` commands.

To provision entries in a new MRN set, the `mrnset=new` parameter must be specified with the `ent-mrn` command. The `mrnset=new` parameter can be specified only with the `ent-mrn` command. When the `ent-mrn` command is executed with the `mrnset=new` parameter, the new MRN set ID is automatically generated and displayed in the output of the `ent-mrn` command as follows.

```
New MRNSET Created : MRNSETID = <new MRN set ID>
```

An MRN set, other than the default MRN set, is an MRN group provisioned with the MRN set ID and can contain a maximum of 32 point codes.

The default MRN set can contain multiple MRN groups. The point code can appear in only one MRN group in the default MRN set.

The point code provisioned in an MRN set can be provisioned in multiple MRN sets. All the point codes in an MRN set must be different.

Provisioning Weights and In-Service Thresholds for MRN Entries

Weighted GTT Load Sharing allows unequal traffic loads to be provisioned in load sharing groups. This feature also allows provisioning control over load sharing groups so that if insufficient capacity within the load sharing group is available, the load sharing group is not used.

To provision the weight values and in-service threshold values for new MRN groups or MRN sets or new entries in existing MRN groups or MRN sets, the `dfltwt`, `wt`, `wt1`, `wt2`, `wt3`, `wt4`, and `thr` parameters are used.

The `dfltwt`, `wt`, `wt1`, `wt2`, `wt3`, `wt4`, and `thr` parameters can be used only:

- If the MRN group or MRN set is either a load shared or combined dominant/load shared MRN group or MRN set.
- If the Weighted GTTLoad Sharing feature is enabled and turned on.

The status of the Weighted GTT Load Sharing feature can be verified by entering the `rtrv-ctrl-feat` command. If the Weighted GTT Load Sharing feature is not enabled or not turned on, perform the *Activating the Weighted GTT Load Sharing Feature* on page 813 procedure to enable and turn on the Weighted GTT Load Sharing feature.

To assign the same weight value to all the entries specified in the `ent-mrn` command, use the `dfltwt` parameter.

To assign an in-service threshold value to all the entries specified in the `ent-mrn` command, use the `thr` parameter.

To assign different weight values to the entries specified in either the `ent-mrn` or `chg-mrn` commands, use the `wt`, `wt1`, `wt2`, `wt3`, and `wt4` parameters with the corrsponding point code parameters.

The `dfltwt` parameter and the individual weight parameters (`wt`, `wt1`, `wt2`, `wt3`, `wt4` parameters) cannot be specified together in the `ent-mrn` command.

The `thr` parameter cannot be specified in this procedure with the `chg-mrn` command. Specifying the `thr` parameter with the `chg-mrn` command can be done when specifying only the

pc/pca/pci/pcn/pcn24 parameter and without the alternate point code parameters. To specify the thr parameter with the chg-mrn command, perform either the *Changing MRN Entries with the ESWT Parameter* on page 368 procedure or the *Changing the Weight and Threshold Values of MRN Entries* on page 381 procedure.

The weight values assigned to the entiries in the MRN group or MRN set are shown in the WT column in the rtrv-mrn output.

The in-service threshold values assigned to the entiries in the MRN group or MRN set are shown in the THR column in the rtrv-mrn output.

The %WT column in the rtrv-mrn output shows the percentage of the traffic the particular entry in the entity set will handle.

The WT, %WT, and THR columns are shown in the rtrv-mrn output only if the Weighted GTT Load Sharing feature is enabled and turned on.

For more information on the Weighted GTT Load Sharing feature, refer to the *Weighted GTT Load Sharing* on page 42 section.

Canceling the RTRV-MRN Command

Because the rtrv-mrn command used in this procedure can output information for a long period of time, the rtrv-mrn command can be canceled and the output to the terminal stopped. There are three ways that the rtrv-mrn command can be canceled.

- Press the F9 function key on the keyboard at the terminal where the rtrv-mrn command was entered.
- Enter the canc-cmd without the trm parameter at the terminal where the rtrv-mrn command was entered.
- Enter the canc-cmd:trm=<xx>, where <xx> is the terminal where the rtrv-mrn command was entered, from another terminal other that the terminal where the rtrv-mrn 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, refer to the *Commands Manual*.

1. Display the mated relay node groups in the database using the rtrv-mrn command.

   This is an example of the possible output if the Flexible GTT Load Sharing feature is not enabled.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   PC            RC
   007-007-007   10
   008-001-001   20
   008-001-002   30
   008-001-003   40
   008-001-004   50
   008-001-005   60
   008-001-006   70
   008-001-007   80
```

```
MRN table is (8 of 2990) 1% full
```

This is an example of the possible output if the Flexible GTTLoad Sharing feature is not enabled and the Weighted GTTLoad Sharing feature is enabled and turned on.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   PC            RC WT %WT THR
   007-007-007    10 10  14   1
   008-001-001    10 10  14   1
   008-001-002    10 20  28   1
   008-001-003    10 30  42   1
   008-001-004    20 40  23   1
   008-001-005    20 40  23   1
   008-001-006    20 40  23   1
   008-001-007    20 50  29   1


MRN table is (8 of 2990) 1% full
```

This is an example of the possible output if the Flexible GTTLoad Sharing feature is enabled.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   MRNSET    PC            RC
   DFLT      007-007-007    10
             008-001-001    20
             008-001-002    30
             008-001-003    40
             008-001-004    50
             008-001-005    60
             008-001-006    70
             008-001-007    80
MRN table is (8 of 5990) 1% full
```

This is an example of the possible output if the Flexible GTT Load Sharing feature is enabled and the Weighted GTT Load Sharing feature is enabled and turned on.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   MRNSET    PC            RC WT %WT THR
   DFLT      007-007-007    10 10  14   1
             008-001-001    10 10  14   1
             008-001-002    10 20  28   1
             008-001-003    10 30  42   1
             008-001-004    20 40  23   1
             008-001-005    20 40  23   1
             008-001-006    20 40  23   1
             008-001-007    20 50  29   1

MRN table is (8 of 2990) 1% full
```

Note: If MRN entries are not shown in the `rtrv-mrn` output in step 1, skip steps 2 through 4 and go to step 5.

Note: If the addition of the new MRN entries in this procedure will not exceed the maximum capacity of the MRN table shown in step 1, skip steps 2 through 5 and go to step 6.

2. If only the Intermediate GTT Load Sharing feature is enabled and turned on, the MRN table can contain a maximum of 3000 entries.

If the Flexible GTT Load Sharing feature is enabled, the MRN table can contain a maximum of 6000 entries. If entries are provisioned in the SCCP-SERV table, shown by the `rtrv-sccp-serv` command output, the maximum number of entries that the MRN table can contain is reduced by the number of entries shown in the `rtrv-sccp-serv` command output.

If adding the new MRN entries will exceed the maximum capacity of the MRN table, shown in the `rtrv-mrn` command output, entries in the MRN or SCCP-SERV tables must be removed so that the new MRN entries can be added.

If you wish to remove MRN entries from the MRN table, perform the *Removing MRN Entries* on page 345 procedure and remove the required number of MRN entries to allow the addition of the new MRN entries. After the MRN entries have been removed, skip steps 3, 4, and 5, and go to step 6.

If you wish to remove entries from the SCCP-SERV table, go to step 3.

If no MRN or SCCP-SERV table entries are removed, the new MRNs cannot be added and this procedure cannot be performed.

3. Display the entries in the SCCP-SERV table by entering the `rtrv-sccp-serv` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   --------------------------------------
   Service     : GFLEX
   State       : Online
   GTT Option  : Yes
   --------------------------------------
   ITUI PC       RC
   1-002-5       10
   1-002-6       20
   --------------------------------------
   Service     : GPORT
   State       : Online
   GTT Option  : Yes
   --------------------------------------
   ITUI PC       RC
   1-002-4       10
   2-003-4       10
   1-002-5       20
   2-003-5       20
   2-003-6       30
   2-003-7       40

SCCPSRV  table is (10 of 96) 10% full.
```

4. Remove enough entries from the SCCP-SERV table to allow the addition of the new MRN entries by entering the `dlt-sccp-serv` command.

   For this example, enter this command.

   `dlt-sccp-serv:serv=gport:pci1=1-002-5:pci2=2-003-6`

   This example removes only the specified point codes. If you wish to remove all the entries for the G-Port or G-Flex service, specify one of the point codes for the service and the `all=yes` parameter.

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

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0
DLT-SCCP-SRV: MASP A - COMPLTD
```

After step 4 is performed, skip step 5 and go to step 6.

5. Display the status of the Intermediate GTT Load Sharing (IGTTLS) feature by entering the `rtrv-ctrl-feat` command with the IGTTLS feature part number.

   Enter this command.

   `rtrv-ctrl-feat:partnum=893006901`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Intermed GTT Load Sharing 893006901  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 IGTTLS controlled feature has not been enabled or turned on, perform the *Activating the IGTTLS feature* on page 750 procedure and enable and turn on the IGTTLS feature.

6. If the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-mrn` output in step 1, the Weighted GTT Load Sharing feature is enabled and turned on. Go to step 7.

   If the `WT`, `%WT`, and `THR` columns are not shown in step 1 and you do not wish to assign weights and in-service thresholds to the entries in the MRN group or MRN set in this procedure, skip this step and go to step 7.

   If the `WT`, `%WT`, and `THR` columns are not shown in step 1 and you wish to assign weights and in-service thresholds to the entries in the MRN group or MRN set in this procedure, perform the *Activating the Weighted GTT Load Sharing Feature* on page 813 procedure to enable and turn on the Weighted GTT Load Sharing feature.

7. If the `MRNSET` column is shown in the `rtrv-mrn` output in step 1, the Flexible GTT Load Sharing feature is enabled. Go to step 8.

   If the `MRNSET` column is not shown in step 1 and you do not wish to provision MRN sets in this procedure, skip this step and go to step 8.

   If the `MRNSET` column is not shown in step 1 and you wish to provision MRN sets in this procedure, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure and enable the Flexible GTT Load Sharing feature.

   Note:

   1. If the Flexible GTT Load Sharing feature is not enabled, the point code can appear only once in the `rtrv-mrn` output, cannot be shown in the `rtrv-sid` output, but must be the DPC

of a route. A proxy point code cannot be assigned to the point code. Perform step 8 to verify that the point code assigned to the MRN group is not shown in the `rtrv-sid` output. Perform steps 9 and 10 to verify that a proxy point code is not assigned to the point code. Perform step 11 to verify that the point code is the DPC of a route.

2. If the Flexible GTT Load Sharing feature is enabled, a specific point code can be assigned to multiple MRN sets, but cannot be shown in the `rtrv-sid` output, and must be the DPC of a route. A proxy point code cannot be assigned to the point code. Because the point code can be assigned to multiple MRN sets, the point code you wish to assign to the MRN set could be assigned to other MRN sets.

   If the point code is shown in the `rtrv-mrn` output in step 1, steps 8, 9, 10, and 11 do not need to be performed. For the point code to be shown in step 1, it has already been determined that the point code is not shown in the `rtrv-sid` output, is the DPC of a route, and a proxy point code is not assigned to the point code. Skip steps 8, 9, 10, and 11, and go to step 12.

   If the point code is not shown in the `rtrv-mrn` output in step 1, steps 8, 9, 10, and 11 need to be performed. Perform step 8 to verify that the point code assigned to the MRN group is not shown in the `rtrv-sid` output. Perform steps 9 and 10 to verify that a proxy point code is not assigned to the point code. Perform step 11 to verify that the point code is the DPC of a route.

8. Display the EAGLE 5 ISS self-identification, using the `rtrv-sid` command.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 36.0.0
   PCA             PCI          PCN               CLLI             PCTYPE
   010-020-030     1-023-1      12-0-14-1         rlghncxa03w      OTHER
                 s-1-023-1    s-12-0-14-1

   CPCA
   002-002-002       002-002-003       002-002-004      002-002-005
   002-002-006       002-002-007       002-002-008      002-002-009
   004-002-001       004-003-003       050-060-070

   CPCI
   1-001-1           1-001-2           1-001-3          1-001-4
   1-002-1           1-002-2           1-002-3          1-002-4
   2-001-1           7-222-7

   CPCN
   2-0-10-3          2-0-11-0          2-0-11-2          2-0-12-1
   2-2-3-3           2-2-4-0           10-14-10-1
```

9. Display the destination point codes in the database by entering the `rtrv-dstn` command. This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN          DOMAIN
   001-207-000   ----------- no  ---   -------      -----------     SS7
   001-001-001   ----------- no  ---   -------      -----------     SS7
   001-001-002   ----------- no  ---   -------      -----------     SS7
   001-005-000   ----------- no  ---   -------      -----------     SS7
   001-007-000   ----------- no  ---   -------      -----------     SS7
   008-012-003   ----------- no  ---   -------      -----------     SS7
   003-002-004   ----------- no  ---   -------      -----------     SS7
   009-002-003   ----------- no  ---   -------      -----------     SS7
   010-020-005   ----------- no  ---   -------      -----------     SS7
```

```
   DPCI          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
   1-207-0       ----------- no  ---   -------      -----------    SS7
   0-015-0       ----------- no  ---   -------      -----------    SS7
   0-017-0       ----------- no  ---   -------      -----------    SS7
   1-011-1       ----------- no  ---   -------      -----------    SS7
   1-011-2       ----------- no  ---   -------      -----------    SS7

   DPCN          CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

   DPCN24        CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the required point code is not shown in the `rtrv-dstn` output, perform the "Adding a Destination Point Code" procedure in the *Database Administration Manual - SS7* to add the required point code. A proxy point code cannot be assigned to the point code.

After the new point code has been added, skip steps 10 and 11 and perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database. After the route has been added, continue the procedure with step 12.

10. Display the point code that will be assigned to the mated application by using the `rtrv-dstn` command and specifying the point code. For this example, enter this command.

    `rtrv-dstn:dpca=010-020-005`

    This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
   010-020-005   ----------- no  ---   -------      -----------    SS7

   PPC           NCAI           PRX
   009-002-003   ----           no

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

    If the adjacent point code is not shown in the `rtrv-dstn` command output, the following output is displayed.

```
DPCA          CLLI        BEI ELEI  ALIASI       ALIASN/N24    DOMAIN

No destinations meeting the requested criteria were found

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

    A proxy point code (a point code value is shown in the `PPC` column) cannot be assigned to the point code. If a proxy point code is shown in this step, choose another point code from the `rtrv-dstn` output in the previous step and repeat this step.

    After the new point code has been added, skip step11 and perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database. After the route has been added, continue the procedure with step 12.

11. Enter the `rtrv-rte` command with the `dpc` parameter specifying the point code to be used with the `ent-mrn` command to verify whether or not the point code is the DPC of a route.

For this example, enter these commands.

`rtrv-rte:dpca=005-005-005`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   005-005-005 ---------- --------------   ls05       10    005-005-005
                                           ls15       30    089-047-123
                                           lsa8       50    077-056-000
                                               RTX:No  CLLI=ls05clli
```

`rtrv-rte:dpca=006-001-001`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   006-001-001 ---------- --------------   ls65       10    006-001-001
                                               RTX:No  CLLI=ls65clli
```

`rtrv-rte:dpca=006-001-002`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   006-001-002 ---------- --------------   ls66       10    006-001-002
                                               RTX:No  CLLI=ls66clli
```

`rtrv-rte:dpca=006-001-003`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   006-001-003 ---------- --------------   ls67       10    006-001-003
                                               RTX:No  CLLI=ls67clli
```

`rtrv-rte:dpca=006-001-004`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   006-001-004 ---------- --------------   ls68       10    006-001-004
                                               RTX:No  CLLI=ls68clli
```

`rtrv-rte:dpca=006-001-005`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   006-001-005 ---------- --------------   ls69     10 006-001-005
                                               RTX:No  CLLI=ls69clli
```

`rtrv-rte:dpca=006-001-006`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   006-001-006 ---------- --------------   ls70     10 006-001-006
                                             RTX:No  CLLI=ls70clli
```

`rtrv-rte:dpca=006-001-007`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   006-001-007 ---------- --------------   ls71       10    006-001-007
                                             RTX:No  CLLI=ls71clli
```

If the point code is not shown in the `rtrv-rte` output, perform one of the Adding a Route procedures in the Database *Administration Manual - SS7* and add the required route to the database.

12. Add the MRN group or MRN set to the database using the `ent-mrn` command.

    The point codes specified must have a route assigned to it, or must be a part of a cluster that has a route assigned to it (shown in step 11), cannot be in the Self ID table (shown in step 8), and proxy point codes cannot be assigned to the point codes (shown in step 10). The MRN group can contain a maximum of 32 alternate point code entries. The alternate point code and its corresponding `rc` parameter must be specified together.

    The point code type of the alternate point codes must be the same as the point code type of the primary point code. For example, if the primary point code is a 24-bit ITU-N point code (`pcn24`), the alternate point codes must be 24-bit ITU-N point codes (`mpcn24`). If spare point codes are being used, both the primary and mate point codes must be spare point codes. For example, if the primary point code is an ITU-I spare point code, the alternate point codes must be ITU-I spare point codes.

    If the Flexible GTT Load Sharing is enabled, the `mrnset` parameter must be specified with the `ent-mrn` command.

    To provision entries in the default MRN set, the `mrnset=dflt` parameter must be specified with the `ent-mrn` command. To provision entries in an existing MRN set other than the default MRN set, the `mrnset=<MRN set ID>` parameter must be specified with the `ent-mrn` command. One of the existing point codes in the existing MRN set must be specified with the primary point code parameter (`pc/pca/pci/pcn/pcn24`). The `rc` parameter value for this point code should not be specified. If the `rc` parameter is specified, an attempt will be made to provision another MRN group in this MRN set. Multiple MRN groups in one MRN set is supported only in the default MRN set. The new entries to this MRN set must be specified with the alternate point code parameters and their corresponding `rc` parameters.

    MRNTo provision entries in a new set, the `mrnset=new` parameter must be specified with the `ent-mrn` command. The `mrnset=new` parameter can be specified only with the `ent-mrn` command. When the `ent-mrn` command is executed with the `mrnset=new` parameter, the new MRN set ID is automatically generated and displayed in the output of the `ent-mrn` command as follows.

    ```
    New MRNSET Created : MRNSETID = <new MRN set ID>
    ```

    An MRN set, other than the default MRN set, is an MRN group provisioned with the MRN set ID and can contain a maximum of 32 point codes.

The default MRN set can contain multiple MRN groups. Each group in the default MRN set can contain a maximum of 32 point codes. The point code value can appear only once in the default MRN set, so the point code value can appear in only one MRN group in the default MRN set.

The point code provisioned in an MRN set can be provisioned in multiple MRN sets. All the point codes in an MRN set, including the default MRN set, must be different.

To provision weights and in-service thresholds to the entries in either a load shared or combined dominant/load shared MRN group or MRN set, specify the `dfltwt`, `wt`, `wt1`, `wt2`, `wt3`, `wt4`, and `thr` parameters with the `ent-mrn` command as shown in the "Provisioning Weights and In-Service Thresholds for MRN Entries" section.

For this example, enter one of these commands.

If the Flexible GTT Load Sharing is not enabled, enter this command.

```
ent-mrn:pca=005-005-005:rc=10:pca1=006-001-001:rc1=20
:pca2=006-001-002:rc2=30:pca3=006-001-003:rc3=40
:pca4=006-001-004:rc4=50
```

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

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
ENT-MRN:  MASP A - COMPLTD
```

If the Flexible GTT Load Sharing is enabled and a new MRN set, other than the default MRN set, is being provisioned, enter this command.

```
ent-mrn:pca=005-005-005:rc=10:pca1=006-001-001:rc1=20
:pca2=006-001-002:rc2=30:pca3=006-001-003:rc3=40
:pca4=006-001-004:rc4=50:mrnset=new
```

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

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
New MRNSET Created : MRNSETID = 2
ENT-MRN : MASP A - COMPLTD
```

If the Flexible GTT Load Sharing is enabled and a new MRN group is being added to the default MRN set, enter this command.

```
ent-mrn:pca=005-005-005:rc=10:pca1=006-001-001:rc1=20
:pca2=006-001-002:rc2=30:pca3=006-001-003:rc3=40
:pca4=006-001-004:rc4=50:mrnset=dflt
```

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

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
ENT-MRN : MASP A - COMPLTD
```

If the Flexible GTT Load Sharing is enabled and entries are being added to an existing MRN set, enter this command.

```
ent-mrn:pca=005-005-005:pca1=006-001-001:rc1=20
:pca2=006-001-002:rc2=30:pca3=006-001-003:rc3=40
:pca4=006-001-004:rc4=50:mrnset=1
```

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

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
ENT-MRN:  MASP A - COMPLTD
```

If the Flexible GTT Load Sharing is not enabled and the Weighted GTTLoad Sharing feature is enabled and turned on, enter this command. This example creates a combined dominant/load shared MRN group with the same weight value for each entry in the group, and an in-service threshold value assigned to each entry in the set.

```
ent-mrn:pca=005-005-005:rc=10:dfltwt=20:pca1=006-001-001
:rc1=10:pca2=006-001-002:rc2=30:pca3=006-001-003:rc3=10
:pca4=006-001-004:rc4=30:thr=40
```

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

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
ENT-MRN:  MASP A - COMPLTD
```

If the Flexible GTT Load Sharing is enabled, the Weighted GTTLoad Sharing feature is enabled and turned on, and a new MRN set, other than the default MRN set, is being provisioned, enter this command. This example creates a new load shared MRN set with different weight values for each entry in the set.

```
ent-mrn:pca=005-005-005:rc=10:wt=10:pca1=006-001-001:rc1=10
:wt1=20:pca2=006-001-002:rc2=10:wt2=30:pca3=006-001-003:rc3=10
:wt3=40:pca4=006-001-004:rc4=10:wt5=50:mrnset=new
```

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

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
New MRNSET Created : MRNSETID = 2
ENT-MRN : MASP A - COMPLTD
```

If the Flexible GTT Load Sharing is enabled, the Weighted GTTLoad Sharing feature is enabled and turned on, and a new MRN group is being added to the default MRN set, enter this command. This example creates a combined dominant/load shared MRN set with different weight values for each entry in the set, and an in-service threshold value assigned to each entry in the set.

```
ent-mrn:pca=005-005-005:rc=10:wt=10:pca1=006-001-001:rc1=10
:wt1=10:pca2=006-001-002:rc2=30:wt2=20:pca3=006-001-003:rc3=40
:wt3=20:pca4=006-001-004:rc4=50:wt4=20:mrnset=dflt:thr=30
```

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

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
ENT-MRN : MASP A - COMPLTD
```

If the Flexible GTT Load Sharing is enabled, the Weighted GTT Load Sharing feature is enabled and turned on, and entries are being added to an existing MRN set, enter this command. This example adds entries to an existing MRN set to create a combined dominant/load shared MRN set. Each entry specified in the `ent-mrn` command has different weight values assigned. Entry specified in the `ent-mrn` command has an in-service threshold value assigned.

```
ent-mrn:pca=005-005-005:pca1=006-001-001:rc1=20:wt1=20
:pca2=006-001-002:rc2=20:wt2=40:pca3=006-001-003:rc3=40:wt3=30
:pca4=006-001-004:rc4=40:wt4=50:mrnset=1:thr=30
```

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

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
ENT-MRN : MASP A - COMPLTD
```

Note: If no more entries will be added to the MRN group or MRN set specified in step 12, skip step 13 and go to step 14.

13. Enter the `ent-mrn` or `chg-mrn` command without the `rc` parameter to add more entries to the MRN group or MRN set specified in step 12.

    The point codes specified must have a route assigned to it, or must be a part of a cluster that has a route assigned to it (shown in step 11), cannot be in the Self ID table (shown in step 8), and proxy point codes cannot be assigned to the point codes (shown in step 10). The MRN group can contain a maximum of 32 alternate point code entries. The alternate point code and its corresponding `rc` parameter must be specified together.

    To provision weights and in-service thresholds to the entries in either a load shared or combined dominant/load shared MRN group or MRN set, specify the `dfltwt`, , `wt1`, `wt2`, `wt3`, `wt4`, or `thr` parameters with the `ent-mrn` command or the , `wt1`, `wt2`, `wt3`, or `wt4` parameters with the `chg-mrn` command as shown in the "Provisioning Weights and In-Service Thresholds for MRN Entries" section.

    Note: The `mrnset` parameter can be specified only if the Flexible GTT Load Sharing feature is enabled. If the Flexible GTT Load Sharing is enabled, the `mrnset` parameter must be specified with the `ent-mrn` or `chg-mrn` commands. The `mrnset` parameter value specified in this step must be the value specified in step 12.

    For this example, enter one of these commands.

    ```
    ent-mrn:pca=005-005-005:pca1=006-001-005:rc1=60
    :pca2=006-001-006:rc2=70:pca3=006-001-007:rc3=80:mrnset=2
    ```

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

    ```
    rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
    ENT-MRN:  MASP A - COMPLTD
    ```

    ```
    chg-mrn:pca=005-005-005:pca1=006-001-005:rc1=60
    :pca2=006-001-006:rc2=70:pca3=006-001-007:rc3=80:mrnset=2
    ```

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

    ```
    rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
    CHG-MRN:  MASP A - COMPLTD
    ```

    If the Weighted GTT Load Sharing feature is enabled and turned on, enter these commands.

    ```
    ent-mrn:pca=005-005-005:dfltwt=40:pca1=006-001-005:rc1=10
    :pca2=006-001-006:rc2=10:pca3=006-001-007:rc3=10:mrnset=2
    ```

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

    ```
    rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
    ENT-MRN:  MASP A - COMPLTD
    ```

    ```
    chg-mrn:pca=005-005-005:pca1=006-001-008:rc1=20:wt1=20
    :pca2=006-001-009:rc2=20:wt2=30:pca3=006-001-010:rc3=20:wt3=30
    :mrnset=2:force=yes
    ```

Note: The `force=yes` parameter must be specified and can be specified only with the `chg-mrn` command when the `rc/rc1/rc2/rc3/rc4` parameter is specified with the `wt/wt1/wt2/wt3/wt4` parameter.

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

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
CHG-MRN:  MASP A - COMPLTD
```

14. Verify the changes using the `rtrv-mrn` command with the point code (`pca/pci/pcn/pcn24` parameters) specified in steps 12 and 13.

    If the `mrnset` parameter was specified in steps 12 and 13, the `mrnset` parameter and value specified in steps 12 and 13 must be specified with the `rtrv-mrn` command in this step.

    For this example, enter one of these commands. If the Flexible GTT Load Sharing is not enabled, enter this command.

    `rtrv-mrn:pca=005-005-005`

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   PC            RC
   005-005-005   10
   006-001-001   20
   006-001-002   30
   006-001-003   40
   006-001-004   50
   006-001-005   60
   006-001-006   70
   006-001-007   80

MRN table is (16 of 2990) 1% full
```

    If the Flexible GTT Load Sharing is enabled and a new MRN set, other than the default MRN set, was provisioned in steps 12 and 13, enter this command.

    `rtrv-mrn:pca=005-005-005:mrnset=2`

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   MRNSET    PC            RC
   2         005-005-005   10
             006-001-001   20
             006-001-002   30
             006-001-003   40
             006-001-004   50
             006-001-005   60
             006-001-006   70
             006-001-007   80

MRN table is (16 of 5990) 1% full
```

    If the Flexible GTT Load Sharing is enabled and a new MRN group was added to the default MRN set in steps 12 and 13, enter this command.

    `rtrv-mrn:pca=005-005-005:mrnset=dflt`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   MRNSET    PC             RC
   DFLT      005-005-005    10
             006-001-001    20
             006-001-002    30
             006-001-003    40
             006-001-004    50
             006-001-005    60
             006-001-006    70
             006-001-007    80

MRN table is (16 of 5990) 1% full
```

If the Flexible GTT Load Sharing is enabled and entries were added to an existing MRN set in step 12, enter this command.

`rtrv-mrn:pca=005-005-005:mrnset=1`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   MRNSET    PC             RC
   1         005-005-005    10
             003-003-003    15
             006-001-001    20
             004-004-004    25
             006-001-002    30
             006-001-003    40
             006-001-004    50
             009-009-009    60

MRN table is (16 of 5990) 1% full
```

If the Weighted GTT Load Sharing feature is enabled and turned on, for this example, enter one of these commands. If the Flexible GTT Load Sharing is not enabled, enter this command.

`rtrv-mrn:pca=005-005-005`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   PC             RC WT %WT THR
   005-005-005    10 20  33  40
   006-001-001    10 20  33  40
   006-001-003    10 20  33  40
   006-001-002    30 20  50  40
   006-001-004    30 20  50  40

MRN table is (16 of 2990) 1% full
```

If the Flexible GTT Load Sharing feature is enabled and a new MRN set, other than the default MRN set, was provisioned in steps 12 and 13, enter this command.

`rtrv-mrn:pca=005-005-005:mrnset=2`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0
```

```
   MRNSET    PC             RC WT %WT THR
   2         005-005-005    10 10   4   1
             006-001-001    10 10   4   1
             006-001-002    10 30  12   1
             006-001-003    10 40  15   1
             006-001-005    10 40  15   1
             006-001-006    10 40  15   1
             006-001-007    10 40  15   1
             006-001-004    10 50  19   1
             006-001-008    20 20  25   1
             006-001-009    20 30  37   1
             006-001-010    20 30  37   1

MRN table is (16 of 5990) 1% full
```

If the Flexible GTT Load Sharing is enabled nand a new MRN group was added to the default MRN set in steps 12 and 13, enter this command.

`rtrv-mrn:pca=005-005-005:mrnset=dflt`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   MRNSET    PC             RC WT %WT THR
   DFLT      005-005-005    10 10  50  30
             006-001-001    10 10  50  30
             006-001-002    30 20 100  30
             006-001-003    40 20 100  30
             006-001-004    50 20 100  30

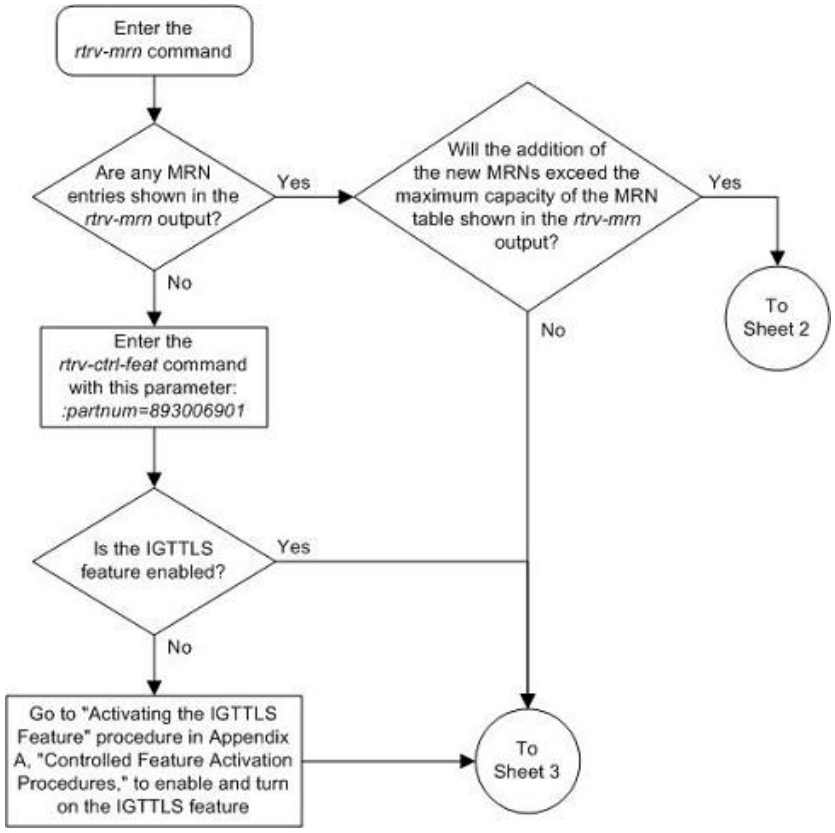
MRN table is (16 of 5990) 1% full
```

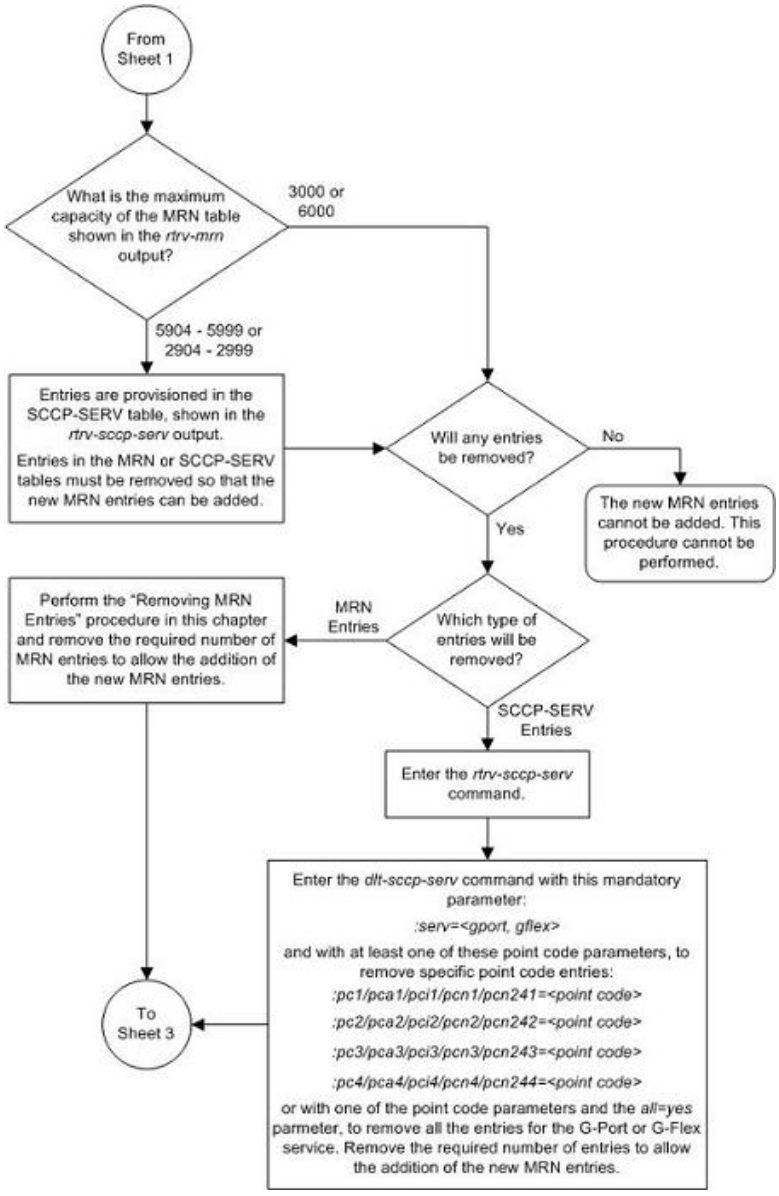
15. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

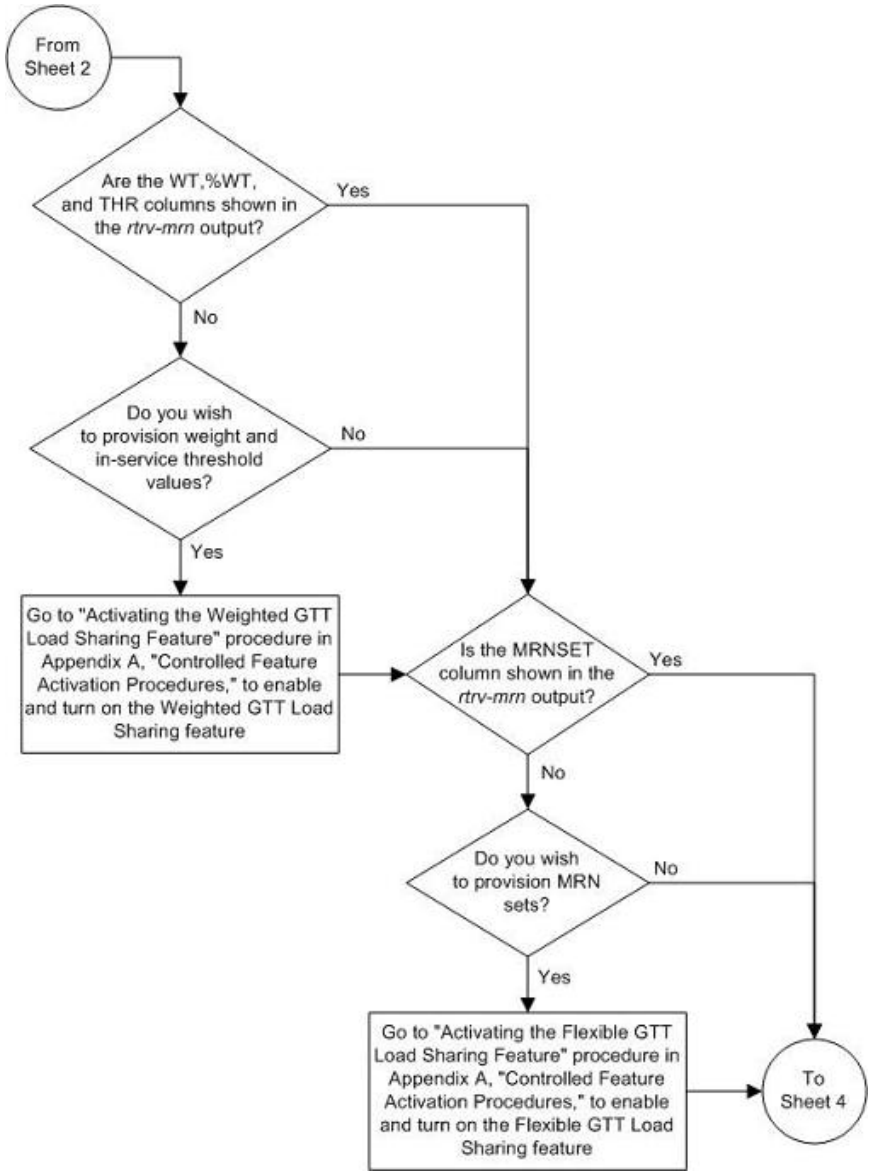
    These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

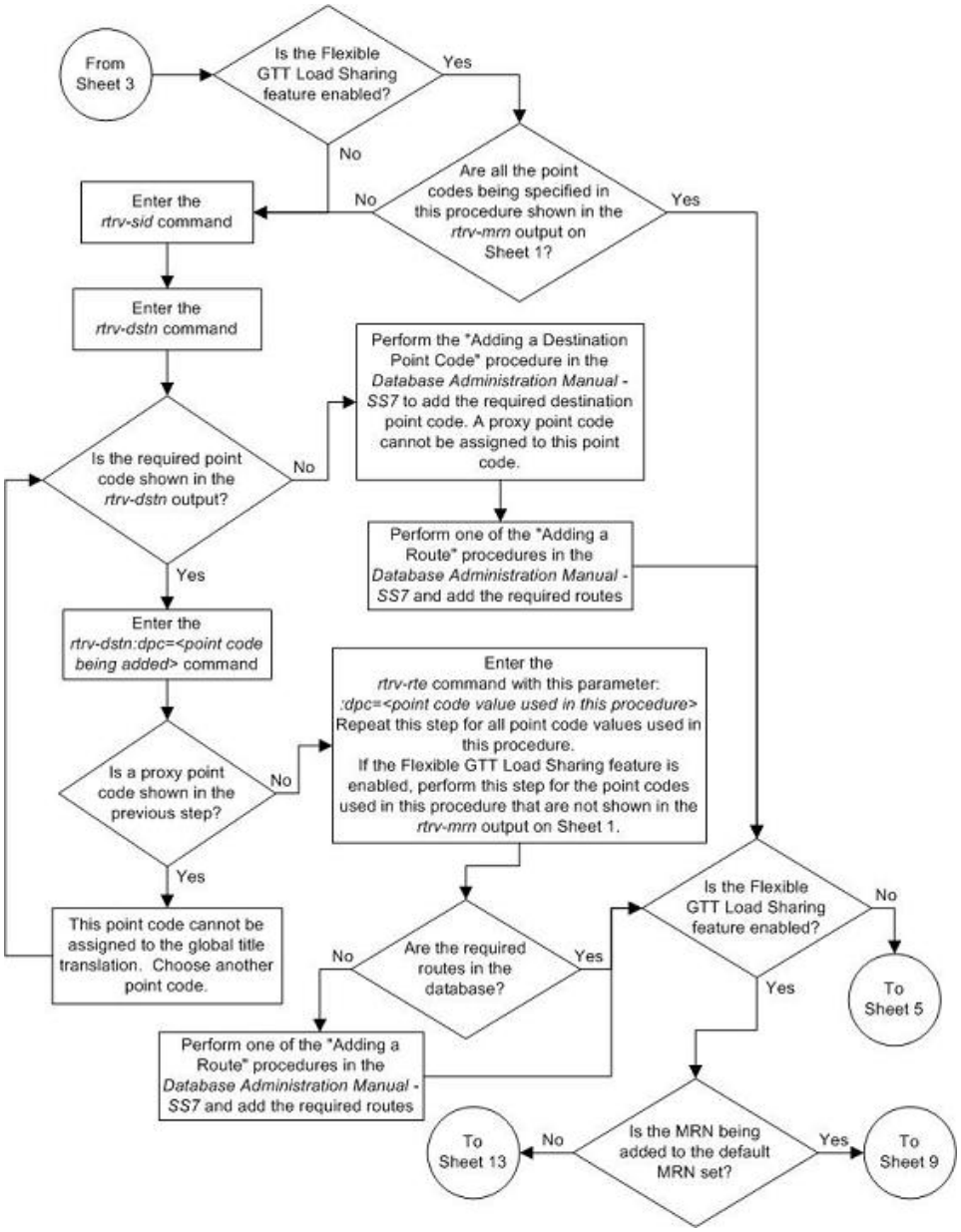
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

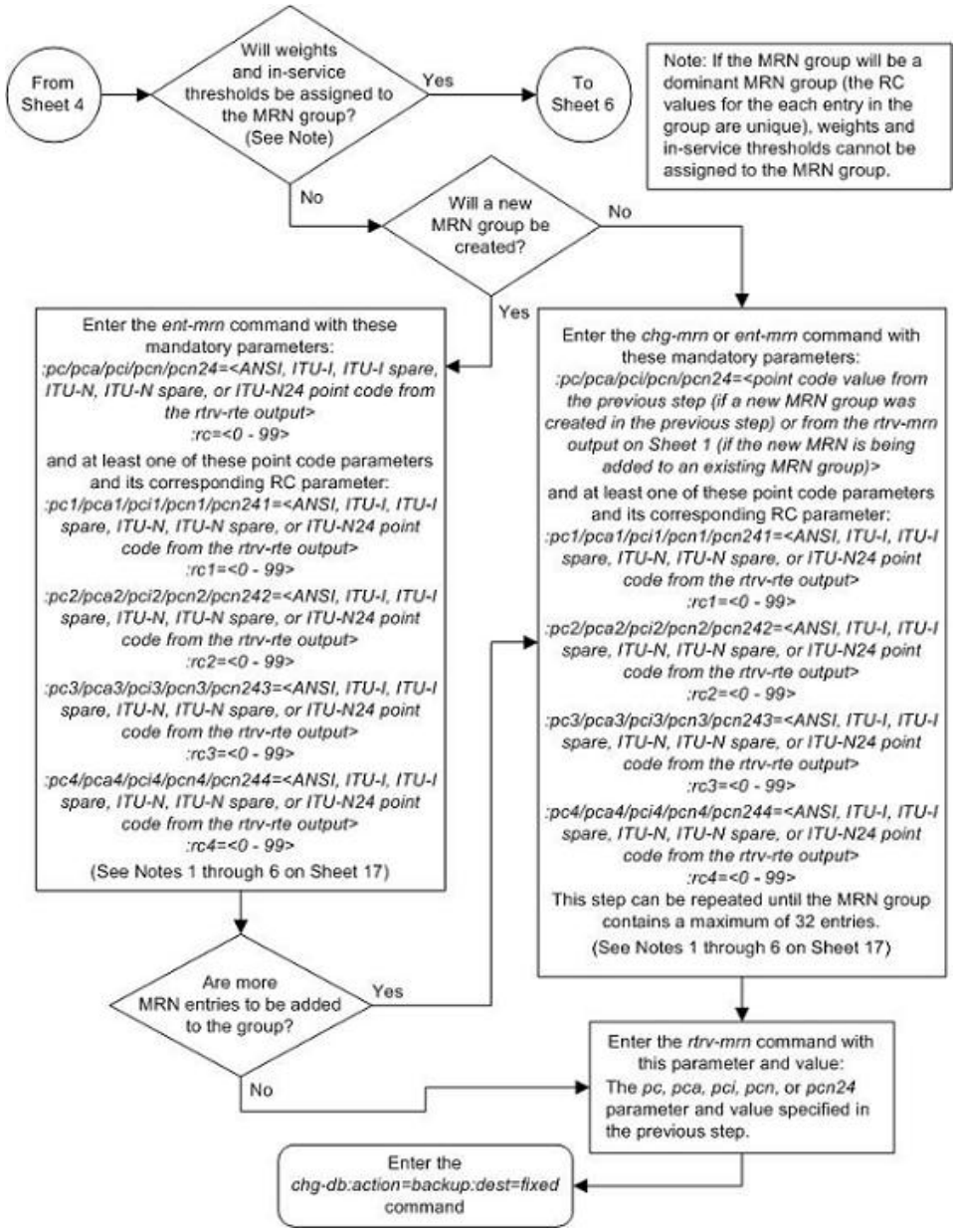
Figure 25: Provisioning MRN Entries

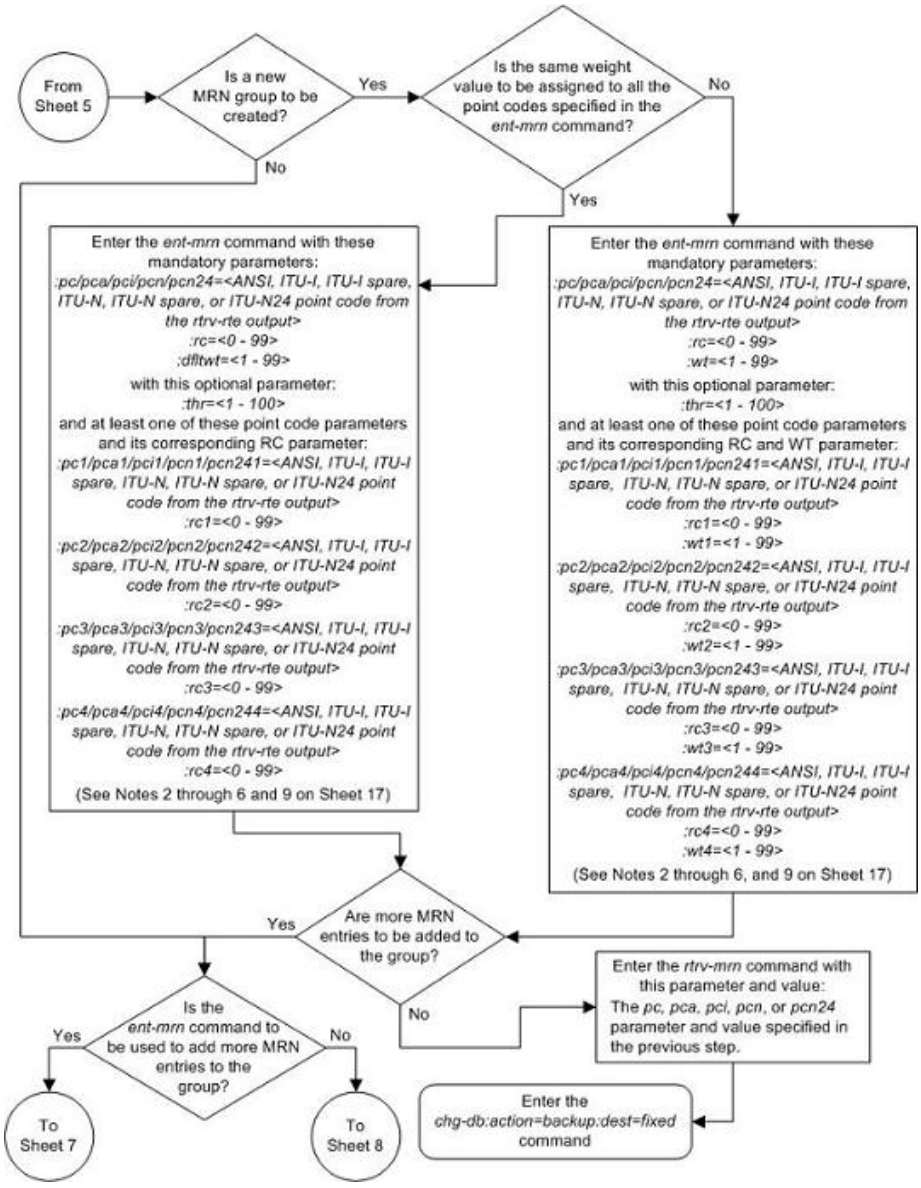

Enter the *rtrv-mrn* command
Are any MRN entries shown in the *rtrv-mrn* output?
Yes
No
Will the addition of the new MRNs exceed the maximum capacity of the MRN table shown in the *rtrv-mrn* output?
Yes
No
To Sheet 2
Enter the *rtrv-ctrl-feat* command with this parameter: *:partnum=893006901*
Is the IGTTLS feature enabled?
Yes
No
Go to "Activating the IGTTLS Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," to enable and turn on the IGTTLS feature
To Sheet 3

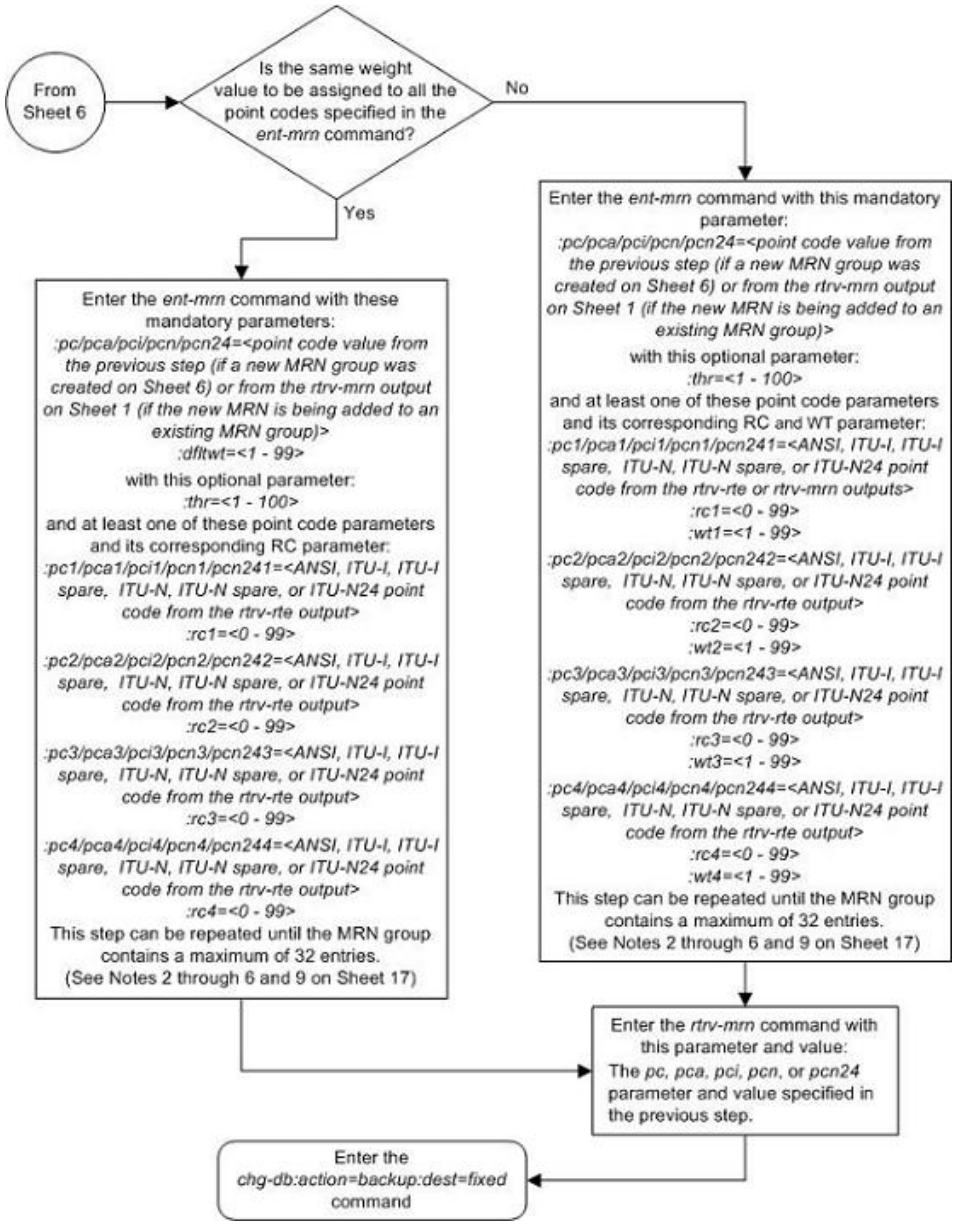

From Sheet 1
What is the maximum capacity of the MRN table shown in the rtrv-mrn output?
3000 or 6000
5904 - 5999 or 2904 - 2999
Entries are provisioned in the SCCP-SERV table, shown in the rtrv-sccp-serv output.
Entries in the MRN or SCCP-SERV tables must be removed so that the new MRN entries can be added.
Will any entries be removed?
No
The new MRN entries cannot be added. This procedure cannot be performed.
Yes
Which type of entries will be removed?
MRN Entries
Perform the "Removing MRN Entries" procedure in this chapter and remove the required number of MRN entries to allow the addition of the new MRN entries.
SCCP-SERV Entries
Enter the rtrv-sccp-serv command.
Enter the dlt-sccp-serv command with this mandatory parameter:
:serv=<gport, gflex>
and with at least one of these point code parameters, to remove specific point code entries:
:pc1/pca1/pci1/pcn1/pcn241=<point code>
:pc2/pca2/pci2/pcn2/pcn242=<point code>
:pc3/pca3/pci3/pcn3/pcn243=<point code>
:pc4/pca4/pci4/pcn4/pcn244=<point code>
or with one of the point code parameters and the all=yes parmeter, to remove all the entries for the G-Port or G-Flex service. Remove the required number of entries to allow the addition of the new MRN entries.
To Sheet 3

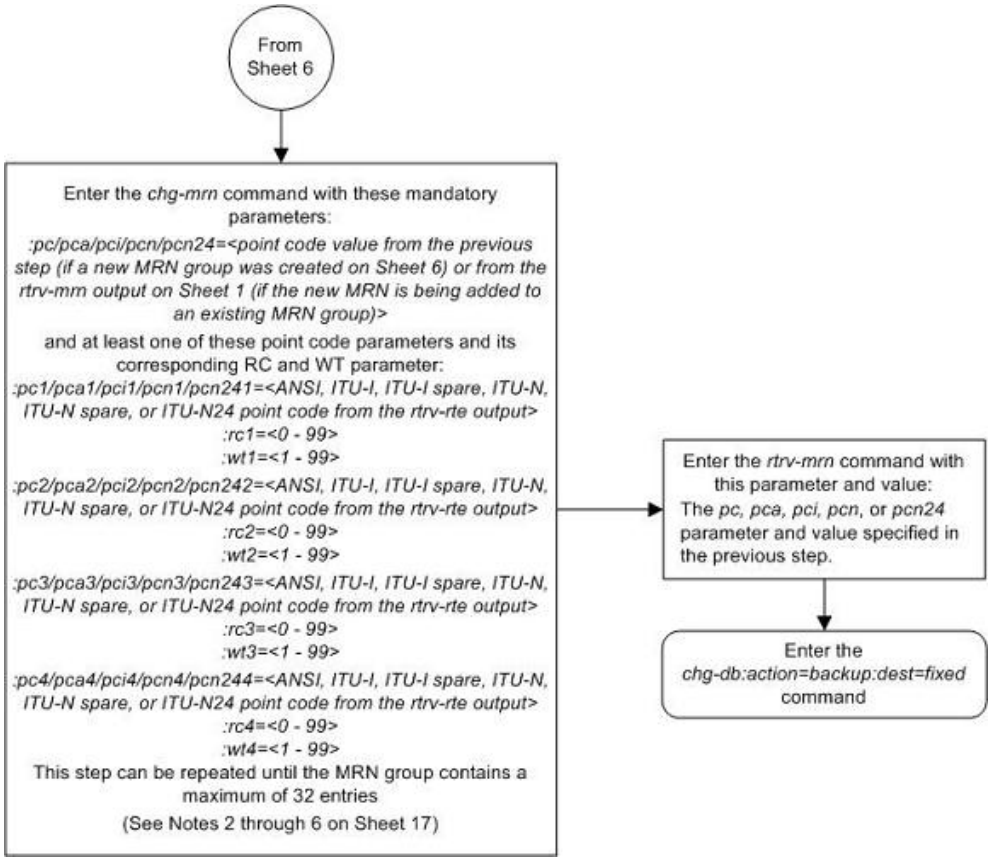

From Sheet 2
Are the WT,%WT, and THR columns shown in the rtrv-mrn output?
Yes
No
Do you wish to provision weight and in-service threshold values?
No
Yes
Go to "Activating the Weighted GTT Load Sharing Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," to enable and turn on the Weighted GTT Load Sharing feature
Is the MRNSET column shown in the rtrv-mrn output?
Yes
No
Do you wish to provision MRN sets?
No
Yes
Go to "Activating the Flexible GTT Load Sharing Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," to enable and turn on the Flexible GTT Load Sharing feature
To Sheet 4

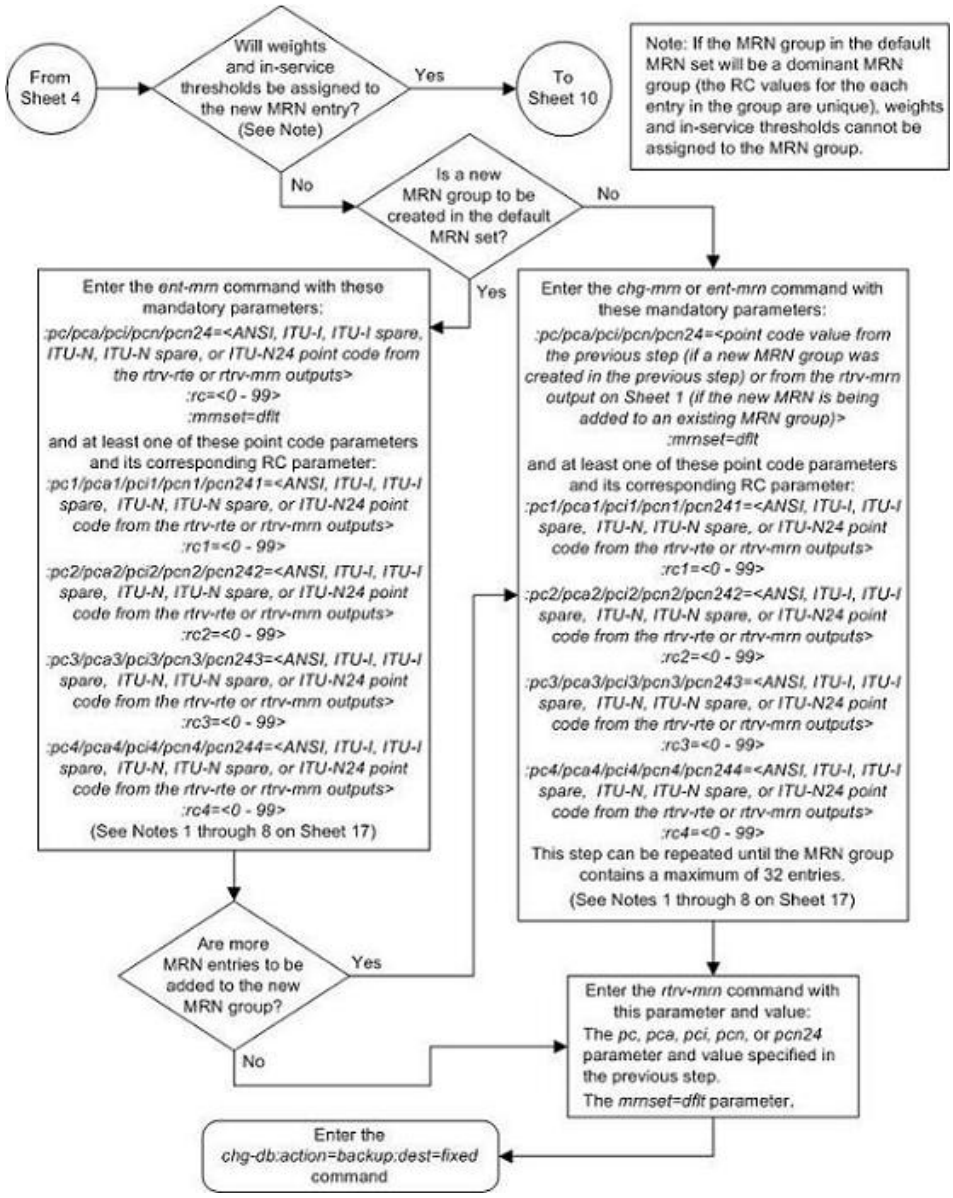

From Sheet 3
Is the Flexible GTT Load Sharing feature enabled?
Yes
No
Are all the point codes being specified in this procedure shown in the rtrv-mrn output on Sheet 1?
No
Yes
Enter the rtrv-sid command
Enter the rtrv-dstn command
Perform the "Adding a Destination Point Code" procedure in the Database Administration Manual - SS7 to add the required destination point code. A proxy point code cannot be assigned to this point code.
Is the required point code shown in the rtrv-dstn output?
No
Yes
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 and add the required routes
Enter the rtrv-dstn:dpc=<point code being added> command
Enter the rtrv-rte command with this parameter: :dpc=<point code value used in this procedure> Repeat this step for all point code values used in this procedure. If the Flexible GTT Load Sharing feature is enabled, perform this step for the point codes used in this procedure that are not shown in the rtrv-mrn output on Sheet 1.
Is a proxy point code shown in the previous step?
No
Yes
This point code cannot be assigned to the global title translation. Choose another point code.
Are the required routes in the database?
No
Yes
Is the Flexible GTT Load Sharing feature enabled?
No
Yes
To Sheet 5
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 and add the required routes
To Sheet 13
No
Is the MRN being added to the default MRN set?
Yes
To Sheet 9

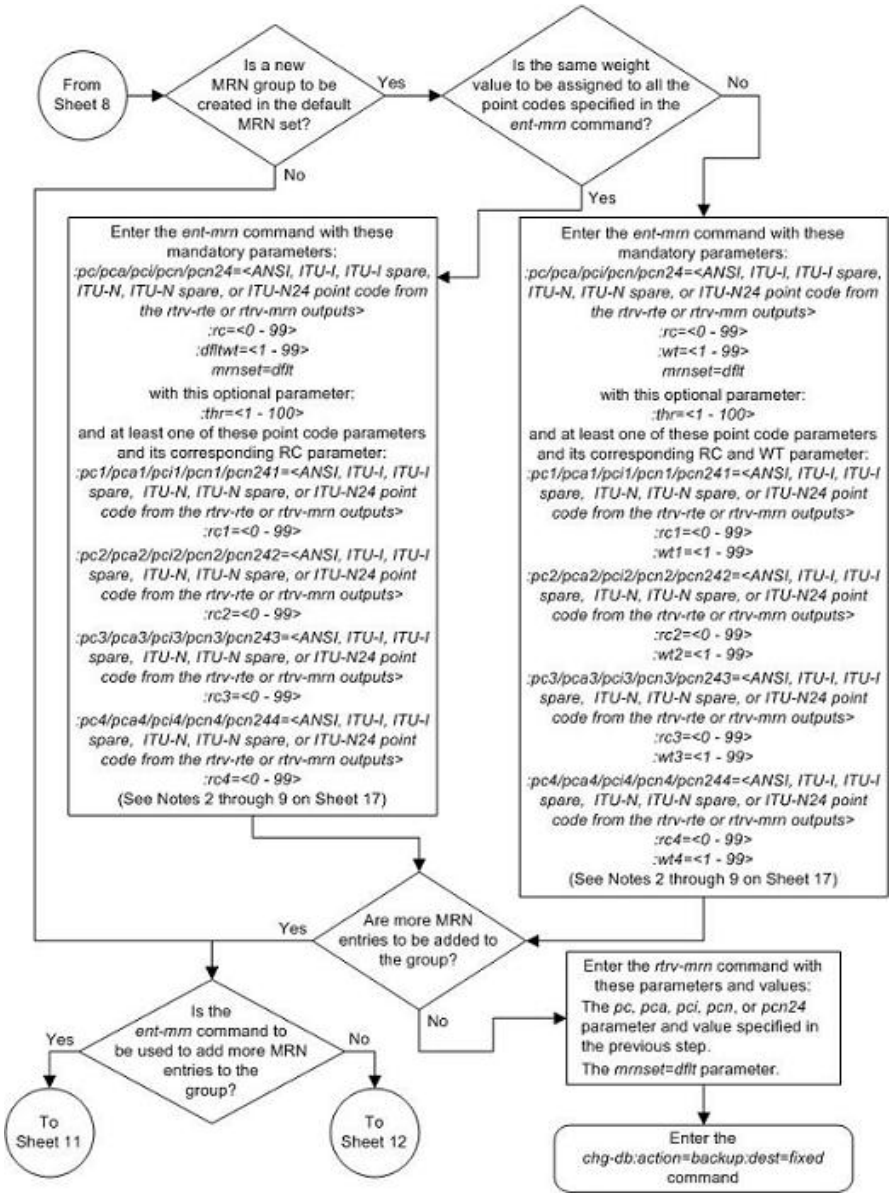

From Sheet 4
Will weights and in-service thresholds be assigned to the MRN group? (See Note)
Yes
To Sheet 6
Note: If the MRN group will be a dominant MRN group (the RC values for the each entry in the group are unique), weights and in-service thresholds cannot be assigned to the MRN group.
No
Will a new MRN group be created?
No
Yes
Enter the ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc=<0 - 99>
and at least one of these point code parameters and its corresponding RC parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc1=<0 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc2=<0 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc3=<0 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc4=<0 - 99>
(See Notes 1 through 6 on Sheet 17)
Enter the chg-mrn or ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<point code value from the previous step (if a new MRN group was created in the previous step) or from the rtrv-mrn output on Sheet 1 (if the new MRN is being added to an existing MRN group)>
and at least one of these point code parameters and its corresponding RC parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc1=<0 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc2=<0 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc3=<0 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc4=<0 - 99>
This step can be repeated until the MRN group contains a maximum of 32 entries.
(See Notes 1 through 6 on Sheet 17)
Are more MRN entries to be added to the group?
Yes
No
Enter the rtrv-mrn command with this parameter and value:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
Enter the chg-db:action=backup:dest=fixed command

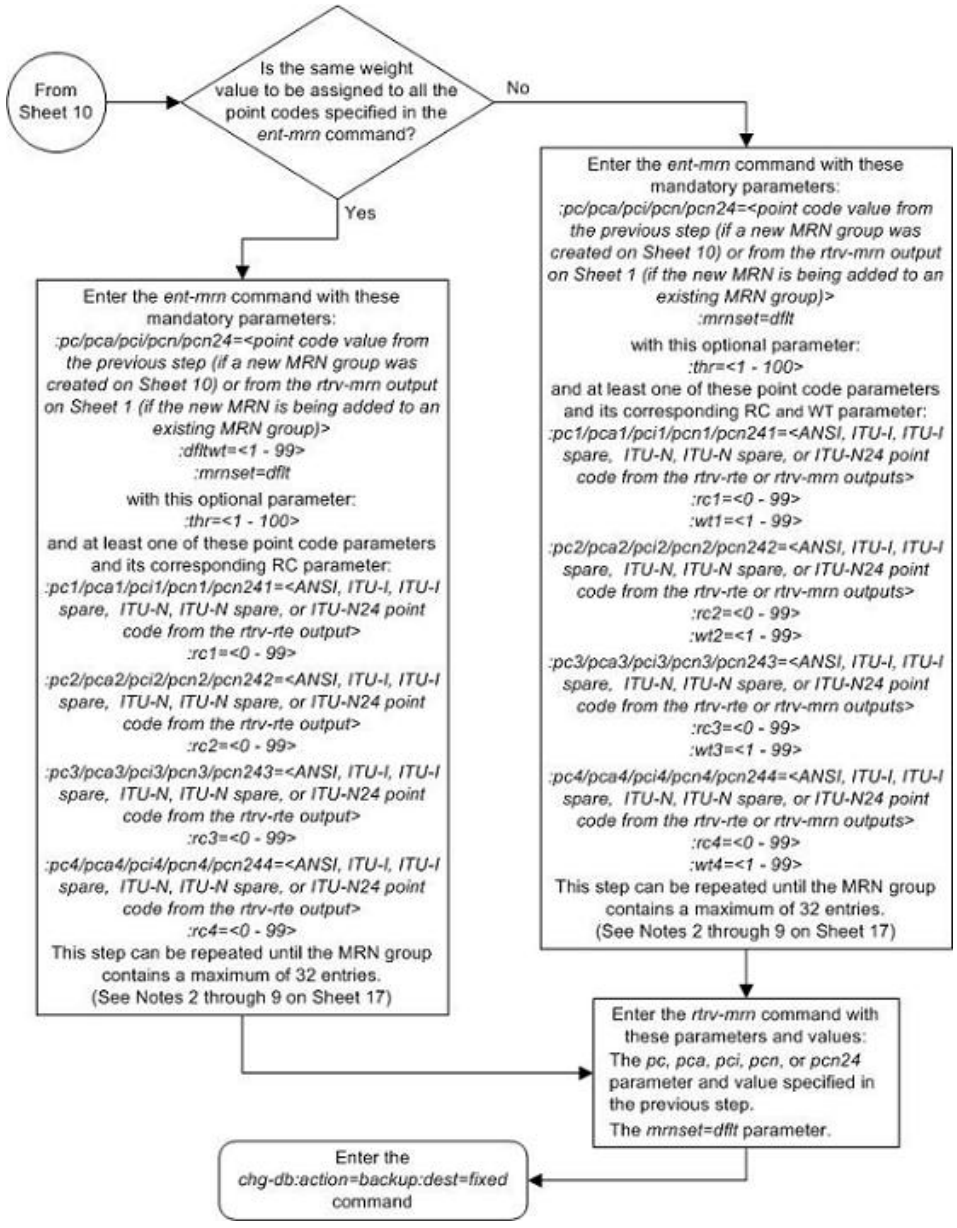

From Sheet 5
Is a new MRN group to be created?
Yes
No
Is the same weight value to be assigned to all the point codes specified in the ent-mrn command?
No
Yes
Enter the ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc=<0 - 99>
:dfltwt=<1 - 99>
with this optional parameter:
:thr=<1 - 100>
and at least one of these point code parameters and its corresponding RC parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc1=<0 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc2=<0 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc3=<0 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc4=<0 - 99>
(See Notes 2 through 6 and 9 on Sheet 17)
Enter the ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc=<0 - 99>
:wt=<1 - 99>
with this optional parameter:
:thr=<1 - 100>
and at least one of these point code parameters and its corresponding RC and WT parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc1=<0 - 99>
:wt1=<1 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc2=<0 - 99>
:wt2=<1 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc3=<0 - 99>
:wt3=<1 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc4=<0 - 99>
:wt4=<1 - 99>
(See Notes 2 through 6, and 9 on Sheet 17)
Are more MRN entries to be added to the group?
Yes
No
Is the ent-mrn command to be used to add more MRN entries to the group?
Yes
No
Enter the rtrv-mrn command with this parameter and value:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
Enter the chg-db:action=backup:dest=fixed command
To Sheet 7
To Sheet 8

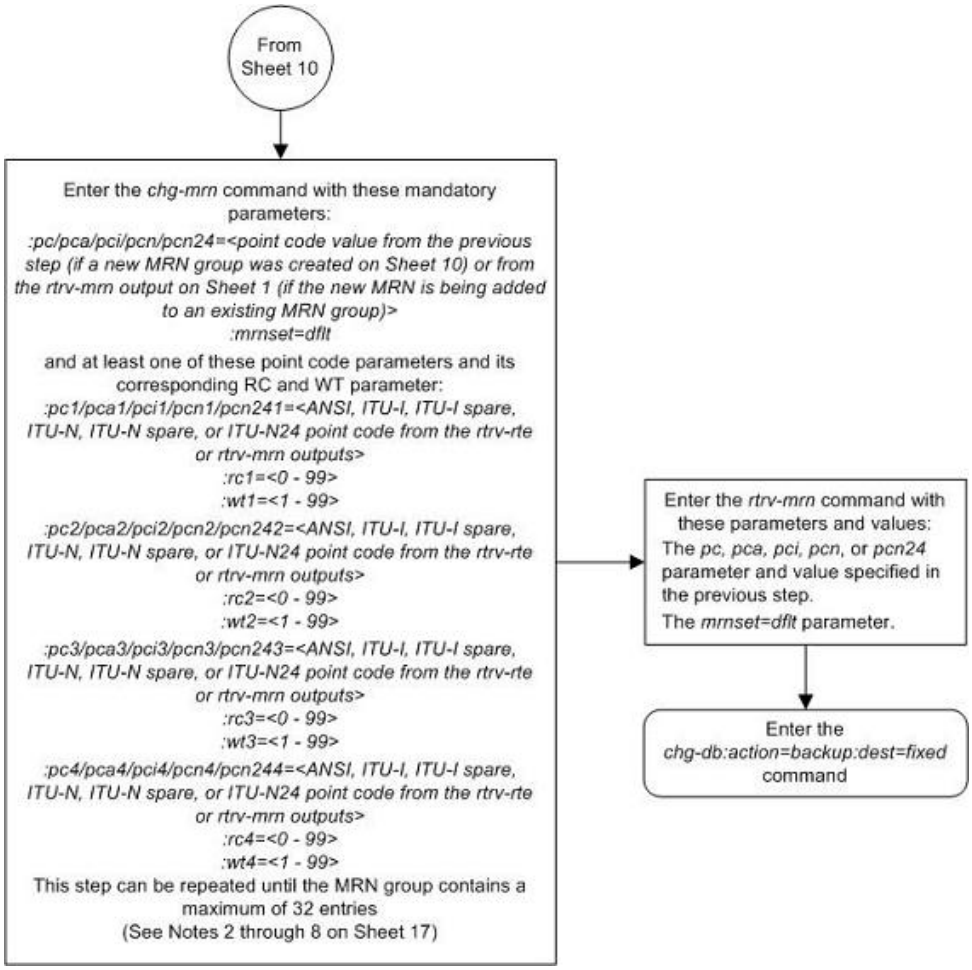

From Sheet 6
Is the same weight value to be assigned to all the point codes specified in the ent-mrn command?
No
Yes
Enter the ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<point code value from the previous step (if a new MRN group was created on Sheet 6) or from the rtrv-mrn output on Sheet 1 (if the new MRN is being added to an existing MRN group)>
:dfltwt=<1 - 99>
with this optional parameter:
:thr=<1 - 100>
and at least one of these point code parameters and its corresponding RC parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc1=<0 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc2=<0 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc3=<0 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc4=<0 - 99>
This step can be repeated until the MRN group contains a maximum of 32 entries.
(See Notes 2 through 6 and 9 on Sheet 17)
Enter the ent-mrn command with this mandatory parameter:
:pc/pca/pci/pcn/pcn24=<point code value from the previous step (if a new MRN group was created on Sheet 6) or from the rtrv-mrn output on Sheet 1 (if the new MRN is being added to an existing MRN group)>
with this optional parameter:
:thr=<1 - 100>
and at least one of these point code parameters and its corresponding RC and WT parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc1=<0 - 99>
:wt1=<1 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc2=<0 - 99>
:wt2=<1 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc3=<0 - 99>
:wt3=<1 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc4=<0 - 99>
:wt4=<1 - 99>
This step can be repeated until the MRN group contains a maximum of 32 entries.
(See Notes 2 through 6 and 9 on Sheet 17)
Enter the rtrv-mrn command with this parameter and value:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
Enter the chg-db:action=backup:dest=fixed command

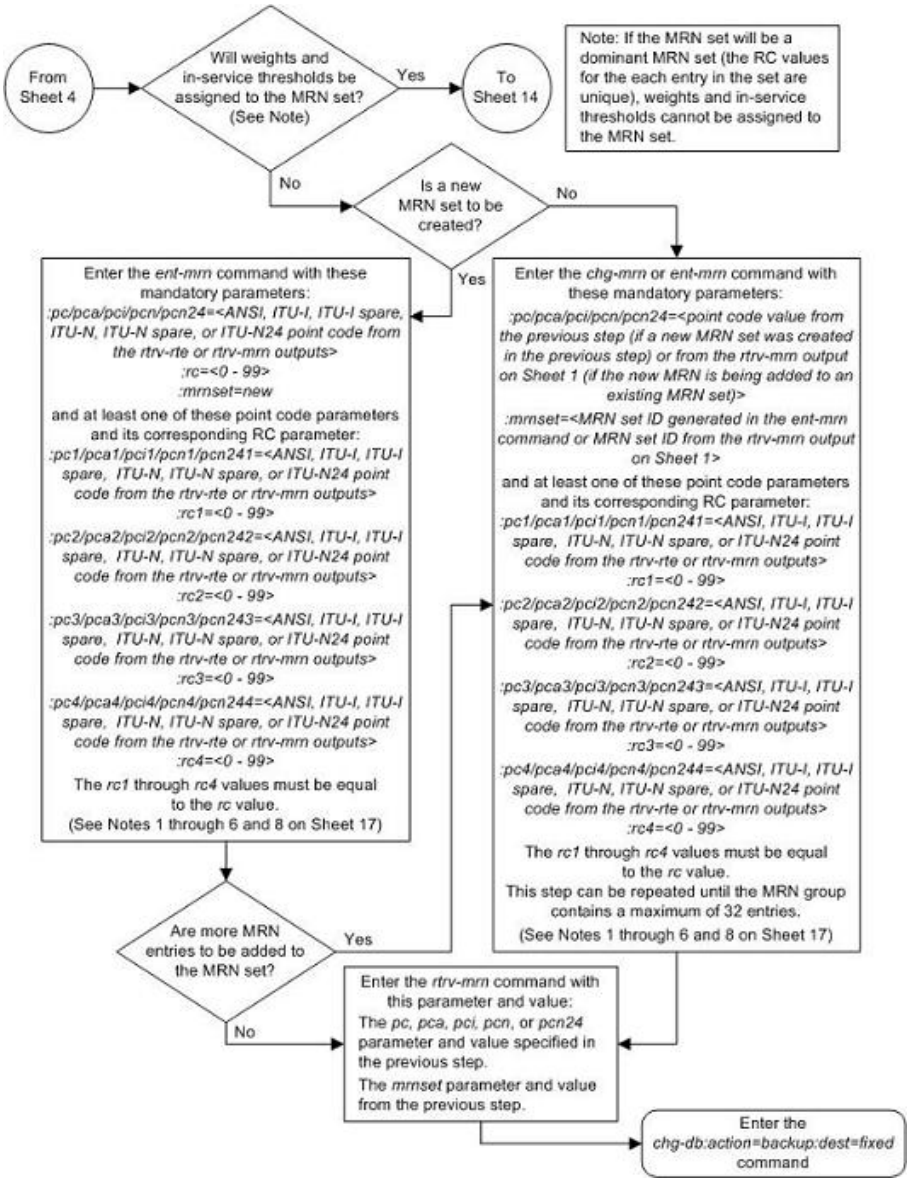

From Sheet 6
Enter the chg-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<point code value from the previous step (if a new MRN group was created on Sheet 6) or from the rtrv-mm output on Sheet 1 (if the new MRN is being added to an existing MRN group)>
and at least one of these point code parameters and its corresponding RC and WT parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc1=<0 - 99>
:wt1=<1 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc2=<0 - 99>
:wt2=<1 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc3=<0 - 99>
:wt3=<1 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc4=<0 - 99>
:wt4=<1 - 99>
This step can be repeated until the MRN group contains a maximum of 32 entries
(See Notes 2 through 6 on Sheet 17)
Enter the rtrv-mrn command with this parameter and value:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
Enter the chg-db:action=backup:dest=fixed command

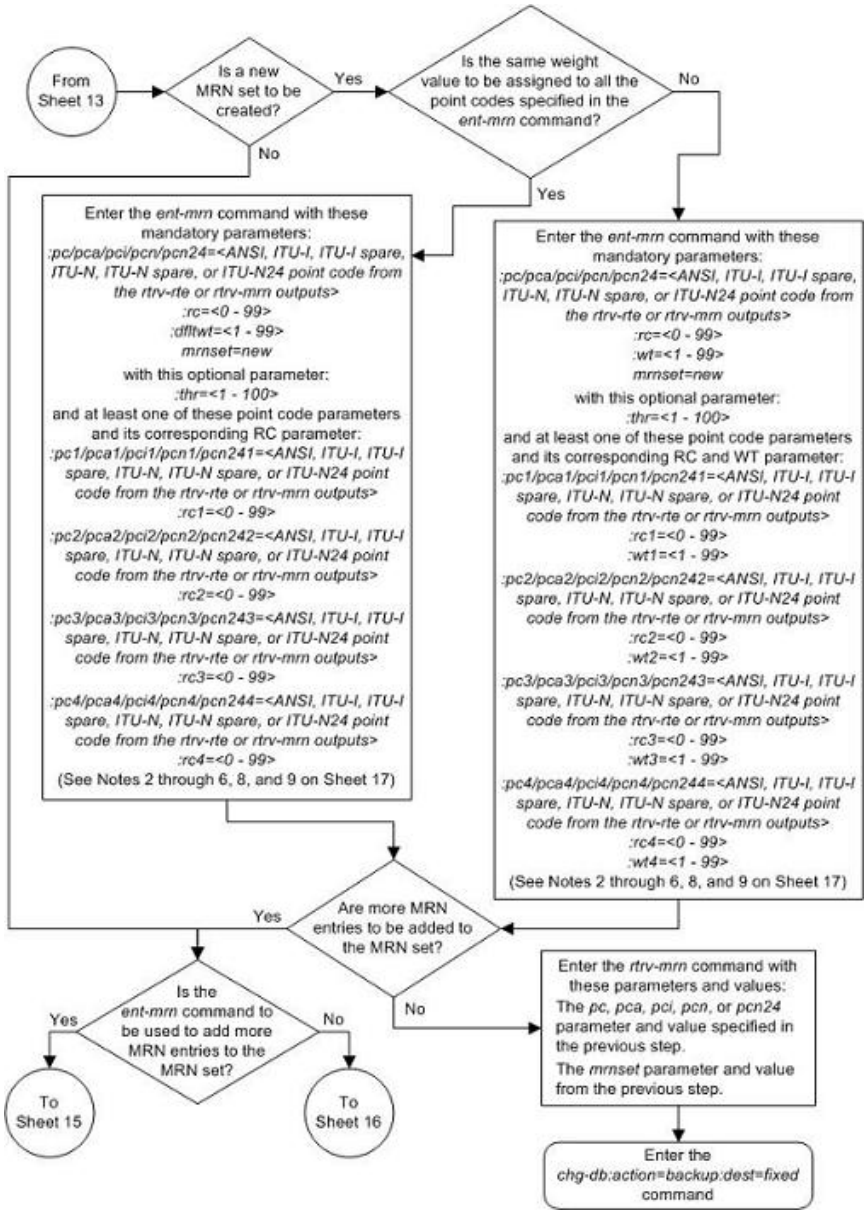

From Sheet 4
Will weights and in-service thresholds be assigned to the new MRN entry? (See Note)
Yes
To Sheet 10
Note: If the MRN group in the default MRN set will be a dominant MRN group (the RC values for the each entry in the group are unique), weights and in-service thresholds cannot be assigned to the MRN group.
No
Is a new MRN group to be created in the default MRN set?
No
Yes
Enter the ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc=<0 - 99>
:mrnset=dflt
and at least one of these point code parameters and its corresponding RC parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc1=<0 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc2=<0 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc3=<0 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc4=<0 - 99>
(See Notes 1 through 8 on Sheet 17)
Enter the chg-mrn or ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<point code value from the previous step (if a new MRN group was created in the previous step) or from the rtrv-mrn output on Sheet 1 (if the new MRN is being added to an existing MRN group)>
:mrnset=dflt
and at least one of these point code parameters and its corresponding RC parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc1=<0 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc2=<0 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc3=<0 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc4=<0 - 99>
This step can be repeated until the MRN group contains a maximum of 32 entries.
(See Notes 1 through 8 on Sheet 17)
Are more MRN entries to be added to the new MRN group?
Yes
No
Enter the rtrv-mrn command with this parameter and value:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The mrnset=dflt parameter.
Enter the chg-db:action=backup:dest=fixed command

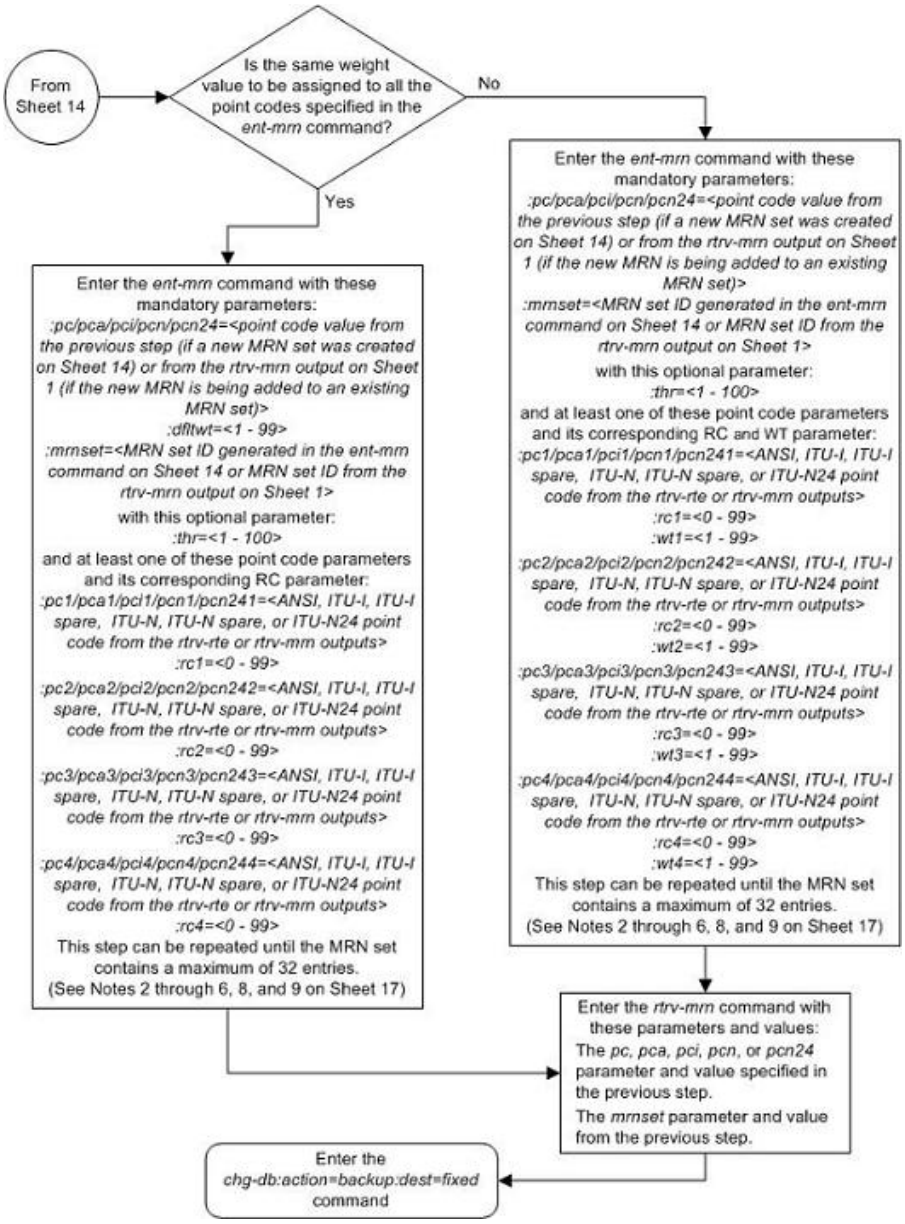

From Sheet 8
Is a new MRN group to be created in the default MRN set?
Yes
No
Is the same weight value to be assigned to all the point codes specified in the ent-mrn command?
No
Yes
Enter the ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc=<0 - 99>
:dfltwt=<1 - 99>
mrnset=dflt
with this optional parameter:
:thr=<1 - 100>
and at least one of these point code parameters and its corresponding RC parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc1=<0 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc2=<0 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc3=<0 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc4=<0 - 99>
(See Notes 2 through 9 on Sheet 17)
Enter the ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc=<0 - 99>
:wt=<1 - 99>
mrnset=dflt
with this optional parameter:
:thr=<1 - 100>
and at least one of these point code parameters and its corresponding RC and WT parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc1=<0 - 99>
:wt1=<1 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc2=<0 - 99>
:wt2=<1 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc3=<0 - 99>
:wt3=<1 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc4=<0 - 99>
:wt4=<1 - 99>
(See Notes 2 through 9 on Sheet 17)
Are more MRN entries to be added to the group?
Yes
No
Is the ent-mrn command to be used to add more MRN entries to the group?
Yes
No
To Sheet 11
To Sheet 12
Enter the rtrv-mrn command with these parameters and values:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The mrnset=dflt parameter.
Enter the chg-db:action=backup:dest=fixed command

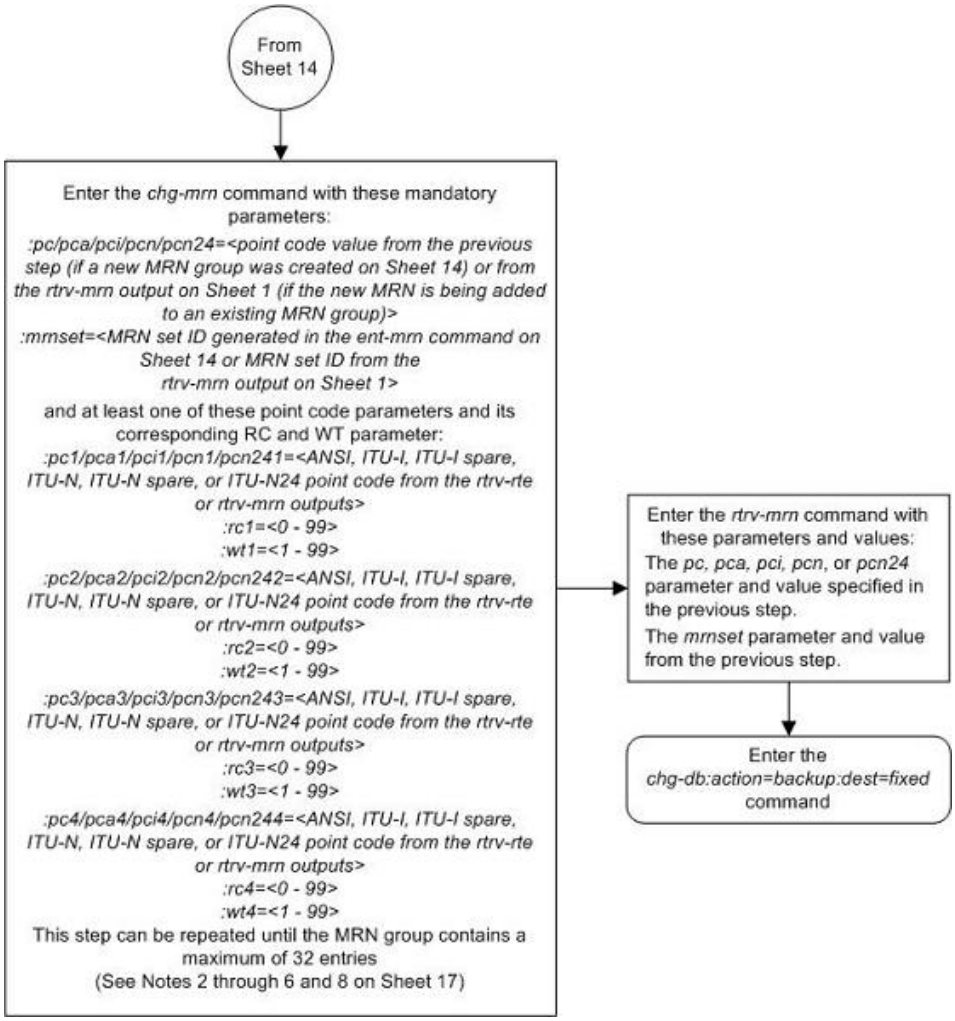

From Sheet 10
Is the same weight value to be assigned to all the point codes specified in the ent-mrn command?
No
Yes
Enter the ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<point code value from the previous step (if a new MRN group was created on Sheet 10) or from the rtrv-mrn output on Sheet 1 (if the new MRN is being added to an existing MRN group)>
:mrnset=dflt
with this optional parameter:
:thr=<1 - 100>
and at least one of these point code parameters and its corresponding RC and WT parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc1=<0 - 99>
:wt1=<1 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc2=<0 - 99>
:wt2=<1 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc3=<0 - 99>
:wt3=<1 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc4=<0 - 99>
:wt4=<1 - 99>
This step can be repeated until the MRN group contains a maximum of 32 entries.
(See Notes 2 through 9 on Sheet 17)
Enter the ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<point code value from the previous step (if a new MRN group was created on Sheet 10) or from the rtrv-mrn output on Sheet 1 (if the new MRN is being added to an existing MRN group)>
:dfltwt=<1 - 99>
:mrnset=dflt
with this optional parameter:
:thr=<1 - 100>
and at least one of these point code parameters and its corresponding RC parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc1=<0 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc2=<0 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc3=<0 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte output>
:rc4=<0 - 99>
This step can be repeated until the MRN group contains a maximum of 32 entries.
(See Notes 2 through 9 on Sheet 17)
Enter the rtrv-mrn command with these parameters and values:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The mrnset=dflt parameter.
Enter the chg-db:action=backup:dest=fixed command


From Sheet 10
Enter the chg-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<point code value from the previous step (if a new MRN group was created on Sheet 10) or from the rtrv-mrn output on Sheet 1 (if the new MRN is being added to an existing MRN group)>
:mrnset=dflt
and at least one of these point code parameters and its corresponding RC and WT parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc1=<0 - 99>
:wt1=<1 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc2=<0 - 99>
:wt2=<1 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc3=<0 - 99>
:wt3=<1 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc4=<0 - 99>
:wt4=<1 - 99>
This step can be repeated until the MRN group contains a maximum of 32 entries
(See Notes 2 through 8 on Sheet 17)
Enter the rtrv-mrn command with these parameters and values:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The mrnset=dflt parameter.
Enter the chg-db:action=backup:dest=fixed command


From Sheet 4
Will weights and in-service thresholds be assigned to the MRN set? (See Note)
Yes
To Sheet 14
Note: If the MRN set will be a dominant MRN set (the RC values for the each entry in the set are unique), weights and in-service thresholds cannot be assigned to the MRN set.
No
Is a new MRN set to be created?
No
Yes
Enter the ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc=<0 - 99>
:mrnset=new
and at least one of these point code parameters and its corresponding RC parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc1=<0 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc2=<0 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc3=<0 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc4=<0 - 99>
The rc1 through rc4 values must be equal to the rc value.
(See Notes 1 through 6 and 8 on Sheet 17)
Enter the chg-mrn or ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<point code value from the previous step (if a new MRN set was created in the previous step) or from the rtrv-mrn output on Sheet 1 (if the new MRN is being added to an existing MRN set)>
:mrnset=<MRN set ID generated in the ent-mrn command or MRN set ID from the rtrv-mrn output on Sheet 1>
and at least one of these point code parameters and its corresponding RC parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc1=<0 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc2=<0 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc3=<0 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc4=<0 - 99>
The rc1 through rc4 values must be equal to the rc value.
This step can be repeated until the MRN group contains a maximum of 32 entries.
(See Notes 1 through 6 and 8 on Sheet 17)
Are more MRN entries to be added to the MRN set?
Yes
No
Enter the rtrv-mrn command with this parameter and value:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The mrnset parameter and value from the previous step.
Enter the chg-db:action=backup:dest=fixed command


From Sheet 13
Is a new MRN set to be created?
Yes
No
Is the same weight value to be assigned to all the point codes specified in the ent-mrn command?
No
Yes
Enter the ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc=<0 - 99>
:dfltwt=<1 - 99>
mrnset=new
with this optional parameter:
:thr=<1 - 100>
and at least one of these point code parameters and its corresponding RC parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc1=<0 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc2=<0 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc3=<0 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc4=<0 - 99>
(See Notes 2 through 6, 8, and 9 on Sheet 17)
Enter the ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc=<0 - 99>
:wt=<1 - 99>
mrnset=new
with this optional parameter:
:thr=<1 - 100>
and at least one of these point code parameters and its corresponding RC and WT parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc1=<0 - 99>
:wt1=<1 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc2=<0 - 99>
:wt2=<1 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc3=<0 - 99>
:wt3=<1 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc4=<0 - 99>
:wt4=<1 - 99>
(See Notes 2 through 6, 8, and 9 on Sheet 17)
Are more MRN entries to be added to the MRN set?
Yes
No
Is the ent-mrn command to be used to add more MRN entries to the MRN set?
Yes
No
To Sheet 15
To Sheet 16
Enter the rtrv-mrn command with these parameters and values:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The mrnset parameter and value from the previous step.
Enter the chg-db:action=backup:dest=fixed command


From Sheet 14
Is the same weight value to be assigned to all the point codes specified in the ent-mrn command?
No
Yes
Enter the ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<point code value from the previous step (if a new MRN set was created on Sheet 14) or from the rtrv-mrn output on Sheet 1 (if the new MRN is being added to an existing MRN set)>
:dfltwt=<1 - 99>
:mrnset=<MRN set ID generated in the ent-mrn command on Sheet 14 or MRN set ID from the rtrv-mrn output on Sheet 1>
with this optional parameter:
:thr=<1 - 100>
and at least one of these point code parameters and its corresponding RC parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc1=<0 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc2=<0 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc3=<0 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc4=<0 - 99>
This step can be repeated until the MRN set contains a maximum of 32 entries.
(See Notes 2 through 6, 8, and 9 on Sheet 17)
Enter the ent-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<point code value from the previous step (if a new MRN set was created on Sheet 14) or from the rtrv-mrn output on Sheet 1 (if the new MRN is being added to an existing MRN set)>
:mrnset=<MRN set ID generated in the ent-mrn command on Sheet 14 or MRN set ID from the rtrv-mrn output on Sheet 1>
with this optional parameter:
:thr=<1 - 100>
and at least one of these point code parameters and its corresponding RC and WT parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc1=<0 - 99>
:wt1=<1 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc2=<0 - 99>
:wt2=<1 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc3=<0 - 99>
:wt3=<1 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc4=<0 - 99>
:wt4=<1 - 99>
This step can be repeated until the MRN set contains a maximum of 32 entries.
(See Notes 2 through 6, 8, and 9 on Sheet 17)
Enter the rtrv-mrn command with these parameters and values:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The mrnset parameter and value from the previous step.
Enter the chg-db:action=backup:dest=fixed command


From Sheet 14
Enter the chg-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<point code value from the previous step (if a new MRN group was created on Sheet 14) or from the rtrv-mrn output on Sheet 1 (if the new MRN is being added to an existing MRN group)>
:mrnset=<MRN set ID generated in the ent-mrn command on Sheet 14 or MRN set ID from the rtrv-mrn output on Sheet 1>
and at least one of these point code parameters and its corresponding RC and WT parameter:
:pc1/pca1/pci1/pcn1/pcn241=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc1=<0 - 99>
:wt1=<1 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc2=<0 - 99>
:wt2=<1 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc3=<0 - 99>
:wt3=<1 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<ANSI, ITU-I, ITU-I spare, ITU-N, ITU-N spare, or ITU-N24 point code from the rtrv-rte or rtrv-mrn outputs>
:rc4=<0 - 99>
:wt4=<1 - 99>
This step can be repeated until the MRN group contains a maximum of 32 entries
(See Notes 2 through 6 and 8 on Sheet 17)
Enter the rtrv-mrn command with these parameters and values:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
The mrnset parameter and value from the previous step.
Enter the chg-db:action=backup:dest=fixed command

Notes:

1. To provision a dominant MRN group or MRN set, the RC values for each entry must be unique.

2. To provision a load shared MRN group or MRN set, the RC values for each entry must be equal.

3. To provision a combined dominant/load shared MRN group or MRN set, the MRN group or MRN set must contain a minimum of two entries with equal RC values, and a minimum of one entry with a different RC value.

4. The point codes specified in this procedure must have routes assigned to them, shown in the *rtrv-rte* command executed on Sheet 4, and cannot be in the Self ID table, shown in the *rtrv-sid* command executed on Sheet 4.

5. The point code type of the alternate point codes must be the same as the point code type of the primary point code. If spare point codes are being used, both the primary and alternate point codes must be spare point codes. For example, if the primary point code is an ITU-I spare point code, the alternate point codes must be ITU-I spare point codes.

6. If the *rtrv-rte* and *rtrv-sid* outputs show 14-bit ITU-N point codes (*dpcn* & *pcn*), then the *pcn*/*pcn1*/*pcn2*/*pcn3*/*pcn4* parameters must be used. If the *rtrv-rte* and *rtrv-sid* outputs show 24-bit ITU-N point codes (*dpcn24* & *pcn24*), then the *pcn24*/*pcn241*/*pcn242*/*pcn243*/*pcn244* parameters must be used.

7. The default MRN set can contain multiple MRN groups. The point code can appear in only one MRN group in the default MRN set. Each group in the MRN set can contain a maximum of 32 entries.

8. The point code provisioned in an MRN set can be provisioned in multiple MRN sets. All the point codes in an MRN set, must be different.

9. The *thr* parameter value is assigned to all the entries specified in the *ent-mrn* command.

Removing MRN Entries

This procedure is used to remove an entry from an mated relay node (MRN) group or an entire MRN group from the database using the `dlt-mrn` command.

The `dlt-mrn` command uses these parameters.

`:pc/pca/pci/pcn/pcn24` – The point code in the message after intermediate global title translation has been performed.

`:pc1/pca1/pci1/pcn1/pcn241` – The first alternate point code value

`:pc2/pca2/pci2/pcn2/pcn242` – The second alternate point code value

`:pc3/pca3/pci3/pcn3/pcn243` – The third alternate point code value

`:pc4/pca4/pci4/pcn4/pcn244` – The fourth alternate point code value

Note: Refer to Chapter 2, "Configuring Destination Tables," in the Database *Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

`:all` – Removes the entire MRN group or MRN set containing the point code specified by the `pc/pca/pci/pcn/pcn24` parameter.

`:mrnset` – The MRN set ID that the MRN is assigned to, shown in the `rtrv-mrn` output. MRN set IDs are shown only if the Flexible GTT Load Sharing feature is enabled. If the Flexible GTT Load Sharing feature is enabled, the `mrnset` parameter must be specified with the `dlt-mrn` command.

If an entire MRN set is being removed in this procedure (with the `all=yes` parameter), or if a point code entry in an MRN set is being removed in this procedure, the reference to the MRN set specified in this procedure must be removed from any GTT or GTA entries before the point code can be removed from an MRN set, or before an entire MRN set can be removed.

Perform one of these procedures to remove the reference to the MRN set, depending on whether or not the EGTT feature is on. The status of the EGTT feature is shown in the `rtrv-feat` command output.

- If the EGTT feature is not on – Enter the `rtrv-gtt` command to verify the MRN set ID references. Perform the *Changing a Global Title Translation* on page 524 procedure to remove the references to the MRN set.
- If the EGTT feature is on – Enter the `rtrv-gta` command to verify the MRN set ID references. Perform the *Changing Global Title Address Information* on page 681 procedure to remove the references to the MRN set. The MRN set ID is not shown in the rtrv-ppsopt output.
- Any references to the MRN's point code and non-default MRN set ID in the rtrv-ppsopts output are removed in step 7 of this procedure.

  Note: If weight and in-service threshold values are assigned to a load shared or combined dominant/load shared MRN group or MRN set, and if by removing entries from this MRN group or MRN set, the MRN group or MRN set becomes a dominant MRN group or MRN set, all weight and threshold values are removed from the remaining entries in the MRN group or MRN set.

The mated relay node group being removed, or the point code value being removed from a MRN group must be in the database.

When removing point codes from an MRN group, the MRN group must contain the `pc` parameter value and at least one alternate point code value.

If the `mrnset=dflt` and `all=yes` parameters are specified with the `dlt-mrn` command, only the MRN group containing the point code value specified in the `dlt-mrn` command is removed from the default MRN set.

Canceling the `RTRV-MRN` Command

Because the `rtrv-mrn` command used in this procedure can output information for a long period of time, the `rtrv-mrn` command can be canceled and the output to the terminal stopped. There are three ways that the `rtrv-mrn` command can be canceled.

- Press the `F9` function key on the keyboard at the terminal where the `rtrv-mrn` command was entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rtrv-mrn` command was entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rtrv-mrn` command was entered, from another terminal other that the terminal where the `rtrv-mrn` 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, refer to the *Commands Manual*.

1. Display the mated relay nodes in the database using the `rtrv-mrn` command.
   This is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

   PC             RC
   005-005-005    10
   006-001-001    20
   006-001-002    30
   006-001-003    40
   006-001-004    50
   006-001-005    60
   006-001-006    70
   006-001-007    80

   PC             RC
   007-007-007    10
   008-001-001    20
   008-001-002    30
   008-001-003    40
   008-001-004    50
   008-001-005    60
   008-001-006    70
   008-001-007    80

MRN table is (16 of 2990) 1% full
```

   If the Flexible GTTLoad Sharing feature is enabled, this is an example of the possible output.

```
   MRNSET    PC             RC
   DFLT      007-007-007    10
             008-001-001    20
             008-001-002    30
             008-001-003    40
             008-001-004    50
             008-001-005    60
             008-001-006    70
             008-001-007    80

   MRNSET    PC             RC
   1         005-005-005    10
             006-001-001    20
             006-001-002    30
             006-001-003    40
             006-001-004    50
             006-001-005    60
             006-001-006    70
             006-001-007    80

MRN table is (16 of 5990) 1% full
```

   If the Weighted GTTLoad Sharing feature is enabled and turned on, this is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

   MRNSET    PC             RC WT %WT THR
```

```
   DFLT      005-005-005    10 10  50  30
             006-001-001    10 10  50  30
             006-001-002    30 20 100  30
             006-001-003    40 20 100  30
             006-001-004    50 20 100  30

   MRNSET    PC             RC WT %WT THR
   1         005-005-005    10 10   4   1
             006-001-001    10 10   4   1
             006-001-002    10 30  12   1
             006-001-003    10 40  15   1
             006-001-005    10 40  15   1
             006-001-006    10 40  15   1
             006-001-007    10 40  15   1
             006-001-004    10 50  19   1
             006-001-008    20 20  25   1
             006-001-009    20 30  37   1
             006-001-010    20 30  37   1

MRN table is (16 of 5990) 1% full
```

Note: If the MRNSET column is not shown in the `rtrv-mrn` output in step 1, then the Flexible GTTLoad Sharing feature is not enabled. Skip steps 2 through 7, and go to step 8.

2. Verify whether or not the Enhanced GTT feature is on by entering the `rtrv-feat` command.

   If the EGTT feature is on, the EGTT field should be set to on.

   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, refer to the `rtrv-feat` command description in the *Commands Manual*.

   If the EGTT feature is on, skip steps 3 and 4, and go to step 5.

   If the EGTT feature is off, go to step 3.

3. Display the translation types in the database by entering the `rtrv-tt` command.

   This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:42:31 GMT  EAGLE5 37.0.0
TYPEA      TTN        NDGT
1          lidb       5
2          c800       10
3          d700       6
5          scp1       6
10         scp2       6
15         scp3       3

ALIAS      TYPEA
30         5
40         10
50         3
65         3

TYPEI      TTN        NDGT
105        itudb      8

ALIAS      TYPEI
7          105

TYPEN      TTN        NDGT
120        dbitu      7
```

```
ALIAS      TYPEN
8          120
```

4. Before an MRN set can be removed from the database, or a point code entry can be removed from an MRN set, all references to the specific MRN set must be removed from the global title translations.

   Select a translation type from step 3. Display the global title translations assigned to the translation type from step 3 that contain either the point code being removed from the MRN set, or a point code in the MRN set that is being removed in this procdure.

   For this example, enter this command.

   `rtrv-gtt:typea=15:pca=006-001-002`

   This is an example of the possible output.

```
rlghncxa03w 08-10-25 09:48:31 GMT  EAGLE5 39.2.0
TYPEA  TTN        NDGT
15     scp3       3
GTT TABLE IS  10 % FULL    (27000 of 269999)

START GTA             END GTA               XLAT   RI     PC
800                   900                   DPC    GT     006-001-002
     MRNSET=1     SSN=--- NGT=---

Command Retrieved 1 Entries
```

   If entries are displayed, perform the *Changing a Global Title Translation* on page 524 procedure and change the MRN reference to `NONE`, or remove the global title translation by performing the *Removing a Global Title Translation* on page 519 procedure.

   If no entries are displayed, repeat this step with the other translation types displayed in step 3.

   When all the translation types have been displayed and all applicable global title translation entries have been changed or removed in this step, skip steps 5 and 6, and go to step 7.

5. Display the existing GTT sets in the database using the `rtrv-gttset` command.

   This is an example of the possible output.

```
rlghncxa03w 07-05-07 00:27:31 GMT EAGLE5 37.0.0
GTTSN     NETDOM  NDGT
lidb      ansi    10
t800      ansi    10
si000     itu     15
imsi      itu     15
abcd1234  itu     12
```

6. Before an MRN set can be removed from the database, all references to the specific MRN set must be removed from the global title translations displayed in the `rtrv-gta` output. Before a point code entry can be removed from an MRN set, all references to the specific MRN set must be removed from the global title translations displayed in the `rtrv-gta` output.

   Select a GTT set name from step 5. Display the global title translations assigned to the GTT set name from step 5 that contain either the point code being removed from the MRN set, or a point code in the MRN set that is being removed in this procdure.

   For this example, enter this command.

   `rtrv-gta:gttsn=t800:pca=006-001-002`

This is an example of the possible output.

```
rlghncxa03w 08-10-07 00:28:31 GMT EAGLE5 39.2.0
GTTSN     NETDOM  NDGT
t800      ansi    10
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
8005550000 8005551999 dpcssn gt     006-001-002
     MRNSET=1     SSN=50  CCGT=yes NTT=---

Command Retrieved 1 Entries
```

If entries are displayed, perform the *Changing Global Title Address Information* on page 681 procedure and change the MRN reference to `NONE`, or remove the entry by performing the *Removing Global Title Address Information* on page 672 procedure.

If no entries are displayed, repeat this step with the other GTT set names displayed in step 5.

When all the GTT set names have been displayed and all applicable global title translation entries have been changed or removed in this step, go to step 7.

Note: If the MRN being removed is in the default MRN set, skip step 7 and go to step 8.

7. The MRN cannot be removed if the point code and non-default MRN set ID of the MRN is shown in the `rtrv-ppsopts` command output. Enter the `rtrv-ppsopts` command to verify that the MRN's point code and non-default MRN set ID is not shown in the `rtrv-ppsopts` output. This is an example of the possible output.

```
rlghncxa03w 07-05-20 09:07:58 GMT EAGLE5 37.0.0
Prepaid SMS Options
-------------------
PPT       PCI/PCN                    RI        Set ID
---       --------------------       ---       ------
1         PCI:    1-001-1            SSN       DFLT
2         --------------------       GT        DFLT
3         --------------------       GT        DFLT
4         PCI:    1-001-1            GT        1
5         --------------------       GT        DFLT
6         --------------------       GT        DFLT
7         --------------------       GT        DFLT
8         PCI:    1-001-1            SSN       1
9         --------------------       GT        DFLT
10        --------------------       GT        DFLT
```

If the `rtrv-ppsopts` output shows any entries that reference the MRN's point code and non-default MRN set ID, remove the reference using the `chg-ppsopts` command with the prepaid portability type (the `PPT` value) that contains the reference and either the `pci=none` or `pcn=none` parameters (depending on the type of point code the prepaid portability type contains).

```
chg-ppsopts:ppt=8:pci=none
```

This is an example of the possible output.

```
rlghncxa03w 07-05-20 09:07:58 GMT EAGLE5 37.0.0
CHG-PPSOPTS: MASP A - COMPLTD
```

Repeat this step for other entries shown in the `rtrv-ppsopts` output that contain the MRN's point code and non-default MRN set ID.

8. Remove the mated relay node from the MRN group or MRN set using the `dlt-mrn` command with a point code from the `rtrv-mrn` command output shown in step 1. For this example, enter this command.

   Note: If the `MRNSET` column is shown in the `rtrv-mrn` output in step 1, then the `mrnset` parameter must be specified with the `dlt-mrn` command. The `mrnset` parameter value must be the MRN set ID containing the point code specified in this step. If the `MRNSET` column is not shown in the `rtrv-mrn` output in step 1, the `mrnset` parameter cannot be specified with the `dlt-mrn` command.

   For this example, enter this command.

   ```
   dlt-mrn:pca=006-001-002:mrnset=1
   ```

   Note: If the entire MRN group or MRN set is not being removed in this step, the MRN group or MRN set must contain at least two entries after this step is performed.

   This message should appear.

   ```
   rlghncxa03w 07-05-07  11:48:16 GMT  EAGLE5 37.0.0
   DLT-MRN:  MASP A - COMPLTD
   ```

   Note: If the `MRNSET` column is not shown in step 1 and an entire MRN group is being removed from the database, enter the `dlt-mrn` command with the point code and the `all=yes` parameter. For this example, enter the `dlt-mrn:pca=006-001-002:all=yes` command.

   Note: If the MRNSET column is shown in step 1 and an entire MRN set is being removed from the database, enter the `dlt-mrn` command with the point code, the `mrnset` parameter value containing a point code in the MRN set, and the `all=yes` parameter. For this example, enter the `dlt-mrn:pca=006-001-002:mrnset=1:all=yes` command. If the `mrnset=dflt` and `all=yes` parameters are specified with the `dlt-mrn` command, only the MRN group containing the point code value specified in the `dlt-mrn` command is removed from the default MRN set.

   Note: If weight and in-service threshold values are assigned to a load shared or combined dominant/load shared MRN group or MRN set, and if by removing entries from this MRN group or MRN set, the MRN group or MRN set becomes a dominant MRN group or MRN set, all weight and threshold values are removed from the remaining entries in the MRN group or MRN set.

9. Verify the changes using the `rtrv-mrn` command with the point code specified in step 7.

   If the `mrnset` parameter was specified in step 7, the `mrnset` parameter and the `mrnset` parameter value specified in step 7 must be specified in this step. For this example, enter this command.

   ```
   rtrv-mrn:pca=006-001-002:mrnset=1
   ```

   This message should appear.

   ```
    E4483 Cmd Rej: PC does not exist in specified MRNSET
   ```

   Note: When an entire MRN group is removed from the default MRN set, this message, E4483, will appear when the `rtrv-mrn` command is specified with the `mrnset=dflt` and the point code value specified in step 7.

If an entire MRN set was removed in step 7, the following message appears when this step is performed.

```
E4480 Cmd Rej: Specified MRNSET does not exist
```

If the Flexible GTT Load Sharing feature is not enabled, the `mrnset` parameer cannot be specified with the `rtrv-mrn` command. When this step is performed (without the Flexible GTT Load Sharing feature enabled and without the `mrnset` parameter), the following message appears.

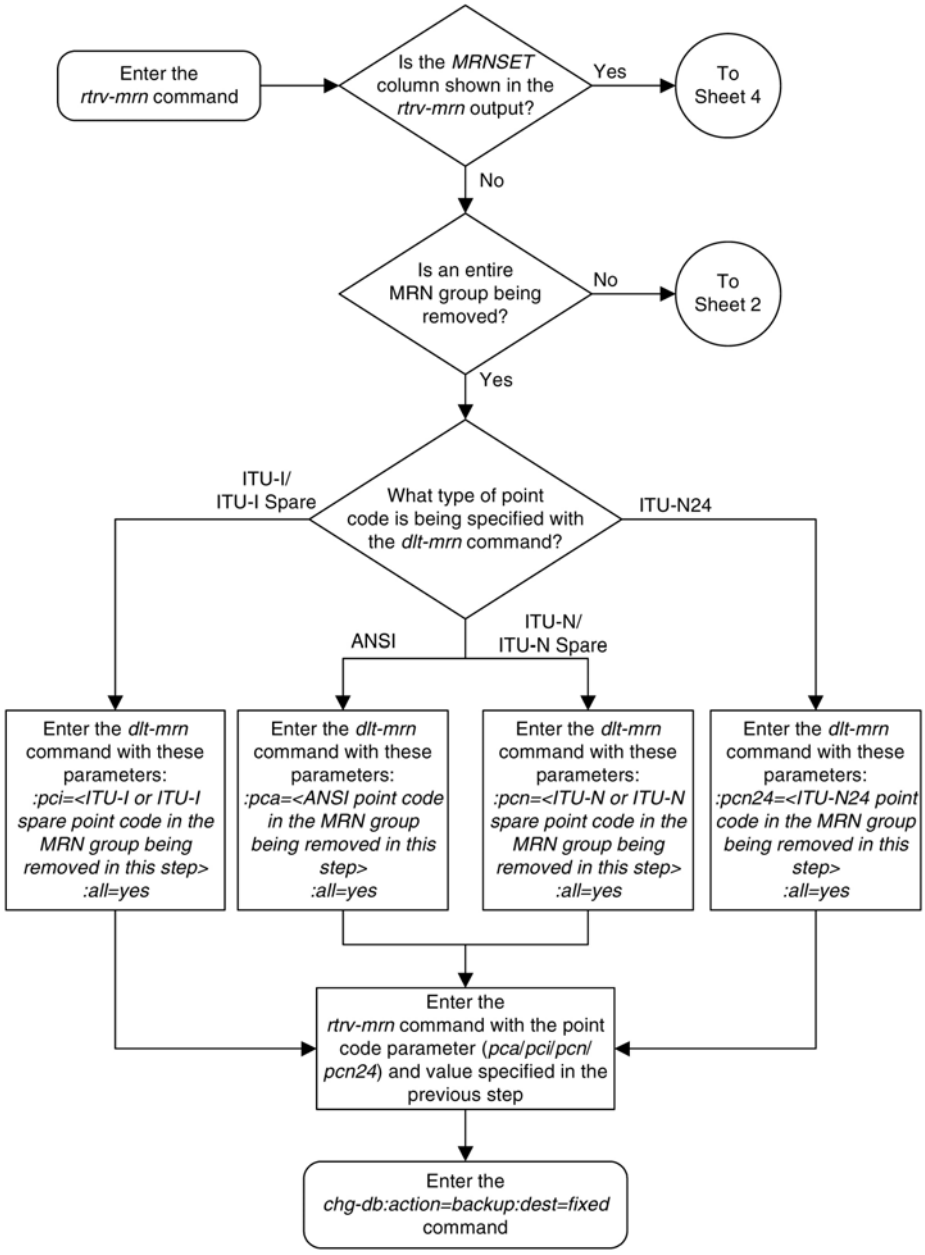
```
E2849 Cmd Rej: PC must already exist in the MRN table
```

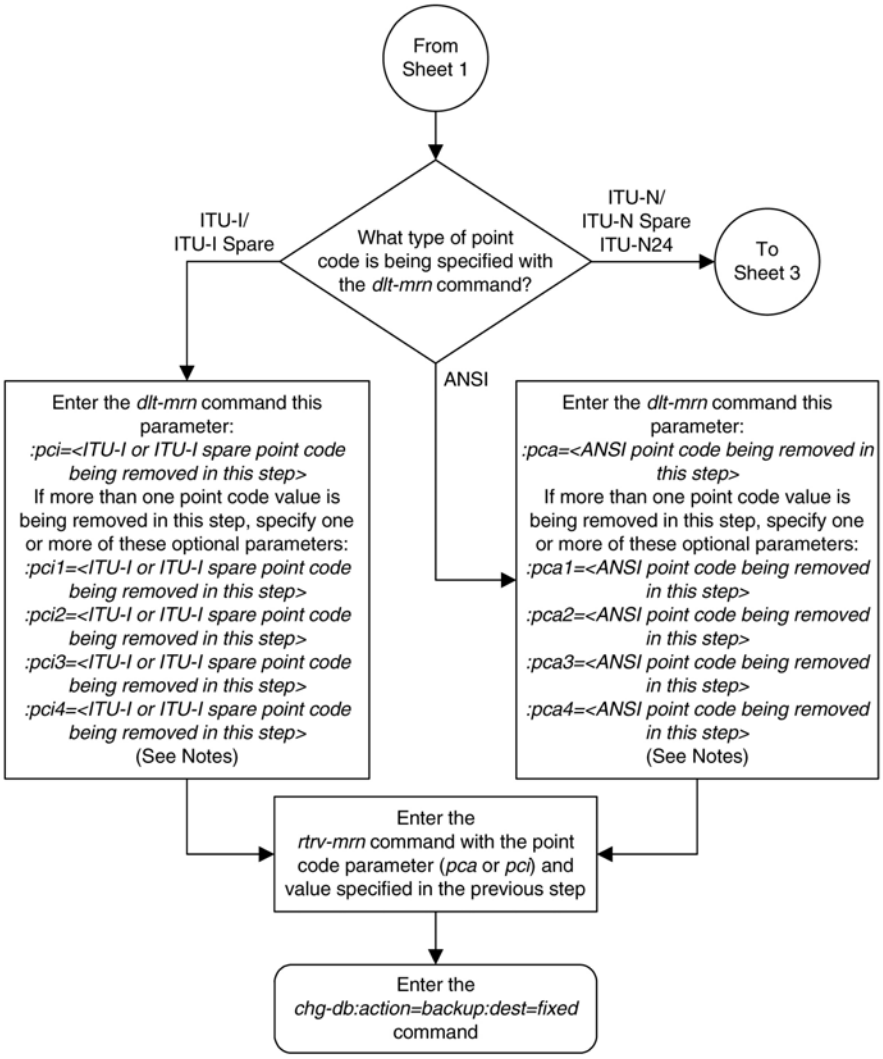
10. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

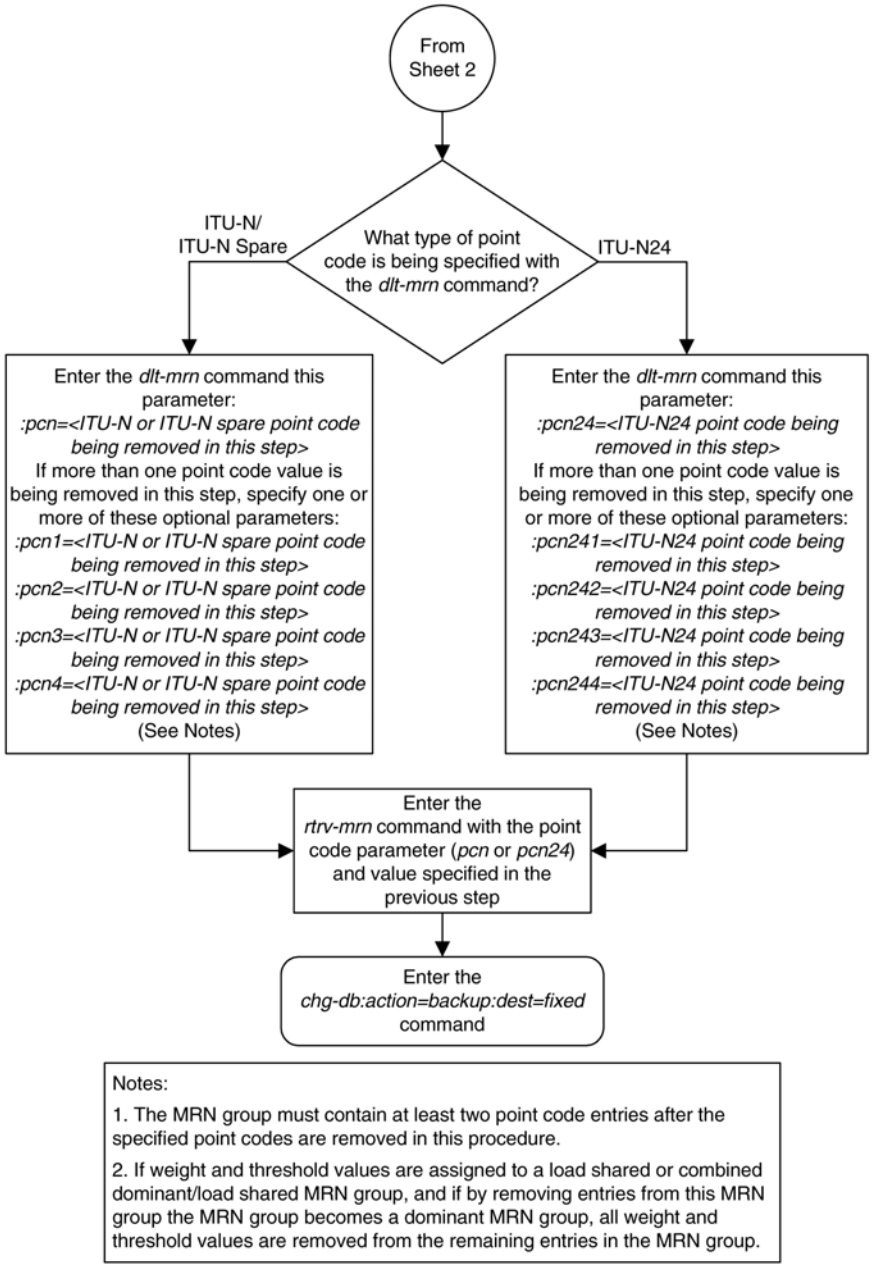
    These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

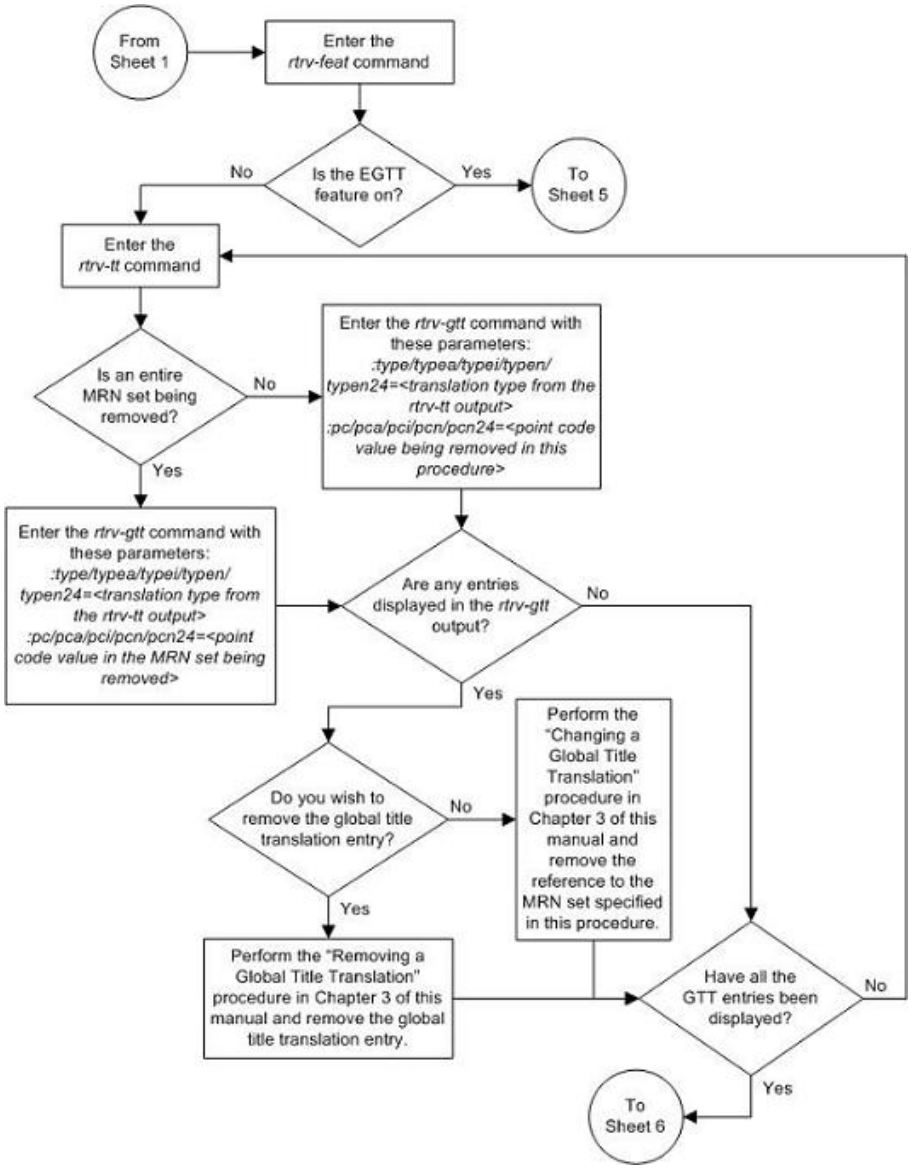
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

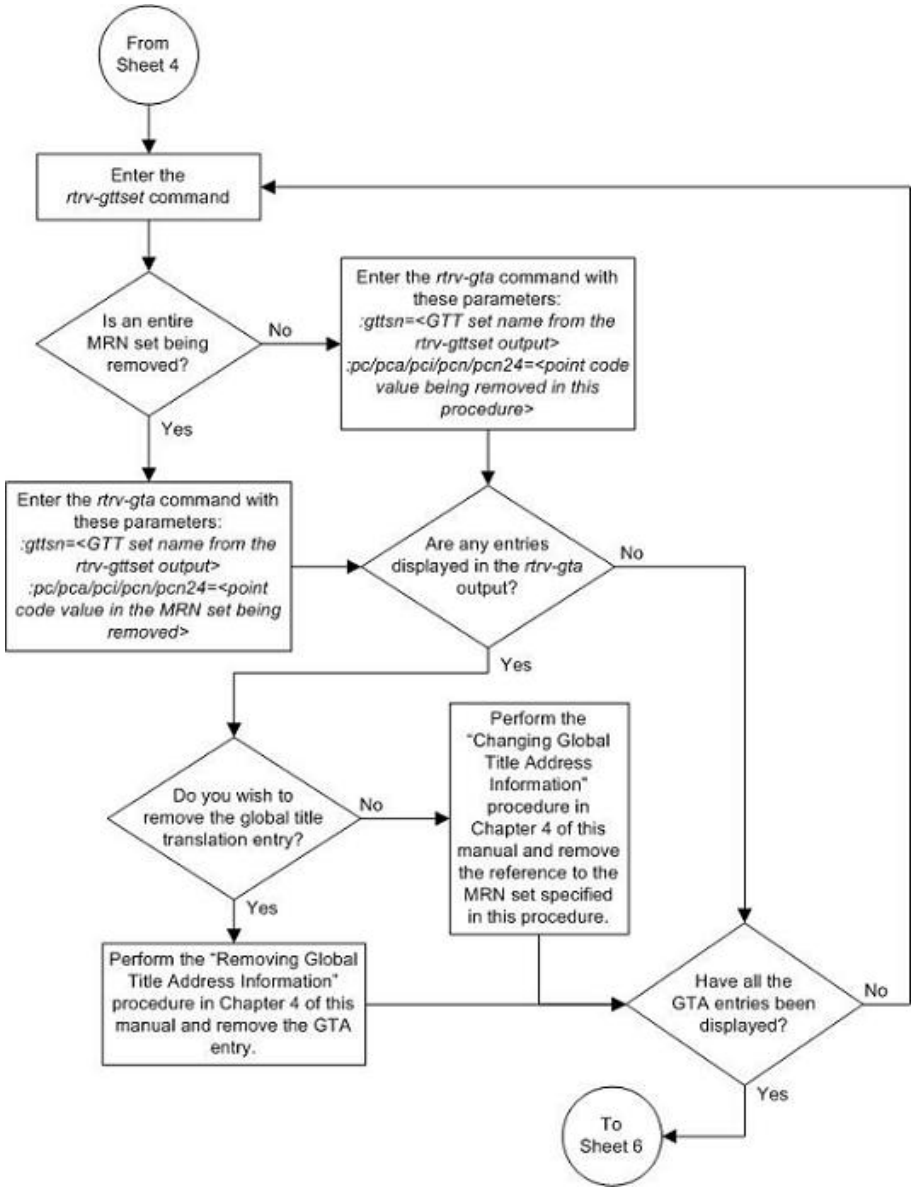
Figure 26: Removing MRN Entries

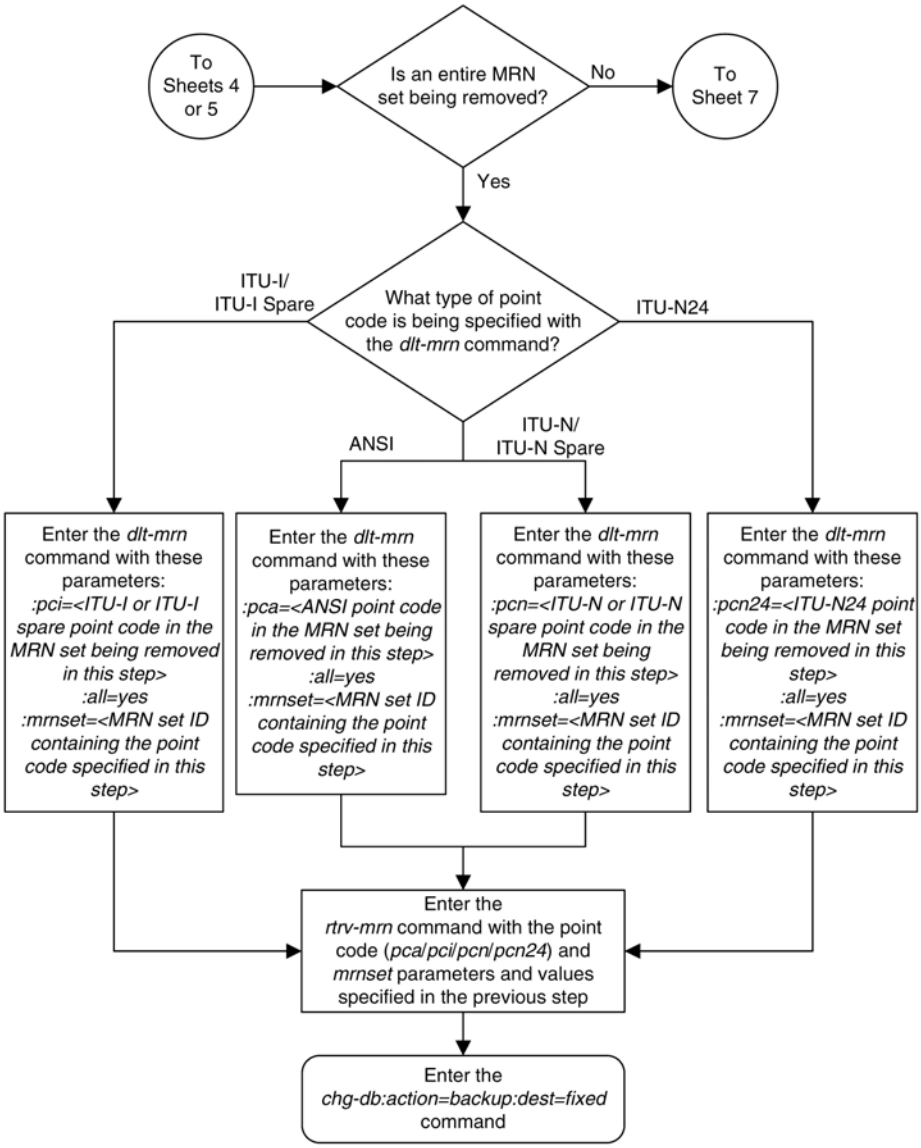

Enter the *rtrv-mrn* command
Is the *MRNSET* column shown in the *rtrv-mrn* output?
Yes
To Sheet 4
No
Is an entire MRN group being removed?
No
To Sheet 2
Yes
What type of point code is being specified with the *dlt-mrn* command?
ITU-I/ ITU-I Spare
ITU-N24
ANSI
ITU-N/ ITU-N Spare
Enter the *dlt-mrn* command with these parameters: *:pci=<ITU-I or ITU-I spare point code in the MRN group being removed in this step> :all=yes*
Enter the *dlt-mrn* command with these parameters: *:pca=<ANSI point code in the MRN group being removed in this step> :all=yes*
Enter the *dlt-mrn* command with these parameters: *:pcn=<ITU-N or ITU-N spare point code in the MRN group being removed in this step> :all=yes*
Enter the *dlt-mrn* command with these parameters: *:pcn24=<ITU-N24 point code in the MRN group being removed in this step> :all=yes*
Enter the *rtrv-mrn* command with the point code parameter (*pca*/*pci*/*pcn*/*pcn24*) and value specified in the previous step
Enter the *chg-db:action=backup:dest=fixed* command

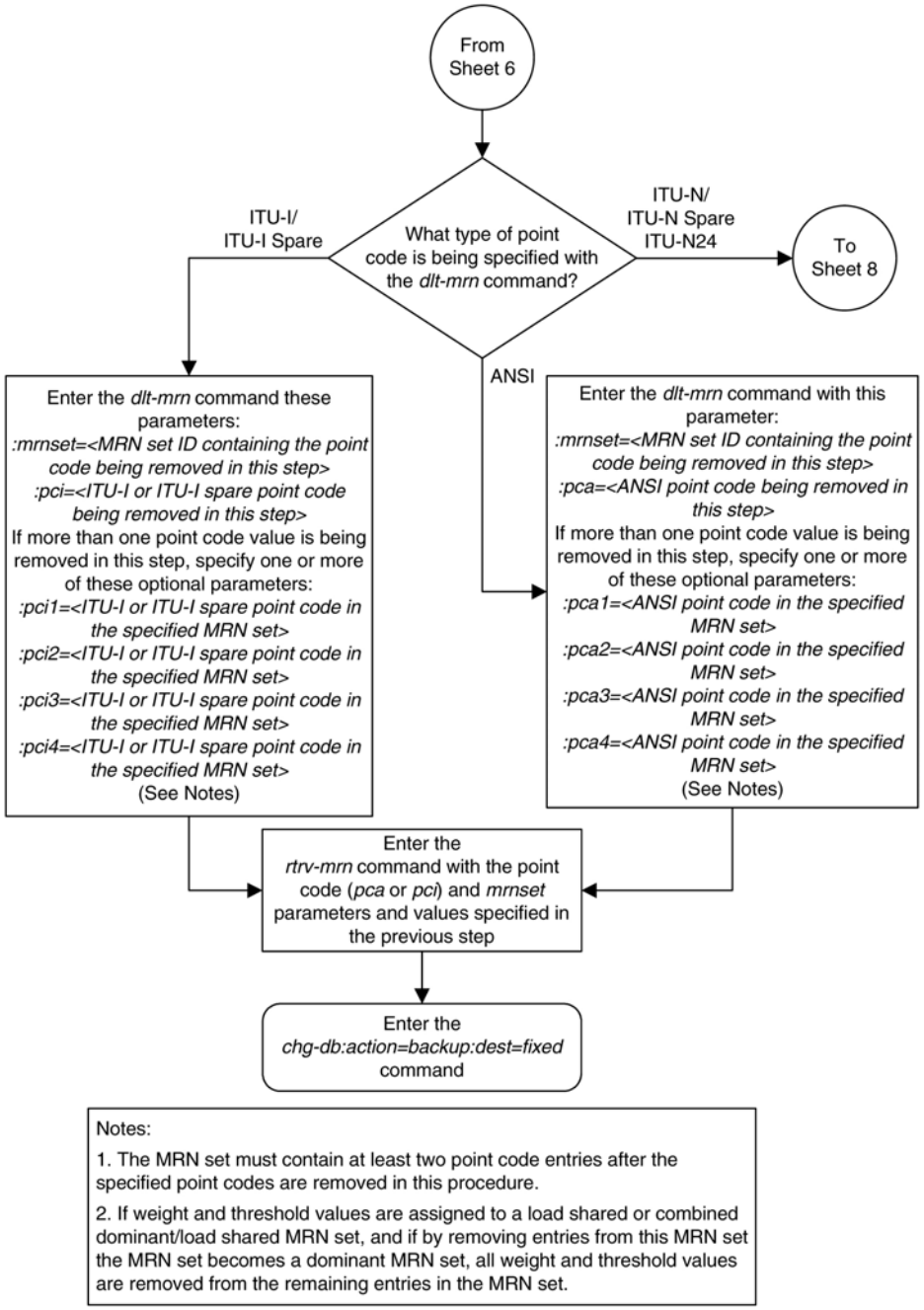

From Sheet 1
What type of point code is being specified with the dlt-mrn command?
ITU-I/ ITU-I Spare
ITU-N/ ITU-N Spare ITU-N24
To Sheet 3
ANSI
Enter the dlt-mrn command this parameter:
:pci=<ITU-I or ITU-I spare point code being removed in this step>
If more than one point code value is being removed in this step, specify one or more of these optional parameters:
:pci1=<ITU-I or ITU-I spare point code being removed in this step>
:pci2=<ITU-I or ITU-I spare point code being removed in this step>
:pci3=<ITU-I or ITU-I spare point code being removed in this step>
:pci4=<ITU-I or ITU-I spare point code being removed in this step>
(See Notes)
Enter the dlt-mrn command this parameter:
:pca=<ANSI point code being removed in this step>
If more than one point code value is being removed in this step, specify one or more of these optional parameters:
:pca1=<ANSI point code being removed in this step>
:pca2=<ANSI point code being removed in this step>
:pca3=<ANSI point code being removed in this step>
:pca4=<ANSI point code being removed in this step>
(See Notes)
Enter the rtrv-mrn command with the point code parameter (pca or pci) and value specified in the previous step
Enter the chg-db:action=backup:dest=fixed command
Notes:
1. The MRN group must contain at least two point code entries after the specified point codes are removed in this procedure.
2. If weight and threshold values are assigned to a load shared or combined dominant/load shared MRN group, and if by removing entries from this MRN group the MRN group becomes a dominant MRN group, all weight and threshold values are removed from the remaining entries in the MRN group.

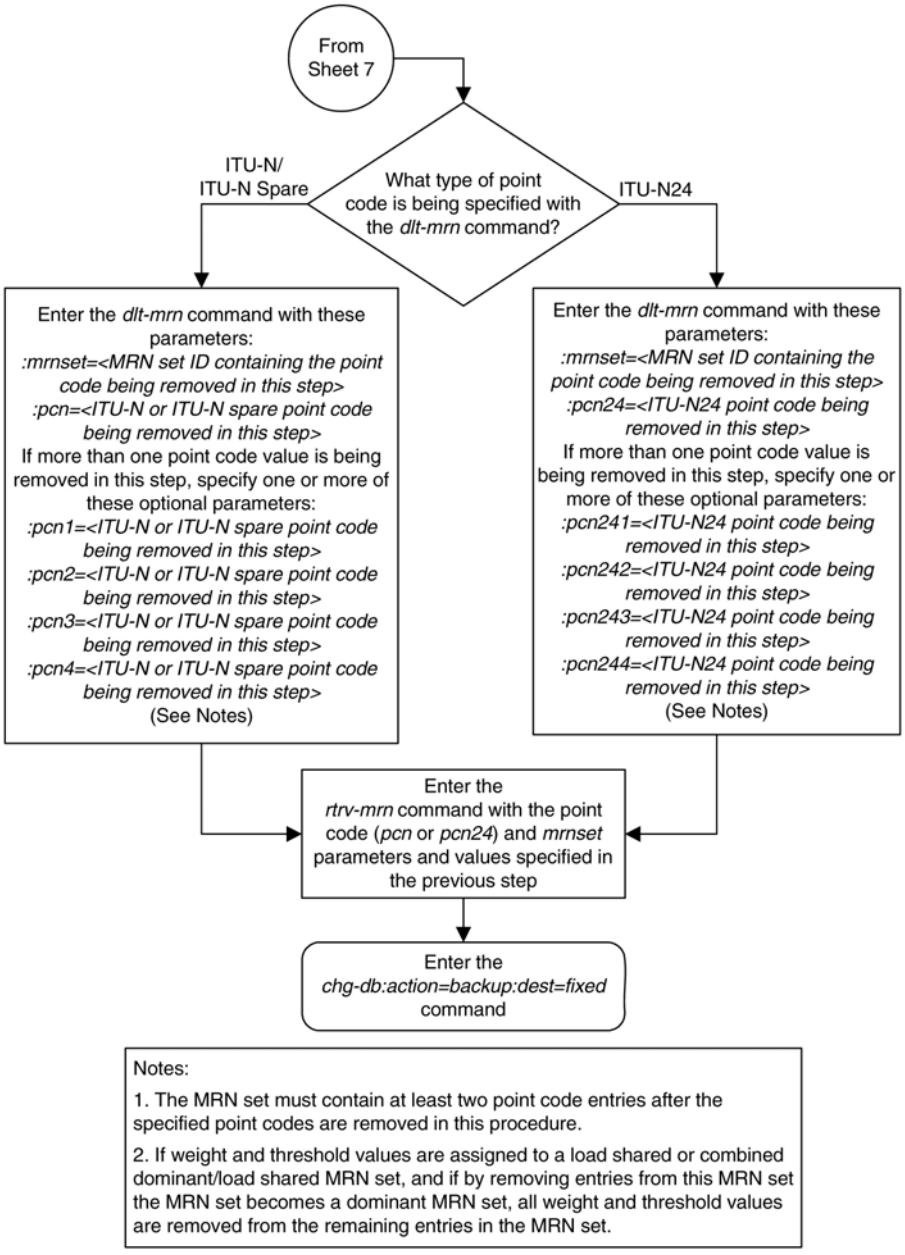

From Sheet 2
What type of point code is being specified with the dlt-mrn command?
ITU-N/ ITU-N Spare
ITU-N24
Enter the dlt-mrn command this parameter:
:pcn=<ITU-N or ITU-N spare point code being removed in this step>
If more than one point code value is being removed in this step, specify one or more of these optional parameters:
:pcn1=<ITU-N or ITU-N spare point code being removed in this step>
:pcn2=<ITU-N or ITU-N spare point code being removed in this step>
:pcn3=<ITU-N or ITU-N spare point code being removed in this step>
:pcn4=<ITU-N or ITU-N spare point code being removed in this step>
(See Notes)
Enter the dlt-mrn command this parameter:
:pcn24=<ITU-N24 point code being removed in this step>
If more than one point code value is being removed in this step, specify one or more of these optional parameters:
:pcn241=<ITU-N24 point code being removed in this step>
:pcn242=<ITU-N24 point code being removed in this step>
:pcn243=<ITU-N24 point code being removed in this step>
:pcn244=<ITU-N24 point code being removed in this step>
(See Notes)
Enter the rtrv-mrn command with the point code parameter (pcn or pcn24) and value specified in the previous step
Enter the chg-db:action=backup:dest=fixed command
Notes:
1. The MRN group must contain at least two point code entries after the specified point codes are removed in this procedure.
2. If weight and threshold values are assigned to a load shared or combined dominant/load shared MRN group, and if by removing entries from this MRN group the MRN group becomes a dominant MRN group, all weight and threshold values are removed from the remaining entries in the MRN group.


From Sheet 1
Enter the rtrv-feat command
Is the EGTT feature on?
No
Yes
To Sheet 5
Enter the rtrv-tt command
Is an entire MRN set being removed?
No
Yes
Enter the rtrv-gtt command with these parameters: :type/typea/typei/typen/ typen24=<translation type from the rtrv-tt output> :pc/pca/pci/pcn/pcn24=<point code value being removed in this procedure>
Enter the rtrv-gtt command with these parameters: :type/typea/typei/typen/ typen24=<translation type from the rtrv-tt output> :pc/pca/pci/pcn/pcn24=<point code value in the MRN set being removed>
Are any entries displayed in the rtrv-gtt output?
No
Yes
Do you wish to remove the global title translation entry?
No
Yes
Perform the "Changing a Global Title Translation" procedure in Chapter 3 of this manual and remove the reference to the MRN set specified in this procedure.
Perform the "Removing a Global Title Translation" procedure in Chapter 3 of this manual and remove the global title translation entry.
Have all the GTT entries been displayed?
No
Yes
To Sheet 6


From Sheet 4
Enter the rtrv-gttset command
Is an entire MRN set being removed?
No
Yes
Enter the rtrv-gta command with these parameters: :gttsn=<GTT set name from the rtrv-gttset output> :pc/pca/pci/pcn/pcn24=<point code value being removed in this procedure>
Enter the rtrv-gta command with these parameters: :gttsn=<GTT set name from the rtrv-gttset output> :pc/pca/pci/pcn/pcn24=<point code value in the MRN set being removed>
Are any entries displayed in the rtrv-gta output?
No
Yes
Do you wish to remove the global title translation entry?
No
Yes
Perform the "Changing Global Title Address Information" procedure in Chapter 4 of this manual and remove the reference to the MRN set specified in this procedure.
Perform the "Removing Global Title Address Information" procedure in Chapter 4 of this manual and remove the GTA entry.
Have all the GTA entries been displayed?
No
Yes
To Sheet 6


To Sheets 4 or 5
Is an entire MRN set being removed?
No
To Sheet 7
Yes
What type of point code is being specified with the dlt-mrn command?
ITU-I/ ITU-I Spare
ITU-N24
ANSI
ITU-N/ ITU-N Spare
Enter the dlt-mrn command with these parameters: :pci=<ITU-I or ITU-I spare point code in the MRN set being removed in this step> :all=yes :mrnset=<MRN set ID containing the point code specified in this step>
Enter the dlt-mrn command with these parameters: :pca=<ANSI point code in the MRN set being removed in this step> :all=yes :mrnset=<MRN set ID containing the point code specified in this step>
Enter the dlt-mrn command with these parameters: :pcn=<ITU-N or ITU-N spare point code in the MRN set being removed in this step> :all=yes :mrnset=<MRN set ID containing the point code specified in this step>
Enter the dlt-mrn command with these parameters: :pcn24=<ITU-N24 point code in the MRN set being removed in this step> :all=yes :mrnset=<MRN set ID containing the point code specified in this step>
Enter the rtrv-mrn command with the point code (pca/pci/pcn/pcn24) and mrnset parameters and values specified in the previous step
Enter the chg-db:action=backup:dest=fixed command


From Sheet 6
What type of point code is being specified with the dlt-mrn command?
ITU-I/ ITU-I Spare
ITU-N/ ITU-N Spare ITU-N24
To Sheet 8
ANSI
Enter the dlt-mrn command these parameters:
:mrnset=<MRN set ID containing the point code being removed in this step>
:pci=<ITU-I or ITU-I spare point code being removed in this step>
If more than one point code value is being removed in this step, specify one or more of these optional parameters:
:pci1=<ITU-I or ITU-I spare point code in the specified MRN set>
:pci2=<ITU-I or ITU-I spare point code in the specified MRN set>
:pci3=<ITU-I or ITU-I spare point code in the specified MRN set>
:pci4=<ITU-I or ITU-I spare point code in the specified MRN set>
(See Notes)
Enter the dlt-mrn command with this parameter:
:mrnset=<MRN set ID containing the point code being removed in this step>
:pca=<ANSI point code being removed in this step>
If more than one point code value is being removed in this step, specify one or more of these optional parameters:
:pca1=<ANSI point code in the specified MRN set>
:pca2=<ANSI point code in the specified MRN set>
:pca3=<ANSI point code in the specified MRN set>
:pca4=<ANSI point code in the specified MRN set>
(See Notes)
Enter the rtrv-mrn command with the point code (pca or pci) and mrnset parameters and values specified in the previous step
Enter the chg-db:action=backup:dest=fixed command
Notes:
1. The MRN set must contain at least two point code entries after the specified point codes are removed in this procedure.
2. If weight and threshold values are assigned to a load shared or combined dominant/load shared MRN set, and if by removing entries from this MRN set the MRN set becomes a dominant MRN set, all weight and threshold values are removed from the remaining entries in the MRN set.



Changing the Relative Cost Values of MRN Entries

This procedure is used to change the relative cost attributes of entries in an existing Mated Relay Node (MRN) group or MRN set using `rc/rc1/rc2/rc3/ rc4` parameters of the `chg-mrn` command.

The `chg-mrn` command can also be used to add point code entries to an existing MRN group or MRN set. This action is not covered in this procedure. If you wish to add point code entries to an existing MRN group or MRN set, perform the *Provisioning MRN Entries* on page 310 procedure.

If you wish to assign the same weight and threshold value to all the MRN entries in the MRN group or MRN set with the `eswt` and `thr` parameters, or to remove the weight and threshold values from all the MRN entries in the MRN group or MRN set with the `eswt=none` parameter, perform the *Changing MRN Entries with the ESWT Parameter* on page 368 procedure. The `eswt` and `thr` parameters cannot be used in this procedure.

If you wish to change individual weight values for MRN entries with the `wt/wt1/wt2/wt3/wt4` parameters, the weight values for an RC group with the `grpwt` parameter, the threshold values for an MRN group or MRN set with the thr parameter, or the relative cost and weight values for an MRN group or MRN set with the `force=yes` parameter, perform the *Changing the Weight and Threshold Values of MRN Entries* on page 381 procedure. (individual weight values). The `wt/wt1/wt2/wt3/wt4`, `grpwt`, `thr`, and `force=yes` parameters cannot be used in this procedure.

An MRN group or MRN set contains alternate point codes, up to 32, that are used for load sharing between multiple nodes when the EAGLE 5 ISS is performing intermediate global title translation. This load sharing is performed after intermediate global title translation is performed on the message. The point code in the message is changed to the selected point code in the MRN table. If the translated point code is not found in the MRN table, the translated point code in the message is not changed, the message is routed using route for the translated point code.

These parameters are used with the `chg-mrn` command in this procedure.

`:pc/pca/pci/pcn/pcn24` – The point code in the message after intermediate global title translation has been performed.

`:rc` – The relative cost value of point code in the message

`:pc1/pca1/pci1/pcn1/pcn241` – The first alternate point code value

`:rc1` – The relative cost value of the first alternate point code

`:pc2/pca2/pci2/pcn2/pcn242` – The second alternate point code value

`:rc2` – The relative cost value of the second alternate point code

`:pc3/pca3/pci3/pcn3/pcn243` – The third alternate point code value

`:rc3` – The relative cost value of the third alternate point code

`:pc4/pca4/pci4/pcn4/pcn244` – The fourth alternate point code value

`:rc4` – The relative cost value of the fourth alternate point code

Note:

Refer to Chapter 2, Configuring Destination Tables in the Database *Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

`:mrnset` – The MRN set ID that the MRN is assigned to, shown in the `rtrv-mrn` output. MRN set IDs are shown only if the Flexible GTT Load Sharing feature is enabled. The `mrnset` parameter value cannot be changed in this procedure. For more information on the Flexible GTT Load Sharing feature, refer to the *Flexible GTT Load Sharing* on page 29 section.

The relative cost parameter values (`rc/rc1/rc2/rc3/rc4`) determine how the global title translation load is to be shared among the alternate point codes. There are three types of load sharing that can be performed: dominant, load shared, or combined dominant/load shared.

All the point codes in a dominant MRN group or MRN set have different relative cost values. The translated point code in the message is the preferred point code that the message is routed on. The relative cost value assigned to the preferred point code does not have to be the lowest value in the MRN group or MRN set. All traffic is routed to the preferred point code, if it is available. If the preferred point code becomes unavailable, the traffic is routed to highest priority alternate point code that is available. When the preferred point code becomes available again, the traffic is then routed back to the preferred point code. For example, the MRN table contains the following entries.

```
PC            RC
005-005-005   10
006-001-001   20
006-001-002   30
006-001-003   40
006-001-004   50
006-001-005   60
006-001-006   70
006-001-007   80
```

If the preferred point code is 006-001-001 and it becomes unavailable, the traffic will be routed to point code 006-001-002.

All the point codes in a load shared MRN group have the same relative cost value. Traffic is shared equally between the point codes in this MRN group.

A combined dominant/load shared MRN group or MRN set is a combination of the dominant and load sharing MRN groups or MRN sets. A combined dominant/load shared MRN group or MRN set must contain a minimum of two entries with the same relative cost value and a minimum of one entry with a different relative cost value. Traffic is routed to the point code or point codes with the lowest relative cost value. If more than one point code has the lowest relative cost value, the traffic is shared between these point codes. If the point code or point codes with the lowest relative cost value become unavailable, traffic is routed to the the point code or point codes with the next higher relative cost value. If more than one point code has this relative cost value, the traffic is shared between these point codes. For example, the MRN table contains the following entries.

```
PC            RC
005-005-005   10
006-001-001   10
006-001-002   10
006-001-003   20
006-001-004   20
006-001-005   20
006-001-006   20
006-001-007   20
```

If the preferred point code is 006-001-001, the traffic is shared equally between point codes 005-005-005, 006-001-001, and 006-001-002. If point codes 005-005-005, 006-001-001, and 006-001-002 become unavailable, the traffic will be shared equally between point codes, 006-001-003, 006-001-004, 006-001-005, 006-001-006, and 006-001-007.

Canceling the `RTRV-MRN` Command

Because the `rtrv-mrn` command used in this procedure can output information for a long period of time, the `rtrv-mrn` command can be canceled and the output to the terminal stopped. There are three ways that the `rtrv-mrn` command can be canceled.

- Press the F9 function key on the keyboard at the terminal where the rtrv-mrn command was entered.
- Enter the canc-cmd without the trm parameter at the terminal where the rtrv-mrn command was entered.
- Enter the canc-cmd:trm=<xx>, where <xx> is the terminal where the rtrv-mrn command was entered, from another terminal other that the terminal where the rtrv-mrn 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, refer to the *Commands Manual*.

1. Display the mated relay node groups in the database using the rtrv-mrn command. This is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

   PC             RC
   005-005-005    10
   006-001-001    20
   006-001-002    30
   006-001-003    40
   006-001-004    50
   006-001-005    60
   006-001-006    70
   006-001-007    80

   PC             RC
   007-007-007    10
   008-001-001    20
   008-001-002    30
   008-001-003    40
   008-001-004    50
   008-001-005    60
   008-001-006    70

MRN table is (15 of 5990) 1% full
```

If the Flexible GTTLoad Sharing feature is enabled, this is an example of the possible output.

```
   MRNSET    PC             RC
   DFLT      005-005-005    10
             006-001-001    20
             006-001-002    30
             006-001-003    40
             006-001-004    50
             006-001-005    60
             006-001-006    70
             006-001-007    80

   MRNSET    PC             RC
   1         007-007-007    10
             008-001-001    20
             008-001-002    30
             008-001-003    40
             008-001-004    50
             008-001-005    60
```

```
             008-001-006    70

MRN table is (15 of 5990) 1% full
```

If the Weighted GTTLoad Sharing feature is enabled and turned on, and the Flexible GTTLoad Sharing feature is not enabled, this is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

   PC             RC WT %WT THR
   005-005-005    10 10  50  30
   006-001-001    10 10  50  30
   006-001-002    30 20 100  30
   006-001-003    40 20 100  30
   006-001-004    50 20 100  30

   PC             RC WT %WT THR
   007-007-007    10 10  17   1
   008-001-001    10 20  33   1
   008-001-002    10 30  50   1
   008-001-003    20 20  25   1
   008-001-004    20 20  25   1
   008-001-005    20 20  25   1
   008-001-006    20 20  25   1

MRN table is (16 of 5990) 1% full
```

If the Weighted GTTLoad Sharing feature is enabled and turned on, and the Flexible GTTLoad Sharing feature is enabled, this is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

   MRNSET    PC             RC WT %WT THR
   DFLT      005-005-005    10 10  50  30
             006-001-001    10 10  50  30
             006-001-002    30 20 100  30
             006-001-003    40 20 100  30
             006-001-004    50 20 100  30

   MRNSET    PC             RC WT %WT THR
   1         007-007-007    10 10  17   1
             008-001-001    10 20  33   1
             008-001-002    10 30  50   1
             008-001-003    20 20  25   1
             008-001-004    20 20  25   1
             008-001-005    20 20  25   1
             008-001-006    20 20  25   1

MRN table is (16 of 5990) 1% full
```

2. Change the RC values in the MRN group or MRN set by entering the `chg-mrn` command with the point code parameters and their corresponding RC parameters `rc`, `rc1`, `rc2`, `rc3`, and `rc4` parameters.

   If only one RC value is being changed, specify the point code value with the `pc/pca/pci/pcn/pcn24` parameter and specify the new RC value with the `rc` parameter. For example, enter this command to change the RC value of the point code 005-005-005 from 10 to 45.

   `chg-mrn:pca=005-005-005:rc=45`

More than one RC value in the MRN group or MRN set can be changed with the `chg-mrn` command. To change more than one RC value, specify the first point code value with the `pc/pca/pci/pcn/pcn24` parameter and the other point code values with the appropriate alternate point code parameters. The new RC values are specified with the `rc` parameters that correspond to the point code parameters. For example, enter this command to change some of the RC values in the MRN group containing these point codes: 005-005-005, 006-001-001, 006-001-003, 006-001-004, and 006-001-007.

```
chg-mrn:pca=007-007-007:rc=5:pca=008-001-003:rc=10:pca=008-001-004:rc=15
:pca=008-001-001:rc=35:pca=008-001-006:rc=45
```

If the MRNSET column is shown in the `rtrv-mrn` output in step 1, the `mrnset=<MRN Set ID>` parameter, specifying the MRN set containing the point code specified in this step, must be specified with the `chg-mrn` command. To change the RC values in an MRN set, for this example enter these commands.

```
chg-mrn:pca=005-005-005:rc=45:mrnset=dflt
```

```
chg-mrn:pca=007-007-007:rc=5:pca=008-001-003:rc=10:pca=008-001-004:rc=15
:pca=008-001-001:rc=35:pca=008-001-006:rc=45:mrnset=1
```

Note: If the RC values are changed so that the resulting MRN group of MRN set becomes a dominant MRN group or MRN set (the RC values are unique), and the MRN group of MRN set had weight and in-service thresholds assigned, the weight and in-service threshold values will be removed from the MRN group of MRN set.

When the `chg-mrn` command has successfully completed, this message should appear.

```
rlghncxa03w 07-05-07  11:44:13  GMT  EAGLE5 37.0.0
CHG-MRN:  MASP A - COMPLTD
```

Repeat this step to change other entries in the MRN group or MRN set.

3. Verify the changes using the `rtrv-mrn` command with the point code (`pca/pci/pcn/pcn24` parameters) specified in step 2. If the `mrnset` parameter was specified in step 2, the `mrnset` parameter and value specified in step 2 must be specified with the `rtrv-mrn` command in this step.

   For this example, enter these commands.

   ```
   rtrv-mrn:pca=005-005-005
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

      PC            RC
      006-001-001   20
      006-001-002   30
      006-001-003   40
      005-005-005   45
      006-001-004   50
      006-001-005   60
      006-001-006   70
      006-001-007   80

   MRN table is (15 of 2990) 1% full
   ```

   ```
   rtrv-mrn:pca=007-007-007
   ```

This is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

   PC             RC
   007-007-007     5
   008-001-003    10
   008-001-004    15
   008-001-002    30
   008-001-001    35
   008-001-006    45
   008-001-005    60

MRN table is (15 of 5990) 1% full
```

If the Flexible GTTLoad Sharing feature is enabled for this example, enter these commands.

`rtrv-mrn:pca=005-005-005:mrnset=dflt`

This is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

   MRNSET    PC             RC
   DFLT      006-001-001    20
             006-001-002    30
             006-001-003    40
             005-005-005    45
             006-001-004    50
             006-001-005    60
             006-001-006    70
             006-001-007    80

MRN table is (15 of 5990) 1% full
```

`rtrv-mrn:pca=007-007-007:mrnset=1`

This is an example of the possible output.

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

   MRNSET    PC             RC
   1         007-007-007     5
             008-001-003    10
             008-001-004    15
             008-001-002    30
             008-001-001    35
             008-001-006    45
             008-001-005    60

MRN table is (15 of 5990) 1% full
```

If the Weighted GTTLoad Sharing feature is enabled and turned on, and the Flexible GTTLoad Sharing feature is not enabled for this example, enter these commands.

This is an example of the possible output.

`rtrv-mrn:pca=005-005-005`

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

   PC             RC WT %WT THR
   006-001-001    10 --  --  --
```

```
   006-001-002    30 --  --  --
   006-001-003    40 --  --  --
   005-005-005    45 --  --  --
   006-001-004    50 --  --  --
```

`rtrv-mrn:pca=007-007-007`

```
   PC             RC WT %WT THR
   007-007-007     5 10 100   1
   008-001-002    10 30  60   1
   008-001-003    10 20  40   1
   008-001-004    15 20 100   1
   008-001-005    20 20 100   1
   008-001-001    35 20 100   1
   008-001-006    45 20 100   1
```

If the Weighted GTTLoad Sharing feature is enabled and turned on, and the Flexible GTTLoad Sharing feature is enabled for this example, enter these commands.

This is an example of the possible output.

`rtrv-mrn:pca=005-005-005:mrnset=dflt`

```
rlghncxa03w 07-05-07 00:34:31 GMT EAGLE5 37.0.0

   MRNSET    PC             RC WT %WT THR
   DFLT      006-001-001    10 --  --  --
             006-001-002    30 --  --  --
             006-001-003    40 --  --  --
             005-005-005    45 --  --  --
             006-001-004    50 --  --  --
```

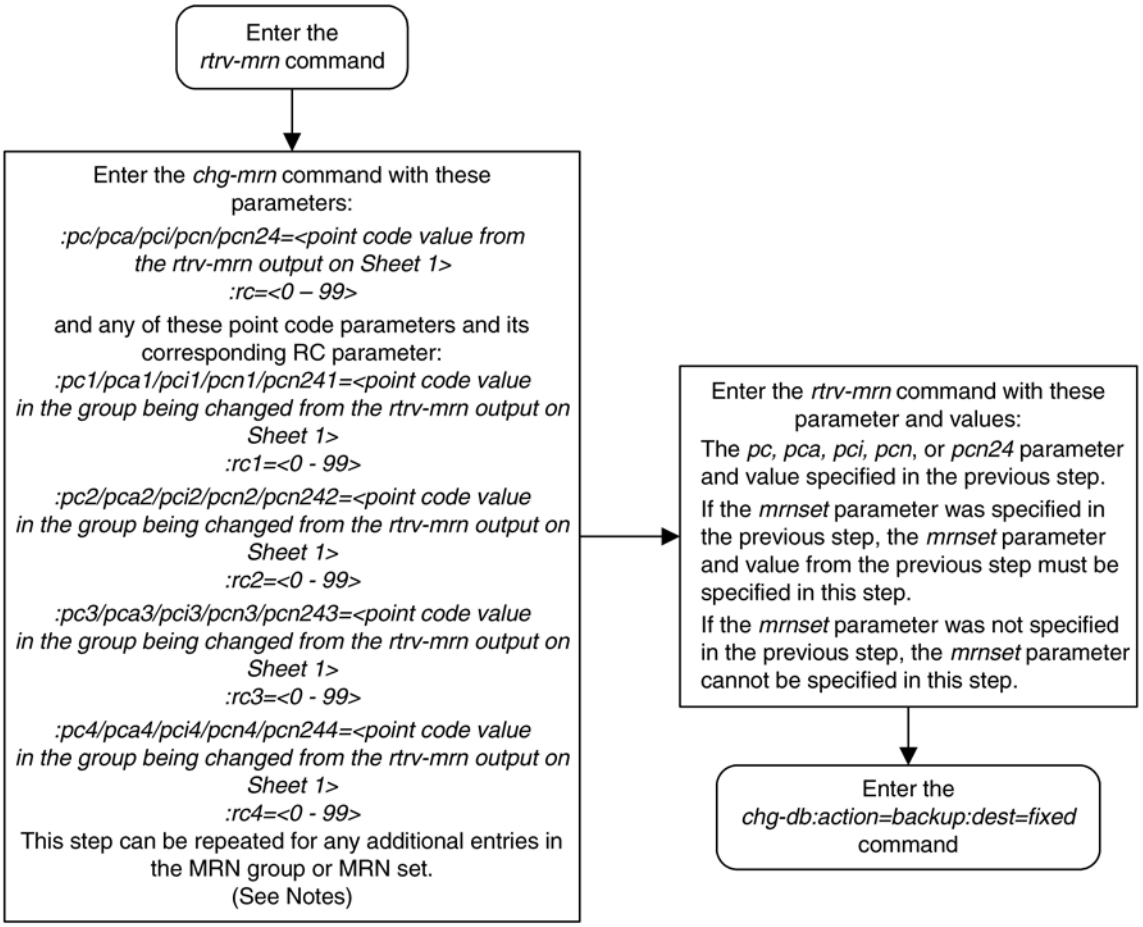
`rtrv-mrn:pca=007-007-007:mrnset=1`

```
   MRNSET    PC             RC WT %WT THR
   1         007-007-007     5 10 100   1
             008-001-002    10 30  60   1
             008-001-003    10 20  40   1
             008-001-004    15 20 100   1
             008-001-005    20 20 100   1
             008-001-001    35 20 100   1
             008-001-006    45 20 100   1
```

4. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 27: Changing Relative Cost Values of MRN Entries



Notes:

1. If the *MRNSET* field is shown in the *rtrv-mrn* output on Sheet 1, the *mrnset=<current MRN set ID>* parameter, specifying the MRN set containing the point code specfied in this step, must be specified with the *chg-mrn* or *rtrv-mrn* command.
2. If the *MRNSET* field is not shown in the *rtrv-mrn* output on Sheet 1, the *mrnset* parameter cannot be specified with the *chg-mrn* or *rtrv-mrn* command.
3. A dominant MRN group or MRN set contains entries whose RC values are unique.
4. A load shared MRN group or MRN set contains entries whose RC values are equal.
5. A combined dominant/load shared MRN group or MRN set contains a minimum of two entries shows RC values are equal, and a minimum of one entry whose RC value is different.
6. If weights and in-service thresholds are assigned to the MRN group or MRN set being changed, and the MRN group or MRN set is being changed to a dominant MRN group or MRN set, the weight and in-service threshold values will be removed from the MRN group or MRN set.

Changing MRN Entries with the ESWT Parameter

This procedure is used to change the weight values of all the entries in an existing Mated Relay Node (MRN) group or MRN set using the `eswt` parameter of the `chg-mrn` command.

The `chg-mrn` command can also be used to add point code entries to an existing MRN group or MRN set. This action is not covered in this procedure. If you wish to add point code entries to an existing MRN group or MRN set, perform the *Provisioning MRN Entries* on page 310 procedure.

If the MRN entries being changed do not have weight and threshold values assigned to them, perform the *Changing the Relative Cost Values of MRN Entries* on page 360 procedure (with no weight and threshold values).

If you wish to change individual weight values for MRN entries with the `wt/wt1/wt2/wt3/wt4` parameters, the weight values for an RC group with the `grpwt` parameter, the threshold values for an MRN group or MRN set with the thr parameter, or the relative cost and weight values for an MRN group or MRN set with the `force=yes` parameter, perform the *Changing the Weight and Threshold Values of MRN Entries* on page 381 procedure. (individual weight values). The `wt/wt1/wt2/wt3/wt4`, `grpwt`, `thr`, and `force=yes` parameters cannot be used in this procedure.

An MRN group or MRN set contains alternate point codes, up to 32, that are used for load sharing between multiple nodes when the EAGLE 5 ISS is performing intermediate global title translation. This load sharing is performed after intermediate global title translation is performed on the message. The point code in the message is changed to the selected point code in the MRN table. If the translated point code is not found in the MRN table, the translated point code in the message is not changed, the message is routed using route for the translated point code.

These parameters are used with the `chg-mrn` command in this procedure.

`:pc/pca/pci/pcn/pcn24` – The point code in the message after intermediate global title translation has been performed.

`:rc` – The relative cost value of point code in the message

`:pc1/pca1/pci1/pcn1/pcn241` – The first alternate point code value

`:rc1` – The relative cost value of the first alternate point code

`:pc2/pca2/pci2/pcn2/pcn242` – The second alternate point code value

`:rc2` – The relative cost value of the second alternate point code

`:pc3/pca3/pci3/pcn3/pcn243` – The third alternate point code value

`:rc3` – The relative cost value of the third alternate point code

`:pc4/pca4/pci4/pcn4/pcn244` – The fourth alternate point code value

`:rc4` – The relative cost value of the fourth alternate point code

Note: Refer to Chapter 2, Configuring Destination Tables in the Database *Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

`:mrnset` – The MRN set ID that the MRN is assigned to, shown in the `rtrv-mrn` output. MRN set IDs are shown only if the Flexible GTT Load Sharing feature is enabled. The `mrnset` parameter value cannot be changed in this procedure. For more information on the Flexible GTT Load Sharing feature, refer to the *Flexible GTT Load Sharing* on page 29 section.

`:eswt` – The entity set weight value. When this parameter is specified, the same weight value is assigned to all entries in the MRN group or MRN set that contain the point code value specified in the `chg-mrn` command. A MRN group or MRN set can also be referred to as an entity set. The value of this parameter is from 1 - 99.

`:thr` – The in-service threshold assigned to the MRN group or MRN set. The in-service threshold is the minimum percentage (from 1 - 100) of weight that must be available for an RC group (a group of entries in the MRN group or MRN set that have the same RC value assigned) to be considered available to carry traffic. If the percentage of the available weight is less than the in-service threshold, then the entire RC group is considered unavailable for traffic. If the percentage of the available weight is equal to or greater than the in-service threshold, then the RC group is considered available, and traffic can be sent to any available entity in the RC group. When the `thr` parameter is specified with the `eswt` parameter in this procedure, the in-service threshold value is assigned to all the entries of the MRN group or MRN set.

The relative cost parameter values (`rc/rc1/rc2/rc3/rc4`) determine how the global title translation load is to be shared among the alternate point codes. There are three types of load sharing that can be performed: dominant, load shared, or combined dominant/load shared.

All the point codes in a dominant MRN group or MRN set have different relative cost values. The translated point code in the message is the preferred point code that the message is routed on. The relative cost value assigned to the preferred point code does not have to be the lowest value in the MRN group or MRN set. All traffic is routed to the preferred point code, if it is available. If the preferred point code becomes unavailable, the traffic is routed to highest priority alternate point code that is available. When the preferred point code becomes available again, the traffic is then routed back to the preferred point code. For example, the MRN table contains the following entries.

```
PC            RC
005-005-005   10
006-001-001   20
006-001-002   30
006-001-003   40
006-001-004   50
006-001-005   60
006-001-006   70
006-001-007   80
```

If the preferred point code is 006-001-001 and it becomes unavailable, the traffic will be routed to point code 006-001-002.

All the point codes in a load shared MRN group have the same relative cost value. Traffic is shared equally between the point codes in this MRN group.

A combined dominant/load shared MRN group or MRN set is a combination of the dominant and load sharing MRN groups or MRN sets. A combined dominant/load shared MRN group or MRN set must contain a minimum of two entries with the same relative cost value and a minimum of one entry with a different relative cost value. Traffic is routed to the point code or point codes with the lowest relative cost value. If more than one point code has the lowest relative cost value, the traffic is shared between these point codes. If the point code or point codes with the lowest relative cost value become unavailable, traffic is routed to the the point code or point codes with the next higher relative cost value. If more than one point code has this relative cost value, the traffic is shared between these point codes. For example, the MRN table contains the following entries.

```
PC            RC
005-005-005   10
006-001-001   10
006-001-002   10
006-001-003   20
006-001-004   20
006-001-005   20
```

```
006-001-006    20
006-001-007    20
```

If the preferred point code is 006-001-001, the traffic is shared equally between point codes 005-005-005, 006-001-001, and 006-001-002. If point codes 005-005-005, 006-001-001, and 006-001-002 become unavailable, the traffic will be shared equally between point codes, 006-001-003, 006-001-004, 006-001-005, 006-001-006, and 006-001-007.

The `eswt` and `thr` parameters can be used only:

- If the MRN group or MRN set is either a load shared or combined dominant/load shared MRN group or MRN set.
- If the Weighted GTTLoad Sharing feature is enabled and turned on.

The status of the Weighted GTT Load Sharing feature can be verified by entering the `rtrv-ctrl-feat` command. If the Weighted GTT Load Sharing feature is not enabled or not turned on, perform the *Activating the Weighted GTT Load Sharing Feature* on page 813 procedure to enable and turn on the Weighted GTT Load Sharing feature.

The `eswt` parameter assigns same weight value to all the entries in the MRN group or MRN set that contains the point code value specified in the `chg-mrn` command.

The `eswt` and `thr` parameters can be specified with the `chg-mrn` command only with the `pc/pca/pci/pcn/pcn24` parameter and without the alternate point code, relative cost (`rc`, `rc1`, `rc2`, `rc3`, `rc4`), group weight (`grpwt`), and individual weight (`wt`, `wt1`, `wt2`, `wt3`, `wt4`) parameters.

The weight values assigned to the entiries in the MRN group or MRN set are shown in the `WT` column in the `rtrv-mrn` output.

The in-service threshold values assigned to the entiries in the MRN group or MRN set are shown in the `THR` column in the `rtrv-mrn` output.

The `%WT` column in the `rtrv-mrn` output shows the percentage of the traffic the particular entry in the entity set will handle.

The `WT`, `%WT`, and `THR` columns are shown in the `rtrv-mrn` output only if the Weighted GTT Load Sharing feature is enabled and turned on.

For more information on the Weighted GTT Load Sharing feature, refer to the *Weighted GTT Load Sharing* on page 42 section.

Canceling the `RTRV-MRN` Command

Because the `rtrv-mrn` command used in this procedure can output information for a long period of time, the `rtrv-mrn` command can be canceled and the output to the terminal stopped. There are three ways that the `rtrv-mrn` command can be canceled.

- Press the `F9` function key on the keyboard at the terminal where the `rtrv-mrn` command was entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rtrv-mrn` command was entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rtrv-mrn` command was entered, from another terminal other that the terminal where the `rtrv-mrn` 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, refer to the *Commands Manual*.

1. Display the mated relay node groups in the database using the `rtrv-mrn` command. This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   PC             RC
   005-005-005    10
   006-001-001    20
   006-001-002    30
   006-001-003    40
   006-001-004    50
   006-001-005    60
   006-001-006    70
   006-001-007    80

   PC             RC
   007-007-007    10
   008-001-001    20
   008-001-002    30
   008-001-003    40
   008-001-004    50
   008-001-005    60
   008-001-006    70

MRN table is (15 of 5990) 1% full
```

If the Flexible GTT Load Sharing feature is enabled, this is an example of the possible output.

```
   MRNSET    PC             RC
   DFLT      007-007-007    10
             008-001-001    20
             008-001-002    30
             008-001-003    40
             008-001-004    50
             008-001-005    60
             008-001-006    70

   MRNSET    PC             RC
   1         005-005-005    10
             006-001-001    20
             006-001-002    30
             006-001-003    40
             006-001-004    50
             006-001-005    60
             006-001-006    70
             006-001-007    80

MRN table is (15 of 5990) 1% full
```

If the Weighted GTT Load Sharing feature is enabled and turned on, and the Flexible GTT Load Sharing feature is not enabled, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   PC             RC WT %WT THR
   008-005-005    10 10  50  30
   008-001-001    10 10  50  30
   008-001-002    30 20 100  30
   008-001-003    40 20 100  30
   008-001-004    50 20 100  30
```

```
   PC              RC WT %WT THR
   009-005-005     10 10   4   1
   009-001-001     10 10   4   1
   009-001-002     10 30  12   1
   009-001-003     10 40  15   1
   009-001-005     10 40  15   1
   009-001-006     10 40  15   1
   009-001-007     10 40  15   1
   009-001-004     10 50  19   1
   009-001-008     20 20  25   1
   009-001-009     20 30  37   1
   009-001-010     20 30  37   1

MRN table is (16 of 5990) 1% full
```

If the Weighted GTT Load Sharing feature is enabled and turned on, and the Flexible GTT Load Sharing feature is enabled, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   MRNSET    PC              RC WT %WT THR
   DFLT      005-005-005     10 10  50  30
             006-001-001     10 10  50  30
             006-001-002     30 20 100  30
             006-001-003     40 20 100  30
             006-001-004     50 20 100  30

   MRNSET    PC              RC WT %WT THR
   1         005-005-005     10 10   4   1
             006-001-001     10 10   4   1
             006-001-002     10 30  12   1
             006-001-003     10 40  15   1
             006-001-005     10 40  15   1
             006-001-006     10 40  15   1
             006-001-007     10 40  15   1
             006-001-004     10 50  19   1
             006-001-008     20 20  25   1
             006-001-009     20 30  37   1
             006-001-010     20 30  37   1

MRN table is (16 of 5990) 1% full
```

2. If you wish to assign weight and in-service threshold values to the MRN entries in the MRN group or MRN set, and the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-mrn` output in step 1, then the Weighted GTT Load Sharing feature is enabled and turned on. Go to step 3.

   Note: If weight and threshold values are assigned to the MRN group or MRN set, skip this step and go to step 3.

   Note: If weight and threshold values are assigned to the MRN group or MRN set, and the weight and threshold values are being removed from the MRN group or MRN set, skip steps 2 and 3 and go to step 4.

   If the `WT`, `%WT`, and `THR` columns are not shown in the `rtrv-mrn` output in step 1, perform the *Activating the Weighted GTT Load Sharing Feature* on page 813 procedure to enable and turn on the Weighted GTT Load Sharing feature. After the Weighted GTT Load Sharing feature is enabled and turned on, go to step 3.

3. To assign weight and in-service threshold values to a dominant MRN group or MRN set, the dominant MRN group or MRN set must be changed to either a load shared or combined dominant/load shared MRN group or MRN set.

Note: If existing MRN group or MRN set that the weight and in-service threshold values are being assigned to is a load shared or combined dominant/load shared MRN group or MRN set, skip step 3 and go to step 4.

If you wish to change the dominant MRN group or MRN set to a load shared or combined dominant/load shared MRN group or MRN set by adding additional entries to the MRN group or MRN set, perform the *Provisioning MRN Entries* on page 310 procedure.

To change the dominant MRN group or MRN set to a load shared or combined dominant/load shared MRN group or MRN set without adding any additional entries to the MRN group or MRN set, enter the `chg-mrn` command specifying the point codes in the MRN group or MRN set with the point codes corresponding RC parameters with the new RC values.

To create a load shared MRN group or MRN set, the new RC values for all the entries in the MRN group or MRN set must be equal.

To create a combined dominant/load shared MRN group or MRN set, a minimum of two the new RC values must be equal and a minimum of one other RC value must be different.

If the MRNSET column is not shown in the `rtrv-mrn` output in step 1, the `mrnset` parameter cannot be specified with the `chg-mrn` command.

For this example, enter this command.

```
chg-mrn:pca=007-007-007:rc=10:pca1=008-001-001:rc1=10
:pca2=008-001-002:rc2=10:pca3=008-001-003:rc3=10
:pca4=008-001-004:rc4=10
```

If the MRNSET column is shown in the `rtrv-mrn` output in step 1, the `mrnset=<MRN Set ID>` parameter, specifying the MRN set containing the point code specified in this step, must be specified with the `chg-mrn` command. To change the RC values in an MRN set, for this example enter this command.

```
chg-mrn:pca=007-007-007:rc=10:pca1=008-001-001:rc1=10
:pca2=008-001-002:rc2=10:pca3=008-001-003:rc3=10
:pca4=008-001-004:rc4=10:mrnset=dflt
```

This step must be repeated until the RC values for all the entries in the MRN group or MRN set have been changed.

After this step is performed, skip steps 4, 5, and 6, and go to step 7.

4. Change the weight and in-service threshold values of the load shared or combined dominant/load shared MRN group or MRN set.

   Enter the `chg-mrn` command with the `eswt` and `thr` parameters to make these changes:

   - Assign weight and threshold values to a non-weighted MRN group or MRN set.
   - Change the existing weight values of a weighted MRN group or MRN set to the same weight value. The threshold can also be changed.

   The `eswt` parameter assigns the same weight value to all the entries in the MRN group or MRN set. The `thr` parameter assigns the same threshold value to all the entries in the MRN group or MRN set.

   If you wish to remove all the weight and threshold values from the MRN group or MRN set, enter the `chg-mrn` command with the `eswt=none` parameter. The `thr` parameter cannot be specified with the `eswt=none` parameter.

   For this example, enter one of these commands.

To assign only weight values to all entries in the MRN group without the Flexible GTT Load Sharing feature enabled, enter this command.

```
chg-mrn:pca=007-007-007:eswt=30
```

To change the weight and in-service threshold values of all the entries in the MRN group without the Flexible GTT Load Sharing feature enabled, enter this command.

```
chg-mrn:pca=007-007-007:eswt=20:thr=30
```

To change only weight values of all the entries in the MRN set with the Flexible GTT Load Sharing feature enabled, enter this command.

```
chg-mrn:pca=007-007-007:eswt=30:mrnset=dflt
```

To change the weight and in-service threshold values of all the entries in the MRN set with the Flexible GTT Load Sharing feature enabled, enter this command.

```
chg-mrn:pca=007-007-007:eswt=20:thr=30:mrnset=dflt
```

To remove the weight and in-service threshold values from all the entries in the MRN set without the Flexible GTT Load Sharing feature enabled, enter this command.

```
chg-mrn:pca=007-007-007:eswt=none
```

To remove the weight and in-service threshold values from all the entries in the MRN set with the Flexible GTT Load Sharing feature enabled, enter this command.

```
chg-mrn:pca=007-007-007:eswt=none:mrnset=dflt
```

If the MRN group or MRN set did not have weight and in-service threshold values assigned before this step was performed, and the `thr` parameter is not specified in this step, the in-service threshold value 1 (1%) is assigned to the entries.

When the `chg-mrn` command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
CHG-MRN:  MASP A - COMPLTD
```

5. Verify the changes using the `rtrv-mrn` command with the point code (`pca/pci/pcn/pcn24` parameters) specified in step 4.If the `mrnset` parameter was specified in step 4, the `mrnset` parameter and value specified in step 4 must be specified with the `rtrv-mrn` command in this step.

   For this example, enter these commands.

   ```
   rtrv-mrn:pca=007-007-007
   ```

   If only the weight values were changed in step 4, this is an example of the possible output.

   ```
   rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

      PC             RC WT %WT THR
      007-007-007    10 30  14   1
      008-001-001    10 30  14   1
      008-001-002    10 30  14   1
      008-001-003    10 30  14   1
      008-001-004    10 30  14   1
      008-001-005    10 30  14   1
      008-001-006    10 30  14   1
   ```

```
MRN table is (15 of 5990) 1% full
```

If the weight and in-service threshold values were changed in step 4, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   PC             RC WT %WT THR
   007-007-007    10 20  14  30
   008-001-001    10 20  14  30
   008-001-002    10 20  14  30
   008-001-003    10 20  14  30
   008-001-004    10 20  14  30
   008-001-005    10 20  14  30
   008-001-006    10 20  14  30

MRN table is (15 of 5990) 1% full
```

`rtrv-mrn:pca=007-007-007:mrnset=dflt`

If an MRN set was changed in step 4, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   MRNSET    PC             RC WT %WT THR
   DFLT      007-007-007    10 30  14   1
             008-001-001    10 30  14   1
             008-001-002    10 30  14   1
             008-001-003    10 30  14   1
             008-001-004    10 30  14   1
             008-001-005    10 30  14   1
             008-001-006    10 30  14   1

MRN table is (15 of 5990) 1% full
```

If the weight and in-service threshold values were changed in an MRN set in step 4, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   MRNSET    PC             RC WT %WT THR
   DFLT      007-007-007    10 20  14  30
             008-001-001    10 20  14  30
             008-001-002    10 20  14  30
             008-001-003    10 20  14  30
             008-001-004    10 20  14  30
             008-001-005    10 20  14  30
             008-001-006    10 20  14  30

MRN table is (15 of 5990) 1% full
```

If the weight and in-service threshold values were removed in step 4, and the Flexible GTT Load Sharing feature is not enabled, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   PC             RC WT %WT THR
   007-007-007    10 --  --  --
   008-001-001    10 --  --  --
   008-001-002    10 --  --  --
   008-001-003    10 --  --  --
   008-001-004    10 --  --  --
```

```
   008-001-005    10 --  --  --
   008-001-006    10 --  --  --

MRN table is (15 of 5990) 1% full
```

`rtrv-mrn:pca=007-007-007:mrnset=dflt`

If the weight and in-service threshold values were removed from an MRN set was changed in step 4, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

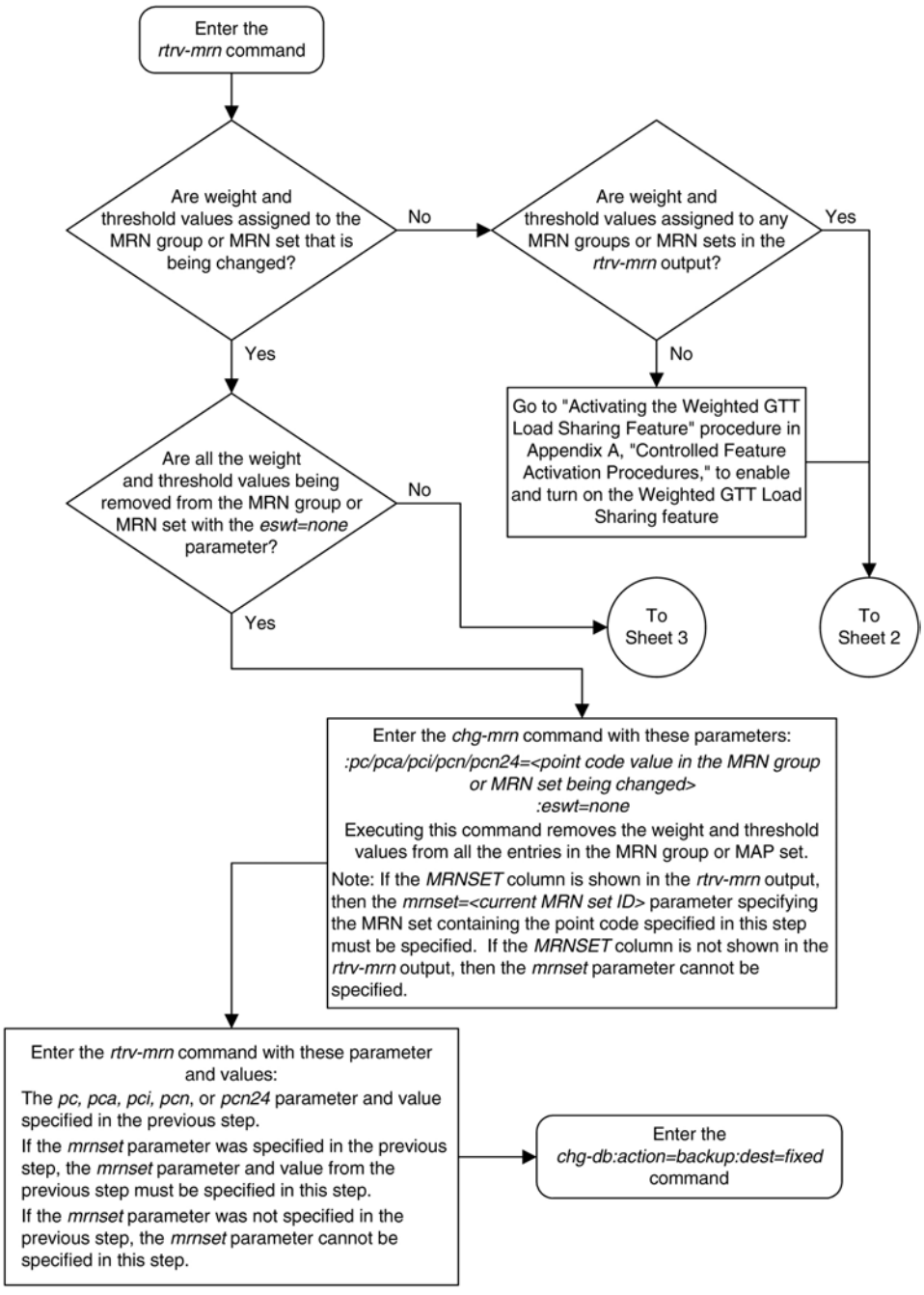
   MRNSET    PC             RC WT %WT THR
   DFLT      007-007-007    10 --  --  --
             008-001-001    10 --  --  --
             008-001-002    10 --  --  --
             008-001-003    10 --  --  --
             008-001-004    10 --  --  --
             008-001-005    10 --  --  --
             008-001-006    10 --  --  --

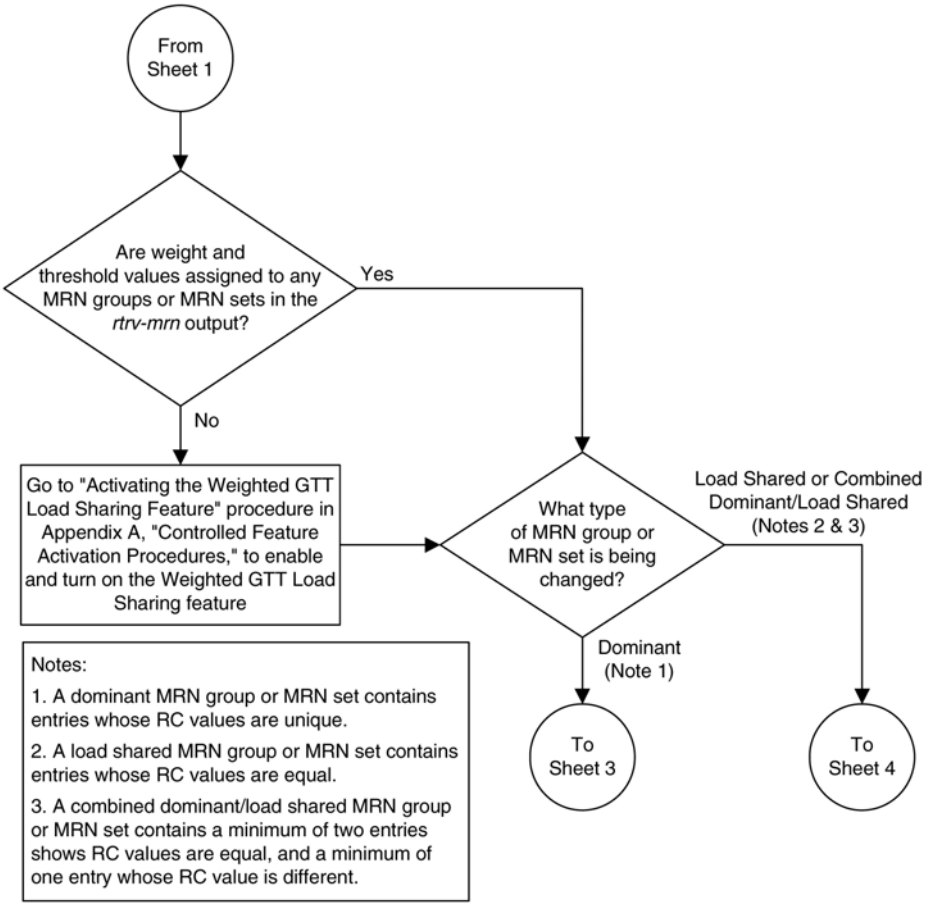
MRN table is (15 of 5990) 1% full
```

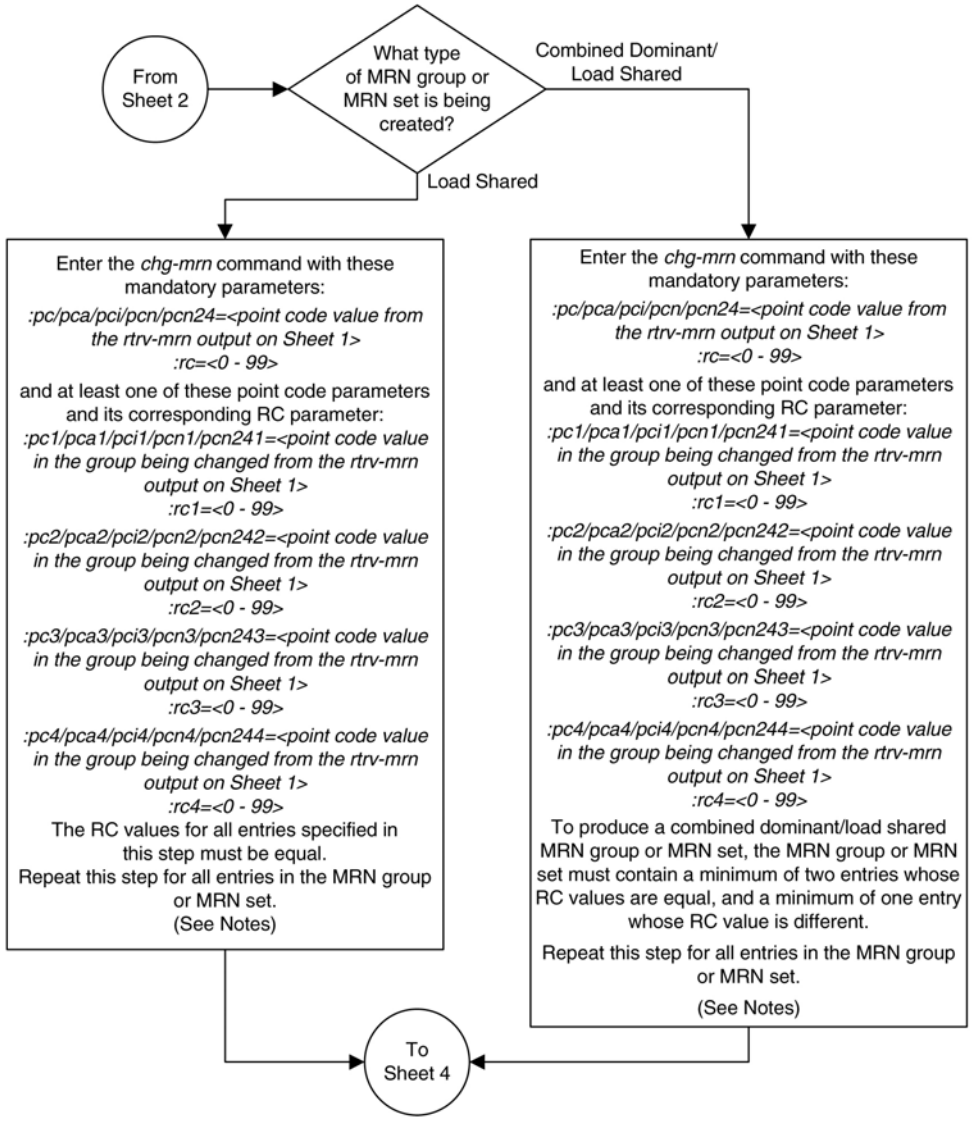
6. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 28: Changing MRN Entries with the ESWT Parameter

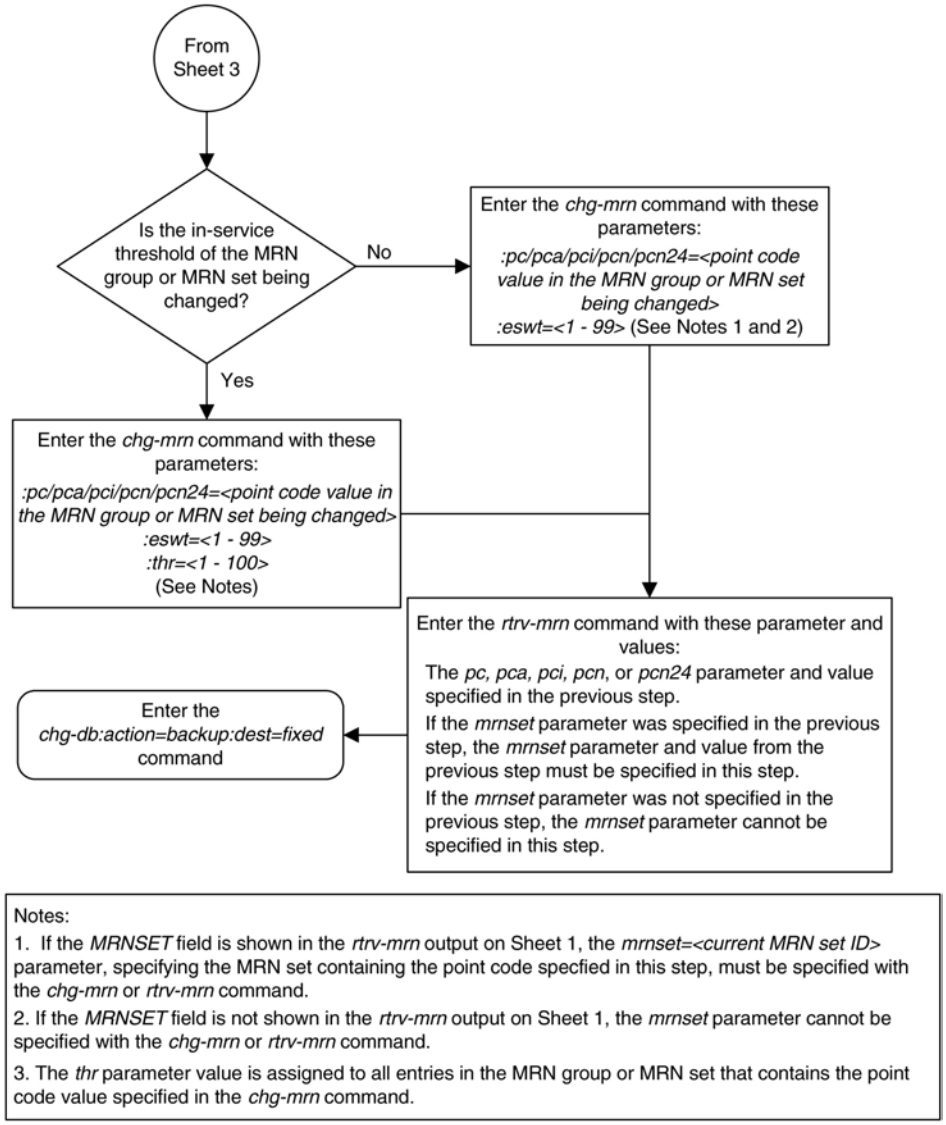

Enter the *rtrv-mrn* command
Are weight and threshold values assigned to the MRN group or MRN set that is being changed?
No
Are weight and threshold values assigned to any MRN groups or MRN sets in the *rtrv-mrn* output?
Yes
Yes
No
Go to "Activating the Weighted GTT Load Sharing Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," to enable and turn on the Weighted GTT Load Sharing feature
Are all the weight and threshold values being removed from the MRN group or MRN set with the *eswt=none* parameter?
No
Yes
To Sheet 3
To Sheet 2
Enter the *chg-mrn* command with these parameters:
:pc/pca/pci/pcn/pcn24=<point code value in the MRN group or MRN set being changed>
:eswt=none
Executing this command removes the weight and threshold values from all the entries in the MRN group or MAP set.
Note: If the *MRNSET* column is shown in the *rtrv-mrn* output, then the *mrnset=<current MRN set ID>* parameter specifying the MRN set containing the point code specified in this step must be specified. If the *MRNSET* column is not shown in the *rtrv-mrn* output, then the *mrnset* parameter cannot be specified.
Enter the *rtrv-mrn* command with these parameter and values:
The *pc, pca, pci, pcn*, or *pcn24* parameter and value specified in the previous step.
If the *mrnset* parameter was specified in the previous step, the *mrnset* parameter and value from the previous step must be specified in this step.
If the *mrnset* parameter was not specified in the previous step, the *mrnset* parameter cannot be specified in this step.
Enter the *chg-db:action=backup:dest=fixed* command


From Sheet 1
Are weight and threshold values assigned to any MRN groups or MRN sets in the rtrv-mrn output?
Yes
No
Go to "Activating the Weighted GTT Load Sharing Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," to enable and turn on the Weighted GTT Load Sharing feature
What type of MRN group or MRN set is being changed?
Load Shared or Combined Dominant/Load Shared (Notes 2 & 3)
Dominant (Note 1)
To Sheet 3
To Sheet 4
Notes:
1. A dominant MRN group or MRN set contains entries whose RC values are unique.
2. A load shared MRN group or MRN set contains entries whose RC values are equal.
3. A combined dominant/load shared MRN group or MRN set contains a minimum of two entries shows RC values are equal, and a minimum of one entry whose RC value is different.



Notes:

1. If the *MRNSET* field is shown in the *rtrv-mrn* output on Sheet 1, the *mrnset=<current MRN set ID>* parameter, specifying the MRN set containing the point code specfied in this step, must be specified with the *chg-mrn* command.
2. If the *MRNSET* field is not shown in the *rtrv-mrn* output on Sheet 1, the *mrnset* parameter cannot be specified with the *chg-mrn* command.



Changing the Weight and Threshold Values of MRN Entries

This procedure is used to change the weight and threshold values of entries in an existing Mated Relay Node (MRN) group or MRN set to new weight and threshold values. The weight and threshold values are changed using the `chg-mrn` command. This procedure can be performed only on MRN entries that have weight and thresholds assigned.

The following changes can be made in this procedure:

- The individual weight values of the entries in the MRN group or MRN set with the `wt/wt1/wt2/wt3/wt4` parameters.
- The individual weight and relative cost values of the entries in the MRN group or MRN set with the `wt/wt1/wt2/wt3/wt4`, `rc/rc1/rc2/rc3/rc4`, and `force=yes` parameters.

- The threshold values of the entities in the MRN group or MRN set that have the same relative cost value with the `thr` parameter. The new threshold value is assigned to the entities in the MRN group or MRN set that have the same relative cost value.
- The weight values of the entities in the MRN group or MRN set that have the same relative cost value with the `grpwt` parameter. The new weight value is assigned to the entities in the MRN group or MRN set that have the same relative cost value.
- The threshold and weight values of the entities in the MRN group or MRN set that have the same relative cost value with the `thr` and `grpwt` parameters. The new threshold and weight value is assigned to the entities in the MRN group or MRN set that have the same relative cost value.

The `chg-mrn` command can also be used to add point code entries to an existing MRN group or MRN set. This action is not covered in this procedure. If you wish to add point code entries to an existing MRN group or MRN set, perform the *Provisioning MRN Entries* on page 310 procedure.

If the MRN entries being changed do not have weight and threshold values assigned to them, perform the *Changing the Relative Cost Values of MRN Entries* on page 360 procedure.

If you wish to assign the same weight and threshold value to all the MRN entries in the MRN group or MRN set with the `eswt` and `thr` parameters, or to remove the weight and threshold values from all the MRN entries in the MRN group or MRN set with the `eswt=none` parameter, perform the *Changing MRN Entries with the ESWT Parameter* on page 368 procedure. The `eswt` parameter cannot be used in this procedure.

An MRN group or MRN set contains alternate point codes, up to 32, that are used for load sharing between multiple nodes when the EAGLE 5 ISS is performing intermediate global title translation. This load sharing is performed after intermediate global title translation is performed on the message. The point code in the message is changed to the selected point code in the MRN table. If the translated point code is not found in the MRN table, the translated point code in the message is not changed, the message is routed using route for the translated point code.

The `chg-mrn` command uses these parameters.

`:pc/pca/pci/pcn/pcn24` – The point code in the message after intermediate global title translation has been performed.

`:rc` – The relative cost value of point code in the message

`:pc1/pca1/pci1/pcn1/pcn241` – The first alternate point code value

`:rc1` – The relative cost value of the first alternate point code

`:pc2/pca2/pci2/pcn2/pcn242` – The second alternate point code value

`:rc2` – The relative cost value of the second alternate point code

`:pc3/pca3/pci3/pcn3/pcn243` – The third alternate point code value

`:rc3` – The relative cost value of the third alternate point code

`:pc4/pca4/pci4/pcn4/pcn244` – The fourth alternate point code value

`:rc4` – The relative cost value of the fourth alternate point code

Note: Refer to Chapter 2, Configuring Destination Tables in the Database *Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

`:mrnset` – The MRN set ID that the MRN is assigned to, shown in the `rtrv-mrn` output. MRN set IDs are shown only if the Flexible GTT Load Sharing feature is enabled. The `mrnset` parameter value cannot be changed in this procedure. For more information on the Flexible GTT Load Sharing feature, refer to the *Flexible GTT Load Sharing* on page 29 section.

`:grpwt` – The group weight value. When this parameter is specified, the same weight value is assigned to all entries that have the same RC (relative cost) value in the MRN group or MRN set that contain the point code specified in the `chg-mrn` command. The value of this parameter is from 1 - 99.

`:wt` – The weight value assigned to the `pc/pca/pci/pcn/pcn24` parameter value. The value of this parameter is from 1 - 99.

`:wt1` – The weight value assigned to the `pc1/pca1/pci1/pcn1/pcn241` parameter value. The value of this parameter is from 1 - 99.

`:wt2` – The weight value assigned to the `pc2/pca2/pci2/pcn2/pcn242` parameter value. The value of this parameter is from 1 - 99.

`:wt3` – The weight value assigned to the `pc3/pca3/pci3/pcn3/pcn243` parameter value. The value of this parameter is from 1 - 99.

`:wt4` – The weight value assigned to the `pc4/pca4/pci4/pcn4/pcn244` parameter value.

`:thr` – The in-service threshold assigned to the MRN group or MRN set. The in-service threshold is the minimum percentage (from 1 - 100) of weight that must be available for an RC group (a group of entries in the MRN group or MRN set that have the same RC value assigned) to be considered available to carry traffic. If the percentage of the available weight is less than the in-service threshold, then the entire RC group is considered unavailable for traffic. If the percentage of the available weight is equal to or greater than the in-service threshold, then the RC group is considered available, and traffic can be sent to any available entity in the RC group. The value of the `thr` parameter is assigned to all entries that have the same RC (relative cost) value in the MRN group or MRN set that contain the point code specified in the `chg-mrn` command.

`:force=yes` – This parameter must be specified if the `rc/rc1/rc2/rc3/rc4` parameter is specified with the `wt/wt1/wt2/wt3/wt4` parameter.

The relative cost parameter values (`rc/rc1/rc2/rc3/rc4`) determine how the global title translation load is to be shared among the alternate point codes. There are three types of load sharing that can be performed: dominant, load shared, or combined dominant/load shared.

All the point codes in a dominant MRN group or MRN set have different relative cost values. The translated point code in the message is the preferred point code that the message is routed on. The relative cost value assigned to the preferred point code does not have to be the lowest value in the MRN group or MRN set. All traffic is routed to the preferred point code, if it is available. If the preferred point code becomes unavailable, the traffic is routed to highest priority alternate point code that is available. When the preferred point code becomes available again, the traffic is then routed back to the preferred point code. For example, the MRN table contains the following entries.

```
PC              RC
005-005-005     10
006-001-001     20
006-001-002     30
006-001-003     40
006-001-004     50
006-001-005     60
```

```
006-001-006    70
006-001-007    80
```

If the preferred point code is 006-001-001 and it becomes unavailable, the traffic will be routed to point code 006-001-002.

All the point codes in a load shared MRN group have the same relative cost value. Traffic is shared equally between the point codes in this MRN group.

A combined dominant/load shared MRN group or MRN set is a combination of the dominant and load sharing MRN groups or MRN sets. A combined dominant/load shared MRN group or MRN set must contain a minimum of two entries with the same relative cost value and a minimum of one entry with a different relative cost value. Traffic is routed to the point code or point codes with the lowest relative cost value. If more than one point code has the lowest relative cost value, the traffic is shared between these point codes. If the point code or point codes with the lowest relative cost value become unavailable, traffic is routed to the the point code or point codes with the next higher relative cost value. If more than one point code has this relative cost value, the traffic is shared between these point codes. For example, the MRN table contains the following entries.

```
PC             RC
005-005-005    10
006-001-001    10
006-001-002    10
006-001-003    20
006-001-004    20
006-001-005    20
006-001-006    20
006-001-007    20
```

If the preferred point code is 006-001-001, the traffic is shared equally between point codes 005-005-005, 006-001-001, and 006-001-002. If point codes 005-005-005, 006-001-001, and 006-001-002 become unavailable, the traffic will be shared equally between point codes, 006-001-003, 006-001-004, 006-001-005, 006-001-006, and 006-001-007.

Specifying the `grpwt` or `thr` parameter with the `chg-mrn` command can be done when specifying only the `pc/pca/pci/pcn/pcn24` parameter and without the alternate point code, relative cost (`rc`, `rc1`, `rc2`, `rc3`, `rc4`), and individual weight (`wt`, `wt1`, `wt2`, `wt3`, `wt4`) parameters.

The weight values assigned to the entiries in the MRN group or MRN set are shown in the `WT` column in the `rtrv-mrn` output.

The in-service threshold values assigned to the entiries in the MRN group or MRN set are shown in the `THR` column in the `rtrv-mrn` output.

The `%WT` column in the `rtrv-mrn` output shows the percentage of the traffic the particular entry in the entity set will handle.

The `WT`, `%WT`, and `THR` columns are shown in the `rtrv-mrn` output only if the Weighted GTT Load Sharing feature is enabled and turned on.

For more information on the Weighted GTT Load Sharing feature, refer to the *Weighted GTT Load Sharing* on page 42 section.

Canceling the `RTRV-MRN` Command

Because the `rtrv-mrn` command used in this procedure can output information for a long period of time, the `rtrv-mrn` command can be canceled and the output to the terminal stopped. There are three ways that the `rtrv-mrn` command can be canceled.

- Press the F9 function key on the keyboard at the terminal where the rtrv-mrn command was entered.
- Enter the canc-cmd without the trm parameter at the terminal where the rtrv-mrn command was entered.
- Enter the canc-cmd:trm=<xx>, where <xx> is the terminal where the rtrv-mrn command was entered, from another terminal other that the terminal where the rtrv-mrn 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, refer to the *Commands Manual*.

1. Display the mated relay node groups in the database using the rtrv-mrn command. This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   PC             RC WT %WT THR
   008-005-005    10 10  50  30
   008-001-001    10 10  50  30
   008-001-002    30 20 100  30
   008-001-003    40 20 100  30
   008-001-004    50 20 100  30

   PC             RC WT %WT THR
   009-005-005    10 10   4   1
   009-001-001    10 10   4   1
   009-001-002    10 30  12   1
   009-001-003    10 40  15   1
   009-001-005    10 40  15   1
   009-001-006    10 40  15   1
   009-001-007    10 40  15   1
   009-001-004    10 50  19   1
   009-001-008    20 20  25   1
   009-001-009    20 30  37   1
   009-001-010    20 30  37   1

MRN table is (16 of 5990) 1% full
```

If the Flexible GTT Load Sharing feature is enabled, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   MRNSET    PC             RC WT %WT THR
   DFLT      005-005-005    10 10  50  30
             006-001-001    10 10  50  30
             006-001-002    30 20 100  30
             006-001-003    40 20 100  30
             006-001-004    50 20 100  30

   MRNSET    PC             RC WT %WT THR
   1         005-005-005    10 10   4   1
             006-001-001    10 10   4   1
             006-001-002    10 30  12   1
             006-001-003    10 40  15   1
             006-001-005    10 40  15   1
             006-001-006    10 40  15   1
             006-001-007    10 40  15   1
```

```
              006-001-004    10 50  19   1
              006-001-008    20 20  25   1
              006-001-009    20 30  37   1
              006-001-010    20 30  37   1

MRN table is (16 of 5990) 1% full
```

2. Change the attributes of the MRN group or MRN set using the `chg-mrn` command in one or more of the following steps.

   To change only the in-service threshold value of the entires in the RC group - perform step 3.

   To change the weight values of all entries in an RC group or to change the weight and in-service threshold values of the entries in the RC group - perform step 5.

   To change the individual weight values of entries in an MRN group or MRN set - perform step 7.

   To change the individual weight values and RC values of entries in an MRN group or MRN set - perform step 9.

3. The in-service threshold value is changed by specifying the `thr` parameter. The `thr` parameter can be specified by itself only if the MRN set or MRN group currently has weight values assigned.

   The new `thr` value is assigned to all entries in the MRN group or MRN set that have the same RC value as the specified point code.

   For this example, enter one of these commands.

   To change the in-service threshold value of all entries in the MRN group that have the same RC value as the point code specified in this step without the Flexible GTT Load Sharing feature enabled, enter this command.

   `chg-mrn:pca=008-001-001:thr=50`

   To change the in-service threshold value of all entries in the MRN set that have the same RC value as the point code specified in this step with the Flexible GTT Load Sharing feature enabled, enter this command.

   `chg-mrn:pca=006-001-001:thr=30:mrnset=1`

   When the `chg-mrn` command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
CHG-MRN:  MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-mrn` command with the point code (`pca/pci/pcn/pcn24` parameters) specified in step 3. If the `mrnset` parameter was specified in step 3, the `mrnset` parameter and value specified in step 3 must be specified with the `rtrv-mrn` command in this step.

   For this example, enter these commands.

   `rtrv-mrn:pca=008-001-001`

   The following example is the configuration of the MRN group before step 3 was performed.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   PC             RC WT %WT THR
   008-005-005    10 10  50  30
```

```
   008-001-001    10 10  50  30
   008-001-002    30 20 100  30
   008-001-003    40 20 100  30
   008-001-004    50 20 100  30

MRN table is (16 of 5990) 1% full
```

This is an example of the possible output after step 3 was performed.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   PC             RC WT %WT THR
   008-005-005    10 10  50  50
   008-001-001    10 10  50  50
   008-001-002    30 20 100  30
   008-001-003    40 20 100  30
   008-001-004    50 20 100  30

MRN table is (16 of 5990) 1% full
```

If the in-service threshold value was changed in an MRN set in step 3, this is an example of the possible output.

`rtrv-mrn:pca=006-001-001:mrnset=1`

The following example is the configuration of the MRN group before step 3 was performed.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   MRNSET    PC             RC WT %WT THR
   1         005-005-005    10 10   4   1
             006-001-001    10 10   4   1
             006-001-002    10 30  12   1
             006-001-003    10 40  15   1
             006-001-005    10 40  15   1
             006-001-006    10 40  15   1
             006-001-007    10 40  15   1
             006-001-004    10 50  19   1
             006-001-008    20 20  25   1
             006-001-009    20 30  37   1
             006-001-010    20 30  37   1

MRN table is (16 of 5990) 1% full
```

This is an example of the possible output after step 3 was performed.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   MRNSET    PC             RC WT %WT THR
   1         005-005-005    10 10   4  30
             006-001-001    10 10   4  30
             006-001-002    10 30  12  30
             006-001-003    10 40  15  30
             006-001-005    10 40  15  30
             006-001-006    10 40  15  30
             006-001-007    10 40  15  30
             006-001-004    10 50  19  30
             006-001-008    20 20  25   1
             006-001-009    20 30  37   1
             006-001-010    20 30  37   1

MRN table is (16 of 5990) 1% full
```

After this step has been performed, go to step 11.

5. An RC group is a group of point code entries that have the same RC value. This step is used to change the weight values of all the point codes in an MRN group or MRN set that have the same RC value to the same weight value using the `chg-mrn` command with the `grpwt` parameter.

   A load shared MRN group or MRN set can be considered an RC group as all the entries in the group or set have the same RC value, but changing all the weight values in a load shared group or set to the same weight value can be accomplished by using the `eswt` parameter as described in the *Changing MRN Entries with the ESWT Parameter* on page 368 procedure.

   The in-service threshold value of the MRN group or MRN set can be changed by specifying the `thr` parameter with the `chg-mrn` command.

   For this example, enter one of these commands.

   To change only weight values of all entries in an RC group of the MRN group without the Flexible GTT Load Sharing feature enabled, enter this command.

   ```
   chg-mrn:pca=009-005-005:grpwt=30
   ```

   To change the weight and in-service threshold values of all entries in an RC group of the MRN group without the Flexible GTT Load Sharing feature enabled, enter this command.

   ```
   chg-mrn:pca=009-005-005:grpwt=20:thr=30
   ```

   To change only weight values of all entries in an RC group of the MRN set with the Flexible GTT Load Sharing feature enabled, enter this command.

   ```
   chg-mrn:pca=005-005-005:grpwt=30:mrnset=1
   ```

   To change the weight and in-service threshold values of all entries in an RC group of the MRN set with the Flexible GTT Load Sharing feature enabled, enter this command.

   ```
   chg-mrn:pca=005-005-005:grpwt=20:thr=30:mrnset=1
   ```

   If the MRN group or MRN set did not have weight and in-service threshold values assigned before this step was performed, and the `thr` parameter is not specified in this step, the in-service threshold value 1 (1%) is assigned to the entries.

   When the `chg-mrn` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
   CHG-MRN:  MASP A - COMPLTD
   ```

6. Verify the changes using the `rtrv-mrn` command with the point code (`pca/pci/pcn/pcn24` parameters) specified in step 5. If the `mrnset` parameter was specified in step 5, the `mrnset` parameter and value specified in step 5 must be specified with the `rtrv-mrn` command in this step.

   For this example, enter these commands.

   ```
   rtrv-mrn:pca=009-005-005
   ```

   The following example is the configuration of the MRN group before step 5 was performed.

   ```
   rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

      PC             RC WT %WT THR
      009-005-005    10 10   4   1
      009-001-001    10 10   4   1
      009-001-002    10 30  12   1
      009-001-003    10 40  15   1
   ```

```
   009-001-005    10 40  15   1
   009-001-006    10 40  15   1
   009-001-007    10 40  15   1
   009-001-004    10 50  19   1
   009-001-008    20 20  25   1
   009-001-009    20 30  37   1
   009-001-010    20 30  37   1

MRN table is (16 of 5990) 1% full
```

This is an example of the possible output after step 5 was performed to change only the weight values.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   PC             RC WT %WT THR
   009-005-005    10 30  13   1
   009-001-001    10 30  13   1
   009-001-002    10 30  13   1
   009-001-003    10 30  13   1
   009-001-005    10 30  13   1
   009-001-006    10 30  13   1
   009-001-007    10 30  13   1
   009-001-004    10 30  13   1
   009-001-008    20 20  25   1
   009-001-009    20 30  37   1
   009-001-010    20 30  37   1

MRN table is (16 of 5990) 1% full
```

This is an example of the possible output after step 5 was performed to change the weight and in-service threshold values.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   PC             RC WT %WT THR
   009-005-005    10 20  13  30
   009-001-001    10 20  13  30
   009-001-002    10 20  13  30
   009-001-003    10 20  13  30
   009-001-005    10 20  13  30
   009-001-006    10 20  13  30
   009-001-007    10 20  13  30
   009-001-004    10 20  13  30
   009-001-008    20 20  25   1
   009-001-009    20 30  37   1
   009-001-010    20 30  37   1

MRN table is (16 of 5990) 1% full
```

If the weight values were changed in an MRN set in step 5, this is an example of the possible output.

`rtrv-mrn:pca=005-005-005:mrnset=1`

The following example is the configuration of the MRN set before step 5 was performed.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   MRNSET    PC             RC WT %WT THR
   1         005-005-005    10 10   4   1
             006-001-001    10 10   4   1
             006-001-002    10 30  12   1
```

```
              006-001-003    10 40  15   1
              006-001-005    10 40  15   1
              006-001-006    10 40  15   1
              006-001-007    10 40  15   1
              006-001-004    10 50  19   1
              006-001-008    20 20  25   1
              006-001-009    20 30  37   1
              006-001-010    20 30  37   1

MRN table is (16 of 5990) 1% full
```

This is an example of the possible output after step 5 was performed to change only the weight values.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   MRNSET    PC             RC WT %WT THR
   1         005-005-005    10 30  13   1
             006-001-001    10 30  13   1
             006-001-002    10 30  13   1
             006-001-003    10 30  13   1
             006-001-005    10 30  13   1
             006-001-006    10 30  13   1
             006-001-007    10 30  13   1
             006-001-004    10 30  13   1
             006-001-008    20 20  25   1
             006-001-009    20 30  37   1
             006-001-010    20 30  37   1

MRN table is (16 of 5990) 1% full
```

This is an example of the possible output after step 5 was performed to change the weight and in-service threshold values.

```
   MRNSET    PC             RC WT %WT THR

   1         005-005-005    10 20  13  30
             006-001-001    10 20  13  30
             006-001-002    10 20  13  30
             006-001-003    10 20  13  30
             006-001-005    10 20  13  30
             006-001-006    10 20  13  30
             006-001-007    10 20  13  30
             006-001-004    10 20  13  30
             006-001-008    20 20  25   1
             006-001-009    20 30  37   1
             006-001-010    20 30  37   1

MRN table is (16 of 5990) 1% full
```

After this step has been performed, go to step 11.

7. Change the individual weight values of the MRN group or MRN set by entering the `chg-mrn` command with the point code parameters and their corresponding weight parameters `wt`, `wt1`, `wt2`, `wt3`, and `wt4` parameters.

   The `thr` parameter cannot be specified with the `wt`, `wt1`, `wt2`, `wt3`, and `wt4` parameters.

   For this example, enter one of these commands.

   To change the individual weight values of the entries in the MRN group without the Flexible GTT Load Sharing feature enabled, enter this command.

```
chg-mrn:pca=008-005-005:wt=30:pca1=008-001-001:wt1=50
```

To change the individual weight values of the entries in the MRN set with the Flexible GTT Load Sharing feature enabled, enter this command.

```
chg-mrn:pca=005-005-005:wt=30:pca1=006-001-001:wt1=20:pca2=006-001-002
:wt2=50:pca3=006-001-003:wt3=10:pca4=006-001-006:wt4=80:mrnset=1
```

When the `chg-mrn` command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
CHG-MRN:  MASP A - COMPLTD
```

8. Verify the changes using the `rtrv-mrn` command with the point code (`pca/pci/pcn/pcn24` parameters) specified in step 13.

   If the `mrnset` parameter was specified in step 13, the `mrnset` parameter and value specified in step 13 must be specified with the `rtrv-mrn` command in this step.

   For this example, enter these commands.

   ```
   rtrv-mrn:pca=008-005-005
   ```

   The following example is the configuration of the MRN group before step 7 was performed.

   ```
   rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

      PC             RC WT %WT THR
      008-005-005    10 10  50  30
      008-001-001    10 10  50  30
      008-001-002    30 20 100  30
      008-001-003    40 20 100  30
      008-001-004    50 20 100  30

   MRN table is (16 of 5990) 1% full
   ```

   This is an example of the possible output after step 7 was performed.

   ```
   rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

      PC             RC WT %WT THR
      008-005-005    10 30  37  30
      008-001-001    10 50  62  30
      008-001-002    30 20 100  30
      008-001-003    40 20 100  30
      008-001-004    50 20 100  30

   MRN table is (16 of 5990) 1% full
   ```

   If individual weight values were changed in an MRN set in step 7, this is an example of the possible output.

   ```
   rtrv-mrn:pca=005-005-005:mrnset=1
   ```

   The following example is the configuration of the MRN set before step 7 was performed.

   ```
   rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

      MRNSET    PC             RC WT %WT THR
      1         005-005-005    10 10   4   1
                006-001-001    10 10   4   1
                006-001-002    10 30  12   1
                006-001-003    10 40  15   1
   ```

```
              006-001-005    10 40  15   1
              006-001-006    10 40  15   1
              006-001-007    10 40  15   1
              006-001-004    10 50  19   1
              006-001-008    20 20  25   1
              006-001-009    20 30  37   1
              006-001-010    20 30  37   1

MRN table is (16 of 5990) 1% full
```

This is an example of the possible output after step 7 was performed.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

   MRNSET    PC             RC WT %WT THR
   1         006-001-003    10 10   3   1
             006-001-001    10 20   6   1
             005-005-005    10 30   9   1
             006-001-005    10 40  13   1
             006-001-007    10 40  13   1
             006-001-002    10 50  15   1
             006-001-004    10 50  15   1
             006-001-006    10 80  25   1
             006-001-008    20 20  25   1
             006-001-009    20 30  37   1
             006-001-010    20 30  37   1

MRN table is (16 of 5990) 1% full
```

After this step has been performed, go to step 11.

9. Change the individual weight values and RC values of the MRN group or MRN set by entering the `chg-mrn` command with the point code parameters and their corresponding RC parameters (`rc`, `rc1`, `rc2`, `rc3`, and `rc4`) and weight parameters (`wt`, `wt1`, `wt2`, `wt3`, and `wt4`) parameters.

   The `thr` parameter cannot be specified with the `wt`, `wt1`, `wt2`, `wt3`, and `wt4` parameters.

   Note: If the RC values are changed so that the resulting MRN group of MRN set becomes a dominant MRN group or MRN set (the RC values are unique), the weight parameters can be specified with the `chg-mrn` command, but the the WT, %WT, and THR values are removed from the MRN group or MRN set and are not displayed in the `rtrv-mrn` output.

   The following types of changes can be performed in this step:

   - Weight and RC values for individual entries
   - Weight values for some entries and the RC values for other entries
   - Combinations of weight and RC values for individual entries and weight values for some entries and RC values for other entries.

   The following examples show these types of changes.

   The following MRN group is being changed.

```
PC             RC WT %WT THR
002-002-002     1  5  20   1
002-002-003     1  5  20   1
002-002-004     1  5  20   1
002-002-005     1  5  20   1
002-002-006     1  5  20   1
```

   To change the weight and RC values for individual entries in this example MRN group, enter this command.

```
chg-mrn:pca=002-002-002:rc=10:wt=10:pca1=002-002-003:rc1=20
:wt1=30:pca2=002-002-004:rc2=10:wt2=40:force=yes
```

The following shows the changes that were made in the example command.

```
PC             RC WT %WT THR
002-002-005     1  5  50   1
002-002-006     1  5  50   1
002-002-004    10 40  80   1
002-002-002    10 10  20   1
002-002-003    20 30 100   1
```

To change the weight values for some entries and the RC values for other entries in this example MRN group, enter this command.

```
chg-mrn:pca=002-002-002:wt=10:pca1=002-002-003:rc1=20
:pca2=002-002-004:wt2=40:force=yes
```

The following shows the changes that were made in the example command.

```
PC             RC WT %WT THR
002-002-004     1 40  67   1
002-002-002     1 10  17   1
002-002-005     1  5   8   1
002-002-006     1  5   8   1
002-002-003    10  5 100   1
```

To make both types of changes in this example MRN group, enter this command.

```
chg-mrn:pca=002-002-002:rc=10:pca1=002-002-003:rc1=20:wt1=30
:pca2=002-002-004:wt2=40:pca3=002-002-005:wt3=40:rc3=20
:pca4=002-002-006 :wt4=60:force=yes
```

The following shows the changes that were made in the example command.

```
PC             RC WT %WT THR
002-002-004     1 40  40   1
002-002-006     1 60  60   1
002-002-002    10  5 100   1
002-002-005    20 40  57   1
002-002-003    20 30  43   1
```

The `force=yes` parameter must be specified with the `chg-mrn` command when the following parameter combinations are specified with the `chg-mrn` command:

- If the `rc` parameter and the `wt/wt1/wt2/wt3/wt4` parameters are specified with the `chg-mrn` command.
- If the `wt` parameter and the `rc/rc1/rc2/rc3/rc4` parameters are specified with the `chg-mrn` command.

For this example, enter one of these commands.

To change the individual weight and RC values of the entries in the MRN group without the Flexible GTT Load Sharing feature enabled, enter this command.

```
chg-mrn:pca=008-005-005:wt=30:rc=20:pca1=008-001-001:wt1=50
:rc1=40:force=yes
```

To change the individual weight and RC values of the entries in the MRN set with the Flexible GTT Load Sharing feature enabled, enter this command.

```
chg-mrn:pca=005-005-005:rc=30:pca1=006-001-001:wt1=20:pca2=006-001-002
:wt2=50:rc2=30:pca3=006-001-003:wt3=10:rc3=40:pca4=006-001-006
:wt4=80:rc4=40:mrnset=1:force=yes
```

When the `chg-mrn` command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-07  11:44:13  GMT  EAGLE5 36.0.0
CHG-MRN:  MASP A - COMPLTD
```

10. Verify the changes using the `rtrv-mrn` command with the point code (`pca/pci/pcn/pcn24` parameters) specified in step 9. If the `mrnset` parameter was specified in step 9, the `mrnset` parameter and value specified in step 9 must be specified with the `rtrv-mrn` command in this step.

    For this example, enter these commands.

    ```
    rtrv-mrn:pca=008-005-005
    ```

    The following example is the configuration of the MRN group before step 9 was performed.

    ```
    rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

       PC             RC WT %WT THR
       008-005-005    10 10  50  30
       008-001-001    10 10  50  30
       008-001-002    30 20 100  30
       008-001-003    40 20 100  30
       008-001-004    50 20 100  30

    MRN table is (16 of 5990) 1% full
    ```

    This is an example of the possible output after step 9 was performed.

    ```
    rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

       PC             RC WT %WT THR
       008-005-005    20 30 100  30
       008-001-002    30 20 100  30
       008-001-001    40 50  71  30
       008-001-003    40 20  28  30
       008-001-004    50 20 100  30

    MRN table is (16 of 5990) 1% full
    ```

    If individual weight and relative cost values were changed in an MRN set in step 9, this is an example of the possible output.

    ```
    rtrv-mrn:pca=005-005-005:mrnset=1
    ```

    The following example is the configuration of the MRN set before step 9 was performed.

    ```
    rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0

       MRNSET    PC             RC WT %WT THR
       1         005-005-005    10 10   4   1
                 006-001-001    10 10   4   1
                 006-001-002    10 30  12   1
                 006-001-003    10 40  15   1
                 006-001-005    10 40  15   1
                 006-001-006    10 40  15   1
                 006-001-007    10 40  15   1
                 006-001-004    10 50  19   1
    ```

```
              006-001-008    20 20  25   1
              006-001-009    20 30  37   1
              006-001-010    20 30  37   1

MRN table is (16 of 5990) 1% full
```

This is an example of the possible output after step 9 was performed.

```
rlghncxa03w 06-10-07 00:34:31 GMT EAGLE5 36.0.0
   MRNSET    PC             RC WT %WT THR

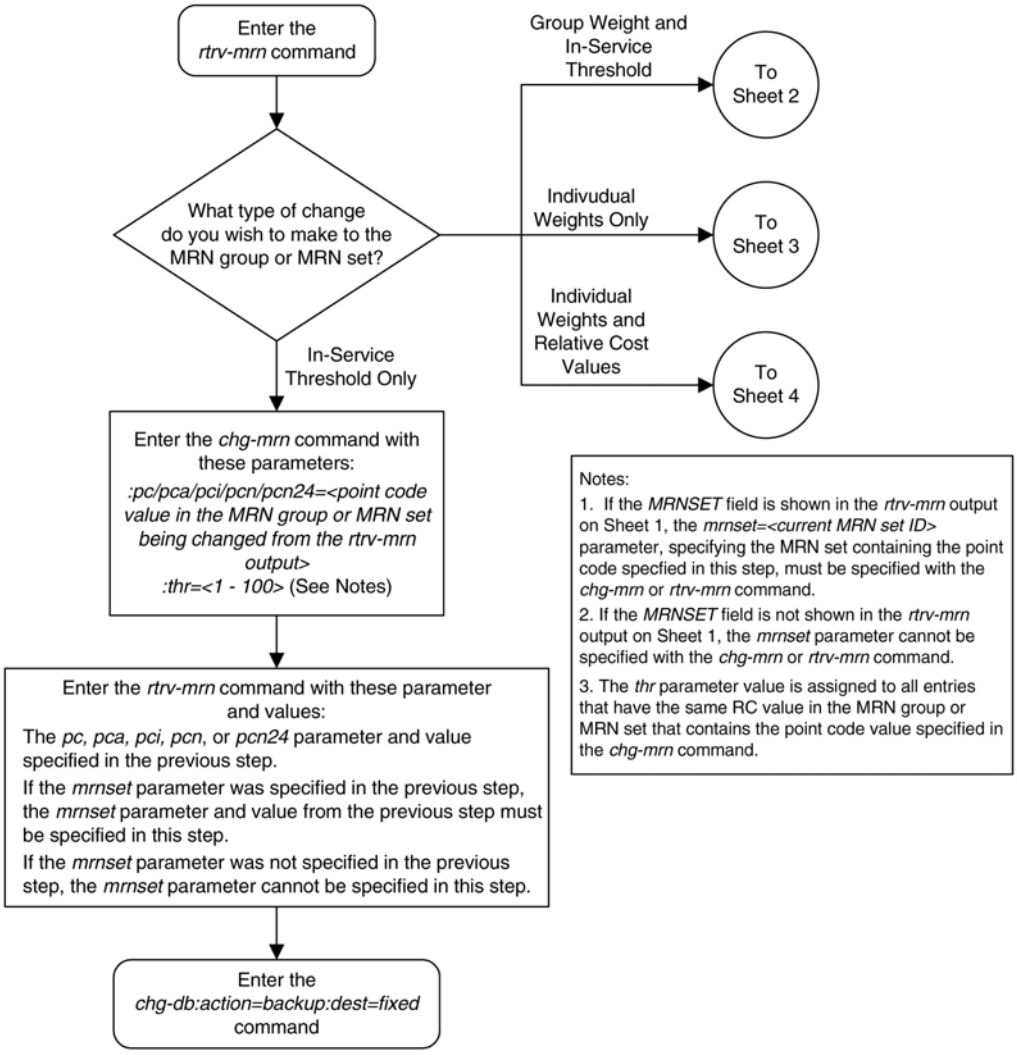
   1         006-001-004    10 50  25   1
             006-001-002    10 50  25   1
             006-001-005    10 40  20   1
             006-001-007    10 40  20   1
             006-001-001    10 20  10   1
             006-001-009    20 30  37   1
             006-001-010    20 30  37   1
             006-001-008    20 20  25   1
             005-005-005    30 10 100   1
             006-001-006    40 80  88   1
             006-001-003    40 10  11   1

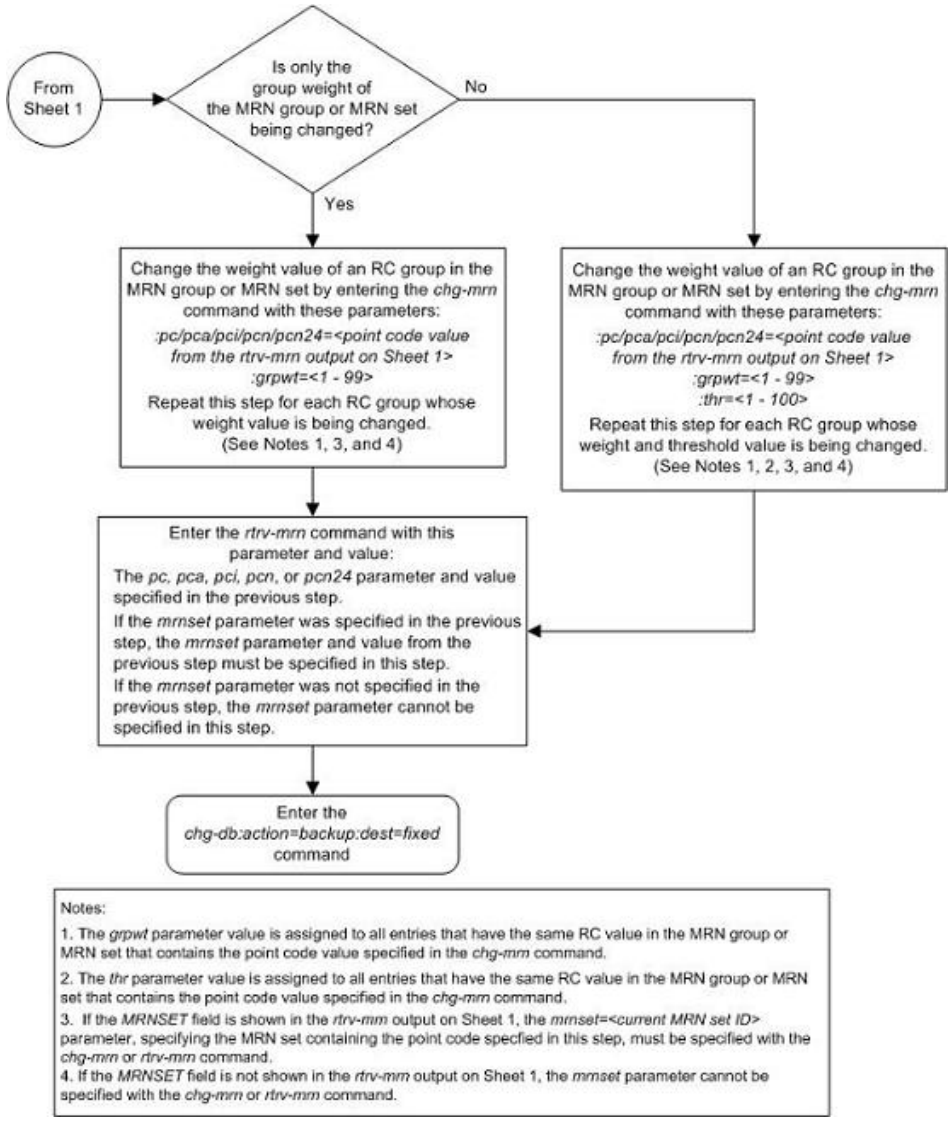
MRN table is (16 of 5990) 1% full
```

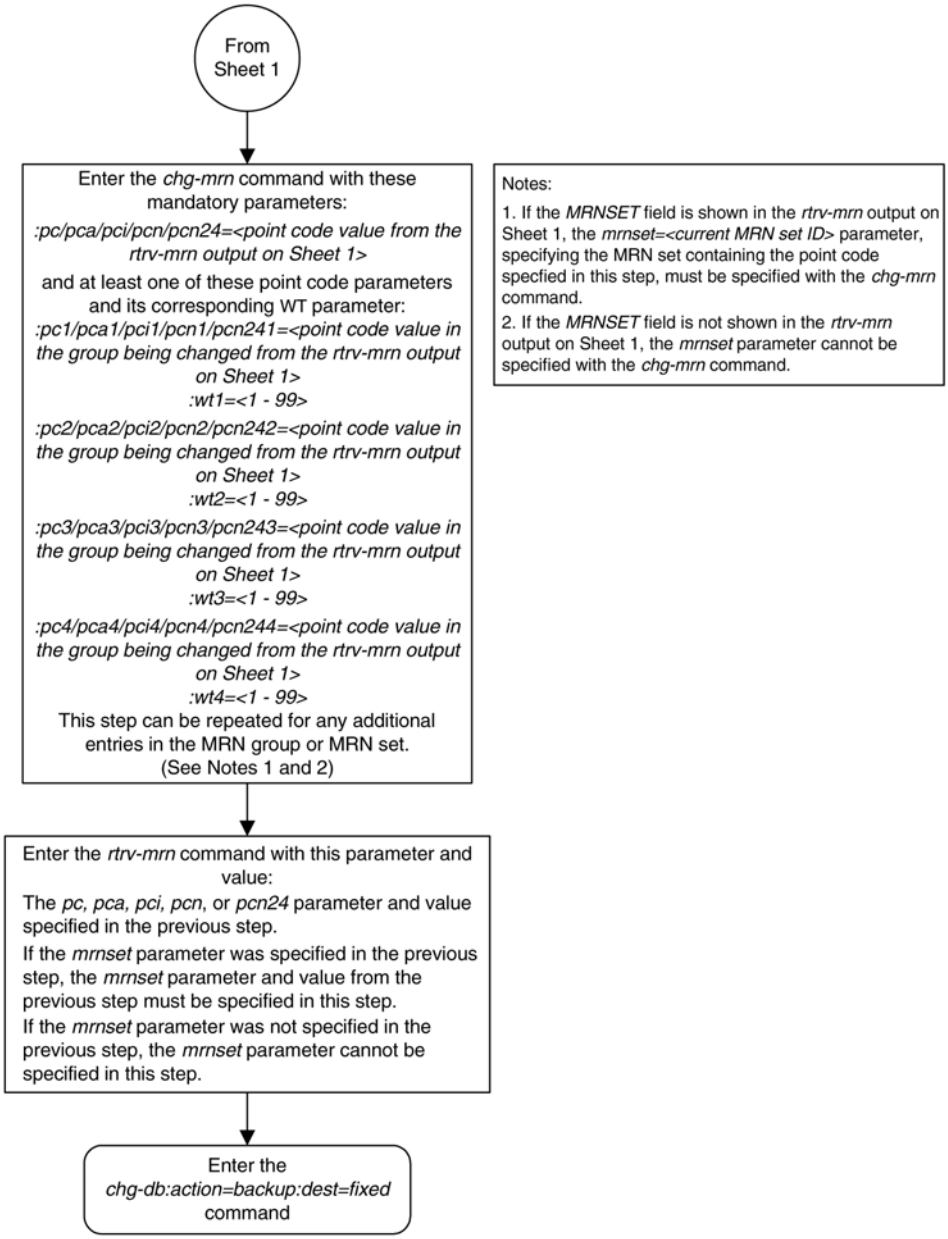
11. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

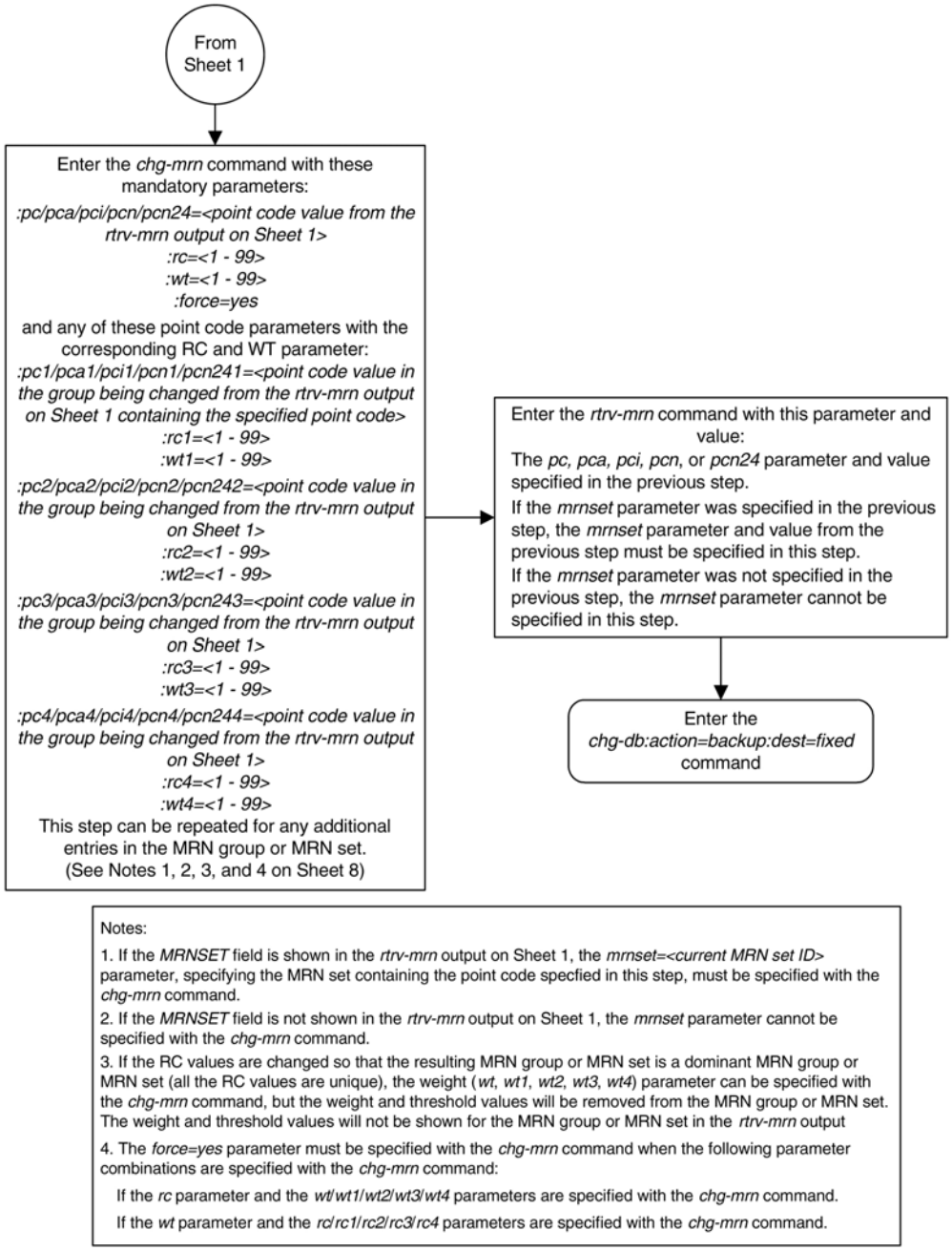
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

Figure 29: Changing the Individual Weight Values of MRN Entries


Enter the *rtrv-mrn* command
What type of change do you wish to make to the MRN group or MRN set?
Group Weight and In-Service Threshold
To Sheet 2
Indivudual Weights Only
To Sheet 3
Individual Weights and Relative Cost Values
To Sheet 4
In-Service Threshold Only
Enter the *chg-mrn* command with these parameters:
:pc/pca/pci/pcn/pcn24=<point code value in the MRN group or MRN set being changed from the rtrv-mrn output>
:thr=<1 - 100> (See Notes)
Enter the *rtrv-mrn* command with these parameter and values:
The *pc, pca, pci, pcn*, or *pcn24* parameter and value specified in the previous step.
If the *mrnset* parameter was specified in the previous step, the *mrnset* parameter and value from the previous step must be specified in this step.
If the *mrnset* parameter was not specified in the previous step, the *mrnset* parameter cannot be specified in this step.
Enter the *chg-db:action=backup:dest=fixed* command
Notes:
1. If the *MRNSET* field is shown in the *rtrv-mrn* output on Sheet 1, the *mrnset=<current MRN set ID>* parameter, specifying the MRN set containing the point code specfied in this step, must be specified with the *chg-mrn* or *rtrv-mrn* command.
2. If the *MRNSET* field is not shown in the *rtrv-mrn* output on Sheet 1, the *mrnset* parameter cannot be specified with the *chg-mrn* or *rtrv-mrn* command.
3. The *thr* parameter value is assigned to all entries that have the same RC value in the MRN group or MRN set that contains the point code value specified in the *chg-mrn* command.


From Sheet 1
Is only the group weight of the MRN group or MRN set being changed?
No
Yes
Change the weight value of an RC group in the MRN group or MRN set by entering the chg-mrn command with these parameters:
:pc/pca/pci/pcn/pcn24=<point code value from the rtrv-mrn output on Sheet 1>
:grpwt=<1 - 99>
Repeat this step for each RC group whose weight value is being changed.
(See Notes 1, 3, and 4)
Change the weight value of an RC group in the MRN group or MRN set by entering the chg-mrn command with these parameters:
:pc/pca/pci/pcn/pcn24=<point code value from the rtrv-mrn output on Sheet 1>
:grpwt=<1 - 99>
:thr=<1 - 100>
Repeat this step for each RC group whose weight and threshold value is being changed.
(See Notes 1, 2, 3, and 4)
Enter the rtrv-mrn command with this parameter and value:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
If the mrnset parameter was specified in the previous step, the mrnset parameter and value from the previous step must be specified in this step.
If the mrnset parameter was not specified in the previous step, the mrnset parameter cannot be specified in this step.
Enter the chg-db:action=backup:dest=fixed command
Notes:
1. The grpwt parameter value is assigned to all entries that have the same RC value in the MRN group or MRN set that contains the point code value specified in the chg-mrn command.
2. The thr parameter value is assigned to all entries that have the same RC value in the MRN group or MRN set that contains the point code value specified in the chg-mrn command.
3. If the MRNSET field is shown in the rtrv-mrn output on Sheet 1, the mrnset=<current MRN set ID> parameter, specifying the MRN set containing the point code specfied in this step, must be specified with the chg-mrn or rtrv-mrn command.
4. If the MRNSET field is not shown in the rtrv-mrn output on Sheet 1, the mrnset parameter cannot be specified with the chg-mrn or rtrv-mrn command.


From Sheet 1
Enter the chg-mrn command with these mandatory parameters:
:pc/pca/pci/pcn/pcn24=<point code value from the rtrv-mrn output on Sheet 1>
and at least one of these point code parameters and its corresponding WT parameter:
:pc1/pca1/pci1/pcn1/pcn241=<point code value in the group being changed from the rtrv-mrn output on Sheet 1>
:wt1=<1 - 99>
:pc2/pca2/pci2/pcn2/pcn242=<point code value in the group being changed from the rtrv-mrn output on Sheet 1>
:wt2=<1 - 99>
:pc3/pca3/pci3/pcn3/pcn243=<point code value in the group being changed from the rtrv-mrn output on Sheet 1>
:wt3=<1 - 99>
:pc4/pca4/pci4/pcn4/pcn244=<point code value in the group being changed from the rtrv-mrn output on Sheet 1>
:wt4=<1 - 99>
This step can be repeated for any additional entries in the MRN group or MRN set.
(See Notes 1 and 2)
Notes:
1. If the MRNSET field is shown in the rtrv-mrn output on Sheet 1, the mrnset=<current MRN set ID> parameter, specifying the MRN set containing the point code specfied in this step, must be specified with the chg-mrn command.
2. If the MRNSET field is not shown in the rtrv-mrn output on Sheet 1, the mrnset parameter cannot be specified with the chg-mrn command.
Enter the rtrv-mrn command with this parameter and value:
The pc, pca, pci, pcn, or pcn24 parameter and value specified in the previous step.
If the mrnset parameter was specified in the previous step, the mrnset parameter and value from the previous step must be specified in this step.
If the mrnset parameter was not specified in the previous step, the mrnset parameter cannot be specified in this step.
Enter the chg-db:action=backup:dest=fixed command



Adding a GT Conversion Table Entry

This procedure is used to provision an entry in the GT Conversion table for the ANSI-ITU-China SCCP Conversion feature using the `ent-gtcnv` command.

The `ent-gtcnv` command uses these parameters.

`:dir` – The direction that the conversion takes place

`atoa` – The conversion takes place in the ANSI to ITU direction

`itoa` – The conversion takes place in the ITU to ANSI direction

`both` – The conversion takes place in the ANSI to ITU and ITU to ANSI directions

`:gtixlat` – The global title indicator types being converted.

`22` – ANSI GTI type 2 to ITU GTI type 2

`24` – ANSI GTI type 2 to ITU GTI type 4

`:tta` – The ANSI translation type

`:tti` – The ITU translation type

`:np` – The numbering plan

`:nai` – The nature of address indicator

`:npdd` – The number of digits to be deleted or substituted from the beginning of the Global Title Address digits (the prefix digits)

`:npds` – The digits that are being substituted for the prefix digits

`:nsdd` – The number of digits to be deleted or substituted from the end of the Global Title Address digits (the suffix digits)

`:nsds` – The digits that are being substituted for the suffix digits

To perform this procedure, the ANSI-ITU-China SCCP Conversion feature must be enabled. Enter the `rtrv-ctrl-feat` command to verify whether or not the ANSI-ITU-China SCCP Conversion is enabled. If the ANSI-ITU-China SCCP Conversion feature is not enabled, perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure to enabled the ANSI-ITU-China SCCP Conversion feature.

Note: The ANSI-ITU-China SCCP Conversion feature can only be permanently enabled.

The `gtixlat` parameter determines how the `tta`, `tti`, `np`, and `nai` parameters are used with the `ent-gtcnv` command.

If the `gtixlat` parameter value is `22`, only the `tta`, `tti`, `npdd`, `npds`, `nsdd`, and `nsds` parameters can be specified. The `tta` and `tti` parameters must be specified along with the `dir` and `gtixlat=22` parameters.

If the `gtixlat` parameter value is `24`, the `tta`, `tti`, `np`, `nai`, `npdd`, `npds`, `nsdd`, and `nsds` parameters can be specified. The `tta`, `tti`, `np`, and `nai` parameters must be specified along with the `dir` and `gtixlat=24` parameters.

Asterisks (*) can be specified for the `tta`, `tti`, `np`, and `nai` parameters indicating all possible values for that parameter. The `dir` and `gtixlat` parameters determine when the asterisk can be used.

If the `dir` parameter is `atoi`, the asterisk can be specified only for the `tta` parameter.

If the `dir` parameter is `itoa` and the `gtixlat` parameter is `24`, the asterisk can be specified for the `tti`, `np`, and `nai` parameters. If the asterisk is specified for either the `tti`, `np`, or `nai` parameters, the asterisk must be specified for the `tti`, `np`, and `nai` parameters.

The asterisk cannot be specified for any parameter when the `dir` parameter value is `both`.

The optional prefix (npdd, npds) and suffix parameters (nsdd, nsds) can be specified, but both sets of parameters, or a mixture of the prefix and suffix parameters cannot be specified. For example, if the either the npdd or npds parameters are specified, the nsdd and nsds cannot be specified. If either the nsdd or nsds parameters are specified, the npdd and npds parameters cannot be specified.

1. Verify the status of the ANSI-ITU-China SCCP Conversion feature by entering the rtrv-ctrl-featcommand with the ANSI-ITU-China SCCP Conversion feature part number. Enter this command.

   rtrv-ctrl-feat:partnum=893012001

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
SCCP Conversion           893012010  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 ANSI-ITU-China SCCP Conversion feature has not been enabled, perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure to enable this feature.

2. Display the GT Conversion Table entries by entering the rtrv-gtcnv command. The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
atoi    22     24   12   --- ---  ---  ---  ---
itoa    22     2    5    --- ---  ---  ---  ---
itoa    24     3    6    4   8    ---  ---  ---
itoa    24     4    7    4   8    3    sfx  123
atoi    24     5    7    4   8    3    sfx  123
atoi    22     7    8    --- ---  3    sfx  123
both    24     8    9    4   8    4    pfx  4567
both    22     9    11   --- ---  ---  ---  ---

GTCNV table is (8 of 1000) 1% full
```

3. Add the new GT Conversion Table entry by entering the ent-gtcnv command with the appropriate parameter combinations shown in *Table 23: GT Conversion Parameter Combinations* on page 402.

Table 23: GT Conversion Parameter Combinations

DIR = ATOI		DIR = ITOA		DIR = BOTH	
GTIXLAT = 22 TTA = 0-255 or TTA = * TTI = 0-255	GTIXLAT = 24 TTA = 0-255 or TTA = * TTI = 0-255 NP = 0-15 NAI = 0-63	GTIXLAT = 22 TTA = 0-255 TTI = 0-255	GTIXLAT = 24 TTA = 0-255 TTI = 0-255 & NP = 0-15 & NAI = 0-63 or TTI = * & NP = * & NAI = *	GTIXLAT = 22 TTA = 0-255 TTI = 0-255	GTIXLAT = 24 TTA = 0-255 TTI = 0-255 NP = 0-15 NAI = 0-63
Optional Parameters					
NPDD = 0-21 & NPDS = 1 - 21 digits or NSDD = 0-21 & NSDS = 1 - 21 digits		NPDD = 0-21 & NPDS = 1 - 21 digits or NSDD = 0-21 & NSDS = 1 - 21 digits		NPDD = 0-21 & NPDS = 1 - 21 digits or NSDD = 0-21 & NSDS = 1 - 21 digits	

For this example, enter these commands.

```
ent-gtcnv:dir=atoi:gtixlat=22:tta=10:tti=43:npdd=3:npds=919
ent-gtcnv:dir=atoi:gtixlat=24:tta=*:tti=29:np=4:nai=87
ent-gtcnv:dir=itoi:gtixlat=22:tta=23:tti=57:nsdd=3:nsds=800
ent-gtcnv:dir=itoi:gtixlat=24:tta=33:tti=66:np=3:nai=33
ent-gtcnv:dir=itoi:gtixlat=24:tta=44:tti=*:np=*:nai=*
ent-gtcnv:dir=both:gtixlat=22:tta=26:tti=13
ent-gtcnv:dir=both:gtixlat=24:tta=37:tti=59:np=3:nai=33:npdd=3
:npds=423
```

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

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-GTCNV: MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-gtcnv` command and specifying the following parameters based on the `gtixlat` parameter values used in step 3.

   a) `gtixlat=22`

   - `dir` = value specified in step 3

- `tta` = value specified in step 3
- `tti` = value specified in step 3

b) `gtixlat=24`

- `dir` = value specified in step 3
- `tta` = value specified in step 3
- `tti` = value specified in step 3
- `np` = value specified in step 3
- `nai` = value specified in step 3

For this example, enter these commands.

```
rtrv-gtcnv:dir=atoi:gtixlat=22:tta=10:tti=43
```

This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
atoi    22     10   43   --- ---  3    pfx  919

GTCNV table is (15 of 1000) 1% full
```

```
rtrv-gtcnv:dir=atoi:gtixlat=24:tta=*:tti=29:np=4:nai=87
```

This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
atoi    24     *    29   4   87   ---  ---  ---

GTCNV table is (15 of 1000) 1% full
```

```
rtrv-gtcnv:dir=itoi:gtixlat=22:tta=23:tti=57:nsdd=3:nsds=800
```

This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
itoi    22     23   57   --- ---  3    sfx  800

GTCNV table is (15 of 1000) 1% full
```

```
rtrv-gtcnv:dir=itoi:gtixlat=24:tta=33:tti=66:np=3:nai=33
```

This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
itoi    24     33   66   3   33   ---  ---  ---

GTCNV table is (15 of 1000) 1% full
```

```
rtrv-gtcnv:dir=itoi:gtixlat=24:tta=44:tti=*:np=*:nai=*
```

This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
```

```
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
itoi    24     44   *    *   *    ---  ---  ---

GTCNV table is (15 of 1000) 1% full
```

`rtrv-gtcnv:dir=both:gtixlat=22:tta=26:tti=13`

This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
both    22     26   13   --- ---  ---  ---  ---

GTCNV table is (15 of 1000) 1% full
```

`rtrv-gtcnv:dir=both:gtixlat=24:tta=37:tti=59:np=3:nai=33:npdd=3 :npds=423`

This is an example of the possible output.

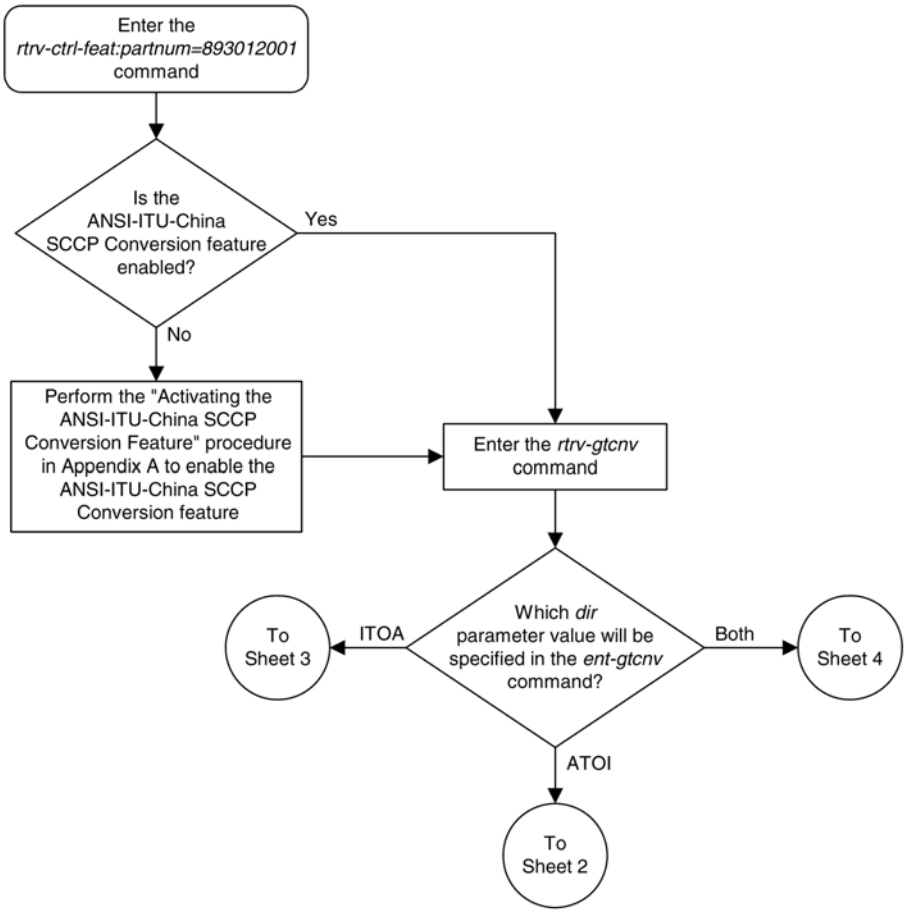
```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
both    24     37   59   3   33   3    pfx  423

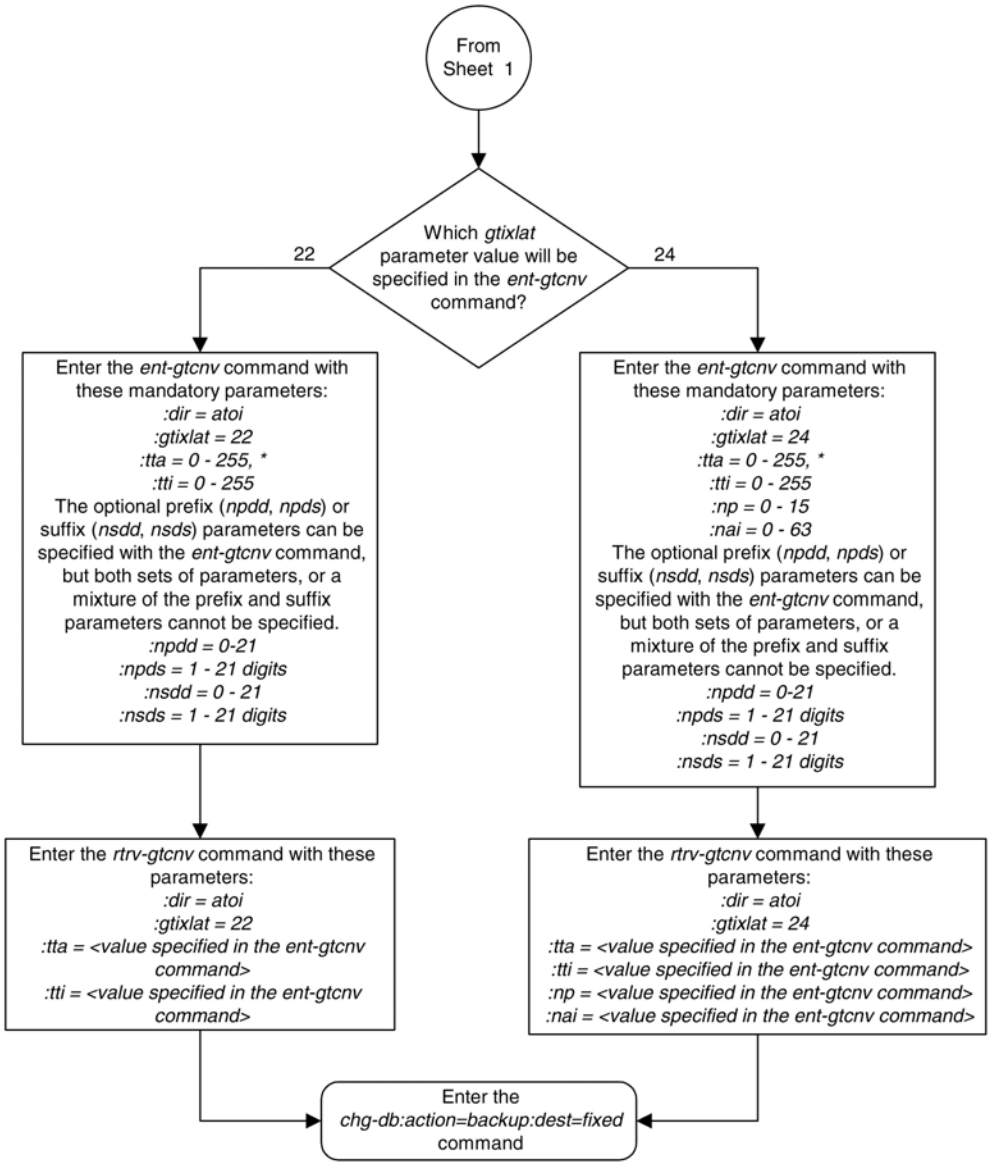
GTCNV table is (15 of 1000) 1% full
```

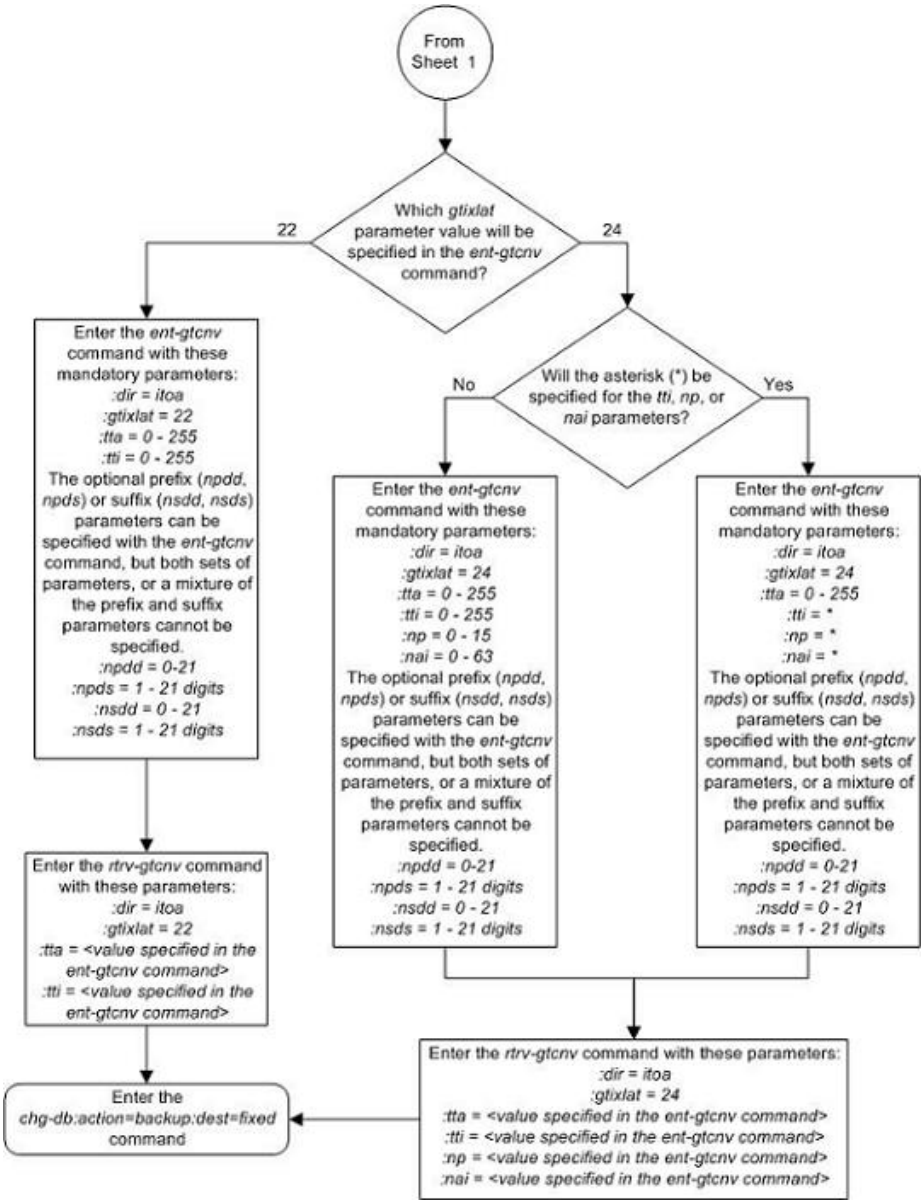
5. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

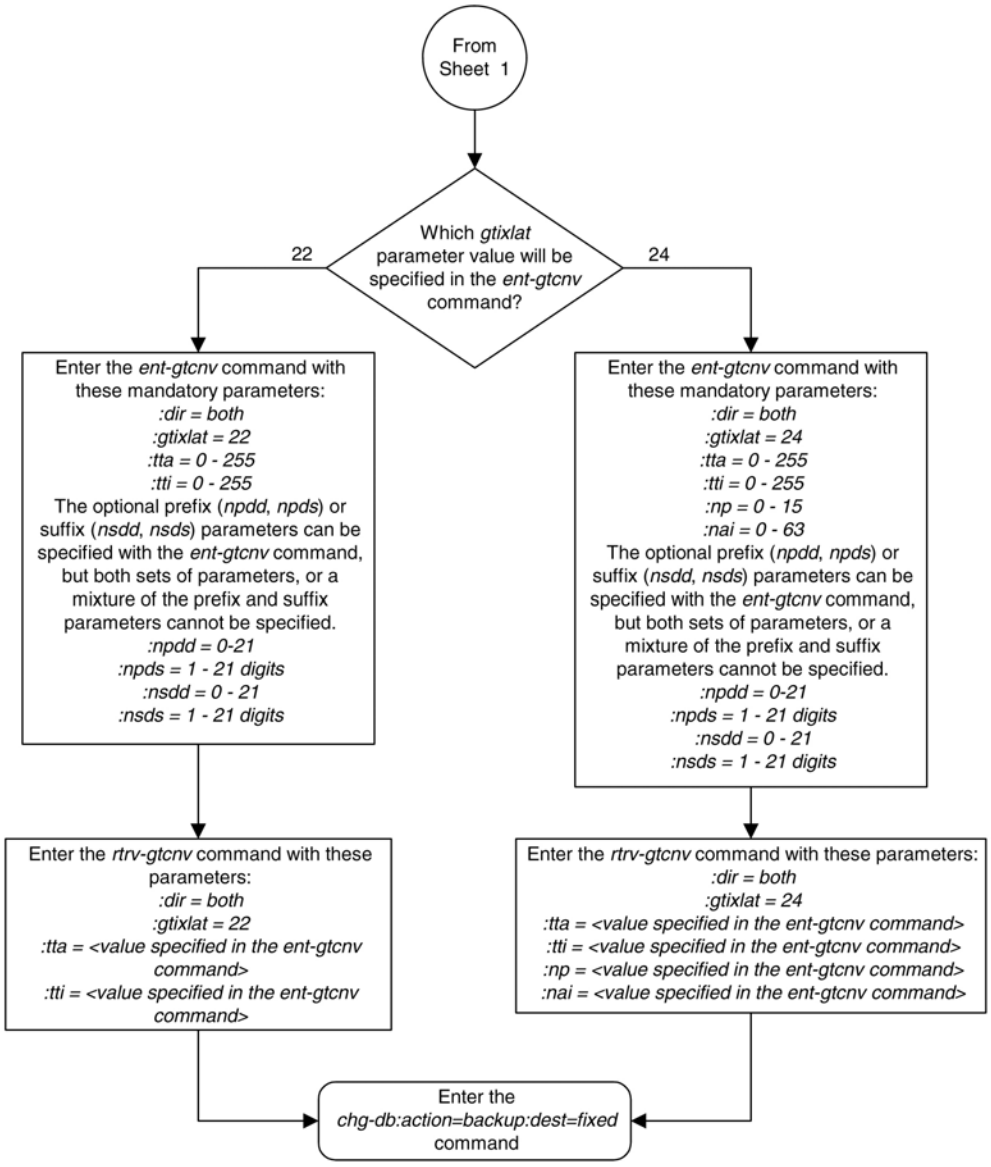
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

Figure 30: Adding a GT Conversion Table Entry


Enter the rtrv-ctrl-feat:partnum=893012001 command
Is the ANSI-ITU-China SCCP Conversion feature enabled?
Yes
No
Perform the "Activating the ANSI-ITU-China SCCP Conversion Feature" procedure in Appendix A to enable the ANSI-ITU-China SCCP Conversion feature
Enter the rtrv-gtcnv command
Which dir parameter value will be specified in the ent-gtcnv command?
ITOA
To Sheet 3
Both
To Sheet 4
ATOI
To Sheet 2


From Sheet 1
Which gtixlat parameter value will be specified in the ent-gtcnv command?
22
24
Enter the ent-gtcnv command with these mandatory parameters:
:dir = atoi
:gtixlat = 22
:tta = 0 - 255, *
:tti = 0 - 255
The optional prefix (npdd, npds) or suffix (nsdd, nsds) parameters can be specified with the ent-gtcnv command, but both sets of parameters, or a mixture of the prefix and suffix parameters cannot be specified.
:npdd = 0-21
:npds = 1 - 21 digits
:nsdd = 0 - 21
:nsds = 1 - 21 digits
Enter the ent-gtcnv command with these mandatory parameters:
:dir = atoi
:gtixlat = 24
:tta = 0 - 255, *
:tti = 0 - 255
:np = 0 - 15
:nai = 0 - 63
The optional prefix (npdd, npds) or suffix (nsdd, nsds) parameters can be specified with the ent-gtcnv command, but both sets of parameters, or a mixture of the prefix and suffix parameters cannot be specified.
:npdd = 0-21
:npds = 1 - 21 digits
:nsdd = 0 - 21
:nsds = 1 - 21 digits
Enter the rtrv-gtcnv command with these parameters:
:dir = atoi
:gtixlat = 22
:tta = <value specified in the ent-gtcnv command>
:tti = <value specified in the ent-gtcnv command>
Enter the rtrv-gtcnv command with these parameters:
:dir = atoi
:gtixlat = 24
:tta = <value specified in the ent-gtcnv command>
:tti = <value specified in the ent-gtcnv command>
:np = <value specified in the ent-gtcnv command>
:nai = <value specified in the ent-gtcnv command>
Enter the chg-db:action=backup:dest=fixed command


From Sheet 1
Which gtixlat parameter value will be specified in the ent-gtcnv command?
22
24
Enter the ent-gtcnv command with these mandatory parameters:
:dir = itoa
:gtixlat = 22
:tta = 0 - 255
:tti = 0 - 255
The optional prefix (npdd, npds) or suffix (nsdd, nsds) parameters can be specified with the ent-gtcnv command, but both sets of parameters, or a mixture of the prefix and suffix parameters cannot be specified.
:npdd = 0-21
:npds = 1 - 21 digits
:nsdd = 0 - 21
:nsds = 1 - 21 digits
Will the asterisk (*) be specified for the tti, np, or nai parameters?
No
Yes
Enter the ent-gtcnv command with these mandatory parameters:
:dir = itoa
:gtixlat = 24
:tta = 0 - 255
:tti = 0 - 255
:np = 0 - 15
:nai = 0 - 63
The optional prefix (npdd, npds) or suffix (nsdd, nsds) parameters can be specified with the ent-gtcnv command, but both sets of parameters, or a mixture of the prefix and suffix parameters cannot be specified.
:npdd = 0-21
:npds = 1 - 21 digits
:nsdd = 0 - 21
:nsds = 1 - 21 digits
Enter the ent-gtcnv command with these mandatory parameters:
:dir = itoa
:gtixlat = 24
:tta = 0 - 255
:tti = *
:np = *
:nai = *
The optional prefix (npdd, npds) or suffix (nsdd, nsds) parameters can be specified with the ent-gtcnv command, but both sets of parameters, or a mixture of the prefix and suffix parameters cannot be specified.
:npdd = 0-21
:npds = 1 - 21 digits
:nsdd = 0 - 21
:nsds = 1 - 21 digits
Enter the rtrv-gtcnv command with these parameters:
:dir = itoa
:gtixlat = 22
:tta = <value specified in the ent-gtcnv command>
:tti = <value specified in the ent-gtcnv command>
Enter the rtrv-gtcnv command with these parameters:
:dir = itoa
:gtixlat = 24
:tta = <value specified in the ent-gtcnv command>
:tti = <value specified in the ent-gtcnv command>
:np = <value specified in the ent-gtcnv command>
:nai = <value specified in the ent-gtcnv command>
Enter the chg-db:action=backup:dest=fixed command



Removing a GT Conversion Table Entry

This procedure is used to remove an entry from the GT Conversion table using the `dlt-gtcnv` command.

The `dlt-gtcnv` command uses these parameters.

`:dir` – The direction that the conversion takes place

`atoa` – The conversion takes place in the ANSI to ITU direction

`itoa` – The conversion takes place in the ITU to ANSI direction

both – The conversion takes place in the ANSI to ITU and ITU to ANSI directions

:tta – The ANSI translation type

:tti – The ITU translation type

:np – The numbering plan

:nai – The nature of address indicator

To perform this procedure, the ANSI-ITU-China SCCP Conversion feature must be enabled. Enter the rtrv-ctrl-feat command to verify whether or not the ANSI-ITU-China SCCP Conversion is enabled.

Note: The ANSI-ITU-China SCCP Conversion feature can only be permanently enabled.

The gtixlat and dir parameter values in the GT Conversion Table entry determines how the tta, tti, np, and nai parameters are used with the dlt-gtcnv command.

- If the dir parameter is atoi, only the dir=atoi and tta parameters can be and must be specified with the dlt-gtcnv command.
- If the dir parameter is itoa and the gtixlat parameter is 22, only the dir=itoa and tti parameter can be and must be specified with the dlt-gtcnv command.
- If the dir parameter is itoa and the gtixlat parameter is 24, only the dir=itoa, tti, np, and nai parameters can be and must be specified for the dlt-gtcnv command.
- If the dir parameter is both and the gtixlat parameter is 22, only the dir=both, tta, and tti parameters can be and must be specified with the dlt-gtcnv command.
- If the dir parameter is both and the gtixlat parameter is 24, the dir=both, tta, tti, np, and nai parameters can be and must be specified for the dlt-gtcnv command.

The values for the parameters of the GT Conversion Table entry being removed must be entered as shown in the rtrv-gtcnv output.

The GT Conversion Table entry specified in the dlt-gtcnv command must be shown in the rtrv-gtcnv output.

1. Display the GT Conversion Table entries by entering the rtrv-gtcnv command.

   The following is an example of the possible output.

```
rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
atoi    24     *    29   4   87   ---  ---  ---
atoi    22     10   43   --- ---  3    pfx  919
itoi    22     23   57   --- ---  3    sfx  800
atoi    22     24   12   --- ---  ---  ---  ---
both    22     26   13   --- ---  ---  ---  ---
itoa    22     2    5    --- ---  ---  ---  ---
itoi    24     33   66   3   33   ---  ---  ---
both    24     37   59   3   33   3    pfx  423
itoa    24     3    6    4   8    ---  ---  ---
itoi    24     44   *    *   *    ---  ---  ---
itoa    24     4    7    4   8    3    sfx  123
atoi    24     5    7    4   8    3    sfx  123
atoi    22     7    8    --- ---  3    sfx  123
both    24     8    9    4   8    4    pfx  4567
both    22     9    11   --- ---  ---  ---  ---
GTCNV table is (8 of 1000) 1% full
```

   If no entries are shown in the rtrv-gtcnv output, this procedure cannot be performed.

If error message E4171 (E4171 Cmd Rej: SCCP Conversion feature must be enabled) is displayed after the rtrv-gtcnv command is entered, the ANSI-ITU-China SCCP Conversion feature is not enabled. If the ANSI-ITU-China SCCP Conversion feature has not been enabled, this procedure cannot be performed. If error message E4171 (E4171 Cmd Rej: SCCP Conversion feature must be enabled) is not displayed after the rtrv-gtcnv command is entered and entries are shown in the rtrv-gtcnv output, go to step 2.

2. Remove the desired GT Conversion Table entry by entering the `dlt-gtcnv` command with the appropriate parameter combinations shown in the following list and with the values for these parameters shown in the `rtrv-gtcnv` output in step 1.
   a) `dir=atoi`, `tta`
   b) `dir-itoa`, `gtixlat=22`, `tti`
   c) `dir=itoa`, `gtixlat=24`, `tti`, `np`, `nai`
   d) `dir=both`, `gtixlat=22`, `tta`, `tti`
   e) `dir=both`, `gtixlat=24`, `tta`, `tti`, `np`, `nai`

   Note: The `gtixlat` parameter cannot be specified with the `dlt-gtcnv` command, but is used to determine the parameter combinations that must be specified with the `dlt-gtcnv` command.

   For this example, enter these commands.

   ```
   dlt-gtcnv:dir=atoi:tta=10
   ```

   ```
   dlt-gtcnv:dir=itoi:tta=33:tti=66:np=3:nai=33
   ```

   ```
   dlt-gtcnv:dir=itoi:tta=44:tti=*:np=*:nai=*
   ```

   ```
   dlt-gtcnv:dir=both:tta=26:tti=13
   ```

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

   ```
   rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
   DLT-GTCNV: MASP A - COMPLTD
   ```

3. Verify the changes using the `rtrv-gtcnv` command and specifying the parameter values used in step 3, along with the `gtixlat` parameter value shown in the `rtrv-gtcnv` output in step 2 that was assigned to the GT Conversion Table entry removed in step 3.

   For this example, enter these commands.

   ```
   rtrv-gtcnv:dir=atoi:gtixlat=22:tta=10:tti=43
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
   DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
   atoi    22     10   43   --- ---  3    pfx  919
   GTCNV table is (11 of 1000) 1% full
   ```

   ```
   rtrv-gtcnv:dir=itoi:gtixlat=24:tta=33:tti=66:np=3:nai=33
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
   DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
   ```

```
itoi    24     33   66   3   33   ---  ---  ---
GTCNV table is (11 of 1000) 1% full
```

`rtrv-gtcnv:dir=itoi:gtixlat=24:tta=44:tti=*:np=*:nai=*`

This is an example of the possible output.

```
rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
itoi    24     44   *    *   *    ---  ---  ---
GTCNV table is (11 of 1000) 1% full
```

`rtrv-gtcnv:dir=both:gtixlat=22:tta=26:tti=13`

This is an example of the possible output.

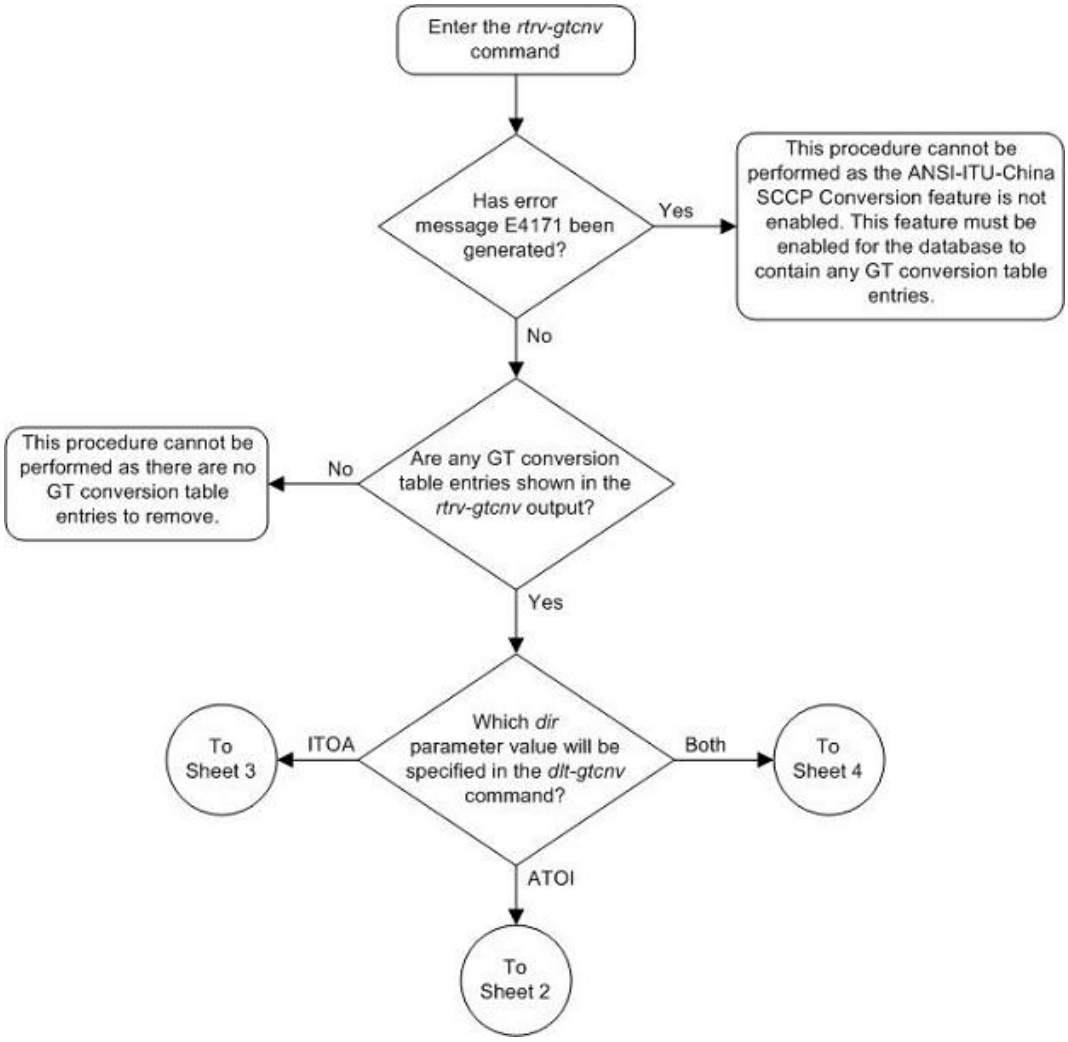
```
rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.0.0
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
both    22     26   13   --- ---  ---  ---  ---
GTCNV table is (11 of 1000) 1% full
```

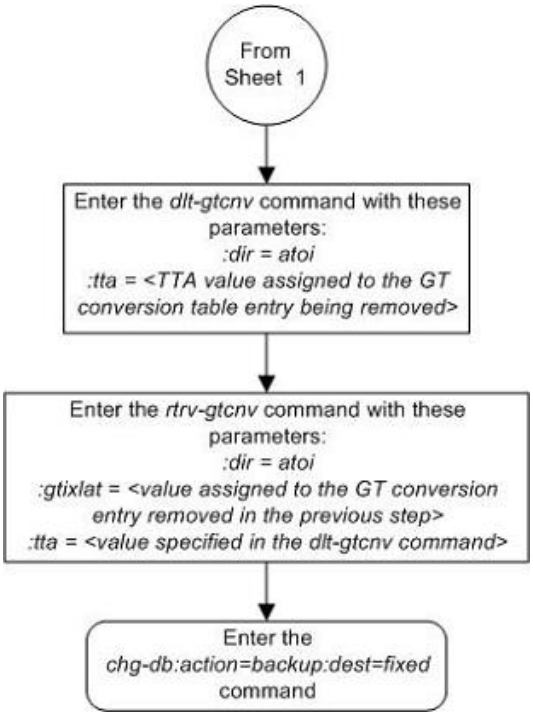
4. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

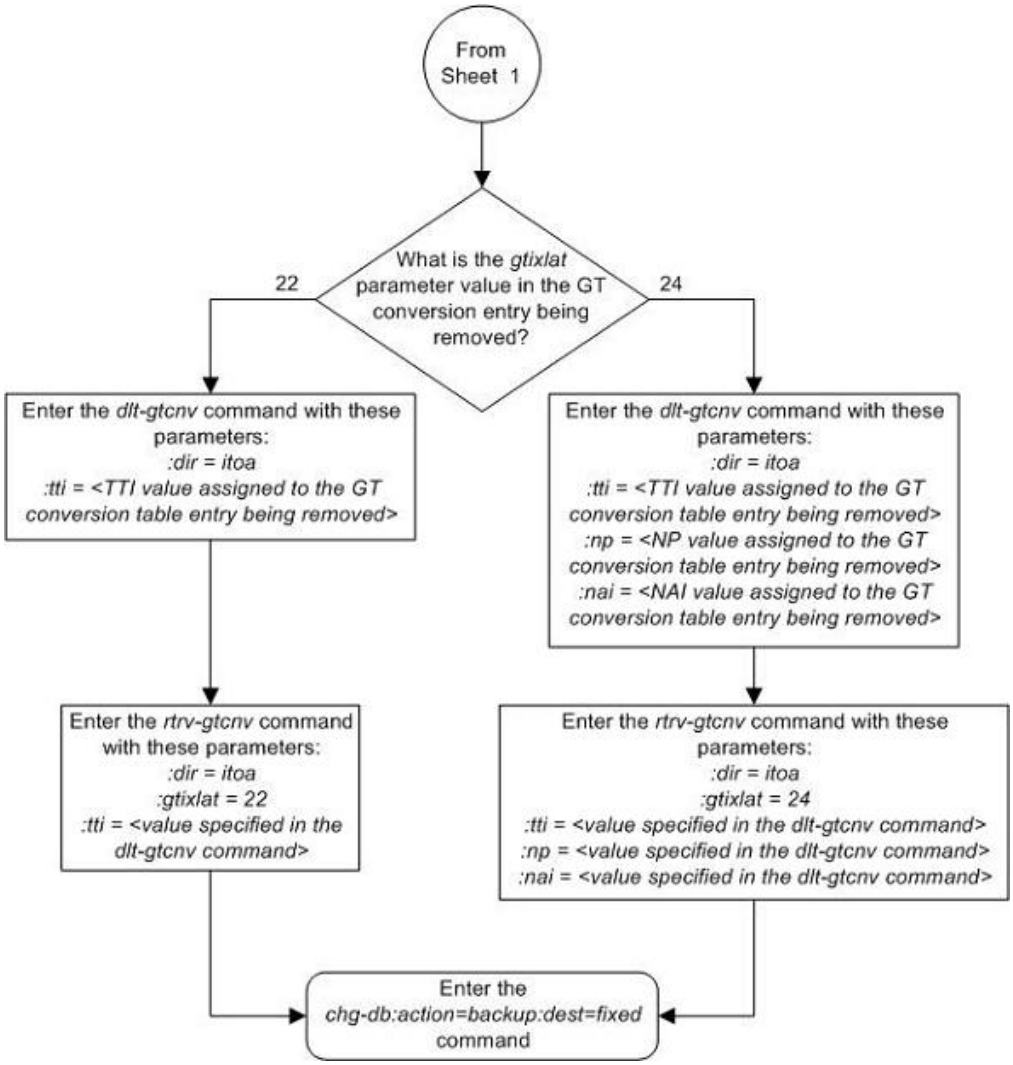
   These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

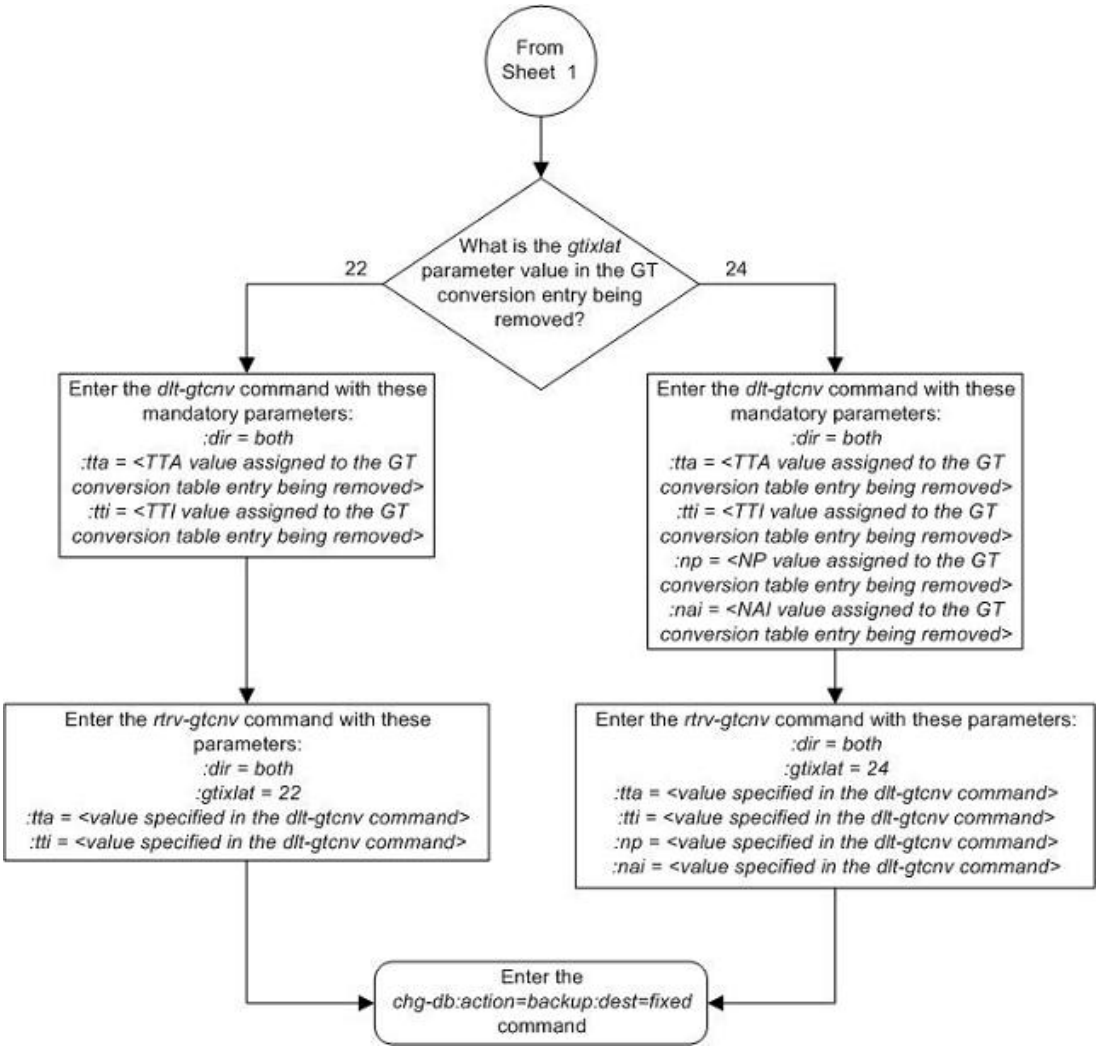
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

Figure 31: Removing a GT Conversion Table Entry


Enter the *rtrv-gtcnv* command
Has error message E4171 been generated?
Yes
This procedure cannot be performed as the ANSI-ITU-China SCCP Conversion feature is not enabled. This feature must be enabled for the database to contain any GT conversion table entries.
No
Are any GT conversion table entries shown in the *rtrv-gtcnv* output?
No
This procedure cannot be performed as there are no GT conversion table entries to remove.
Yes
Which *dir* parameter value will be specified in the *dlt-gtcnv* command?
ITOA
To Sheet 3
Both
To Sheet 4
ATOI
To Sheet 2


From Sheet 1
Enter the dlt-gtcnv command with these parameters:
:dir = atoi
:tta = <TTA value assigned to the GT conversion table entry being removed>
Enter the rtrv-gtcnv command with these parameters:
:dir = atoi
:gtixlat = <value assigned to the GT conversion entry removed in the previous step>
:tta = <value specified in the dlt-gtcnv command>
Enter the chg-db:action=backup:dest=fixed command


From Sheet 1
What is the gtixlat parameter value in the GT conversion entry being removed?
22
24
Enter the dlt-gtcnv command with these parameters:
:dir = itoa
:tti = <TTI value assigned to the GT conversion table entry being removed>
Enter the dlt-gtcnv command with these parameters:
:dir = itoa
:tti = <TTI value assigned to the GT conversion table entry being removed>
:np = <NP value assigned to the GT conversion table entry being removed>
:nai = <NAI value assigned to the GT conversion table entry being removed>
Enter the rtrv-gtcnv command with these parameters:
:dir = itoa
:gtixlat = 22
:tti = <value specified in the dlt-gtcnv command>
Enter the rtrv-gtcnv command with these parameters:
:dir = itoa
:gtixlat = 24
:tti = <value specified in the dlt-gtcnv command>
:np = <value specified in the dlt-gtcnv command>
:nai = <value specified in the dlt-gtcnv command>
Enter the chg-db:action=backup:dest=fixed command



Changing a GT Conversion Table Entry

This procedure is used to provision an entry in the GT Conversion table for the ANSI-ITU-China SCCP Conversion feature using the `chg-gtcnv` command.

The `chg-gtcnv` command uses these parameters.

`:dir` – The direction that the conversion takes place

`atoa` – The conversion takes place in the ANSI to ITU direction

`itoa` – The conversion takes place in the ITU to ANSI direction

`both` – The conversion takes place in the ANSI to ITU and ITU to ANSI directions

`:tta` – The ANSI translation type

`:tti` – The ITU translation type

:np – The numbering plan

:nai – The nature of address indicator

:npdd – The number of digits to be deleted or substituted from the beginning of the Global Title Address digits (the prefix digits)

:npds – The digits that are being substituted for the prefix digits

:nsdd – The number of digits to be deleted or substituted from the end of the Global Title Address digits (the suffix digits)

:nsds – The digits that are being substituted for the suffix digits

:rdmod – This parameter specifies whether or not the existing npdd, npds, nsdd, nsds parameter values are removed from the GT Conversion Table entry. If the value of this parameter is yes, the existing npdd, npds, nsdd, nsds parameter values are removed from the GT Conversion Table entry. If the value of this parameter is no, the default value, the existing npdd, npds, nsdd, nsds parameter values are not removed from the GT Conversion Table entry.

To perform this procedure, the ANSI-ITU-China SCCP Conversion feature must be enabled. Enter the rtrv-ctrl-feat command to verify whether or not the ANSI-ITU-China SCCP Conversion is enabled.

Note: The ANSI-ITU-China SCCP Conversion feature can only be permanently enabled.

The gtixlat and dir parameter values in the GT Conversion Table entry determines how the tta, tti, np, nai, npdd, npds, nsdd, nsds, and rdmod parameters are used with the chg-gtcnv command.

- If the dir parameter is atoi, the dir=atoi and tta parameters must be specified with the chg-gtcnv command. If the gtixlat parameter is 22, the optional parameters tti, npdd, npds, nsdd, nsds, and rdmod can be specified with the chg-gtcnv command. If the gtixlat parameter is 24, the optional parameters tti, np, nai, npdd, npds, nsdd, nsds, and rdmod can be specified with the chg-gtcnv command.
- If the dir parameter is itoa and the gtixlat parameter is 22, the dir=itoa and tti parameters must be specified with the chg-gtcnv command. The optional parameters tta, npdd, npds, nsdd, nsds, and rdmod can be specified with the chg-gtcnv command.
- If the dir parameter is itoa and the gtixlat parameter is 24, the dir=itoa and tti, np, and nai parameters must be specified with the chg-gtcnv command. The optional parameters tta, npdd, npds, nsdd, nsds, and rdmod can be specified with the chg-gtcnv command.
- If the dir parameter is both and the gtixlat parameter is 22, the dir=both, tta, and tti parameters must be specified with the chg-gtcnv command. The optional parameters npdd, npds, nsdd, nsds, and rdmod can be specified with the chg-gtcnv command.
- If the dir parameter is both and the gtixlat parameter is 24, the dir=both, tta, tti, np, and nai parameters must be specified with the chg-gtcnv command. The optional parameters npdd, npds, nsdd, nsds, and rdmod can be specified with the chg-gtcnv command.

If the rdmod=yes parameter is specified with the chg-gtcnv command, the npdd, npds, nsdd, and nsds parameters cannot be specified.

If the npdd, npds, nsdd, or nsds parameters are specified with the chg-gtcnv command, the rdmod=yes parameter cannot be specified.

The optional prefix (npdd, npds) and suffix parameters (nsdd, nsds) can be specified, but both sets of parameters, or a mixture of the prefix and suffix parameters cannot be specified. For example, if the either the npdd or npds parameters are specified, the nsdd and nsds cannot be specified.

If either the nsdd or nsds parameters are specified, the npdd and npds parameters cannot be specified.

The prefix or suffix parameter values assigned to a GT Conversion Table entry can be changed from one type to another type, (prefix parameter values to suffix parameter values or suffix parameter values to prefix parameter values). To change the prefix values to suffix values or suffix values to prefix values, the existing prefix or suffix values must be removed from the GT Conversion Table entry by specifying the rdmod=yes with the chg-gtcnv command. After the existing prefix or suffix values have been removed, the new prefix or suffix values can be assigned to the GT Conversion Table entry with the npdd and npds, or nsdd and nsds parameters.

The values for the mandatory parameters of the GT Conversion Table entry being changed must be entered as shown in the rtrv-gtcnv output.

The GT Conversion Table entry specified in the chg-gtcnv command must be shown in the rtrv-gtcnv output.

1. Verify the status of the ANSI-ITU-China SCCP Conversion feature by entering the rtrv-ctrl-featcommand with the ANSI-ITU-China SCCP Conversion feature part number.

   Enter this command.

   ```
   rtrv-ctrl-feat:partnum=893012001
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   The following features have been permanently enabled:

   Feature Name              Partnum    Status  Quantity
   SCCP Conversion           893012010  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 ANSI-ITU-China SCCP Conversion feature has not been enabled or is not on, this procedure cannot be performed.

2. Display the GT Conversion Table entries by entering the rtrv-gtcnv command.

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
   atoi    24     *    29   4   87   ---  ---  ---
   atoi    22     10   43   --- ---  3    pfx  919
   itoi    22     23   57   --- ---  3    sfx  800
   atoi    22     24   12   --- ---  ---  ---  ---
   both    22     26   13   --- ---  ---  ---  ---
   itoa    22     2    5    --- ---  ---  ---  ---
   itoi    24     33   66   3   33   ---  ---  ---
   both    24     37   59   3   33   3    pfx  423
   itoa    24     3    6    4   8    ---  ---  ---
   itoi    24     44   *    *   *    ---  ---  ---
   itoa    24     4    7    4   8    3    sfx  123
   atoi    24     5    7    4   8    3    sfx  123
   ```

```
atoi    22     7    8    --- ---  3    sfx  123
both    24     8    9    4   8    4    pfx  4567
both    22     9    11   --- ---  ---  ---  ---

GTCNV table is (15 of 1000) 1% full
```

If no entries are shown in the `rtrv-gtcnv` output, this procedure cannot be performed.

Note: If prefix or suffix digits are not assigned to the GT Conversion Table entry being changed, not being removed, or not being changed from one type to another (prefix digits changed to suffix digits or suffix digits changed to prefix digits), skip steps 3 and 4, and go to step 5.

3. Change the desired GT Conversion Table entry by entering the `chg-gtcnv` command with the `rdmod=yes` parameter, and with appropriate parameter combinations shown in the following list and with the values for these parameters shown in the `rtrv-gtcnv` output in step 2.

   - `dir=atoi, tta.`

     If the `gtixlat` parameter value is `22`, the optional parameter `tti=<0-255>` can be specified with the `chg-gtcnv` command. If the `gtixlat` parameter value is `24`, the optional parameters `tti=<0-255>`, `np=<0-15>`, `nai=<0-63>`, can be specified with the `chg-gtcnv` command.
   - `dir-itoa, gtixlat=22, tti.`

     The optional parameter `tta=<0-255>` can be specified with the `chg-gtcnv` command.
   - `dir=itoa, gtixlat=24, tti, np, nai.`

     The optional parameter `tta=<0-255>` can be specified with the `chg-gtcnv` command.
   - `dir=both, gtixlat=22, tta, tti`
   - `dir=both, gtixlat=24, tta, tti, np, nai`

   Note: The `gtixlat` parameter cannot be specified with the `chg-gtcnv` command, but is used to determine the parameter combinations that must be specified with the `chg-gtcnv` command.

   For this example, enter these commands.

   ```
   chg-gtcnv:dir=atoi:tta=10:rdmod=yes
   ```

   ```
   chg-gtcnv:dir=itoi:tti=7:np=4:nai=8:rdmod=yes
   ```

   ```
   chg-gtcnv:dir=both:tta=37:tti=59:np=3:nai=33:rdmod=yes
   ```

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

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   CHG-GTCNV: MASP A - COMPLTD
   ```

4. Verify the changes using the `rtrv-gtcnv` command and specifying the parameter values used in step 3, along with the `gtixlat` parameter value shown in the `rtrv-gtcnv` output in step 2 that was assigned to the GT Conversion Table entry changed in step 3.

   For this example, enter these commands.

   ```
   rtrv-gtcnv:dir=atoi:gtixlat=22:tta=10
   ```

This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
atoi    22     10   43   --- ---  ---  ---  ---

GTCNV table is (11 of 1000) 1% full
```

`rtrv-gtcnv:dir=itoi:gtixlat=24:tti=7`

This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
itoa    24     4    7    4   8    ---  ---  ---

GTCNV table is (11 of 1000) 1% full
```

`rtrv-gtcnv:dir=both:gtixlat=24:tta=37:tti=59`

This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
both    24     37   59   3   33   ---  ---  ---
GTCNV table is (11 of 1000) 1% full
```

5. Change the desired GT Conversion Table entry by entering the `chg-gtcnv` command with appropriate parameter combinations shown in *Table 24: GT Conversion Parameter Combinations* on page 419 and with the values for these parameters shown in the `rtrv-gtcnv` output in step 2.

   Note: If steps 3 and 4 were performed, and no other changes are being made to the GT Conversion entry, skip steps 5 and 6, and go to step 7.

Table 24: GT Conversion Parameter Combinations

GTIXLAT=22 DIR = ATOI	GTIXLAT=22 DIR = ITOA	GTIXLAT=22 DIR = BOTH	GTIXLAT=24 DIR = ATOI	GTIXLAT=24 DIR = ITOA	GTIXLAT=24 DIR = BOTH
TTA = <current TTA value>	TTI = <current TTI value>	TTA = <current TTA value> TTI = <current TTI value>	TTA = <current TTA value>	TTI = <current TTI value> NP = <current NP value> NAI = <current NAI value>	TTA = <current TTA value> TTI = <current TTI value> NP = <current NP value> NAI = <current NAI value>
Optional Parameters					

GTIXLAT=22 DIR = ATOI	GTIXLAT=22 DIR = ITOA	GTIXLAT=22 DIR = BOTH	GTIXLAT=24 DIR = ATOI	GTIXLAT=24 DIR = ITOA	GTIXLAT=24 DIR = BOTH
TTI = 0-255 NPDD = 0-21 NPDS = 1 - 21 digits NSDD = 0-21 NSDS = 1 - 21 digits	TTA = 0-255 NP = 0-15 NAI = 0-63 NPDD = 0-21 NPDS = 1 - 21 digits NSDD = 0-21 NSDS = 1 - 21 digits	NPDD = 0-21 NPDS = 1 - 21 digits NSDD = 0-21 NSDS = 1 - 21 digits	TTI = 0-255 NP = 0-15 NAI = 0-63 NPDD = 0-21 NPDS = 1 - 21 digits NSDD = 0-21 NSDS = 1 - 21 digits	TTA = 0-255 NPDD = 0-21 NPDS = 1 - 21 digits NSDD = 0-21 NSDS = 1 - 21 digits	NPDD = 0-21 NPDS = 1 - 21 digits NSDD = 0-21 NSDS = 1 - 21 digits

Notes:

1. The `gtixlat` parameter cannot be specified with the `chg-gtcnv` command, but is used to determine the parameter combinations that can be specified with the `chg-gtcnv` command.

2. If the GT Conversion Table entry contains no prefix (`npdd`, `npds`) or suffix (`nsdd`, `nsds`) parameter values, the prefix or suffix parameters can be specified with the `chg-gtcnv` command, but both sets of parameters, or a mixture of the prefix or suffix parameters cannot be specified.

3. If the GT Conversion Table entry contains prefix parameter values, the suffix parameters cannot be specified with the `chg-gtcnv` command.

4. If the GT Conversion Table entry contains suffix parameter values, the prefix parameters cannot be specified with the `chg-gtcnv` command.

For this example, enter these commands.

```
chg-gtcnv:dir=atoi:tta=10:tti=35:nsdd=3:nsds=818
```

```
chg-gtcnv:dir=itoi:tti=7:np=4:nai=8:tta=40:npdd=3:npds=202
```

```
chg-gtcnv:dir=both:tta=8:tti=9:np=4:nai=8:npds=6151
```

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

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
CHG-GTCNV: MASP A - COMPLTD
```

6. Verify the changes using the `rtrv-gtcnv` command and specifying the parameter values used in step 5, along with the `gtixlat` parameter value shown in the `rtrv-gtcnv` output in step 2 that was assigned to the GT Conversion Table entry changed in step 5.

   For this example, enter these commands.

   ```
   rtrv-gtcnv:dir=atoi:gtixlat=22:tta=10
   ```

This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
atoi    22     10   25   --- ---  3    sfx  818

GTCNV table is (11 of 1000) 1% full
```

`rtrv-gtcnv:dir=itoi:gtixlat=24:tti=7`

This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
itoa    24     40   7    4   8    3    pfx  202

GTCNV table is (11 of 1000) 1% full
```

`rtrv-gtcnv:dir=both:gtixlat=24:tta=8:tti=9`

This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
DIR   GTIXLAT  TTA  TTI  NP  NAI  DEL  POS  ADD
both    24     8    9    4   8    4    pfx  6151

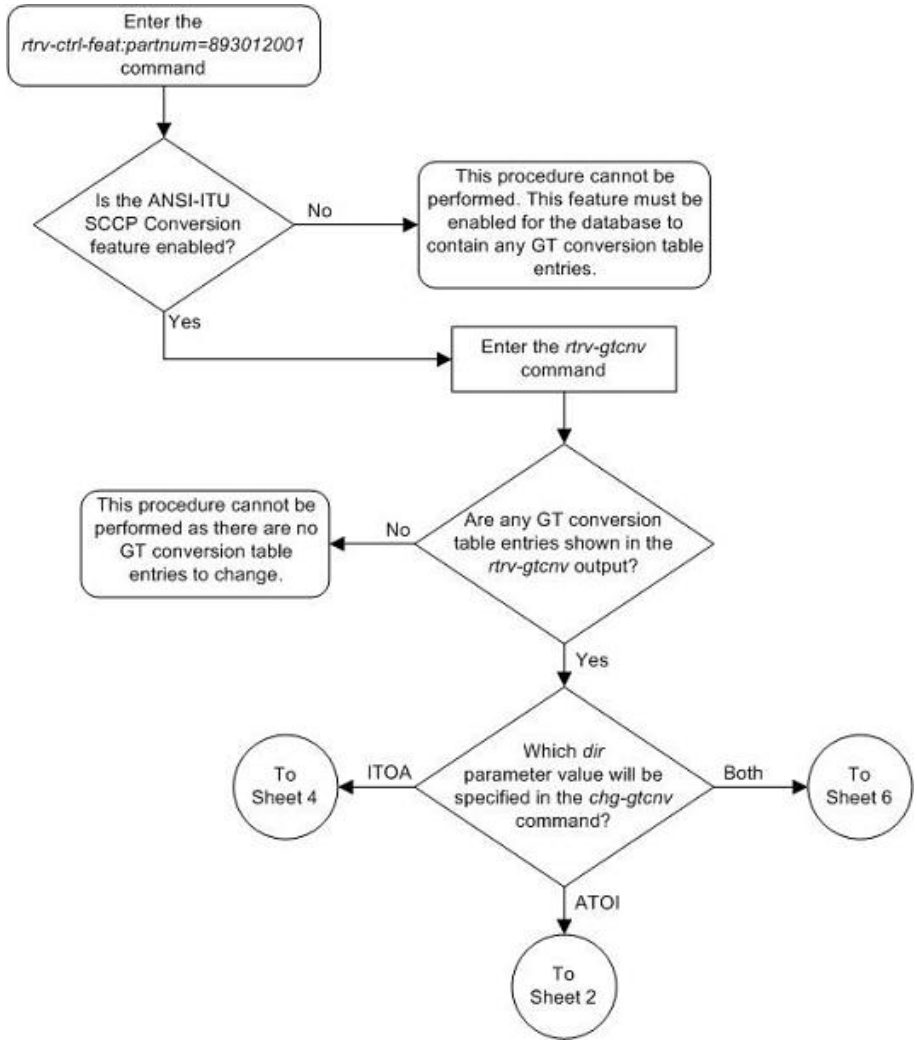
GTCNV table is (11 of 1000) 1% full
```

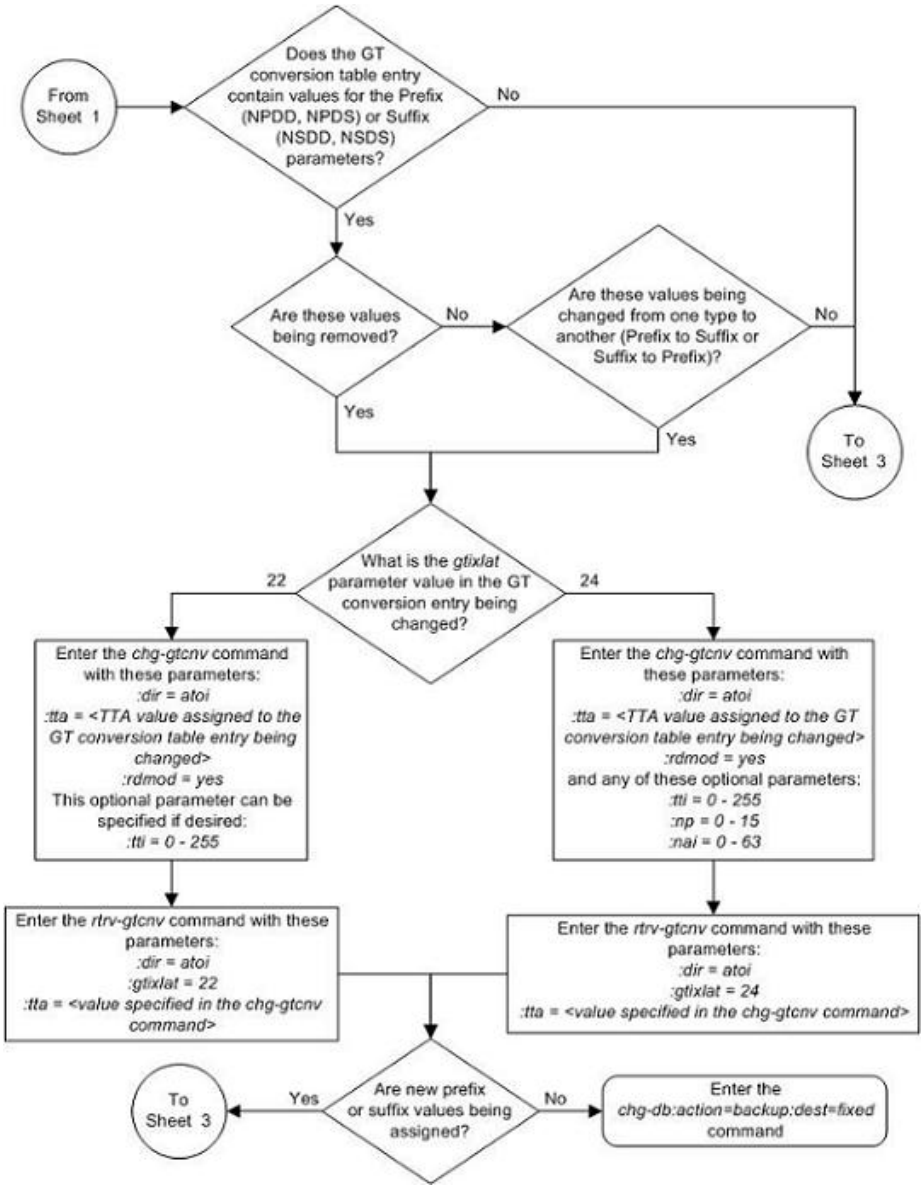
7. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

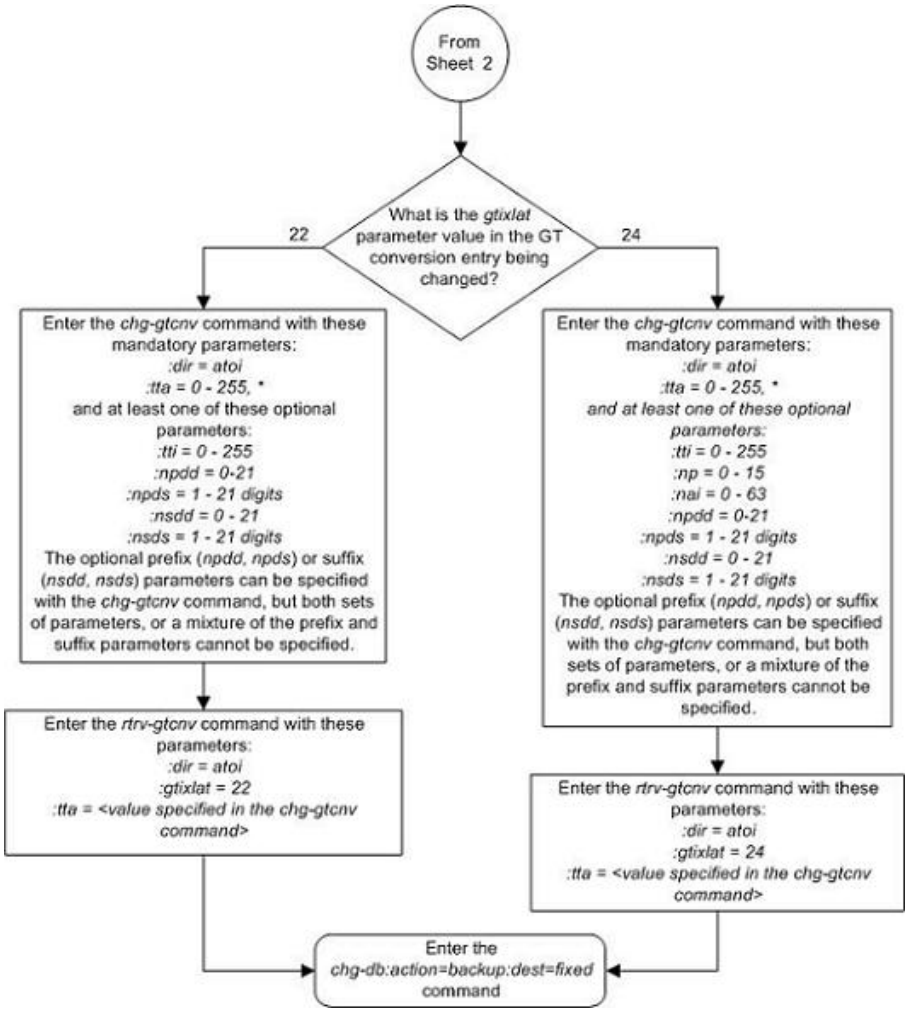
   These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

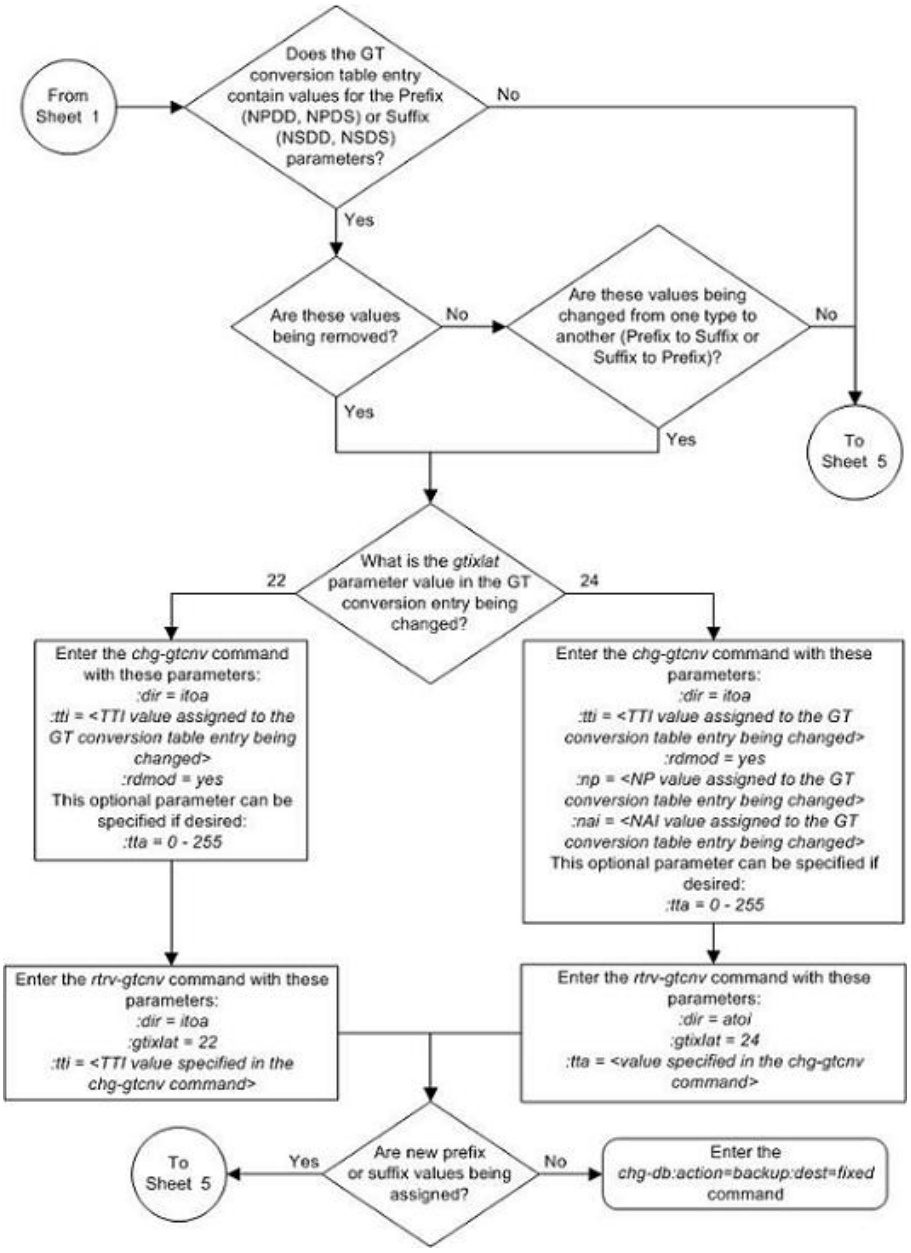
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

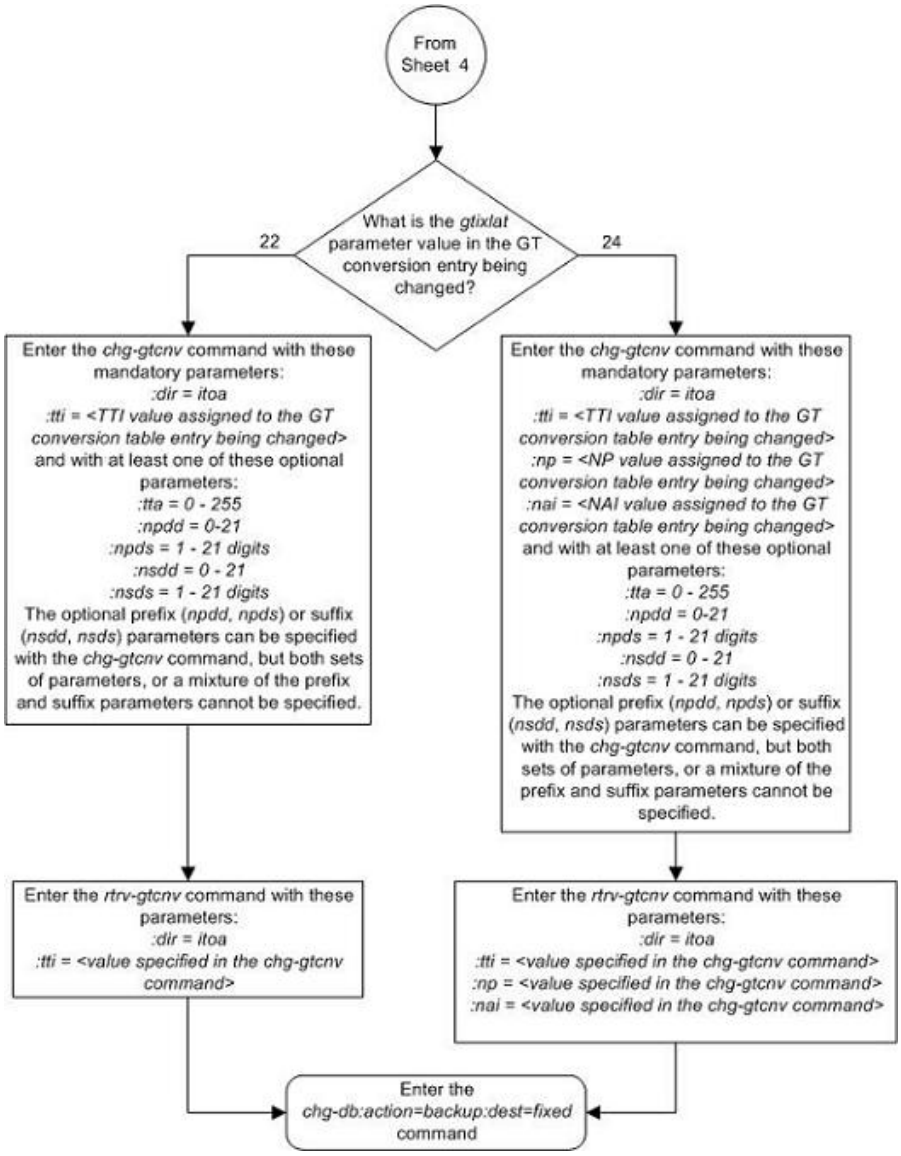
Figure 32: Changing a GT Conversion Table Entry

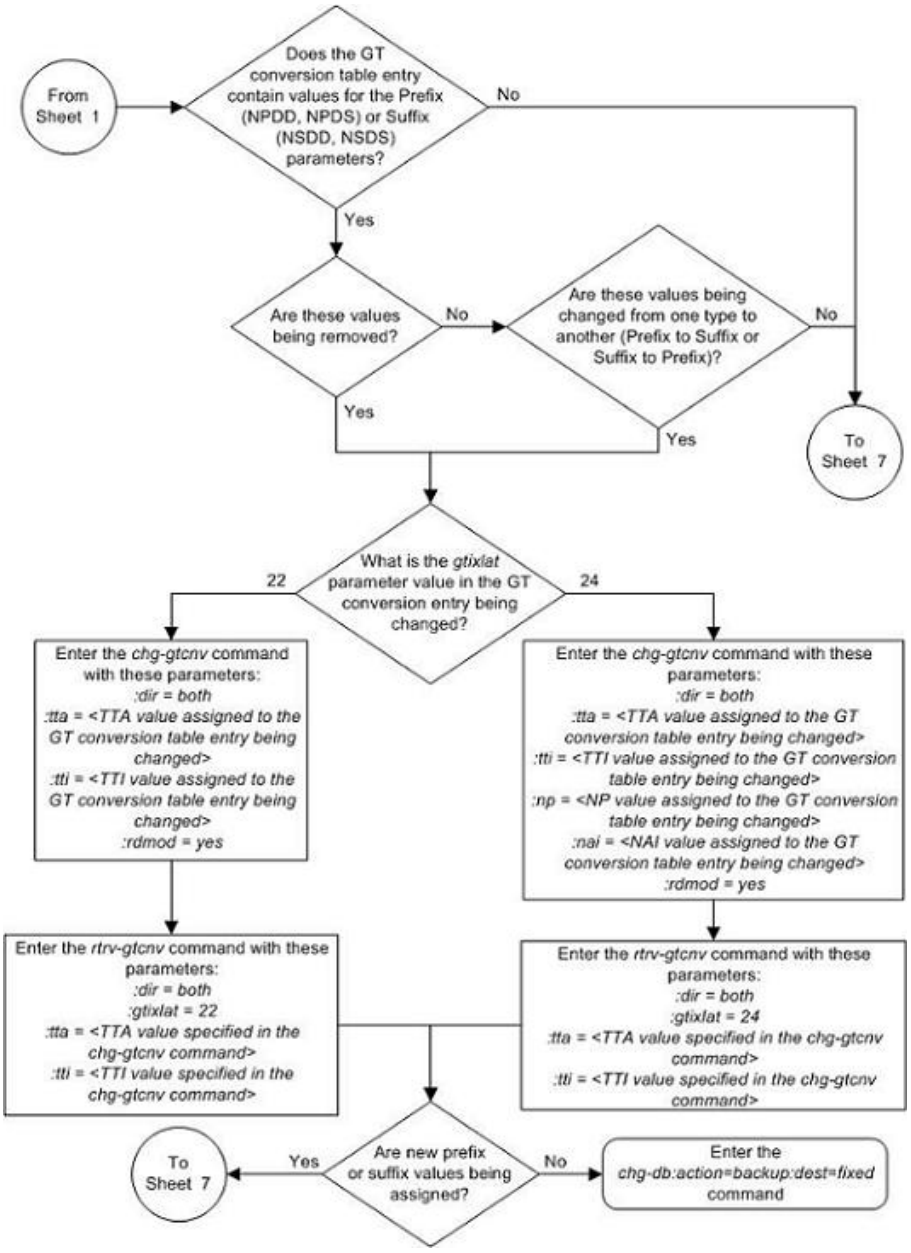

Enter the rtrv-ctrl-feat:partnum=893012001 command
Is the ANSI-ITU SCCP Conversion feature enabled?
No
This procedure cannot be performed. This feature must be enabled for the database to contain any GT conversion table entries.
Yes
Enter the rtrv-gtcnv command
Are any GT conversion table entries shown in the rtrv-gtcnv output?
No
This procedure cannot be performed as there are no GT conversion table entries to change.
Yes
Which dir parameter value will be specified in the chg-gtcnv command?
ITOA
To Sheet 4
Both
To Sheet 6
ATOI
To Sheet 2

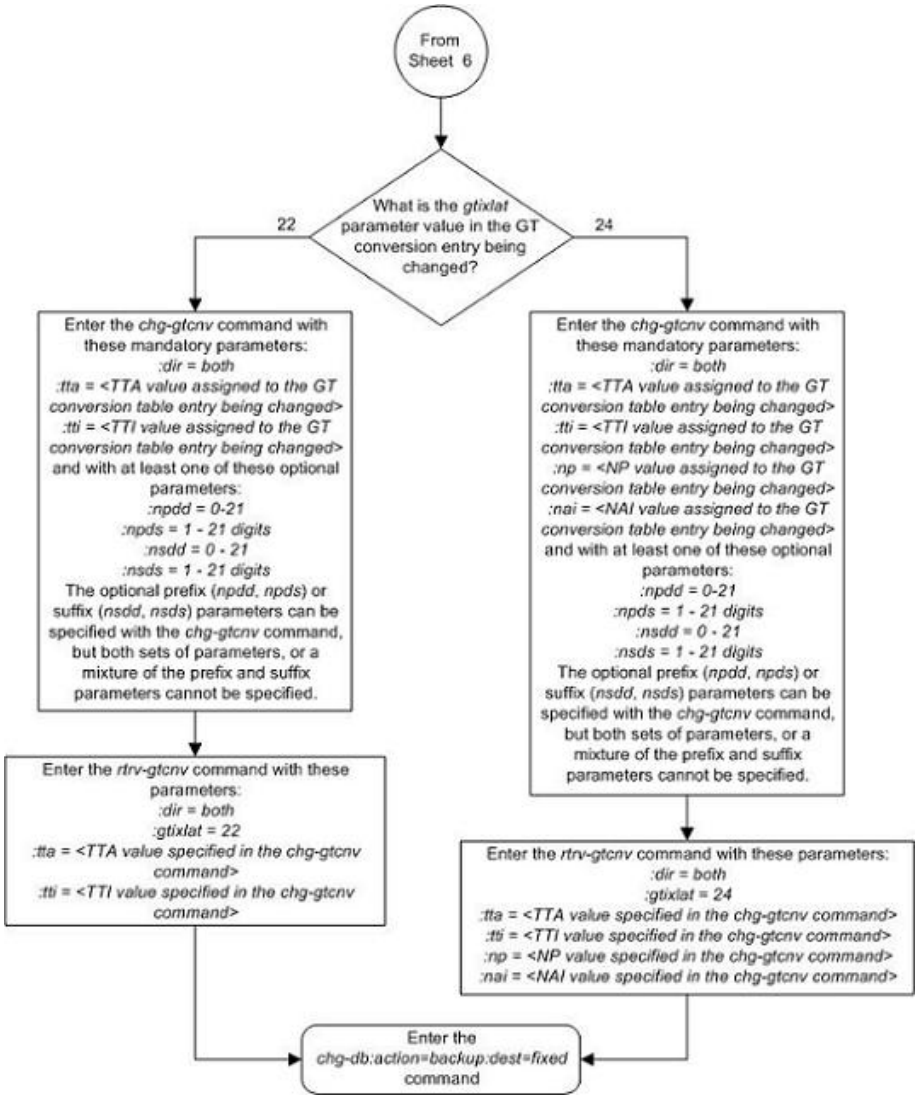

From Sheet 1
Does the GT conversion table entry contain values for the Prefix (NPDD, NPDS) or Suffix (NSDD, NSDS) parameters?
No
Yes
Are these values being removed?
No
Are these values being changed from one type to another (Prefix to Suffix or Suffix to Prefix)?
No
Yes
Yes
To Sheet 3
What is the gtixlat parameter value in the GT conversion entry being changed?
22
24
Enter the chg-gtcnv command with these parameters:
:dir = atoi
:tta = <TTA value assigned to the GT conversion table entry being changed>
:rdmod = yes
This optional parameter can be specified if desired:
:tti = 0 - 255
Enter the chg-gtcnv command with these parameters:
:dir = atoi
:tta = <TTA value assigned to the GT conversion table entry being changed>
:rdmod = yes
and any of these optional parameters:
:tti = 0 - 255
:np = 0 - 15
:nai = 0 - 63
Enter the rtrv-gtcnv command with these parameters:
:dir = atoi
:gtixlat = 22
:tta = <value specified in the chg-gtcnv command>
Enter the rtrv-gtcnv command with these parameters:
:dir = atoi
:gtixlat = 24
:tta = <value specified in the chg-gtcnv command>
To Sheet 3
Yes
Are new prefix or suffix values being assigned?
No
Enter the chg-db:action=backup:dest=fixed command


From Sheet 2
What is the gtixlat parameter value in the GT conversion entry being changed?
22
24
Enter the chg-gtcnv command with these mandatory parameters:
:dir = atoi
:tta = 0 - 255, *
and at least one of these optional parameters:
:tti = 0 - 255
:npdd = 0-21
:npds = 1 - 21 digits
:nsdd = 0 - 21
:nsds = 1 - 21 digits
The optional prefix (npdd, npds) or suffix (nsdd, nsds) parameters can be specified with the chg-gtcnv command, but both sets of parameters, or a mixture of the prefix and suffix parameters cannot be specified.
Enter the chg-gtcnv command with these mandatory parameters:
:dir = atoi
:tta = 0 - 255, *
and at least one of these optional parameters:
:tti = 0 - 255
:np = 0 - 15
:nai = 0 - 63
:npdd = 0-21
:npds = 1 - 21 digits
:nsdd = 0 - 21
:nsds = 1 - 21 digits
The optional prefix (npdd, npds) or suffix (nsdd, nsds) parameters can be specified with the chg-gtcnv command, but both sets of parameters, or a mixture of the prefix and suffix parameters cannot be specified.
Enter the rtrv-gtcnv command with these parameters:
:dir = atoi
:gtixlat = 22
:tta = <value specified in the chg-gtcnv command>
Enter the rtrv-gtcnv command with these parameters:
:dir = atoi
:gtixlat = 24
:tta = <value specified in the chg-gtcnv command>
Enter the chg-db:action=backup:dest=fixed command


From Sheet 1
Does the GT conversion table entry contain values for the Prefix (NPDD, NPDS) or Suffix (NSDD, NSDS) parameters?
No
Yes
Are these values being removed?
No
Are these values being changed from one type to another (Prefix to Suffix or Suffix to Prefix)?
No
Yes
Yes
To Sheet 5
What is the gtixlat parameter value in the GT conversion entry being changed?
22
24
Enter the chg-gtcnv command with these parameters:
:dir = itoa
:tti = <TTI value assigned to the GT conversion table entry being changed>
:rdmod = yes
This optional parameter can be specified if desired:
:tta = 0 - 255
Enter the chg-gtcnv command with these parameters:
:dir = itoa
:tti = <TTI value assigned to the GT conversion table entry being changed>
:rdmod = yes
:np = <NP value assigned to the GT conversion table entry being changed>
:nai = <NAI value assigned to the GT conversion table entry being changed>
This optional parameter can be specified if desired:
:tta = 0 - 255
Enter the rtrv-gtcnv command with these parameters:
:dir = itoa
:gtixlat = 22
:tti = <TTI value specified in the chg-gtcnv command>
Enter the rtrv-gtcnv command with these parameters:
:dir = atoi
:gtixlat = 24
:tta = <value specified in the chg-gtcnv command>
To Sheet 5
Yes
Are new prefix or suffix values being assigned?
No
Enter the chg-db:action=backup:dest=fixed command


From Sheet 4
What is the gtixlat parameter value in the GT conversion entry being changed?
22
24
Enter the chg-gtcnv command with these mandatory parameters:
:dir = itoa
:tti = <TTI value assigned to the GT conversion table entry being changed>
and with at least one of these optional parameters:
:tta = 0 - 255
:npdd = 0-21
:npds = 1 - 21 digits
:nsdd = 0 - 21
:nsds = 1 - 21 digits
The optional prefix (npdd, npds) or suffix (nsdd, nsds) parameters can be specified with the chg-gtcnv command, but both sets of parameters, or a mixture of the prefix and suffix parameters cannot be specified.
Enter the chg-gtcnv command with these mandatory parameters:
:dir = itoa
:tti = <TTI value assigned to the GT conversion table entry being changed>
:np = <NP value assigned to the GT conversion table entry being changed>
:nai = <NAI value assigned to the GT conversion table entry being changed>
and with at least one of these optional parameters:
:tta = 0 - 255
:npdd = 0-21
:npds = 1 - 21 digits
:nsdd = 0 - 21
:nsds = 1 - 21 digits
The optional prefix (npdd, npds) or suffix (nsdd, nsds) parameters can be specified with the chg-gtcnv command, but both sets of parameters, or a mixture of the prefix and suffix parameters cannot be specified.
Enter the rtrv-gtcnv command with these parameters:
:dir = itoa
:tti = <value specified in the chg-gtcnv command>
Enter the rtrv-gtcnv command with these parameters:
:dir = itoa
:tti = <value specified in the chg-gtcnv command>
:np = <value specified in the chg-gtcnv command>
:nai = <value specified in the chg-gtcnv command>
Enter the chg-db:action=backup:dest=fixed command


From Sheet 1
Does the GT conversion table entry contain values for the Prefix (NPDD, NPDS) or Suffix (NSDD, NSDS) parameters?
No
Yes
Are these values being removed?
No
Are these values being changed from one type to another (Prefix to Suffix or Suffix to Prefix)?
No
Yes
Yes
To Sheet 7
What is the gtixlat parameter value in the GT conversion entry being changed?
22
24
Enter the chg-gtcnv command with these parameters:
:dir = both
:tta = <TTA value assigned to the GT conversion table entry being changed>
:tti = <TTI value assigned to the GT conversion table entry being changed>
:rdmod = yes
Enter the chg-gtcnv command with these parameters:
:dir = both
:tta = <TTA value assigned to the GT conversion table entry being changed>
:tti = <TTI value assigned to the GT conversion table entry being changed>
:np = <NP value assigned to the GT conversion table entry being changed>
:nai = <NAI value assigned to the GT conversion table entry being changed>
:rdmod = yes
Enter the rtrv-gtcnv command with these parameters:
:dir = both
:gtixlat = 22
:tta = <TTA value specified in the chg-gtcnv command>
:tti = <TTI value specified in the chg-gtcnv command>
Enter the rtrv-gtcnv command with these parameters:
:dir = both
:gtixlat = 24
:tta = <TTA value specified in the chg-gtcnv command>
:tti = <TTI value specified in the chg-gtcnv command>
To Sheet 7
Yes
Are new prefix or suffix values being assigned?
No
Enter the chg-db:action=backup:dest=fixed command



Changing the ANSI-ITU-China SCCP Conversion Options

This procedure is used to change the options used for the ANSI-ITU-China SCCP Conversion feature using the `chg-stpopts` command. The options are:

`:cnvcgda` – The CGPA point code in ANSI SCCP messages are discarded if the point code or alias point code of the destination network type is not defined.

`:cnvcgdi` – The CGPA point code in ITU-I SCCP messages are discarded if the point code or alias point code of the destination network type is not defined.

`:cnvcgdn` – The CGPA point code in ITU-N SCCP messages are discarded if the point code or alias point code of the destination network type is not defined.

:cnvcgdn24 – The CGPA point code in ITU-N24 SCCP messages are discarded if the point code or alias point code of the destination network type is not defined.

:gtcnvdflt – SCCP messages are routed using system defaults when an appropriate entry is not found in the Default GT Conversion Table.

The values for each of these parameters is either yes or no. The system default values for these parameters is no.

These parameters of the chg-stpopts command are optional. For any parameters not specified with the chg-stpopts command, the values for these parameters are not changed.

The current values for these parameters are shown in the CNVCGDA, CNVCGDI, CNVCGDN, CNVCGDN24, and GTCNVDFLT fields in the output of the rtrv-stpopts command.

The ANSI-ITU-China SCCP Conversion Feature must be enabled to change these parameter values with the chg-stpopts command. The CNVCGDA, CNVCGDI, CNVCGDN, CNVCGDN24, and GTCNVDFLT fields in the output of the rtrv-stpopts command are shown when the ANSI-ITU-China SCCP Conversion feature is enabled. If the CNVCGDA, CNVCGDI, CNVCGDN, CNVCGDN24, and GTCNVDFLT fields are not shown in the output of the rtrv-stpopts command, perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure to enabled the ANSI-ITU-China SCCP Conversion feature.

Note: The ANSI-ITU-China SCCP Conversion feature can only be permanently enabled.

1. Display the existing values for the ANSI-ITU-China SCCP Conversion feature options by entering the rtrv-stpopts command.

   This is an example of the possible output.

```
rlghncxa03w 07-05-17 16:02:05 GMT  EAGLE5 37.0.0
STP OPTIONS
-----------------------
CNVCGDA              no
CNVCGDI              no
CNVCGDN              no
CNVCGDN24            no
GTCNVDFLT            no
```

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

   If the CNVCGDA, CNVCGDI, CNVCGDN, CNVCGDN24, and GTCNVDFLT fields are not shown in the output of the rtrv-stpopts command, perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure to enabled the ANSI-ITU-China SCCP Conversion feature.

   Note: The ANSI-ITU-China SCCP Conversion feature can only be permanently enabled.

2. Change the ANSI-ITU-China SCCP Conversion feature options.

   For this example, enter this command.

   chg-stpopts:cnvcgdi=yes:gtcnvdflt=yes

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

```
rlghncxa03w 07-05-07 00:22:57 GMT  EAGLE5 37.0.0
CHG-STPOPTS: MASP A - COMPLTD
```

3. Verify the changes using the `rtrv-stpopts` command.

   This is an example of the possible output.

```
rlghncxa03w 07-05-17 16:02:05 GMT  EAGLE5 37.0.0
STP OPTIONS
-----------------------
CNVCGDA             no
CNVCGDI            yes
CNVCGDN             no
CNVCGDN24           no
GTCNVDFLT          yes
```

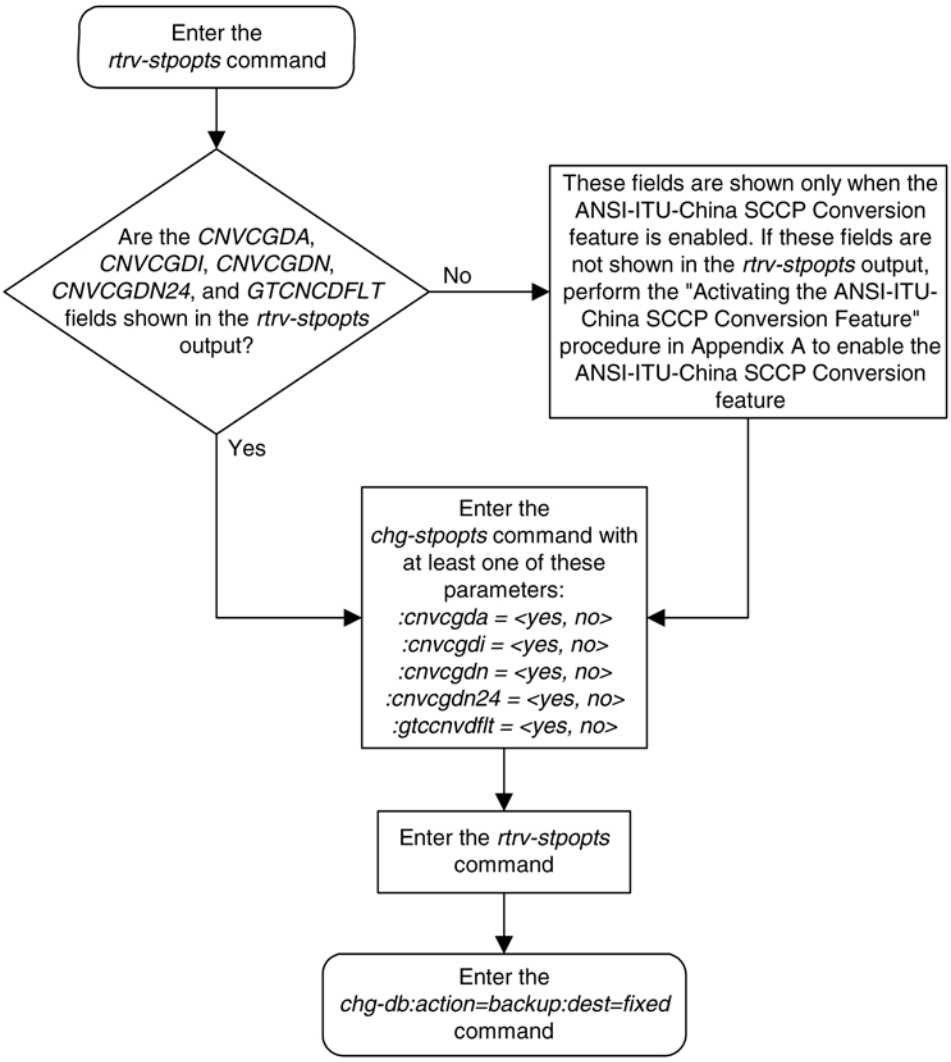
   Note: The `rtrv-stpopts` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-stpopts` command, refer to the `rtrv-stpopts` command description in the *Commands Manual*.

4. Back up the new changes using the `chg-db:action=backup:dest=fixed` command.

   These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 33: Changing the ANSI-ITU-China SCCP Conversion Options



Changing SCCP Class 1 Sequencing Option

This procedure is used to change the option for sequencing UDT/XUDT Class 1 messages using the `chg-sccpopts` command and the `class1seq` parameter. The `class1seq` parameter has two values `on` and `off`.

When the `class1seq` parameter value is `on`, UDT/XUDT Class 1 messages are delivered to the remote node in the order in which they were received (in sequence). Load sharing of these messages is performed in the dominant mode, overriding the load sharing configuration in the MAP and MRN tables.

Delivering the UDT/XUDT Class 1 ITU messages in sequence is guaranteed only if the `randsls` parameter value of the `chg-stpopts` command is either `off` or `class0`. If you wish to guarantee delivering these messages in sequence, the `class1seq=on` and the `randsls=all` parameters

should not be used together in the EAGLE 5 ISS. The value of the `randsls` parameter is shown in the `rtrv-stpopts` command.

When the `class1seq` parameter value is `off`, load sharing of the UDT/XUDT Class 1 messages is performed using the load sharing configuration in the MAP and MRN tables. The delivery of the UDT/XUDT Class 1 messages in sequence is not guaranteed.

1. Display the existing value for the `class1seq` parameter by entering the `rtrv-sccpopts` command. This is an example of the possible output.

```
rlghncxa03w 07-05-17 16:02:05 GMT  EAGLE5 37.0.0
SCCP OPTIONS
------------------------------
CLASS1SEQ                  off
DFLTGTTMODE               CdPA
```

2. Verify the value of the `randsls` parameter of the `chg-stpopts` command by entering the `rtrv-stpopts` command.

   Note: If the `class1seq` parameter value in step 1 is `on`, skip step 2 and 3, and go to step 4.

   This is an example of the possible output.

```
rlghncxa03w 07-05-17 16:02:05 GMT  EAGLE5 37.0.0
STP OPTIONS
----------------------
RANDSLS          class0
```

   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, refer to the `rtrv-stpopts` command description in the *Commands Manual*.

   Delivering the UDT/XUDT Class 1 ITU messages in sequence is guaranteed only if the `randsls` parameter value of the `chg-stpopts` command is either `off` or `class0` and if the `class1seq` parameter value is `on`. If you wish to guarantee delivering these messages in sequence, the `class1seq=on` and the `randsls=all` parameters should not be used together in the EAGLE 5 ISS.

3. Change the `randsls` parameter value to either `off` or `class0`. Refer to the "Configuring the EAGLE 5 ISS for Random SLS Generation" procedure in the Database *Administration Manual - SS7* for more information on using the `off` and `class0` options. For this example, enter this command.

   Note:

   If the `randsls` parameter value shown in step 2 is either `off` or `class0`, or if you wish to use the `randsls=all` parameter and the `class1seq=on` parameters, skip step 3 and go to step 4.

   `chg-stpopts:randsls=class0`

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

```
rlghncxa03w 07-05-07 00:22:57 GMT  EAGLE5 37.0.0
CHG-STPOPTS: MASP A - COMPLTD
```

4. Change the `class1seq` parameter value.

   If you wish to enable the sequencing of UDT/XUDT Class 1 messages, enter this command.

```
chg-sccpopts:class1seq=on
```

If you wish to disable the sequencing of UDT/XUDT Class 1 messages, enter this command.

```
chg-sccpopts:class1seq=off
```

When the `chg-sccpopts` command has successfully completed, this message should appear.

```
rlghncxa03w 07-05-07 00:22:57 GMT  EAGLE5 37.0.0
CHG-SCCPOPTS: MASP A - COMPLTD
```

5. Verify the changes using the `rtrv-sccpopts` command. This is an example of the possible output.

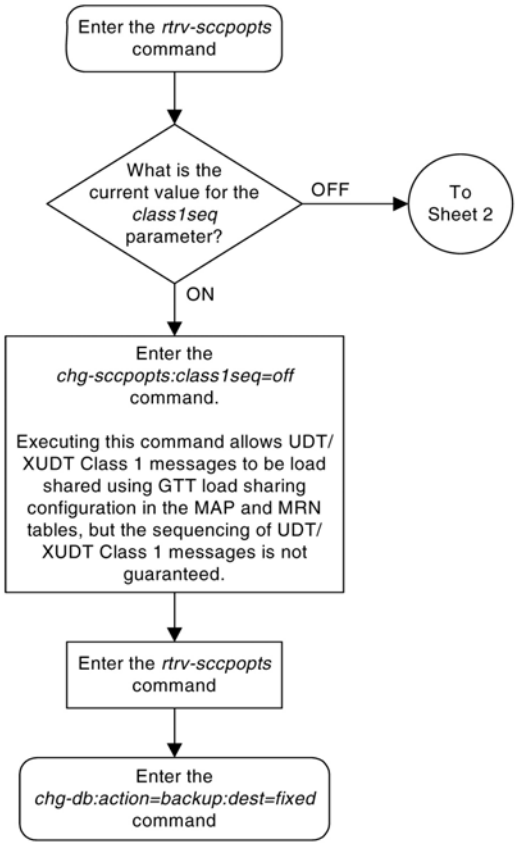
```
rlghncxa03w 07-05-17 16:02:05 GMT  EAGLE5 37.0.0

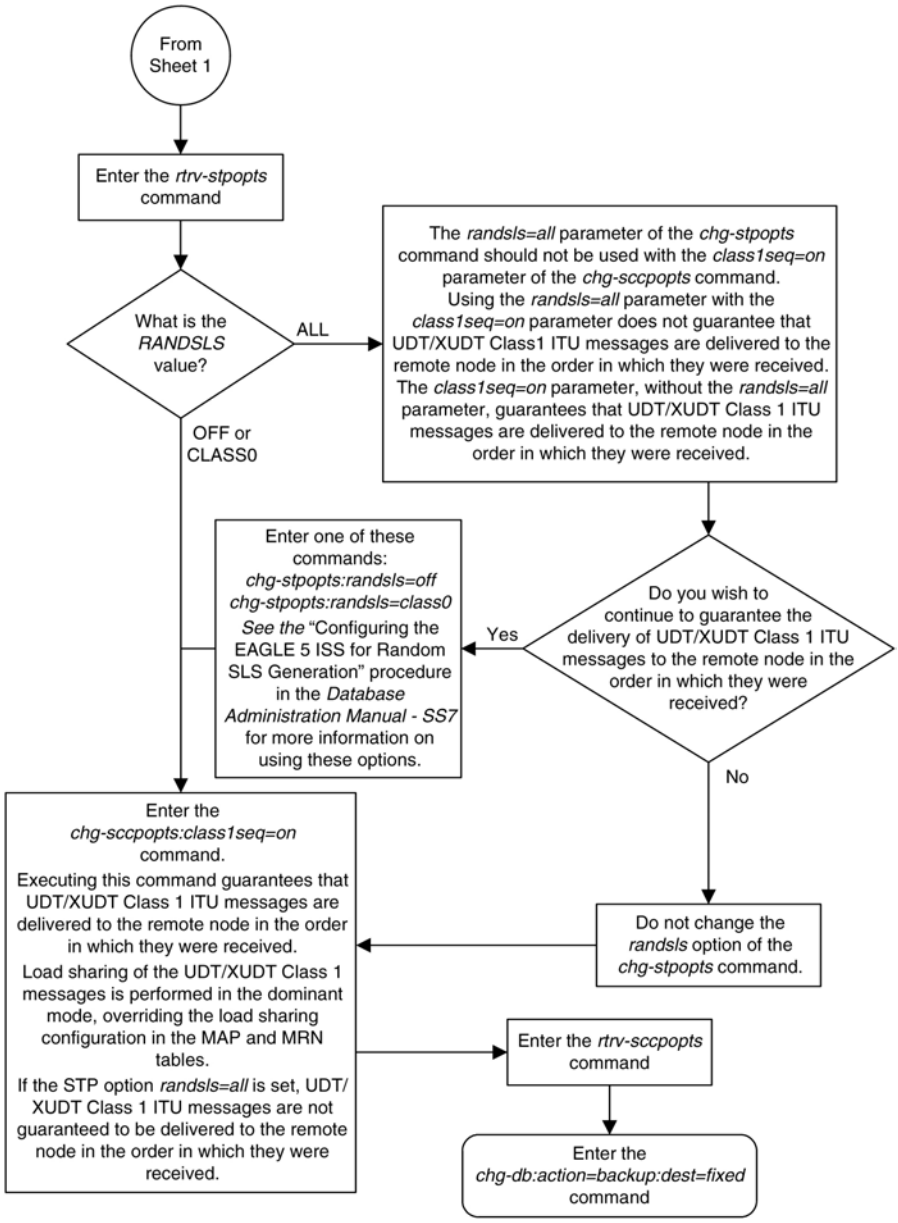
SCCP OPTIONS
------------------------------
CLASS1SEQ                    on
DFLTGTTMODE                CdPA
```

6. Back up the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 34: Changing the SCCP Class 1 Sequencing Options


Enter the *rtrv-sccpopts* command
What is the current value for the *class1seq* parameter?
OFF
To Sheet 2
ON
Enter the *chg-sccpopts:class1seq=off* command.
Executing this command allows UDT/XUDT Class 1 messages to be load shared using GTT load sharing configuration in the MAP and MRN tables, but the sequencing of UDT/XUDT Class 1 messages is not guaranteed.
Enter the *rtrv-sccpopts* command
Enter the *chg-db:action=backup:dest=fixed* command



Changing the SCCP Alarm Thresholds

This procedure is used to change the SCCP alarm thresholds using the `chg-th-alm` command and these parameters.

`:sccptpscap` – The percentage for the SCCP load capacity (TPS) threshold alarm, from 0 to 100 and is shown in the `SCCP TPS Threshold` field of the `rtrv-th-alm` output and in the `System TPS Alarm Threshold` field in the `rept-stat-sccp` output. The system default value is 80. When this threshold is exceeded, UAM 330 is generated.

:sccpcalcmthd – The calculation method used for determining if the SCCP load capacity (TPS) threshold alarm level has been exceeded. This parameter contains these values:

- N – All in-service normal cards are used in the SCCP load capacity (TPS) threshold alarm level calculation.
- NPLUS1 – All in-service normal cards minus one of the in-service normal card with the highest TPS capacity are used in the SCCP load capacity (TPS) threshold alarm level calculation.

The system default value is N.

The value of this parameter is shown in the SCCP Calculation Method field of the rtrv-th-alm output and in the System SCCP Capacity Calc. Method field in the rept-stat-sccp output.

The service modules that can be used are TSMs, DSMs and E5-SM4Gs. Each type of service module supports a certain number of transactions per second (TPS), TSMs - 850, DSMs - 1700, and E5-SM4G - 1700 or 5000 if the E5-SM4G Throughput Capacity feature is enabled. If the sccpcalcmthd=n parameter is specified, the value in the System SCCP Capacity Calc. Method field in the rept-stat-sccp output is the sum of the TPS ratings of all the in-service normal service modules, shown with the entry IS-NR in the PST column in the rept-stat-sccp output.

If the sccpcalcmthd=nplus1 parameter is specified, the value in the System SCCP Capacity Calc. Method field in the rept-stat-sccp output is the sum of the TPS ratings of all the in-service normal service modules, shown with the entry IS-NR in the PST column in the rept-stat-sccp output, minus the TPS rating of the highest rated in-service normal card. If the EAGLE 5 ISS contains only TSMs, only DSMs, or only E5-SM4Gs as service modules, then the TPS rating of one of the TSM, DSM, or E5-SM4G, as applicable, is subtracted from the sum of the TPS ratings of all the in-service normal service modules. If the EAGLE 5 ISS contains both TSMs and DSMs, then the TPS rating of one of the DSMs is subtracted from the sum of the TPS ratings of all the in-service normal service modules. If the EAGLE 5 ISS contains TSMs, DSMs, and E5-SM4Gs then the TPS rating of one of the E5-SM4Gs is subtracted from the sum of the TPS ratings of all the in-service normal service modules.

:gttservl1 – The percentage of the SCCP GTT service errors, shown in the FAIL RATIO column for the GTT row of the TOTAL SERVICE STATISTICS: section rept-stat-sccp output, from 1 to 100, that when exceeded, generates major alarm UAM 0452. The system default value is 10.

:gttservl2 – The percentage of the SCCP GTT service errors, shown in the FAIL RATIO column for the GTT row of the TOTAL SERVICE STATISTICS: section rept-stat-sccp output, from 1 to 100, that when exceeded, generates critical alarm UAM 0453. The system default value is 20.

Note: After the chg-th-alm command is performed, the gttservl2 parameter value must be greater than the gttservl1 parameter value.

:nongttservl1 – The percentage of the SCCP non-GTT service errors (for example, GPORT, GFLEX, EIR, etc.), shown in the FAIL RATIO column for the rows other than GTT in the TOTAL SERVICE STATISTICS: section of the rept-stat-sccp output, from 1 to 100, that when exceeded, generates major alarm UAM 0452. The system default value is 10.

:nongttservl2 – The percentage of the SCCP non-GTT service errors (for example, GPORT, GFLEX, EIR, etc.), shown in the FAIL RATIO column for the rows other than GTT in the TOTAL SERVICE STATISTICS: section of the rept-stat-sccp output, from 1 to 100, that when exceeded, generates critical alarm UAM 0453. The system default value is 20.

Note: After the chg-th-alm command is performed, the nongttservl2 parameter value must be greater than the nongttservl1 parameter value.

`:sccpthlv1intvl` - The number of minutes, from 0 to 1440, during which the SCCP threshold level 1 alarm (UAM 0452) cannot be raised more than once. The system default value is 0.

`:sccpthlv2intvl` - The number of minutes, from 0 to 1440, during which the SCCP threshold level 2 alarm (UAM 0453) cannot be raised more than once. The system default value is 0.

Note: After the `chg-th-alm` command is performed, the `sccpthlv2intvl` parameter value must be greater than the `sccpthlv1intvl` parameter value.

For more information on these alarms, refer to the *Unsolicited Alarm and Information Messages Manual* .

The `chg-th-alm` command contains other optional parameters. These parameters are not shown here because they are not necessary to provision the SCCP alarm thresholds. These parameters are explained in more detail in the *Commands Manual*.

1. Display the current SCCP alarm thresholds in the database by entering the`rtrv-th-alm` command. This is an example of the possible output.

```
rlghncxa03w 08-03-28 09:12:36 GMT EAGLE5 38.0.0
SCCP TPS Threshold:                  80%
SCCP Calculation Method:             N
GTT SCCP Service Alarm Level 1:      10%
GTT SCCP Service Alarm Level 2:      20%
Non-GTT SCCP Service Alarm Level 1:  10%
Non-GTT SCCP Service Alarm Level 2:  20%
SCCP Service Alarm Level 1 Interval: 0
SCCP Service Alarm Level 2 Interval: 0
Command Executed
```

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

2. Change the SCCP alarm thresholds by entering the `chg-th-alm` command with at least one of the SCCP alarm threshold parameters.

   If a SCCP alarm threshold parameter is not specified with the `chg-th-alm` command, that parameter value will not be changed. The system default values for the SCCP alarm threshold parameters are:

   - `sccptpscap` – 80
   - `sccpcalcmthd` – n
   - `gttservl1` – 10
   - `gttservl2` – 20
   - `nongttservl1` – 10
   - `nongttservl2` – 20
   - `sccpthlv1intvl` – 10
   - `sccpthlv2intvl` – 20.

   Note: After the `chg-th-alm` command is performed, the `gttservl2` parameter value must be greater than the `gttservl1` parameter value, the `nongttservl2` parameter value must be greater than the `nongttservl1` parameter value, and the `sccpthlv2intvl` parameter value must be greater than the `sccpthlv1intvl` parameter value.

   For this example, enter this command.

```
chg-th-alm:sccptpscap=70:gttservl1=70:gttservl2=80:nongttservl1=30:nongttservl2=40
:sccpthlv1intvl=120:sccpthlv2intvl=240
```

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

```
rlghncxa03w 07-05-28 09:12:36 GMT EAGLE5 37.0.0
CHG-TH-ALM: MASP A - COMPLTD
```

3. Verify the changes using the `rtrv-th-alm` command. This is an example of the possible output.

```
rlghncxa03w 08-3-28 09:12:36 GMT EAGLE5 38.0.0
SCCP TPS Threshold:                 70%
SCCP Calculation Method:            N
GTT SCCP Service Alarm Level 1:     70%
GTT SCCP Service Alarm Level 2:     80%
Non-GTT SCCP Service Alarm Level 1:  30%
Non-GTT SCCP Service Alarm Level 2:  40%
SCCP Service Alarm Level 1 Interval: 120
SCCP Service Alarm Level 2 Interval: 240
Command Executed
```

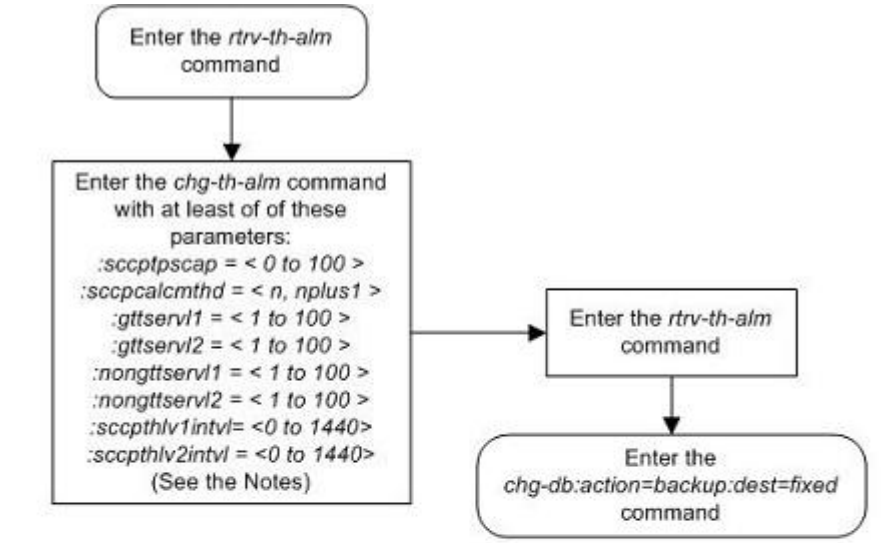
Note: The `rtrv-th-alm` command output contains other fields that are not used in this procedure. If you wish to see all the fields displayed by the `rtrv-th-alm` command, refer to the `rtrv-th-alm` command description in the *Commands Manual*.

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.
```

Figure 35: Changing the SCCP Alarm Thresholds



Notes:

1. If any parameter is not specified with the *chg-th-alm* command, that parameter value will not be changed.
2. The system default values for the parameters used in this procedure are:

sccptpscap – 80	*sccpcalcmthd – n*
gttservl1 – 10	*gttservl2 – 20*
nongttservl1 – 10	*nongttservl2 – 20*
sccpthlv1intvl – 0	*sccpthlv2intvl – 0.*

3. After the *chg-th-alm* command is performed, the *gttservl2* parameter value must be greater than the *gttservl1* parameter value.
4. After the *chg-th-alm* command is performed, the *nongttservl2* parameter value must be greater than the *nongttservl1* parameter value.
5. After the *chg-th-alm* command is performed, the *sccpthlv2intvl* parameter value must be greater than the *sccpthlv1intvl* parameter value.

Changing the Transaction-Based GTT Load Sharing Options

This procedure is used to change the options for performing Transaction-Based GTT Load Sharing using the `chg-sccpopts` command and with these parameters:

`:tgtt0` – enable or disable Transaction-Based GTT Load Sharing for SCCP Class 0 UDT, UDTS, XUDT, or XUDTS messages. The values for this parameter are:

- `udt` – Transaction-Based GTT Load Sharing is performed for Class 0 UDT or UDTS messages.
- `xudt` – Transaction-Based GTT Load Sharing is performed for Class 0 XUDT or XUDTS messages.
- `both` – Transaction-Based GTT Load Sharing is performed for Class 0 UDT, UDTS. XUDT and XUDTS messages.
- `none` – Transaction-Based GTT Load Sharing is not performed for SCCP Class 0 messages.

`:tgtt1` – enable or disable Transaction-Based GTT Load Sharing for SCCP Class 1 UDT, UDTS, XUDT, or XUDTS messages. The values for this parameter are:

- udt – Transaction-Based GTT Load Sharing is performed for Class 1 UDT or UDTS messages.
- xudt – Transaction-Based GTT Load Sharing is performed for Class 1 XUDT or XUDTS messages.
- both – Transaction-Based GTT Load Sharing is performed for Class 1 UDT, UDTS. XUDT and XUDTS messages.
- none – Transaction-Based GTT Load Sharing is not performed for SCCP Class 1 messages.

:tgttudtkey – the Transaction Parameter for the incoming UDT or UDTS messages. The values for this parameter are:

- mtp – Transaction-Based GTT Load Sharing is performed on the MTP parameter for UDT and UDTS messages.
- sccp – Transaction-Based GTT Load Sharing is performed on the SCCP parameter for UDT and UDTS messages.
- tcap – Transaction-Based GTT Load Sharing is performed on the TCAP parameter for UDT and UDTS messages.
- enhmtp – Transaction-Based GTT Load Sharing is performed using the enhanced MTP algorithm for UDT and UDTS messages.

:tgttxudtkey – the Transaction Parameter for the incoming XUDT or XUDTS messages. The values for this parameter are:

- mtp – Transaction-Based GTT Load Sharing is performed on the MTP parameter for XUDT and XUDTS messages.
- sccp – Transaction-Based GTT Load Sharing is performed on the SCCP parameter for XUDT and XUDTS messages.
- enhmtp – Transaction-Based GTT Load Sharing is performed using the enhanced MTP algorithm for XUDT and XUDTS messages.

The Transaction-Based GTT Load Sharing feature must be enabled to change these parameter values with the chg-sccpopts command. The tggt0, tggt1, tgttudtkey, and tgttxudtkey fields in the output of the rtrv-sccpopts command are shown when the Transaction-Based GTT Load Sharing feature is enabled. If the tggt0, tggt1, tgttudtkey, and tgttxudtkey fields are not shown in the output of the rtrv-sccpopts command, perform the *Activating the Transaction-Based GTT Load Sharing Feature* on page 821 procedure to enable the Transaction-Based GTT Load Sharing feature.

When the Transaction-Based GTT Load Sharing feature is enabled, these values for the tggt0, tggt1, tgttudtkey, and tgttxudtkey fields are shown in the rtrv-sccpopts output:

- tggt0 – none
- tggt1 – none
- tgttudtkey – mtp
- tgttxudtkey – mtp.

If any parameter is not specified with the chg-sccpopts command, that parameter value will not be changed.

If the value both is specified for the tggt0 or tggt1 parameters, the entry UDT,XUDT is shown in the tggt0 or tggt1 fields of the rtrv-sccpopts output.

For more information on the Transaction-Based GTT Load Sharing feature, refer to the *Transaction-Based GTT Load Sharing* on page 49 section.

1. Display the existing values for the Transaction-Based GTT Load Sharing feature options by entering the `rtrv-sccpopts` command. This is an example of the possible output.

```
rlghncxa03w 08-09-17 16:02:05 GMT  EAGLE5 39.2.0
SCCP OPTIONS
----------------------------
tgtt0                    NONE
tgtt1                    NONE
tgttudtkey                MTP
tgttxudtkey               MTP
```

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

   If the `tggt0`, `tggt1`, `tgttudtkey` and `tgttxudtkey` fields are not shown in the output of the `rtrv-sccpopts` command, the Transaction-Based GTTLoad Sharing feature is not enabled. For these fields to be shown in the `rtrv-sccpopts` output, and to change these values, the Transaction-Based GTTLoad Sharing feature must be enabled. Perform the *Activating the Transaction-Based GTT Load Sharing Feature* on page 821 procedure to enable the Transaction-Based GTTLoad Sharing feature.

2. Change the Transaction-Based GTT Load Sharing feature options by entering the chg-sccpopts command with at least one of the Transaction-Based GTT Load Sharing parameters. For this example, enter this command.

   `chg-sccpopts:tggt0=udt:tgtt1=both:tgttudtkey=tcap:tgttxudtkey=enhmtp`

   If any parameter is not specified with the `chg-sccpopts` command, that parameter value will not be changed.

   When the `chg-sccpopts` command has successfully completed, this message should appear.

```
rlghncxa03w 08-09-07 00:22:57 GMT  EAGLE5 39.2.0
CHG-SCCPOPTS: MASP A - COMPLTD
```

3. Verify the changes using the `rtrv-sccpopts` command. This is an example of the possible output.

```
rlghncxa03w 08-09-17 16:02:05 GMT  EAGLE5 39.2.0

SCCP OPTIONS
-------------------------------
tgtt0                       UDT
tgtt1                   UDT,XUDT
tgttudtkey                  TCAP
tgttxudtkey               ENHMTP
```

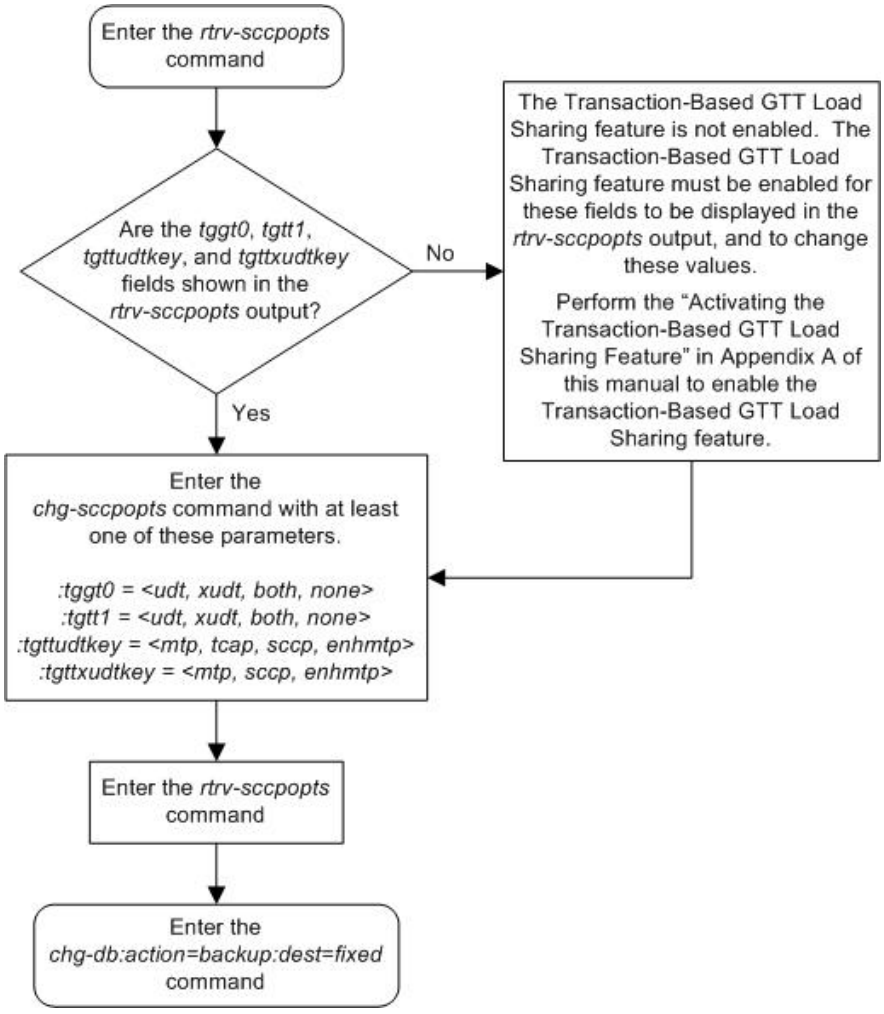
   Note: The `rtrv-sccpopts` command output contains other fields that are not used by this procedure. If you wish to see all the fields displayed by the `rtrv-sccpopts` command, refer to the `rtrv-sccpopts` command description in the *Commands Manual*.

4. Back up the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

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

Figure 36: Changing the Transaction-Based GTT Load Sharing Options



Adding a Loopset

This procedure is used to add a loopset to the database using the `ent-loopset` command.

The `ent-loopset` command uses these parameters.

`:name` - The name of the loopset. The loopset name can contain up to 8 characters, with the first character being a letter.

`:pc1/pc1a/pc1i/pc1n/pc1n24` - The point codes assigned to the specified loopset, either an ANSI point (`pc1/pc1a`), ITU-1 or ITU-1 spare point (`pc1i`), a 14-bit ITU-N or 14-bit ITU-N spare point code (`pc1n`), or a 24-bit ITU-N (`pc1n24`) point code.

Note: See Chapter 2, *Configuring Destination Tables* in the *Database Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for the definition of the different formats that can be used for ITU national point codes.

`:mode` - Mode of operation. Can be notify or discard. This is an optional parameter that specifies whether the message is discarded when an SCCP loop is detected. The "Notify only" mode of operation generates UIMs but not actually discard the message, which allows a user to capture and verify messages. However, the "Discard" mode of operation generates the UIMs and also discard the MSUs.

To add a loopset to the database, the SCCP Loop Detection feature must be enabled. The `rtrv-ctrl-feat` command output shows whether or not the SCCP Loop Detection feature is enabled. If the SCCP Loop Detection feature is not enabled, perform the *Activating the SCCP Loop Detection Feature* on page 830 procedure to enable this feature.

All the point codes specified with the `pc1/pc1a/pc1i/pc1n/pc1n24` parameter must be the same type of point code. The point code values are separated by commas with no spaces between the commas and the point code values as shown in the example `pc1=002-002-002,003-003-003,004-004-004`. This example specified three ANSI point codes for the loopset.

A maximum of twelve point codes can be assigned to a single loopset. However, this procedure can be used to assign a maximum of six point codes to a single loopset. If you wish to add more point codes to the loopset entries, perform the *Changing the Attributes of a Loopset* on page 453 procedure.

A maximum of 1000 loopsets can be assigned to a loopset database. If adding the new loopset entries exceed the maximum capacity of the loopset table displayed in the `rtrv-loopset` command output, entries in the loopset table must be removed to ensure that the new loopset entries can be added. Perform the *Removing a Loopset* on page 446 procedure to remove the required number of loopset entries

1. Display the loopsets in the database by entering this command.

   `rtrv-loopset:num=1000:force=yes`

   This is an example of the possible output.

```
rlghncxa03w 06-10-18  08:52:38  GMT EAGLE Rel 35.6.0

LoopSet          Mode       Point Codes
=================================================================
rtp1             notify      005-005-005       007-007-007    (ANSI)
                             003-004-003       003-007-003
                             005-007-005       007-004-007
                             003-003-009


LOOPSET table is (1 of 1000) 1% full
```

   Note: If the `rtrv-loopset` command is entered with no other parameters specified, a maximum of 50 entries are displayed. To display more than 50 entries, the `force=yes` parameter must be specified with the `rtrv-loopset` command and the num parameter value must be greater than 50. Since there can be a maximum of 1000 loopsets in the database, to display all the loopsets in the database, the `force=yes` and `num=1000` parameters must be specified with the `rtrv-loopset` command.

2. If error message `E4565` is displayed after the `rtrv-loopset` command is executed, theSCCP Loop Detection feature is not enabled.

If the SCCP Loop Detection feature is not enabled, perform the *Activating the SCCP Loop Detection Feature* on page 830 procedure to enable the SCCP Loop Detection feature. If error message `E2584` is displayed after the `rtrv-loopset` command is executed, the GTT feature is not on. Perform the *Activating the SCCP Loop Detection Feature* on page 830 procedure to turn the GTT feature on and enable the SCCP Loop Detection feature.

3. The EAGLE 5 ISS can contain a maximum of 1000 loopset. If the `rtrv-loopset` output in step 1 show 1000 loopsets, enough loopsets must be removed from the database to allow the new loopsets to be added.

   Perform the *Removing a Loopset* on page 446 procedure and remove the required number of loopsets to allow the addition of the new loopsets. If no loopsets are removed, the new loopsets cannot be added and this procedure cannot be performed.

4. Add the loopset to the database using the `ent-loopset` command.

   For this example, enter this command

   `ent-loopset:name=rtp2:pc1=2-2-2,3-3-3,4-4-4,5-5-5`

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

```
rlghncxa03w 06-10-18 08:31:28 GMT EAGLE Rel 35.6.0

LOOPSET table is (12 of 1000) 1% full
ENT-LOOPSET: MASP A - COMPLTD
```

5. Verify the changes using the `rtrv-loopset` command with the loopset name specified in step 4.

   For this example , enter this command.

   `rtrv-loopset:name=rtp2`

   This is an example of the possible output.

```
rlghncxa03w 06-10-18 08:31:28 GMT EAGLE Rel 35.6.0

LoopSet       Mode       Point Codes
=============================================================================
rtp2         notify     002-002-002        003-003-003     (ANSI)
                        004-004-004        005-005-005

LOOPSET table is (2 of 1000) 1% full
```

6. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

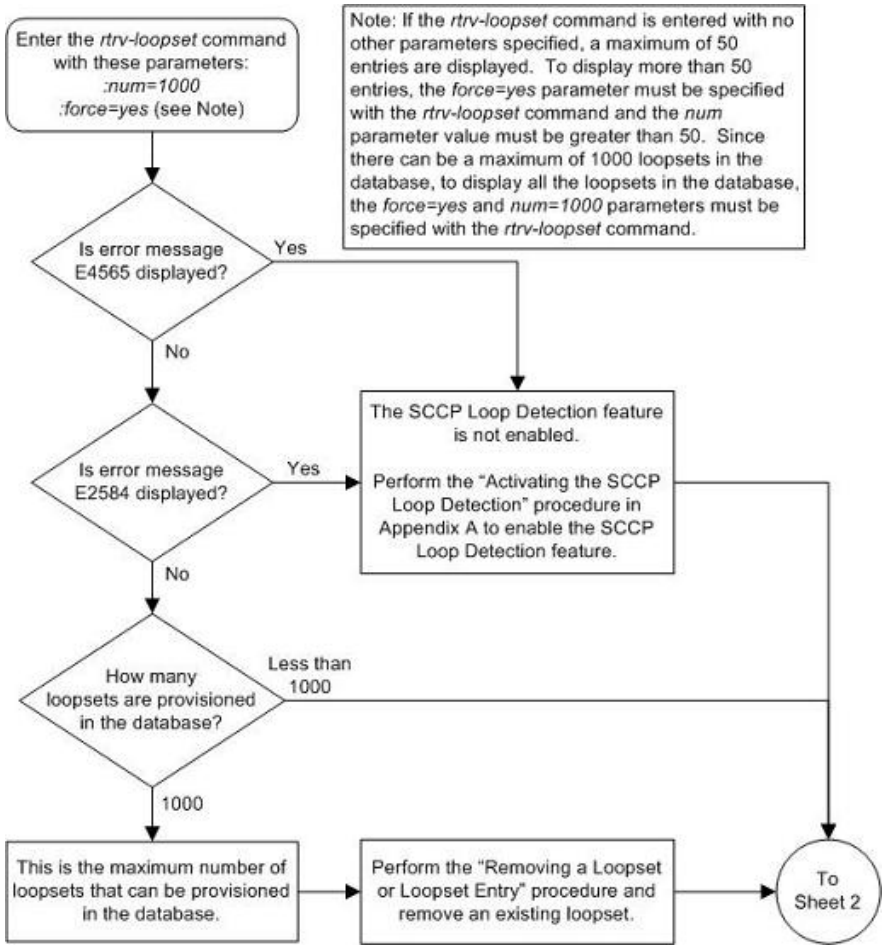
   These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

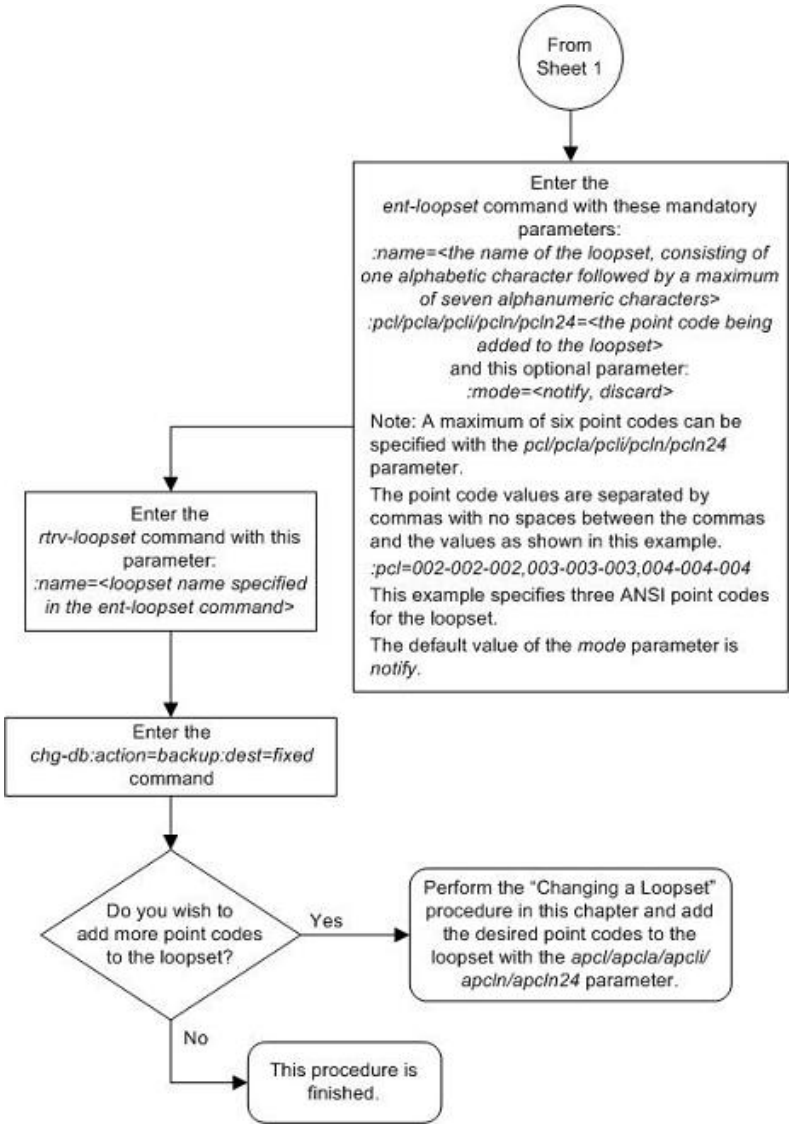
```
BACKUP (FIXED) : MASP A-Backup starts on active MASP.
BACKUP (FIXED) : MASP A-Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A-Backup starts on standby MASP.
BACKUP (FIXED) : MASP A-Backup on standby MASP to fixed disk complete.
```

7. A loopset can contain a maximum of 12 point codes. If you wish to add more point codes to this loopset, perform the *Changing the Attributes of a Loopset* on page 453 procedure and add the additional point codes with the `apcl/apcla/apcli/apcln/apcln24` parameter.

   If you do not wish to add more point codes to the loopset, this procedure is finished.

Figure 37: Adding a Loopset to the Database


Enter the rtrv-loopset command with these parameters:
:num=1000
:force=yes (see Note)
Note: If the rtrv-loopset command is entered with no other parameters specified, a maximum of 50 entries are displayed. To display more than 50 entries, the force=yes parameter must be specified with the rtrv-loopset command and the num parameter value must be greater than 50. Since there can be a maximum of 1000 loopsets in the database, to display all the loopsets in the database, the force=yes and num=1000 parameters must be specified with the rtrv-loopset command.
Is error message E4565 displayed?
Yes
No
Is error message E2584 displayed?
Yes
The SCCP Loop Detection feature is not enabled.
Perform the "Activating the SCCP Loop Detection" procedure in Appendix A to enable the SCCP Loop Detection feature.
No
How many loopsets are provisioned in the database?
Less than 1000
1000
This is the maximum number of loopsets that can be provisioned in the database.
Perform the "Removing a Loopset or Loopset Entry" procedure and remove an existing loopset.
To Sheet 2



Removing a Loopset

This procedure is used to remove an entire loopset from the database or a specific point code in a loopset using the `dlt-loopset` command.

The `dlt-loopset` command uses these parameter.

`:name` - The name of the loopset being removed, shown in the `rtrv-loopset` output.

`:force` – This parameter has two values, yes or no. The value yes allows the point code in the loopset to be removed if the loopset is assigned to entries in either the `rtrv-gtt` or `rtrv-gta` outputs. The value no requires that any references to the loopset must be removed from the GTT or GTA entries before the loopset or the point code in the loopset can be removed. Perform one

of these procedures to remove the reference to the loopset, depending on whether or not the EGTT feature is on. The status of the EGTT feature is shown in the `rtrv-feat` command output.

- If the EGTT feature is not on – Enter the `rtrv-gtt` command to verify the loopset references. Perform the *Changing a Global Title Translation* on page 524 procedure and change the loopset reference to `NONE` or to another loopset name, or remove the global title translation by performing the *Removing a Global Title Translation* on page 519 procedure.
- If the EGTT feature is on – Enter the `rtrv-gta` command to verify the loopset references. Perform the *Changing Global Title Address Information* on page 681 procedure and change the loopset reference to `NONE` or to another loopset name, or remove the entry by performing the *Removing Global Title Address Information* on page 672 procedure.

`:pcl/pcla/pcli/pcln/pcln24` – The point code, either an ANSI point code (`pcl/pcla`), ITU-I or ITU-I spare point code (`pcli`), a 14-bit ITU-N or 14-bit ITU-N spare point code (`pcln`), or a 24-bit ITU-N (`pcln24`) point code, that is assigned to the loopset and shown in the `rtrv-loopset` output.

If the `dlt-loopset` command is specified with the `name` and `pcl/pcla/pcli/ pcln/pcln24` parameter, the specified point code is removed from the loopset.

If the `dlt-loopset` command is specified with the `name` parameter and without the `pcl/pcla/pcli/pcln/pcln24` parameter, the entire loopset is removed from the database.

1. Display the loopsets in the database by entering this command. This is an example of the possible output

   ```
   rtrv-loopset:num=1000:force=yes
   ```

   Note: If the `rtrv-loopset` command is entered with no other parameters specified, a maximum of 50 entries are displayed. To display more than 50 entries, the `force=yes` parameter must be specified with the `rtrv-loopset` command and the num parameter value must be greater than 50. Since there can be a maximum of 1000 loopsets in the database, to display all the loopsets in the database, the `force=yes` and `num=1000` parameters must be specified with the `rtrv-loopset` command.

   This is an example of the possible output.

   ```
   rlghncxa03w 06-10-18 08:52:38 GMT  EAGLE Rel 35.6.0
   LoopSet   Mode     Point Codes
   ========================================================================
   rtp1      notify   005-005-005       007-007-007      (ANSI)
                      003-004-003       003-007-003
                      005-007-005       007-004-007
                      005-004-005

   rtp2      notify   002-002-002       003-003-003      (ANSI)
                      004-004-004       005-005-005

   LOOPSET table is (2 of 1000) 1% full
   ```

   If error message `E4565` is displayed or if no loopsets are displayed, this procedure cannot be performed.

   Note: If the `force=yes` parameter will be specified with the `dlt-loopset` command, only a specific point code can be removed from the loopset. Skip steps 2 through 6 and go to step 7.

2. Verify whether or not the EGTT feature is turned on by entering the `rtrv-feat` command. If the EGTT featured is turned on, the EGTT field should be set to on.

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

Note: If the EGTT feature is not turned on, skip steps 3 and step 4, and go to step 5.

3. Display the GTT sets in the database using the `rtrv-gttset` command. This is an example of the possible output.

```
rlghncxa03w 07-03-07 00:27:31 GMT EAGLE5 35.6.0
GTTSN      NETDOM  SETTYPE  NDGT
setans015  ansi    CDGTA    6
set1       ansi    CDGTA    6
```

4. Display the global title address (GTA) information for a GTT set from step 3. Execute the `rtrv-gta` command with the `gttsn` parameter value shown in the output of step 3 and with the name of the loopset being removed, specified with the `loopset` parameter. For this example, enter this command.

```
rtrv-gta:gttsn=set1:loopset=rtp1
```

This is an example of the possible output.

```
rlghncxa03w 07-03-07 00:27:31 GMT EAGLE5 35.6.0
GTTSN      NETDOM  SETTYPE  NDGT
set1       ansi    CDGTA    6
GTT TABLE IS   1 % FULL (2 of 269999)

START GTA END GTA   XLAT   RI     PCA
919460    919460    DISC
919461    919461    DPC    SSN    002-002-002
     SSN=--- CCGT=no  NTT=---
     LOOPSET = rtp1
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------

Command Retrieved 2 Entries
```

If any of the displayed entries reference the loopset being removed, for those entries, perform the *Changing Global Title Address Information* on page 681 procedure and change the loopset reference to `NONE` or to another loopset name, or remove the entry by performing the *Removing Global Title Address Information* on page 672 procedure.

If the displayed entries do not reference the loopset being removed, repeat this step with the other GTT set names displayed in step 3.

When all the GTT set names have been displayed and all applicable global title translation entries have been changed or removed in this step, go to step 7.

5. Display the translation types in the database using the `rtrv-tt` command. This is an example of the possible output.

```
rlghncxa03w 07-03-25 09:42:31 GMT  EAGLE5 35.6.0
TYPEA      TTN        NDGT
1          lidb       5
2          c800       10
3          d700       6
5          scp1       6
10         scp2       6
15         scp3       3

ALIAS      TYPEA
30         5
```

```
40          10
50          3
65          3

TYPEI       TTN         NDGT
105         itudb       8

ALIAS       TYPEI
7           105

TYPEN       TTN         NDGT
120         dbitu       7

ALIAS       TYPEN
8           120
```

6. Display the global title translations in the database using the `rtrv-gtt` command specifying a translation type from the `rtrv-tt` command output shown in step 5 and with the name of the loopset being removed, specified with the `loopset` parameter. For this example, enter this command.

   `rtrv-gtt:typea=10:loopset=rtp1`

   This is an example of the possible output.

```
rlghncxa03w 08-10-25 09:43:31 GMT  EAGLE5 39.2.0
TYPEA  TTN         NDGT
10     scp2        6

GTT TABLE IS  10 % FULL    (27000 of 269999)

START GTA             END GTA               XLAT   RI     PC
615370                615380                DPCSSN SSN    003-003-003
     MAPSET=6      SSN=254 NGT=---
     LOOPSET = rtp1

Command Retrieved 1 Entries
```

   If any of the displayed entries reference the loopset being removed, for those entries, perform the *Changing a Global Title Translation* on page 524 procedure and change the loopset reference to `NONE` or to another loopset name, or remove the global title translation by performing the *Removing a Global Title Translation* on page 519 procedure.

   If the displayed entries do not reference the loopset being removed, repeat this step with the other translation types displayed in step 5.

   When all the translation types have been displayed and all applicable global title translation entries have been changed or removed in this step, go to step 7.

7. If an entire loopset is being removed from the database, specify the `dlt-loopset` command with the name of the loopset you wish to remove.

   If a point code value is being removed from the loopset, specify the `dlt-loopset` command with the name of the loopset and the point code value you wish to remove.

   For this example, enter this command to remove the entire loopset.

   `dlt-loopset:name=rtp1`

This message should appear.

```
rlghncxa03w 06-10-18 08:48:25 GMT  EAGLE Rel 35.6.0
LOOPSET table is (11 of 1000) 1% full
DLT-LOOPSET: MASP A – COMPLTD
```

Note: If the loopset containing the point code being removed in this step is referenced by an entry shown in either the `rtrv-gtt` or `rtrv-gta` outputs, and those entries have not been removed or the loopset assignment for these entries has not been changed, the `force=yes` parameter must be specified with the `dlt-loopset` command.

If you wish to remove other point codes from the loopset, repeat this step. When you have finished removing the point codes from the loopset, go to step 8.

8. Verify the changes using the `rtrv-loopset` command with the name of the loopset specified in step 7. For this example, enter this command.

   ```
   rtrv-loopset:name=rtp1
   ```

   The following message should appear if you have deleted specific point codes in the loopset.

   ```
   rlghncxa03w 06-10-18 08:52:38 GMT  EAGLE Rel 35.6.0
   LoopSet   Mode     Point Codes
   ========================================================================
   rtp1      notify   005-005-005       003-004-003      (ANSI)
                      003-007-003       005-007-005
                      007-004-007
   ```

   The following message should appear if you have deleted an entire loopset.

   ```
   E4568 : Loopset Entry does not exist
   ```

9. Backup the new changes using the `chg-db:action=backup:dest=fixed` commend. 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.
   ```

   If a point code value was removed from a loopset in step 7 and the `force=yes` was not used in step 7, and you wish to assign this loopset to the GTT or GTA entries that were removed or changed in steps 4 or 6, go to step 10.

   If any of the following actions were performed in step 7, this procedure is finished. Do not perform step 10.

   - An entire loopset was removed in step 7.
   - A point code value was removed from a loopset with the `force=yes` parameter in step 7.
   - A point code value was removed from a loopset in step 7, the `force=yes` was not used in step 7, and you do not wish to assign this loopset to the GTT or GTA entries that were removed or changed in steps 4 or 6.

10. Assign the loopset specified in step 7 to the GTT or GTA entries that were removed or changed in steps 4 or 6.

    If the EGTT feature is not on, perform one of these procedures:

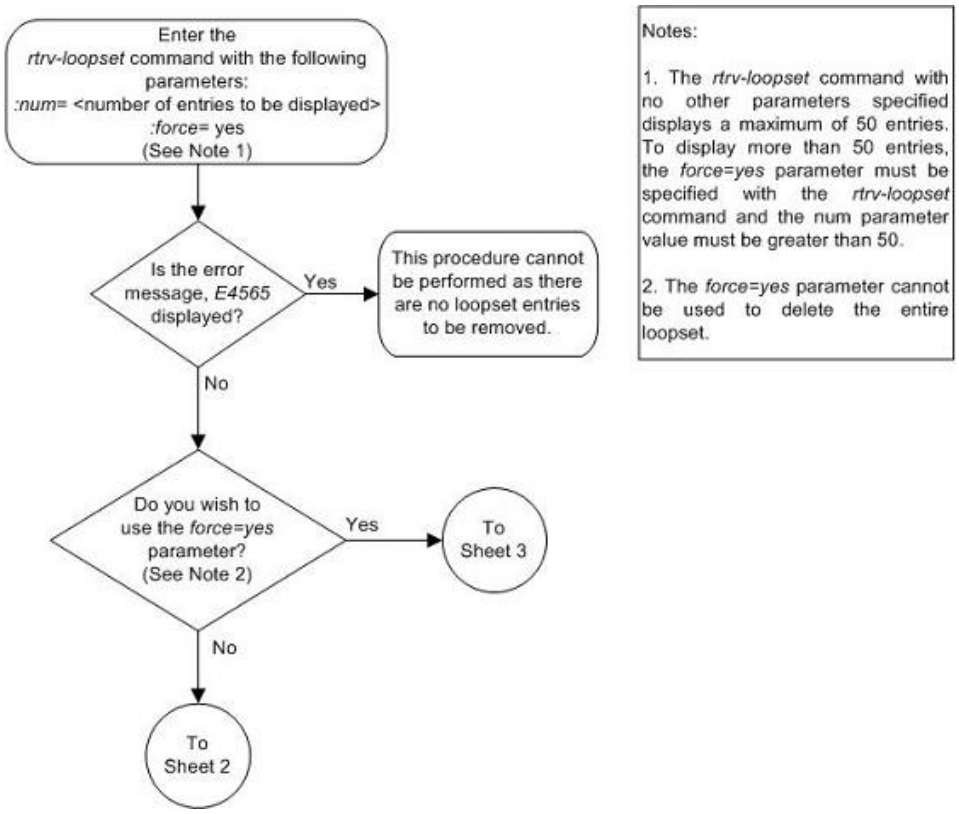
    - *Adding a Global Title Translation* on page 480 procedure if the GTT entry was removed from the database in step 6.

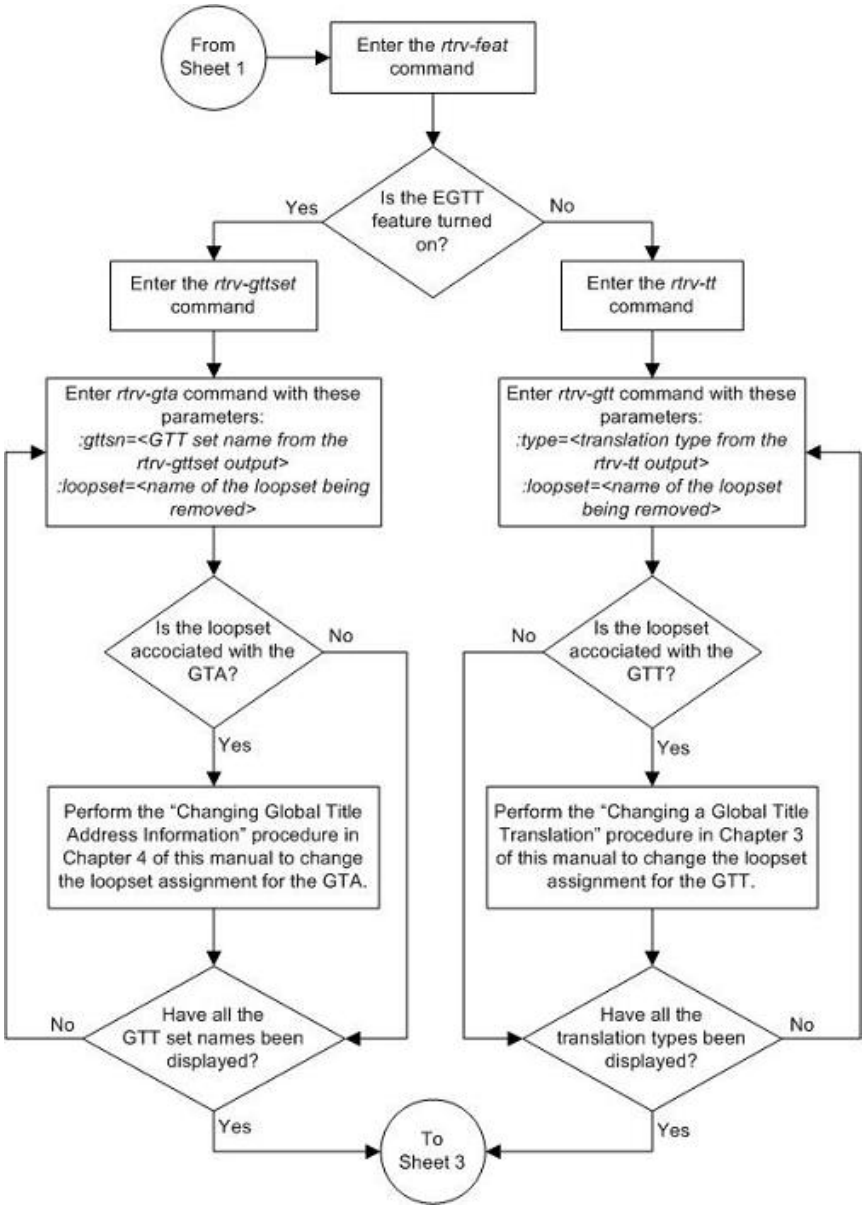
- *Changing a Global Title Translation* on page 524 procedure if the GTT entry was changed in step 6.

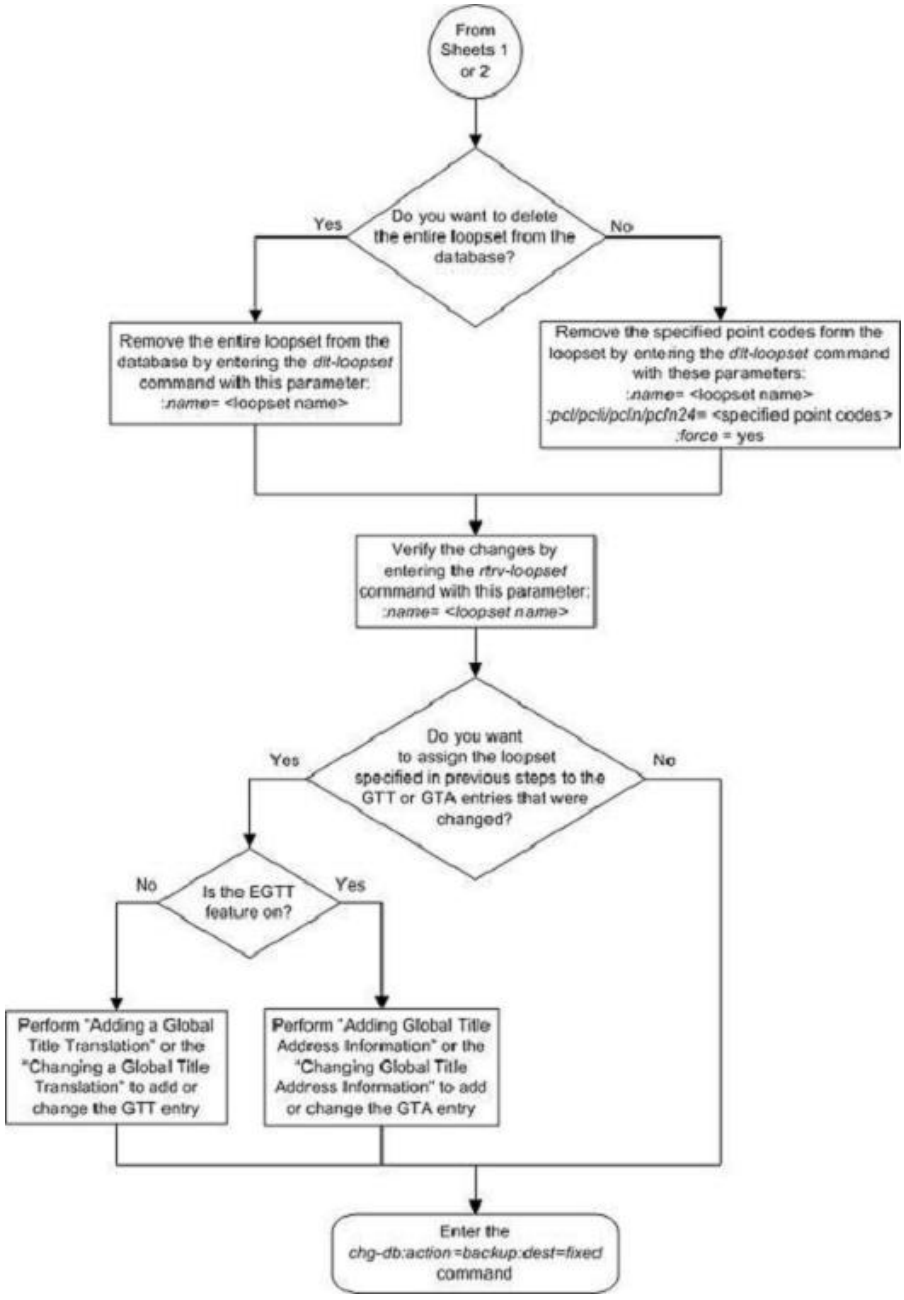
If the EGTT is on, perform one of these procedures:

- *Adding Global Title Address Information* on page 617 procedure if the GTA entry was removed from the database in step 4.
- *Changing Global Title Address Information* on page 681 procedure if the GTA entry was changed in step 4.

Figure 38: Removing a Loopset




From Sheet 1
Enter the rtrv-feat command
Is the EGTT feature turned on?
Yes
No
Enter the rtrv-gttset command
Enter the rtrv-tt command
Enter rtrv-gta command with these parameters:
:gttsn=<GTT set name from the rtrv-gttset output>
:loopset=<name of the loopset being removed>
Enter rtrv-gtt command with these parameters:
:type=<translation type from the rtrv-tt output>
:loopset=<name of the loopset being removed>
Is the loopset accociated with the GTA?
No
Yes
Is the loopset accociated with the GTT?
No
Yes
Perform the "Changing Global Title Address Information" procedure in Chapter 4 of this manual to change the loopset assignment for the GTA.
Perform the "Changing a Global Title Translation" procedure in Chapter 3 of this manual to change the loopset assignment for the GTT.
Have all the GTT set names been displayed?
No
Yes
Have all the translation types been displayed?
No
Yes
To Sheet 3



Changing the Attributes of a Loopset

This procedure is used to modify a loopset in the following ways using the `chg-loopset` command.

- Change the mode of operation
- Replace all the point codes

- Replace a specific point code
- Replace two specific point codes
- Append additional point codes

The `chg-loopset` command uses these parameters.

`:name` – The name of the loopset to be modified, shown in the rtrv-loopset output.

`:force` – This parameter has two values, yes or no. The value yes allows the attributes of a loopset to be changed if the loopset is assigned to entries in either the `rtrv-gtt` or `rtrv-gta` outputs. The value no requires that references to the loopset must be removed from the GTT or GTA entries before the attributes of the loopset are changed. Perform one of these procedures to remove a reference to the loopset, depending on whether or not the EGTT feature is on. The status of the EGTT feature is shown in the `rtrv-feat` command output.

- If the EGTT feature is not on – Enter the `rtrv-gtt` command to verify the loopset references. Perform the *Changing a Global Title Translation* on page 524 procedure and change the loopset reference to `NONE` or to another loopset name, or remove the global title translation by performing the *Removing a Global Title Translation* on page 519 procedure.
- If the EGTT feature is on – Enter the `rtrv-gta` command to verify the loopset references. Perform the *Changing Global Title Address Information* on page 681 procedure and change the loopset reference to `NONE` or to another loopset name, or remove the entry by performing the *Removing Global Title Address Information* on page 672 procedure.

`:pcl/pcla/pcli/pcln/pcln24` – The point code, either an ANSI point code (`pcl/pcla`), ITU-I or ITU-I spare point code (`pcli`), a 14-bit ITU-N or 14-bit ITU-N spare point code (`pcln`), or a 24-bit ITU-N (`pcln24`) point code, assigned to the loopset shown in the `rtrv-loopset` output that is to be replaced by a new point code. This point code is the first or the only point code that can be replaced when the `chg-loopset` command is used to replace two specific point codes or a single point code.

`:pc2/pc2a/pc2i/pc2n/pc2n24` – The point code, either an ANSI point code (`pc2/pc2a`), ITU-I or ITU-I spare point code (`pc2i`), a 14-bit ITU-N or 14-bit ITU-N spare point code (`pc2n`), or a 24-bit ITU-N (`pc2n24`) point code, assigned to the loopset shown in the `rtrv-loopset` output that is to be replaced by a new point code. This point code is the second point code that can be replaced when the `chg-loopset` command is used to replace two specific point codes.

`:rpcl/rpcla/rpcli/rpcln/rpcln24` – The point code, either an ANSI point code (`rpcl/rpcla`), ITU-I or ITU-I spare point code (`rpcli`), a 14-bit ITU-N or 14-bit ITU-N spare point code (`rpcln`), or a 24-bit ITU-N (`rpcln24`) point code, that is used to simultaneously replace all the point code(s) assigned to the loopset shown in the `rtrv-loopset` output.

`:npcl/npcla/npcli/npcln/npcln24` – The point code, either an ANSI point code (`npcl/npcla`), ITU-I or ITU-I spare point code (`npcli`), a 14-bit ITU-N or 14-bit ITU-N spare point code (`npcln`), or a 24-bit ITU-N (`npcln24`) point code that replaces the first or the only specified point code when the `chg-loopset` command is used to replace two specific point codes or a single point code.

`:npc2/npc2a/npc2i/npc2n/npc2n24` – The point code, either an ANSI point code (`npc2/npc2a`), ITU-I or ITU-I spare point code (`npc2i`), a 14-bit ITU-N or 14-bit ITU-N spare point code (`npc2n`), or a 24-bit ITU-N (`npc2n24`) point code that replaces the second specified point code when the `chg-loopset` command is used to replace two specific point codes.

`:apcl/apcla/apcli/apcln/apcln24` – The point code, either an ANSI point code (`npcl/npcla`), ITU-I or ITU-I spare point code (`npcli`), a 14-bit ITU-N or 14-bit ITU-N spare

point code (npcln), or a 24-bit ITU-N (npcln24) point code that that can be appended to the set of point codes assigned to the loopset shown in the rtrv-loopset output.

:mode – The mode of operation of the SCCP Loop Detection feature. This parameter can have either of the two values Notify and Discard.

1. Display the loopsets in the database by entering this command. This is an example of the possible output

   rtrv-loopset:num=1000:force=yes

   Note: If the rtrv-loopset command is entered with no other parameters specified, a maximum of 50 entries are displayed. To display more than 50 entries, the force=yes parameter must be specified with the rtrv-loopset command and the num parameter value must be greater than 50. Since there can be a maximum of 1000 loopsets in the database, to display all the loopsets in the database, the force=yes and num=1000 parameters must be specified with the rtrv-loopset command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-18 08:52:38 GMT  EAGLE Rel 35.6.0
LoopSet   Mode     Point Codes
================================================================================
rtp1      notify   005-005-005       007-007-007      (ANSI)
                   003-004-003       003-007-003
                   005-007-005       007-004-007
                   005-004-005

rtp2      notify   002-002-002       003-003-003      (ANSI)
                   004-004-004       005-005-005

LOOPSET table is (2 of 1000) 1% full
```

   If error message E4565 is displayed or if no loopsets are displayed, this procedure cannot be performed.

   Note: If the force=yes parameter will be specified with the chg-loopset command, a loopset can be changed without changing or deleting the association, if any, of the loopset with a GTT or a GTA. Skip steps 2 through 6 and go to step 7.

2. Verify whether or not the EGTT feature is turned on by entering the rtrv-feat command. If the EGTT featured is turned on, the EGTT field should be set to on.

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

   Note: If the EGTT feature is not turned on, skip step 3 and step 4 and go to step 5.

3. Display the GTT sets in the database using the rtrv-gttset command. This is an example of the possible output.

```
rlghncxa03w 07-03-07 00:27:31 GMT EAGLE5 35.6.0
GTTSN      NETDOM  SETTYPE  NDGT
setans015  ansi    CDGTA    6
set1       ansi    CDGTA    6
```

4. Display the global title address (GTA) information for a GTT set from step 3. Execute the rtrv-gta command with the gttsn parameter value shown in the output of step 3 and with the name of the loopset being changed, specified with the loopset parameter. For this example, enter this command.

`rtrv-gta:gttsn=set1:loopset=rtp1`

This is an example of the possible output.

```
rlghncxa03w 07-03-07 00:27:31 GMT EAGLE5 35.6.0
GTTSN      NETDOM  SETTYPE  NDGT
set1       ansi    CDGTA    6
GTT TABLE IS   1 % FULL (2 of 269999)

START GTA END GTA   XLAT   RI     PCA
919460    919460    DISC
919461    919461    DPC    SSN    002-002-002
     SSN=--- CCGT=no  NTT=---
     LOOPSET = rtp1
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------

Command Retrieved 2 Entries
```

If any of the displayed entries reference the loopset being modified, for those entries, perform the *Changing Global Title Address Information* on page 681 procedure and change the loopset reference to NONE or to another loopset name, or remove the entry by performing the *Removing Global Title Address Information* on page 672 procedure.

If the displayed entries do not reference the loopset being removed, repeat this step with the other GTT set names displayed in step 3.

When all the GTT set names have been displayed and all applicable global title translation entries have been changed or removed in this step, go to step 7.

5. Display the translation types in the database using the `rtrv-tt` command.

   This is an example of the possible output.

```
rlghncxa03w 07-03-25 09:42:31 GMT  EAGLE5 35.6.0
TYPEA      TTN        NDGT
1          lidb       5
2          c800       10
3          d700       6
5          scp1       6
10         scp2       6
15         scp3       3

ALIAS      TYPEA
30         5
40         10
50         3
65         3

TYPEI      TTN        NDGT
105        itudb      8

ALIAS      TYPEI
7          105

TYPEN      TTN        NDGT
120        dbitu      7

ALIAS      TYPEN
8          120
```

6. Display the global title translations in the database using the `rtrv-gtt` command specifying a translation type from the `rtrv-tt` command output shown in step 5 and with the name of

the loopset being removed, specified with the `loopset` parameter. For this example, enter this command.

```
rtrv-gtt:typea=10:loopset=rtp1
```

This is an example of the possible output.

```
rlghncxa03w 08-10-25 09:43:31 GMT  EAGLE5 39.2.0
TYPEA  TTN        NDGT
10     scp2       6

GTT TABLE IS  10 % FULL    (27000 of 269999)

START GTA             END GTA               XLAT   RI     PC
615370                615380                DPCSSN SSN    003-003-003
     MAPSET=6      SSN=254 NGT=---
     LOOPSET = rtp1

Command Retrieved 1 Entries
```

If any of the displayed entries reference the loopset being modified, for those entries, perform the *Changing a Global Title Translation* on page 524 procedure and change the loopset reference to `NONE` or to another loopset name, or remove the global title translation by performing the *Removing a Global Title Translation* on page 519 procedure.

If the displayed entries do not reference the loopset being removed, repeat this step with the other translation types displayed in step 5.

When all the translation types have been displayed and all applicable global title translation entries have been changed or removed in this step, go to step 7.

7. If all the point codes of the loopset are being replaced simultaneously, specify the `chg-loopset` command with the name of the loopset with the `rpc1` parameter.

   For this example, enter this command to replace all the point codes of the loopset simultaneously.

   ```
   chg-loopset:name=rtp1:rpc1a=003-003-003,001-001-001,002-002-002
   ```

   This message should appear.

   ```
   rlghncxa03w 07-02-19 10:37:19 GMT  35.6.0
   LOOPSET table is (1 of 1000) 1% full
   CHG-LOOPSET: MASP A - COMPLTD
   ```

   If a single specified point code value is to be modified in the loopset, specify the `chg-loopset` command with the name of the loopset, the point code you wish to change and the new point code.

   For this example, enter this command to modify a single point code in the loopset.

   ```
   chg-loopset:name=rtp1:pc1=003-003-003:npc1=003-004-005
   ```

   This message should appear.

   ```
   rlghncxa03w 07-02-19 10:50:36 GMT  35.6.0
   LOOPSET table is (1 of 1000) 1% full
   CHG-LOOPSET: MASP A - COMPLTD
   ```

   If two specified point code values are to be modified in the loopset, specify the `chg-loopset` command with the name of the loopset, the two point codes you wish to change and the new point codes.

   For this example, enter this command to modify two specific point codes in the loopset.

```
chg-loopset:name=rtp1:pc1=003-004-005:npc1=003-004-007:pc2=001-001-001:npc2=001-003-004
```

This message should appear.

```
rlghncxa03w 07-02-19 10:59:08 GMT  35.6.0
LOOPSET table is (1 of 1000) 1% full
CHG-LOOPSET: MASP A - COMPLTD
```

If only the `mode` parameter is to be modified in the loopset, specify the `chg-loopset` command with the name of the loopset, the new value of the `mode` parameter.

For this example, enter this command to modify two specific point codes in the loopset.

```
chg-loopset:name=rtp1:mode=discard
```

This message should appear.

```
rlghncxa03w 07-02-19 11:04:52 GMT  35.6.0
LOOPSET table is (1 of 1000) 1% full
CHG-LOOPSET: MASP A - COMPLTD
```

If point codes are to be appended in the loopset, specify the `chg-loopset` command with the name of the loopset, the point codes to be appended.

For this example, enter this command to append the point codes to the loopset.

```
chg-loopset:name=rtp1:apcla=7-7-7,3-3-3,5-5-5
```

```
rlghncxa03w 07-02-19 11:19:26 GMT  35.6.0
LOOPSET table is (1 of 1000) 1% full
CHG-LOOPSET: MASP A - COMPLTD
```

Refer to the following table for the `chg-loopset` parameter combinations.

Table 25: Changing a Loopset Parameter Combinations

Changing Mode only	Replacing All Point Codes	Replacing One Specific Point Code	Replacing two Specific Point Codes	Appending Point Codes
Mandatory Parameters				
Name (See Note 1)	Name (See Note 1)	Name (See Note 1)	Name (See Note 1)	Name (See Note 1)
Mode	RPCL/RPCLA/ RPCLI/RPCLN/ RPCLN24	PC1/PC1A/ PC1I/PC1N/ PC1N24	PC1/PC1A/ PC1I/PC1N/ PC1N24	APCL/APCLA/ APCLI/APCLN/ APCLN24
		NPC1/NPC1A/ NPC1I/NPC1N/ NPC1N24	NPC1/NPC1A/ NPC1I/NPC1N/ NPC1N24	
			PC1/PC1A/ PC1I/PC1N/ PC1N24	

Changing Mode only	Replacing All Point Codes	Replacing One Specific Point Code	Replacing two Specific Point Codes	Appending Point Codes
			NPC2/NPC2A/ NPC2I/NPC2N/ NPC2N24	
Optional Parameters				
Force=yes	Mode	Mode	Mode	Mode
	Force=yes	Force=yes	Force=yes	Force=yes

Parameter Values:

Name – Loopset name

Mode – Mode of operation

APCL/APCLA/APCLI/APCLN/APCLN24 – Appending point code list

RPCL/RPCLA/RPCLI/RPCLN/RPCLN24 – Replacing point code List

PC1/PC1A/PC1I/PC1N/PC1N24 – Point code to be replaced first

PC2/PC2A/PC2I/PC2N/PC2N24– Point code to be replaced after the replacement of the first point code when two specific point codes are replaced

NPC1/NPC1A/NPC1I/NPC1N/NPC1N24– Point code that replaces the first specified point code or the only point code when two specific point codes or a single specified point code is replaced

NPC2/NPC2a/NPC2I/NPC2N/NPC2N24– Point code that replaces the second specified point code when two specific point codes are replaced

FORCE – yes, no. Default = no

Notes:

1. The `name` parameter can take up to 8 alphanumeric characters. The first character must be an alphabetic character.
2. The `rpcl` parameter allows the replacement of a maximum of six point code in a loopset.
3. The `apcl` parameter allows a maximum of six point codes to be appended to a loopset per execution of the `chg-loopset` command. A maximum of 12 point codes can be appended to any loopset using the `apcl` parameter.

Note: If the loopset being modified in this step is referenced by an entry shown in either the `rtrv-gtt` or `rtrv-gta` outputs, and those entries have not been removed or the loopset assignment for these entries has not been changed, the `force=yes` parameter must be specified with the `chg-loopset` command.

8. Verify the changes using the `rtrv-loopset` command with the name of the loopset specified in step 7.

   In this example enter this command.

```
rtrv-loopset:name=rtp1
```

The following message should appear if you have replaced all the point codes in step 7.

```
rlghncxa03w 07-02-19 19:42:34 GMT  35.6.0
LoopSet    Mode     Point Codes
================================================================================
rtp1     discard    003-003-003       002-002-002      (ANSI)
                    001-001-001
```

The following message should appear if you have modified a single specific point code in step 7.

```
rlghncxa03w 07-02-19 19:49:47 GMT  35.6.0
LoopSet    Mode     Point Codes
================================================================================
rtp1     discard    003-004-005       002-002-002      (ANSI)
                    001-001-001
```

The following message should appear if you have modified two specific point codes in step 7.

```
rlghncxa03w 07-02-19 19:56:57 GMT  35.6.0
LoopSet    Mode     Point Codes
================================================================================
rtp1     discard    003-004-007       002-002-002      (ANSI)
                    001-003-004
```

The following message should appear if you have appended point codes in step 7.

```
rlghncxa03w 07-02-19 20:03:21 GMT  35.6.0
LoopSet    Mode     Point Codes
================================================================================
rtp1     discard    003-004-007       002-002-002      (ANSI)
                    001-003-004       007-007-007
                    003-003-003       005-005-005
```

The following message should appear if you have only changed the mode in step 7.

```
rlghncxa03w 07-02-19 20:09:00 GMT  35.6.0
LoopSet    Mode     Point Codes
================================================================================
rtp1     notify     003-003-003       002-002-002      (ANSI)
                    001-001-001
```

9. Backup the new changes using the `chg-db:action=backup:dest=fixed` commend. 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.
```

If a loopset was changed in step 7 and the `force=yes` was not used in step 7, and you wish to assign this loopset to the GTT or GTA entries that were removed or changed in steps 4 or 6, go to step 10.

If any of the following actions were performed in step 7, this procedure is finished. Do not perform step 10.

- A loopset was modified with the `force=yes` parameter in step 7.
- A loopset was modified in step 7, the `force=yes` was not used in step 7, and you do not wish to assign this loopset to the GTT or GTA entries that were removed or changed in steps 4 or 6.

10. Assign the loopset specified in step 7 to the GTT or GTA entries that were removed or changed in steps 4 or 6.

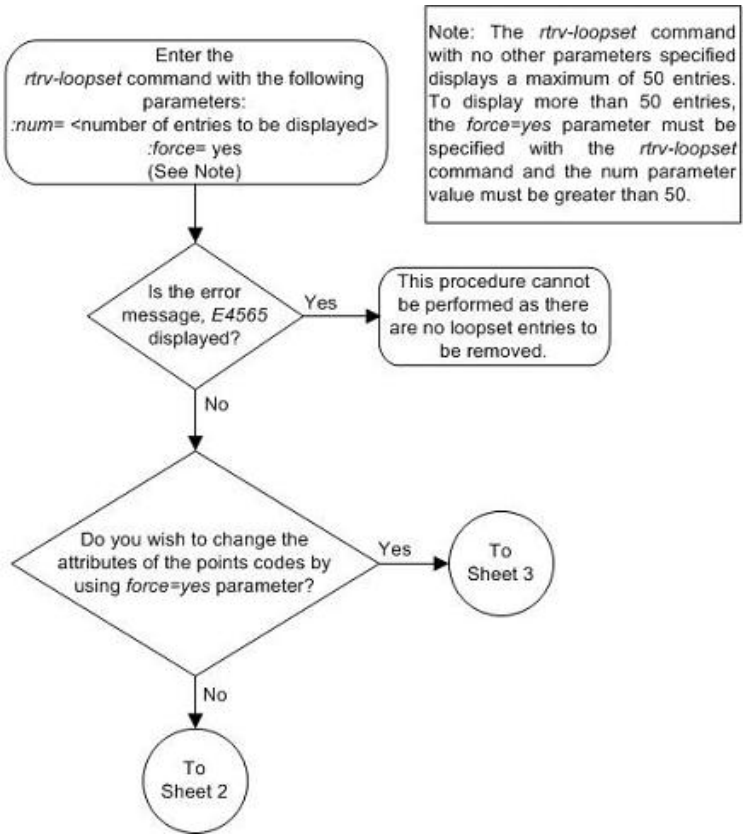
    If the EGTT feature is not on, perform one of these procedures:

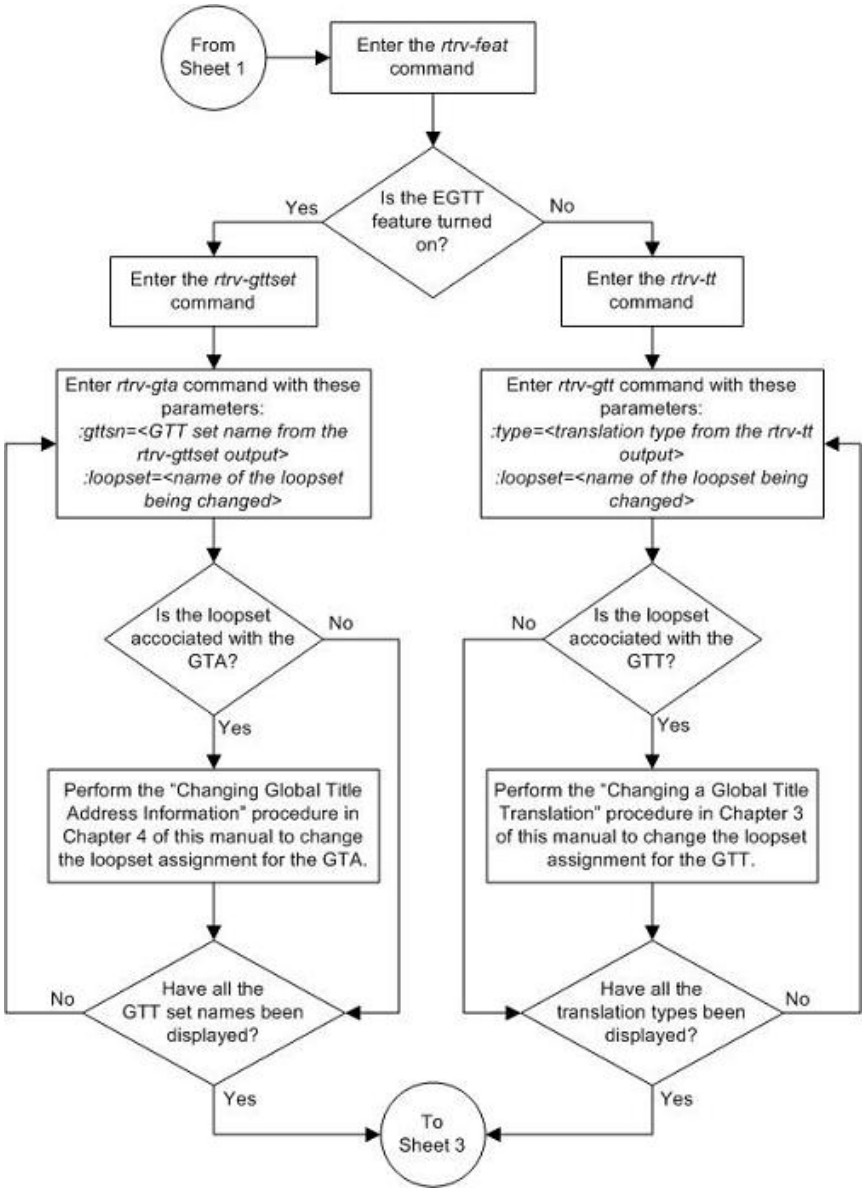
    - *Adding a Global Title Translation* on page 480 procedure if the GTT entry was removed from the database in step 6.
    - *Changing a Global Title Translation* on page 524 procedure if the GTT entry was changed in step 6.

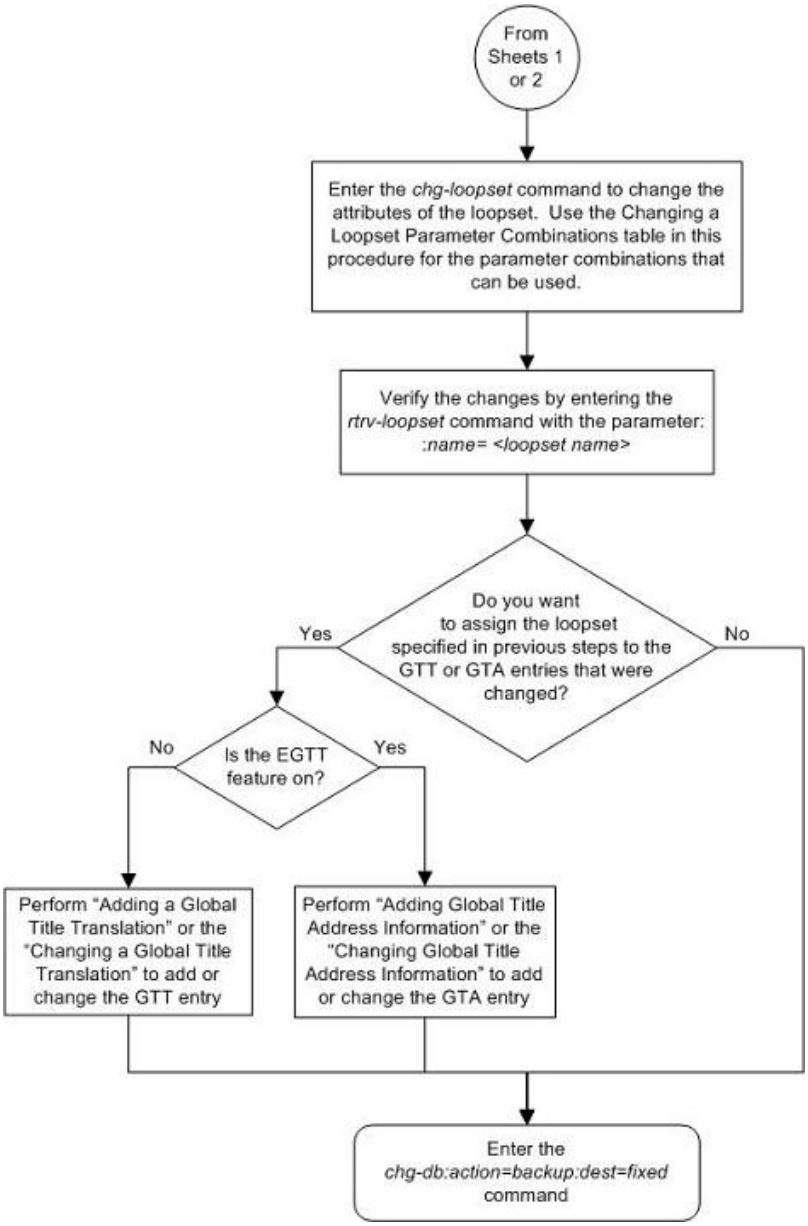
    If the EGTT is on, perform one of these procedures:

    - *Adding Global Title Address Information* on page 617 procedure if the GTA entry was removed from the database in step 4.
    - *Changing Global Title Address Information* on page 681 procedure if the GTA entry was changed in step 4.

Figure 39: Changing the Attributes of a Loopset




From Sheet 1
Enter the rtrv-feat command
Is the EGTT feature turned on?
Yes
No
Enter the rtrv-gttset command
Enter the rtrv-tt command
Enter rtrv-gta command with these parameters:
:gttsn=<GTT set name from the rtrv-gttset output>
:loopset=<name of the loopset being changed>
Enter rtrv-gtt command with these parameters:
:type=<translation type from the rtrv-tt output>
:loopset=<name of the loopset being changed>
Is the loopset accociated with the GTA?
No
Yes
Is the loopset accociated with the GTT?
No
Yes
Perform the "Changing Global Title Address Information" procedure in Chapter 4 of this manual to change the loopset assignment for the GTA.
Perform the "Changing a Global Title Translation" procedure in Chapter 3 of this manual to change the loopset assignment for the GTT.
Have all the GTT set names been displayed?
No
Yes
Have all the translation types been displayed?
No
Yes
To Sheet 3



Configuring the ANSI to ITU-N SCCP Conversion Option

This procedure is used to set the value of the called party/calling party address Reserved for National Use bit that is used during SCCP conversion when global title translation routes the message to the ITU national network. The called/calling party address Reserved for National Use bit is set using the `chg-sccpopts` command and with this parameter:

`:cnvainat` – the value of the called party/calling party address Reserved for National Use bit used during SCCP conversion when the MSU is routed to the ITU national network. The values for this parameter are:

- 0 – the Reserved for National Use bit is not reserved for national use.
- 1 – the Reserved for National Use bit is reserved for national use.

The system default value for this parameter is 1.

The ANSI-ITU-China SCCP Conversion feature must be enabled and turned on to change this parameter value with the chg-sccpopts command. The CNVAINAT field in the output of the rtrv-sccpopts command output is shown when the ANSI-ITU-China SCCP Conversion feature is enabled and turned on. If the CNVAINAT field is not shown in the output of the rtrv-sccpopts command output, perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure to enable the ANSI-ITU-China SCCP Conversion feature.

If any parameter is not specified with the chg-sccpopts command, that parameter value will not be changed.

For more information on the ANSI-ITU-China SCCP Conversion feature, refer to the *ANSI-ITU-China SCCP Conversion Feature* on page 24 section.

1. Display the existing value for the cnvainat parameter value by entering rtrv-sccpopts command. This is an example of the possible output.

```
rlghncxa03w 08-05-17 16:02:05 GMT  EAGLE5 38.0.0
SCCP OPTIONS
---------------------------
CNVAINAT                   1
```

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

If the CNVAINAT field is not shown in the output of the rtrv-sccpopts command, the ANSI-ITU-China SCCP Conversion feature is not enabled and turned on. For this field to be shown in the rtrv-sccpopts output, and to change these values, the ANSI-ITU-China SCCP Conversion feature must be enabled and turned on. Perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure to enable and turn on the ANSI-ITU-China SCCP Conversion feature. After the ANSI-ITU-China SCCP Conversion has been enabled and turned on, continue the procedure with *Step 2* on page 464

If the CNVAINAT field is shown in the rtrv-sccpopts output, continue the procedure with *Step 2* on page 464.

2. Change the cnvainat parameter value by entering the chg-sccpopts command with the cnvainat parameters. For this example, enter this command.

```
chg-sccpopts:cnvainat=0
```

If any parameter is not specified with the chg-sccpopts command, that parameter value will not be changed.

When the chg-sccpopts command has successfully completed, this message should appear.

```
rlghncxa03w 08-05-07 00:22:57 GMT  EAGLE5 38.0.0
CHG-SCCPOPTS: MASP A - COMPLTD
```

3. Verify the changes using the `rtrv-sccpopts` command. This is an example of the possible output.

```
rlghncxa03w 08-05-17 16:02:05 GMT  EAGLE5 38.0.0

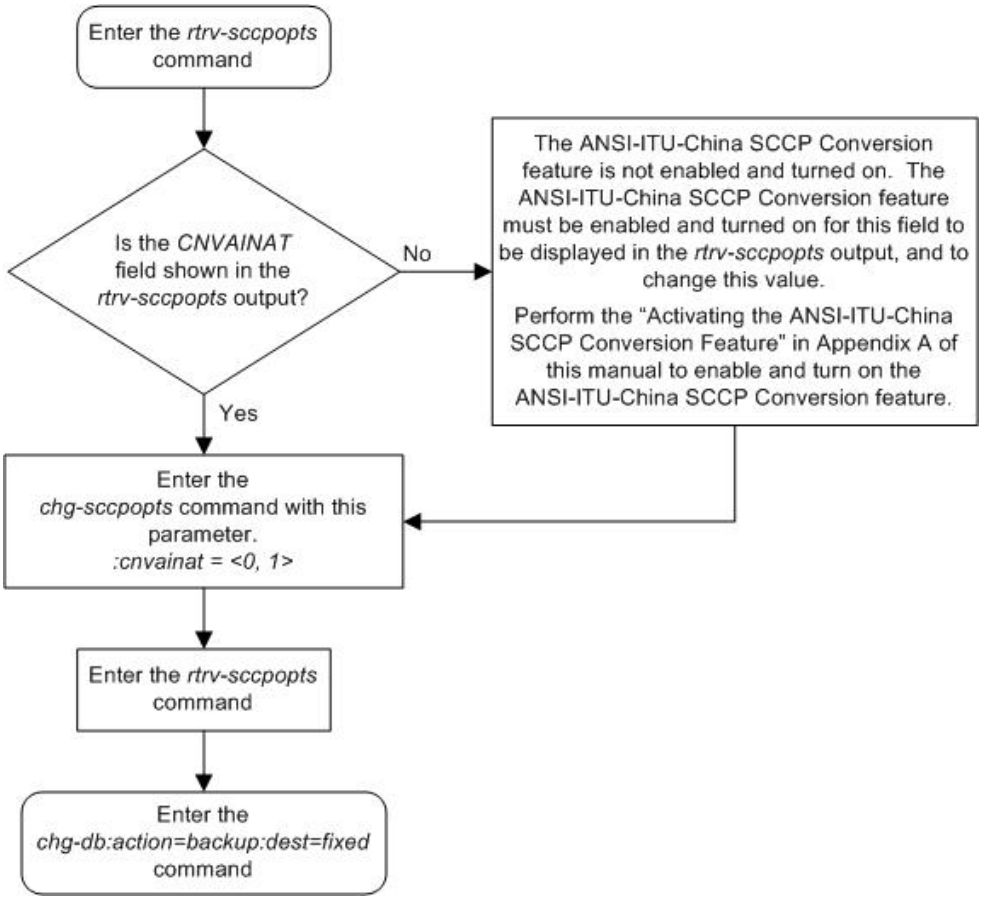
SCCP OPTIONS
------------------------------
CNVAINAT                      0
```

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

4. Back up the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 40: Configuring the ANSI to ITU-N SCCP Conversion Option



Chapter 3

Global Title Translation (GTT) Configuration

Topics:

- *Introduction Page 468*
- *Adding a Translation Type Page 468*
- *Removing a Translation Type Page 476*
- *Adding a Global Title Translation Page 480*
- *Removing a Global Title Translation Page 519*
- *Changing a Global Title Translation Page 524*

Chapter 3, Global Title Translation (GTT) Configuration, contains the procedures specific to configure the global title translation feature.

Introduction

This chapter describes the procedures needed to add, remove, or change global title translation (GTT) data in the database

The items configured in this section are:

- Translation types
- Global title translations.

The following items must also be configured for the Global Title Translation feature. The procedures to configure these items are located in *Global Title Translation (GTT) Configuration* on page 467.

- Service modules
- Translation type mapping
- Concerned signaling point codes
- Mate applications
- Mated relay node groups
- GT Conversion Table Entries for the ANSI-ITU-China SCCP Conversion feature.

The procedures shown in this chapter use a variety of commands. For more information on these commands, refer to the *Commands Manual*.



CAUTION: The Enhanced Global Title Translation (EGTT) feature overrides the Global Title Translation (GTT) feature when the EGTT feature is turned on with the `chg-feat:egtt=on` command. The override causes an automatic update of the database and the rejection of GTT feature commands when entered. Be careful not to turn the EGTT feature on accidentally when turning the GTT feature on. Once a feature is turned on with the `chg-feat` command, it cannot be turned off.

Notes:

1. Before turning the Global Title Translation (GTT) feature on with the `chg-feat:gtt=on` command, make sure you have purchased this feature. If you are not sure whether you have purchased the GTT feature, contact your Tekelec Sales Representative or Account Representative.
2. To perform the procedures in this chapter, the GTT feature must be on, and the Enhanced Global Title Translation (EGTT) feature must be off. For more details on configuring the EGTT feature, refer to *Enhanced Global Title Translation (EGTT) Configuration* on page 569.
3. To find out about the differences between the Global Title Translation (GTT) feature and the Enhanced Global Title Translation (EGTT) feature, refer to the *Upgrading from Global Title Translation (GTT) to Enhanced Global Title Translation (EGTT)* on page 55 section.

Adding a Translation Type

This procedure is used to add a translation type to the database using the `ent-tt` command.

The `ent-tt` command uses these parameters.

`:type/typea/typei/typen/typen24` – The translation type and network type of that translation type. The translation type indicates which global title translation table is to be used to determine the routing to a particular service database. :`type` or :`typea` – an ANSI network `:typei` – an ITU international network `:typen` or `:typen24`– an ITU national network.

`:ttn` – The name of the global title translation type

`:ndgt` – The number of digits contained in the global title translation.

`:alias` – The alias of the global title translation type

The examples in this procedure are used to add the translation type data shown in *Table 26: Example Translation Type Configuration Table* on page 469.

Table 26: Example Translation Type Configuration Table

Translation Type	Translation Type Name	Number of Digits	Alias Translation Type
5	scp1	6	30
10	scp2	6	40
15	scp3	3	--

The translation type value specified by the `type` or `typea` parameters cannot be defined in the database as an ANSI translation type. The translation type value specified by `typei`, `typen`, or `typen24` parameters cannot be defined in the database as an ITU translation type by either `typei`, `typen`, or `typen24` parameters.

When adding an alias translation type, the translation type must be specified with the `ent-tt` command. The translation type must be shown in the `rtrv-tt` output.

Either the `ndgt` parameter or the `alias` parameter can be specified with the `ent-tt` command, but not both at the same time.

The translation type name value specified with the `ent-tt` command cannot be shown in the `rtrv-tt` output.

If an alias translation type is being assigned to an ANSI translation type, the alias translation type value cannot be shown in the `rtrv-tt` output as an ANSI translation type, or assigned to any ANSI translation types in the `rtrv-tt` output as an alias translation type.

If an alias translation type is being assigned to an ITU translation type, the alias translation type value cannot be shown in the `rtrv-tt` output as an ITU translation type, or assigned to any ITU translation types in the `rtrv-tt` output as an alias translation type.

If the Variable-length Global Title Translation Feature (VGTT) is being used, shown by the entry `VGTT = on` in the `rtrv-feat` command output, the `ndgt` parameter cannot be specified with the `ent-tt` command. The length of the global title address is determined when the global title address is entered with the `ent-gtt` command. For more information on the VGTT feature and the length of global title addresses, see the *Variable-length Global Title Translation Feature* on page 20section and the *Adding a Global Title Translation* on page 480 procedure.

The global title translation feature must be enabled. Verify this by entering the `rtrv-feat` command. If the global title translation feature is off, it can be enabled by entering the `chg-feat:gtt=on` command.

Note: Once the Global Title Translation (GTT) feature is enabled with the `chg-feat` command, it cannot be disabled.

The GTT feature must be purchased before turning it on. If you are not sure whether you have purchased the GTT feature, contact your Tekelec Sales Representative or Account Representative.

If the Variable-length Global Title Translation Feature (VGTT) is on, shown by the entry `VGTT = on` in the `rtrv-feat` command output, the `ndgt` parameter cannot be specified with the `ent-tt` command. The length of the global title address is determined when the global title address is entered with the `ent-gtt` command. For more information on the VGTT feature and the length of global title addresses, see the *Variable-length Global Title Translation Feature* on page 20 section and the *Adding a Global Title Translation* on page 480 procedure.

If the Variable-length Global Title Translation Feature (VGTT) is on, the `NDGT` field of the `rtrv-tt` command shows the different lengths of global title addresses assigned to a translation type, as shown in the following example.

```
rlghncxa03w 07-05-25 09:57:31 GMT  EAGLE5 37.0.0
TYPEA
TTN
NDGT
1          lidb       6, 12, 15
2          c800       10
3          d700       6

ALIAS      TYPEA
50         3
65         3

TYPEI      TTN        NDGT
105        itudb      8

ALIAS      TYPEI
7          105

TYPEN      TTN        NDGT
120        dbitu      7

ALIAS      TYPEN
8          120
```

In this example of the `rtrv-tt` command output, the ANSI translation type 1 contains three different length global title addresses; global title addresses containing six digits, 12 digits, and 15 digits.

If the Variable-length Global Title Translation Feature (VGTT) feature is off and you wish to turn it on, enter the `chg-feat:vgtt=on` command. The GTT feature must be on before the `vgtt=on` parameter can be specified with the `chg-feat` command.

Note: Once the Variable-length Global Title Translation (VGTT) feature is turned on with the `chg-feat` command, it cannot be disabled.

The VGTT feature must be purchased before turning it on. If you are not sure whether you have purchased the VGTT feature, contact your Tekelec Sales Representative or Account Representative.

1. Display the translation types in the database using the `rtrv-tt` command. This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:57:31 GMT  EAGLE5 37.0.0
TYPEA
TTN
NDGT
1          lidb       5
2          c800       10
3          d700       6

ALIAS      TYPEA
50         3
65         3

TYPEI      TTN        NDGT
105        itudb      8

ALIAS      TYPEI
7          105

TYPEN      TTN        NDGT
120        dbitu      7

ALIAS      TYPEN
8          120
```

Note: If you do not wish to use the Variable-length Global Title Translation Feature (VGTT) feature, skip steps 2, 3, and 4, and go to step 5.

2. Verify that the VGTT feature is on, by entering the `rtrv-feat` command. If the VGTT feature is on, the `VGTT` field should be set to `on`. For this example, the VGTT feature is off.

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

Note: If the Variable-length Global Title Translation (VGTT) feature is on in step 2, skip steps 3 and 4, and go to step 5.

3. Display the cards in the EAGLE 5 ISS using the `rtrv-card` command. This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:58:31 GMT EAGLE5 37.0.0
CARD   TYPE      APPL      LSET NAME     LINK SLC LSET NAME     LINK SLC
1102   TSM       GLS
1113   GPSM      EOAM
1114   TDM-A
1115   GPSM      EOAM
1116   TDM-B
1117   MDAL
1118   RESERVED
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
1308   LIMDS0    SS7ANSI   sp6           A    1   sp7           B    0
```

```
1314   LIMDS0    SS7ANSI   sp7           A    1   sp5           B    1
1317   ACMENET   STPLAN
```

The correct service modules must be in the EAGLE 5 ISS before the VGTT feature can be turned on. See *Table 12: Service Module and Feature Combinations* on page 76 to determine the service modules that are required. If any service modules must be replaced, contact the Customer Care Center before replacing any service modules. Refer to *Customer Care Center* on page 4 for the contact information.

4. Turn the Variable-length Global Title Translation (VGTT) feature on by entering this command.

   `chg-feat:vgtt=on`

   Note: Once the Variable-length Global Title Translation (VGTT) feature is enabled with the `chg-feat` command, it cannot be disabled.

   The VGTT feature must be purchased before turning it on. If you are not sure whether you have purchased the VGTT feature, contact your Tekelec Sales Representative or Account Representative.

   When the `chg-feat` has successfully completed, this message should appear.

   ```
   rlghncxa03w 07-05-25 09:57:41 GMT EAGLE5 37.0.0
   CHG-FEAT: MASP A - COMPLTD
   ```

5. Add the translation type to the database using the `ent-tt` command. For this example, enter these commands.

   Note: If the VGTT feature is on, the `ndgt` parameter cannot be specified with the `ent-tt` command.

   `ent-tt:typea=5:ttn=scp1:alias=30`

   `ent-tt:typea=10:ttn=scp2:alias=40`

   `ent-tt:typea=15:ttn=scp3`

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

   ```
   rlghncxa03w 07-05-25 09:57:41 GMT  EAGLE5 37.0.0
   ENT-TT: MASP A - COMPLTD
   ```

6. Verify the changes using the `rtrv-tt` command. This is an example of the possible output.

   ```
   rlghncxa03w 07-05-25 09:57:51 GMT  EAGLE5 37.0.0
   TYPEA      TTN        NDGT
   1          lidb       5
   2          c800       10
   3          d700       6
   5          scp1       6
   10         scp2       6
   15         scp3       3

   ALIAS      TYPEA
   30         5
   40         10
   50         3
   65         3

   TYPEI      TTN        NDGT
   105        itudb      8
   ```

```
ALIAS      TYPEI
7          105

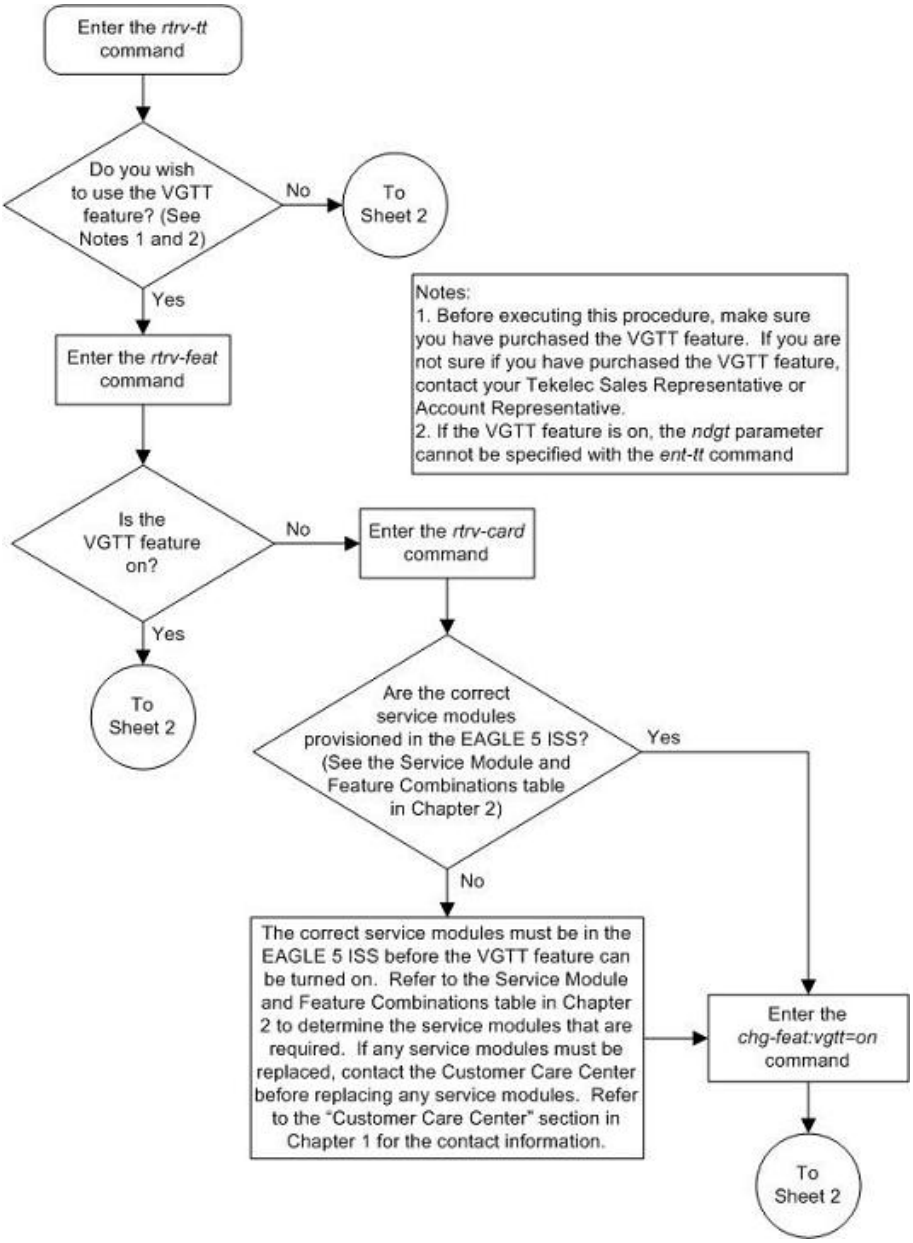
TYPEN      TTN        NDGT
120        dbitu      7

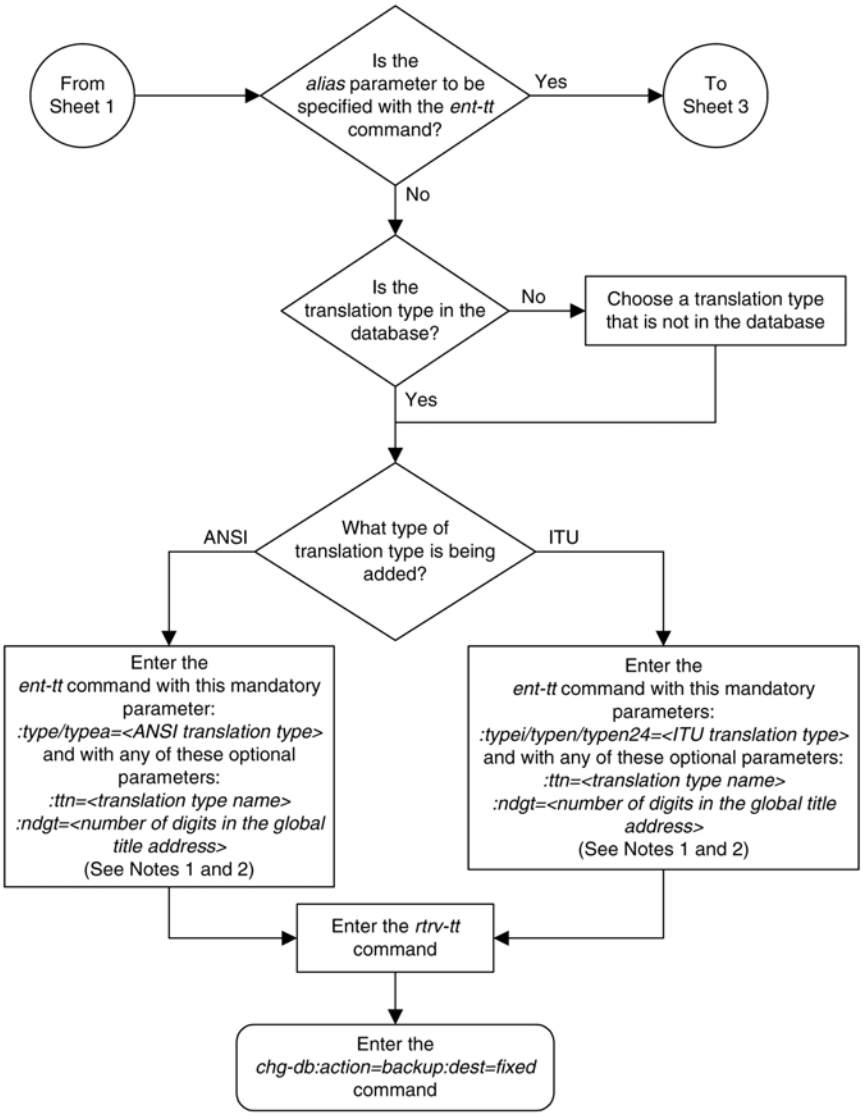
ALIAS      TYPEN
8          120
```

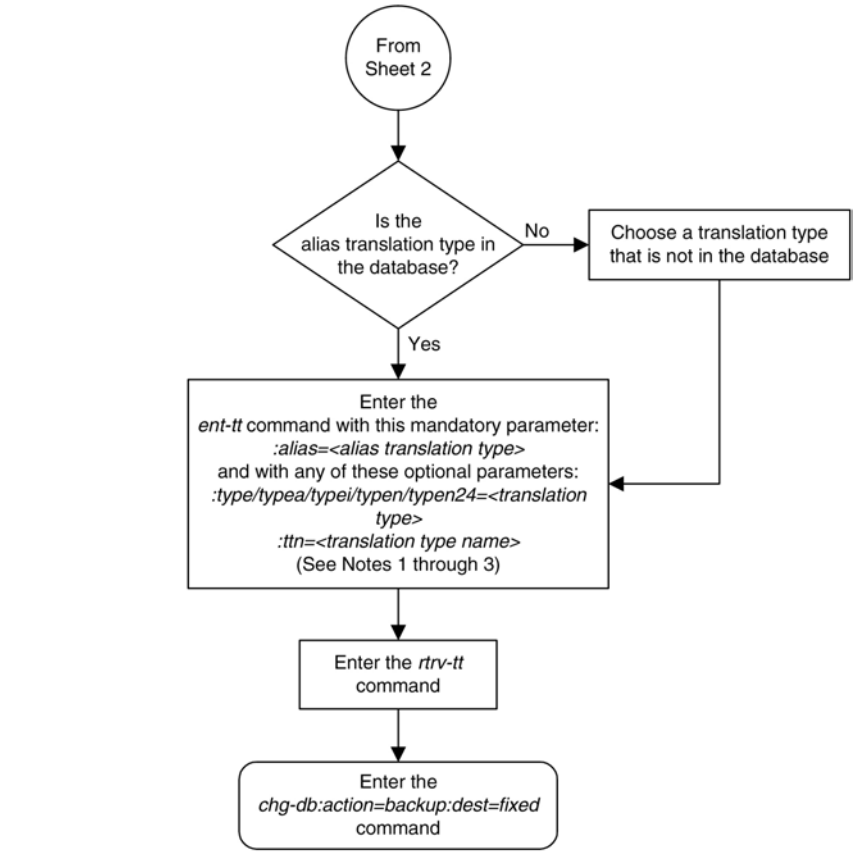
7. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 41: Adding a Translation Type


Enter the rtrv-tt command
Do you wish to use the VGTT feature? (See Notes 1 and 2)
No
To Sheet 2
Yes
Enter the rtrv-feat command
Notes:
1. Before executing this procedure, make sure you have purchased the VGTT feature. If you are not sure if you have purchased the VGTT feature, contact your Tekelec Sales Representative or Account Representative.
2. If the VGTT feature is on, the ndgt parameter cannot be specified with the ent-tt command
Is the VGTT feature on?
No
Enter the rtrv-card command
Yes
To Sheet 2
Are the correct service modules provisioned in the EAGLE 5 ISS? (See the Service Module and Feature Combinations table in Chapter 2)
Yes
No
The correct service modules must be in the EAGLE 5 ISS before the VGTT feature can be turned on. Refer to the Service Module and Feature Combinations table in Chapter 2 to determine the service modules that are required. If any service modules must be replaced, contact the Customer Care Center before replacing any service modules. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
Enter the chg-feat:vgtt=on command
To Sheet 2


From Sheet 1
Is the alias parameter to be specified with the ent-tt command?
Yes
To Sheet 3
No
Is the translation type in the database?
No
Choose a translation type that is not in the database
Yes
What type of translation type is being added?
ANSI
ITU
Enter the ent-tt command with this mandatory parameter: :type/typea=<ANSI translation type> and with any of these optional parameters: :ttn=<translation type name> :ndgt=<number of digits in the global title address> (See Notes 1 and 2)
Enter the ent-tt command with this mandatory parameters: :typei/typen/typen24=<ITU translation type> and with any of these optional parameters: :ttn=<translation type name> :ndgt=<number of digits in the global title address> (See Notes 1 and 2)
Enter the rtrv-tt command
Enter the chg-db:action=backup:dest=fixed command
Notes:
1. If the VGTT feature is on, the ndgt parameter cannot be specified with the ent-tt command.
2. The translation type value specified by the type or typea parameters cannot be defined in the database as an ANSI translation type, or as an alias translation type associated with and ANSI translation type. The translation type value specified by typei, typen, or typen24 parameters cannot be defined in the database as an ITU translation type by either typei, typen, or typen24 parameters, or as an alias translation type associated with an ITU translation type.



Removing a Translation Type

This procedure is used to remove a translation type from the database using the `dlt-tt` command.

The `dlt-tt` command uses these parameters.

`:type/typea/typei/typen/typen24` – The translation type and network type of that translation type. The translation type indicates which global title translation table is to be used to determine the routing to a particular service database.:`type` or :`typea` – an ANSI network `:typei` – an ITU international network `:typen/typen24` – an ITU national network.

`:ttn` – The name of the global title translation type

`:alias` – The alias of the global title translation type

The examples in this procedure are used to remove the translation type 3 from the database.

The translation type, translation type name, or alias specified with the `dlt-tt` command must be shown in the `rtrv-tt` output, and must be assigned to the specified translation type

The translation type cannot be removed if the global title translation tables reference the translation type. Verify that the global title translation tables do not reference the translation type using the `rtrv-gtt` command.

If the `rtrv-gtt` command shows references to the translation type to be removed, go to the *Removing a Global Title Translation* on page 519 procedure and remove the global title translation data associated with the translation type.

If the translation type is referenced by an alias, all aliases to the translation type must be removed first. To remove the alias, the alias and translation type must be specified in the `dlt-tt` command.

Canceling the `RTRV-GTT` Command

Because the `rtrv-gtt` command used in this procedure can output information for a long period of time, the `rtrv-gtt` command can be canceled and the output to the terminal stopped. There are three ways that the `rtrv-gtt` command can be canceled.

- Press the `F9` function key on the keyboard at the terminal where the `rtrv-gtt` command was entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rtrv-gtt` command was entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rtrv-gtt` command was entered, from another terminal other that the terminal where the `rtrv-gtt` command was entered. To enter the `canc-cmd:trm=<xx>` command, the terminal must allow Security Administration commands to be entered from it and the user must be allowed to enter Security Administration commands. The terminal's permissions can be verified with the `rtrv-secu-trm` command. The user's permissions can be verified with the `rtrv-user` or `rtrv-secu-user` commands.

For more information about the `canc-cmd` command, go to the *Commands Manual*.

1. Display the translation types in the database using the `rtrv-tt` command.

   This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:57:31 GMT  EAGLE5 37.0.0
TYPEA      TTN        NDGT
1          lidb       5
2          c800       10
3          d700       6
5          scp1       6
10         scp2       6
15         scp3       3

ALIAS      TYPEA
30         5
40         10
50         3
65         3

TYPEI      TTN        NDGT
105        itudb      8
```

```
ALIAS      TYPEI
7          105

TYPEN      TTN        NDGT
120        dbitu      7

ALIAS      TYPEN
8          120
```

2. Display the global title translations assigned to the translation type being removed from the database using the `rtrv-gtt` command specifying the translation type being removed from the `rtrv-tt` command output shown in step 1. For this example, enter this command.

   `rtrv-gtt:typea=3`

   This is an example of the possible output.

```
rlghncxa03w 08-10-25 09:46:31 GMT  EAGLE5 39.2.0
TYPEA  TTN        NDGT
3      d700       6
GTT TABLE IS  10 % FULL    (27000 of 269999)
START GTA             END GTA               XLAT   RI     PC
910460                919460                NGT    GT     007-007-007
     SSN=--- NGT= 6
     NNP=3 NNAI=100 NPDD=3 NPDS=345
     NGTI=

Command Retrieved 1 Entries
```

   If global title translations are shown in the output of the `rtrv-gtt` command output, go to the *Removing a Global Title Translation* on page 519 procedure and remove these global title translations.

3. Remove the translation type from the database using the `dlt-tt` command.

   For this example, enter these commands.

   `dlt-tt:typea=3:alias=50`

   `dlt-tt:typea=3:alias=65`

   `dlt-tt:typea=3`

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

```
rlghncxa03w 07-05-25 09:57:41 GMT  EAGLE5 37.0.0
DLT-TT: MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-tt` command and specify the translation type used in step 3.

   For this example, enter the `rtrv-tt:typea=3` command.

   This message should appear.

```
E2466 Cmd Rej: Translation TYPE specified does not exist
```

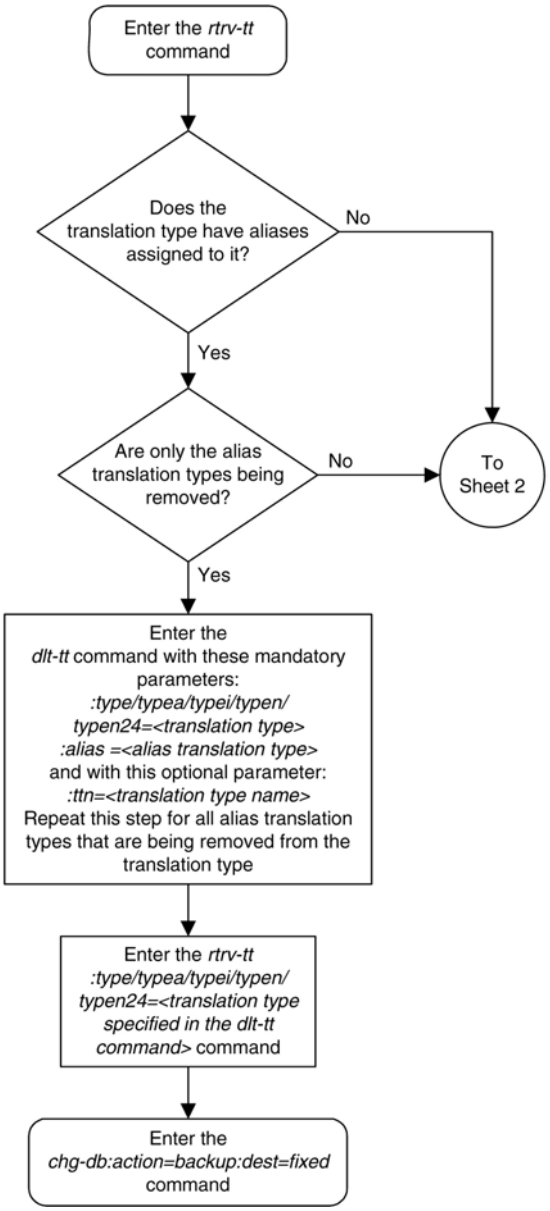
5. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

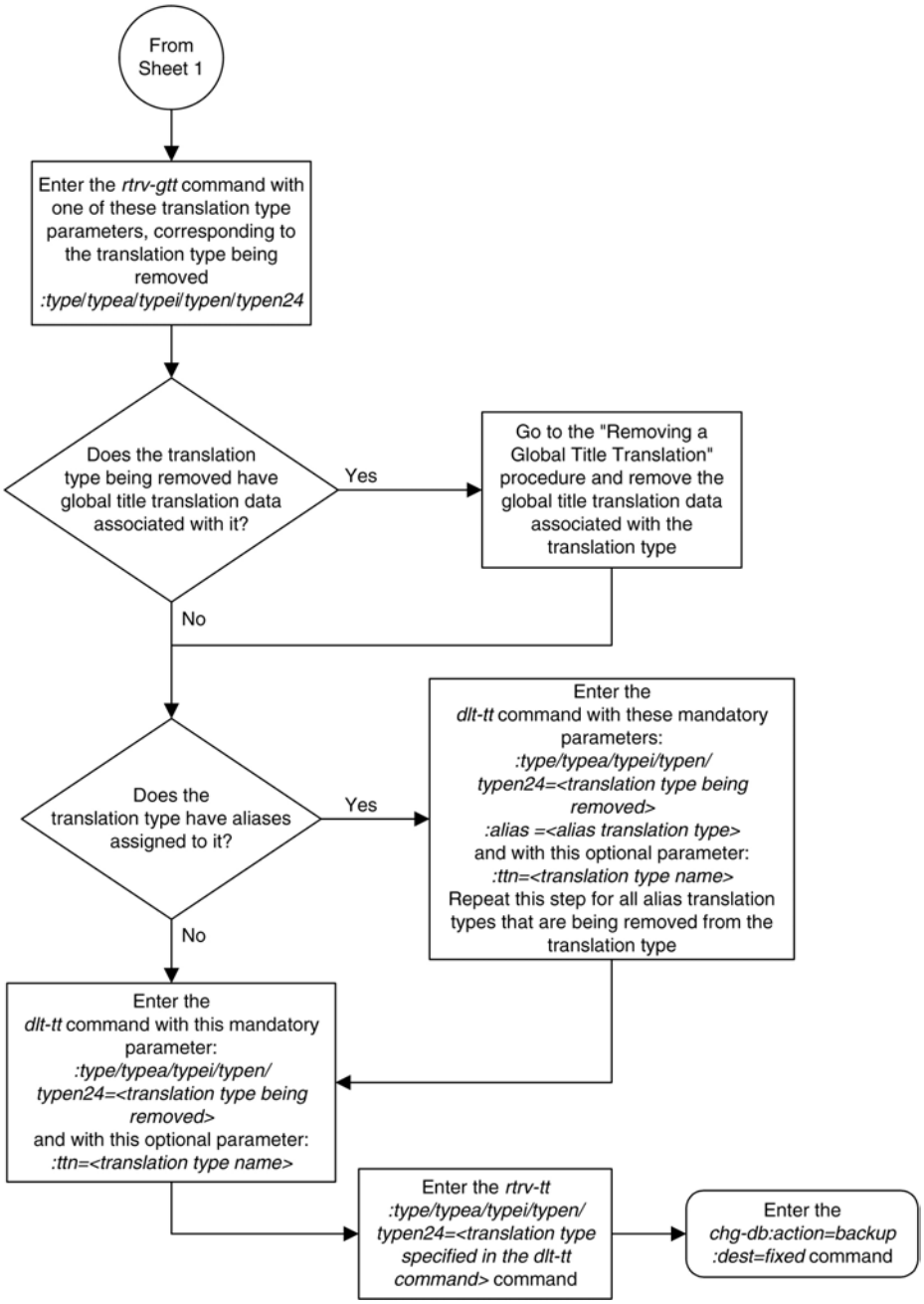
   These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
```

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

Figure 42: Removing a Translation Type





Adding a Global Title Translation

This procedure is used to add a global title translation to the database using the `ent-gtt` command.

The `ent-gtt` command uses these parameters.

`:gta` – Global title start address – along with the `egta` parameter, identifies all valid global titles for the given translation type to translate to the given `pc`, `ssn`, or `ngt` parameters. These are the non-SS7 addresses transmitted to the STP for translation.

`:type/typea/typei/typen/typen24` – The translation type and network type of that translation type.

`:egta` – Global title end address – along with the `gta` parameter, identifies all valid global titles for the given translation type to translate to the given `pc`, `ssn`, or `ngt` parameters. These are the non-SS7 addresses transmitted to the STP for translation.

`:ngt` – New global title – identifies the type of global title translation to replace the received global title.

`:force` – the mated application override. Is the global title translation to be entered without a mated application in the database?

`:xlat` – Translate indicator – defines the type of global title translation that is to be performed.

`:ri` – Route indicator – indicates whether a subsequent global title translation is required.

`:pc/pca/pci/pcn/pcn24` – The point code of the signaling point that is to receive the message.

Note: See Chapter 2, "Configuring Destination Tables," in the *Database Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

`:ssn` – Subsystem number – identifies the subsystem address that is to receive the message.

`:nnp` – The new numbering plan

`:nnai` – The new nature of address indicator

`:npdd` – The number of digits to be deleted or substituted from the beginning of the Global Title Address digits (the prefix digits)

`:npds` – The digits that are being substituted for the prefix digits

`:nsdd` – The number of digits to be deleted or substituted from the end of the Global Title Address digits (the suffix digits)

`:nsds` – The digits that are being substituted for the suffix digits

`:ngti` – The new GT indicator value

`:mrnset` – The MRN set ID, shown in the `rtrv-mrn` command. This parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled and if the `ri=gt` parameter is specified for the global title translation. If the Flexible GTT Load Sharing feature is enabled, the point code specified for the global title translation must be assigned to the MRN set specified by this parameter. The status of the Flexible GTT Load Sharing feature is shown in the `rtrv-ctrl-feat` output. To enable the Flexible GTT Load Sharing feature, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure.

`:mapset` – The MAP set ID, shown in the `rtrv-map` command. This parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled and if the `ri=ssn` parameter is specified for the global title translation. If the Flexible GTT Load Sharing feature is enabled, the point code and SSN specified for the global title translation must be assigned to the MAP set specified by this parameter. The status of the Flexible GTT Load Sharing feature is shown in the `rtrv-ctrl-feat` output. To enable the Flexible GTT Load Sharing feature, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure.

`:loopset` - The value of this parameter is the name of the loopset that is assigned to the GTT. This parameter can be specified only if the SCCP Loop Detection feature is enabled. Enter the `rtrv-loopset` command to verify that the SCCP Loop Detection feature is enabled. Perform the procedure *Activating the SCCP Loop Detection Feature* on page 830, if necessary. By default, the value of the `loopset` parameter is "none" because no loopset is assigned to the GTT.

`:cggtmod` - The calling party GT modification indicator. This parameter specifies whether or not calling party global title modification is required. The values for this parameter are `yes` (calling party global title modification is required) or `no` (calling party global title modification is not required). This parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled. Enter the `rtrv-ctrl-feat` command to verify that either the AMGTT or AMGTT CgPA Upgrade feature is enabled. If the AMGTT or AMGTT CgPA Upgrade feature is not enabled, perform the *Activating the Advanced GT Modification Feature* on page 846 procedure to enable the required feature.

Note: The command line on the terminal can contain up to 150 characters. If the parameters and values specified with the `ent-gtt` command are too long to fit on the ent-gtt command line, perform the *Changing a Global Title Translation* on page 524 procedure to complete adding the GTT entry.

The `XLAT` parameter does not have a SEAS equivalent. When global title translations are configured at the SEAS interface, the values for the SEAS parameters `RI`, `DPC`, and `SSN`, all mandatory parameters for the SEAS `ADD-GTT` and `CHG-GTT` commands, are converted to the EAGLE 5 ISS parameters and values shown in *Table 27: SEAS and Global Title Translation Parameter Conversion* on page 482.

Table 27: SEAS and Global Title Translation Parameter Conversion

SEAS GTT Parameters			GTT Parameters			
RI	DPC	SSN	XLAT	RI	PC/PCA	SSN
G	xxx-xxx-xxx	000	DPC	GT	xxx-xxx-xxx	Not Specified
D	xxx-xxx-xxx	002-255	DPCSSN	SSN	xxx-xxx-xxx	002-255
G	xxx-xxx-xxx	002-255	DPCSSN	GT	xxx-xxx-xxx	002-255
D	xxx-xxx-xxx	000	DPC	SSN	xxx-xxx-xxx	Not Specified

Notes:

- The SEAS `RI=G` parameter denotes global title routing, further global title translation is required.
- The SEAS `RI=D` parameter denotes DPC routing, no further global title translation is required.
- The `RI=GT` parameter denotes further global title translation is required and uses MTP routing.
- The `RI=SSN` parameter denotes final global title translation and uses MAP routing.
- The `XLAT=DPC` parameter indicates that the DPC & RI values in the MSU are to be replaced.

SEAS GTT Parameters	GTT Parameters
• The XLAT=DPCSSN parameter indicates that the DPC, RI, & SSN values in the MSU are to be replaced. • The XLAT=DPCNGT parameter indicates that the DPC, RI, & TT values in the MSU are to be replaced.	

The examples in this procedure are used to add the global title translation data shown in the *Table 28: Example Global Title Translation Configuration Table* on page 483 .

Table 28: Example Global Title Translation Configuration Table

TYPE	GTA	EGTA	XLAT	RI	PC	NGT	SSN
5	910460	---	dpcngt	gt	007-007-007	6	---
10	615370	615380	dpcssn	ssn	003-003-003	---	254
15	800	900	dpc	ssn	005-005-005	---	---
TYPE	**GTA**	**EGTA**	**TTN**	**NNP**	**NNAI**	**NPDD**	**NPDS**
5	910460	---	scp1	3	120	2	N/A
10	615370	615380	scp2	N/A	N/A	N/A	N/A
15	800	900	scp3	N/A	N/A	N/A	N/A

The global title translation data cannot be added to the database if the translation type is defined as an alias and if the global title translation data is already assigned to that translation type.

If the translate indicator is equal to `dpc` (`xlat=dpc`) and the routing indicator is equal to `ssn` (`ri=ssn`), and the `force=yes` parameter is not specified, the point code specified in the `ent-gtt` command must be defined in the database as a mated application. Verify this by entering the `rtrv-map` command. If this point code is not defined as a mated application, perform one of these procedures to add the point code and subsystem number to the database as a mated application:

- *Provisioning a Solitary Mated Application* on page 112
- *Provisioning a Dominant Mated Application* on page 142
- *Provisioning a Load Shared Mated Application* on page 189
- *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223

The point code and subsystem number do not have to be in the mated application table when the `ent-gtt` command is executed if these parameters are specified with the `ent-gtt` command.

- `ri=gt`
- `xlat=dpcssn` and `ri=ssn`

If the point code and subsystem, if applicable, are not in the mated application table when either of these parameters are specified with the `ent-gtt` command, the EAGLE 5 ISS creates a solitary mated application in the mated application table using the point code and subsystem values specified in the `ent-gtt` command.

If the `xlat=dpcssn` parameter is specified, the `ssn` parameter must be specified. Otherwise, the `ssn` parameter cannot be specified.

If a point code is the STP's True PC, then the value of the `XLAT` parameter must be set to `DPCSSN` and the value of the `RI` parameter must be set to `SSN`. If the `SSN` parameter is specified and a point code is the STP's True PC, then the subsystem number specified must exist in the SS-APPL table. This can be verified with the `rtrv-ss-appl` command. To execute the `rtrv-ss-appl` command, either the LNP or ATINP features must be enabled, or the EIR, INP, V-Flex, or ANSI-41 INP Query features must be enabled and turned on. If the LNP feature is enabled, the entry `LNP TNs` with a quantity greater than zero is shown in the `rtrv-ctrl-feat` command output. If the EIR feature is enabled and turned on, the entry `EIR` is shown in the `rtrv-ctrl-feat` command output as being permanently or temporarily enabled and with the status set to on. If the INP feature is enabled and turned on, the entry `INP` is shown in the `rtrv-ctrl-feat` command output with the status set to on. If the ANSI-41 INP Query feature is enabled and turned on, the entry `ANSI-41 INP Query` is shown in the `rtrv-ctrl-feat` command output with the status set to on. If the V-Flex feature is enabled and turned on, the entry `VFLEX` is shown in the `rtrv-ctrl-feat` command output with the status set to on. If the ATINP feature is enabled and turned on, the entry `ATINP` is shown in the `rtrv-ctrl-feat` command output with the status set to on.

Note: The Local Number Portability (LNP), Equipment Identity Register (EIR), INAP Number Portability (INP), V-Flex, ATINP, or ANSI-41 INP Query features must be purchased before you can enable the LNP or ATINP features, or enable and turn on the EIR, INP, V-Flex, or ANSI-41 INP Query features. If you are not sure whether you have purchased the LNP, EIR, or INP, V-Flex, ATINP, or ANSI-41 INP Query feature, contact your Tekelec Sales Representative or Account Representative.

Once the LNP or ATINP feature is enabled with the `enable-ctrl-feat` command, or the EIR, INP, V-Flex, and ANSI-41 INP Query features are turned on with the `chg-ctrl-feat` command, they cannot be turned off or disabled.

The point code specified in the `ent-gtt` command must be defined in the routing table or be the EAGLE 5 ISS's point code. For ANSI point codes (`pc/pca`), the point code specified in the `ent-gtt` command, must be a full point code. That point code can be defined as a full point code in the destination point code table, or can be a member of a cluster point code defined in the destination point code table. Cluster point codes or a network routing point codes cannot be specified with this command. Enter the `rtrv-rte` command to verify that the point code is in the routing table. If the point code is not defined as a route, perform one of the Adding a Route procedures in the Database *Administration Manual – SS7* to define the point code as a route.

If the EAGLE 5 ISS's point code is specified with the `ent-gtt` command, then the `xlat=dpcssn` and `ri=ssn` parameters must be specified. The EAGLE 5 ISS's point code is shown in the `PCA`, `PCI`, `PCN`, or `PCN24` fields of the `rtrv-sid` command output.

If the `xlat=dpcngt` parameter is specified, the `ngt` parameter and the `ri=gt` parameters must be specified. Otherwise, the `ngt` parameter cannot be specified.

An ANSI point code or ITU international point code containing all zeros is not a valid point code and cannot be entered into the database. An ITU national point code containing all zeros is a valid point code and can be entered into the database.

Either the `type` parameter or the `ttn` parameter must be specified.

If the `type` parameter is specified, the translation type must be in the database. This can be verified with the `rtrv-tt` command.

If the `type` parameter is not specified, the translation type name must be assigned to a translation type in the database. This can be verified with the `rtrv-tt` command.

If the `type` and `ttn` parameters are specified, the specified translation type must be in the database and the specified translation type name must be assigned to the translation type.

If the translation type is ANSI (`type` or `typea`), the `pc` type must be ANSI (`pc` or `pca`). If the translation type is one of the ITU types (`typei`, `typen`, or `typen24`) the `pc` type may be either of the ITU types (`pci`, `pcn`, or `pcn24`). If the ANSI-ITU-China SCCP Conversion feature is enabled, the domain (ANSI or ITU) of the translation type and point code do not have to be the same.

The end global title address (`egta`) must be greater than or equal to the start global title address (`gta`) and its length must be equal to the start global title address.

If the Variable-Length Global Title Translation (VGTT) feature is off, shown the entry `VGTT = off`, the global title address length must be equal to the number of digits specified by the given translation type. The length of the global title address can be verified with the `rtrv-tt` command.

If the Variable-Length Global Title Translation (VGTT) feature is on, shown the entry `VGTT = on`, up to 10 different length global title addresses can be assigned to a translation type. The length of the global title address is only limited by the range of values for the `gta` and `egta` parameters, one to 21 digits, and by the global title addresses already assigned to the translation type. The `ndgt` parameter of the `ent-tt` command has no effect on the length of the global title address. As global title addresses of different lengths are assigned to a specific translation type, these lengths are displayed in the `NDGT` field of the `rtrv-tt` command output.

If the translation type has 10 different length global title addresses assigned to it, and another global title address is specified for the translation type, the length of the global title address being added to the translation type must be the same as one of the 10 lengths already assigned to the translation type. If the length of the global title address does not match one of the 10 lengths already assigned to the translation type, the `ent-gtt` command is rejected with this message.

```
E2958 Cmd Rej: No more than 10 GTA lengths supported per TT for VGTT
```

If the translation type has less than 10 different length global title addresses assigned to it, and another global title address is specified for the translation type, the length of the global title address can be from one to 21 digits and does not have to match the length of the other global title addresses assigned to the translation type.

Go to the *Variable-length Global Title Translation Feature* on page 20 section for more information about this feature.

Note: The Variable-Length Global Title Translation (VGTT) feature allows a variable-length global title address. Before enabling the VGTT feature, make sure you have purchased this feature. If you are not sure whether you have purchased the VGTT feature, contact your Tekelec Sales Representative or Account Representative.

If you have purchased this feature, refer to section *Variable-length Global Title Translation Feature* on page 20 for more information about this feature.

The range, as specified by the start and end global title addresses, cannot already exist in the global title translation data for the specified translation type. If the ranges overlap, the range of global title addresses cannot be split and the `ent-gtt` command is rejected with this message.

```
E2401 Cmd Rej:GTA range overlaps a current range. GTA range overlaps a
current range
```

Along with error message 2401, a list of the overlapped global title addresses is displayed as shown in the following example.

```
rlghncxa03w 07-02-24 08:29:15 GMT EAGLE5 35.6.0
The following GTA ranges overlap the input GTA range

START GTA               END GTA
8005550000              8005551999
8005552000              8005553999
8005554000              8005555999

ENT-GTT: MASP A - Command Aborted
```

The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, and `nsds` parameters are used by the Advanced GT Modification feature to modify the numbering plan, nature of address indicator, and the prefix or suffix digits in the called party address and calling party address portion of outbound MSUs in addition to the translation type when the MSU requires further global title translation and the translation type is to be replaced.

Being able to change the numbering plan, nature of address indicator, and either the prefix or suffix digits in the called party address portion of outbound MSUs makes the MSU more compatible with the network that the MSU is being sent to and to ensure that the MSU is routed correctly. These changes are made after the global title translation process, but before the MSU is routed to its destination.

The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, and `nsds` parameters can be specified only when the Advanced GT Modification feature is enabled. This can be verified by entering the `rtrv-ctrl-feat` command. For more information on the Advanced GT Modification feature, refer to the *Advanced GT Modification Feature* on page 22 section.

The `ngti=2` parameter can be specified with an ANSI point code or an ITU point code and not with the `nnp` and `nnai` parameters.

The `ngti=4` parameter can be specified only with an ITU point code. The `nnp` and `nnai` parameters must be specified with the `ngti=4` parameter.

The `ngti` parameter can be specified only if the domain (ANSI or ITU) of the translation type and point code of the global title translation are not the same(the translation type is ANSI and the point code is ITU or the translation type is ITU and the point code is ANSI), or if the domain of the translation type and point code is ITU. The Advanced GT Modification feature must be enabled and the ANSI-ITU-China SCCP Conversion feature must be enabled before the `ngti` parameter can be specified with the global title translation.

The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified with the `ent-gtt` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters.

Table 29: Valid Parameter Combinations for the ent-gtt Routing Parameters on page 487 shows the valid combinations for the `xlat`, `ri`, `ssn`, and `ngt` parameters. All other combinations are rejected.

Table 29: Valid Parameter Combinations for the `ent-gtt` Routing Parameters

XLAT Value	RI Value	Routing Action	SSN Value	NGT Value
DPC	GT	Translate DPC only and route on GT	Cannot specify	Can be specified (See note)
DPC	SSN	Translate DPC only and route on SSN	Cannot specify	Cannot specify
DPCSSN	GT	Translate DPC and SSN and route on GT	Must specify	Cannot specify
DPCSSN	SSN	Translate DPC and SSN and route on SSN	Must specify	Cannot specify
DPCNGT	GT	Translate New GT and route on GT	Cannot specify	Must specify
Note: The `ngt` parameter can be specified with the `xlat=dpc` and `ri=gt` parameters only if the ANSI-ITU-China SCCP Conversion feature is enabled. Otherwise, the `ngt` parameter cannot be specified with the `xlat=dpc` and `ri=gt` parameters.				

The EAGLE 5 ISS can contain 269,999, 400,000, or 1,000,000 global title translations. The system default is 269,999 global title translations. This quantity can be increased to 400,000 by enabling the feature access key for part number 893-0061-01, or to 1,000,000 by enabling the feature access key for part number 893-0061-10. For more information on enabling these feature access keys, go to the *Enabling the XGTT Table Expansion Feature* on page 762 procedure.

Canceling the `RTRV-GTT` Command

Because the `rtrv-gtt` command used in this procedure can output information for a long period of time, the `rtrv-gtt` command can be canceled and the output to the terminal stopped. There are three ways that the `rtrv-gtt` command can be canceled.

- Press the `F9` function key on the keyboard at the terminal where the `rtrv-gtt` command was entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rtrv-gtt` command was entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rtrv-gtt` command was entered, from another terminal other that the terminal where the `rtrv-gtt` command was entered. To enter the `canc-cmd:trm=<xx>` command, the terminal must allow Security Administration commands to be entered from it and the user must be allowed to enter Security Administration commands. The terminal's permissions can be verified with the `rtrv-secu-trm`

command. The user's permissions can be verified with the `rtrv-user` or `rtrv-secu-user` commands.

For more information about the `canc-cmd` command, go to the *Commands Manual*.

1. Display the translation types in the database using the `rtrv-tt` command. This is an example of the possible output..

```
rlghncxa03w 07-02-25 09:42:31 GMT  EAGLE5 37.0.0
TYPEA      TTN        NDGT
1          lidb       5
2          c800       10
3          d700       6
5          scp1       6
10         scp2       6
15         scp3       3

ALIAS      TYPEA
30         5
40         10
50         3
65         3

TYPEI      TTN        NDGT
105        itudb      8

ALIAS      TYPEI
7          105

TYPEN      TTN        NDGT
120        dbitu      7

ALIAS      TYPEN
8          120
```

   If the required translation type is not shown in the `rtrv-tt` output, perform the *Adding a Translation Type* on page 468 procedure to add the translation type to the database.

2. Display the global title translations in the database using the `rtrv-gtt` command specifying a translation type (`type`), translation type name (`ttn`), or both from the `rtrv-tt` command output shown in *Step 1* on page 488 along with the desired global title address (`gta`). If a range of global title addresses will be specified for the global title translation, the `egta` parameter can be specified with the `rtrv-gtt` command. For this example, enter these commands.

   `rtrv-gtt:typea=5:gta=910460`

   `rtrv-gtt:typea=10:gta=615370:egta=615380`

   `rtrv-gtt:typea=15:gta=800:egta=900`

   To add a global title translation, the desired global title addresses cannot be in the database. If the global title addresses are not in the database, the `rtrv-gtt` command is rejected with the following message.

```
E2405 Cmd Rej: GTA does not exist in any range
```

3. The global title translation cannot be added to the database if the database contains the maximum number of global title translations the EAGLE 5 ISS is allowed to have. The maximum number of global title translations is shown in the `rtrv-gtt` output in *Step 2* on page 488 or the `rtrv-ctrl-feat` output.

If error message E2405 was displayed in the output in *Step 2* on page 488, enter the rtrv-ctrl-feat command to verify the maximum number of global title translations that are allowed in the database.

The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
HC-MIM SLK Capacity       893012707  on      64

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: If the entry XGTT Table Expansion is not shown in the rtrv-ctrl-feat output, the maximum number of global title addresses that the database can contain is 269,999.

If the maximum number of global title translations is 1,000,000, continue the procedure with *Step 4* on page 489 .

If the maximum number of global title translations is 400,000, and the global title translation being added increases the number beyond 400,000, perform the *Enabling the XGTT Table Expansion Feature* on page 762 procedure to enable XGTT Table Expansion feature for 1,000,000 global title translations. After the maximum number of global title translations has been increased, continue the procedure with *Step 4* on page 489 .

If the maximum number of global title translations is either 269,999 or 400,000, and the global title translation being added will not increase the number beyond the maximum number of global title translations, continue the procedure with *Step 4* on page 489 .

Note: If the nnp, nnai, npdd, npds, nsdd, nsds, or cggtmod parameters will not be specified in this procedure, continue the procedure with *Step 5* on page 490 .

4. To specify the nnp, nnai, npdd, npds, nsdd, nsds, or cggtmod parameters in this procedure, the Advanced GT Modification feature must be enabled.

   If the Advanced GT Modification feature is enabled, one of these entries is shown in the rtrv-ctrl-feat output.

   - AMGTT
   - AMGTT CdPA Only
   - AMGTT CgPA Upgrade

   Note: If the entry AMGTT CdPA Only is shown in the rtrv-ctrl-feat output, the cggtmod parameter cannot be specified in this procedure. To specify the cggtmode parameter, either the AMGTT or AMGTT CgPA Upgrade entry must be shown in the rtrv-ctrl-feat output.

If the `rtrv-ctrl-feat` command was performed in *Step 3* on page 488, and the appropriate AMGTT entry is shown in the `rtrv-ctrl-feat` output, continue the procedure with *Step 5* on page 490.

If the `rtrv-ctrl-feat` command was not performed in *Step 3* on page 488, enter the `rtrv-ctrl-feat` command to verify the status of the Advanced GT Modification feature.

The following is an example of the possible output.

```
rlghncxa03w 06-10-28 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  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
HC-MIM SLK Capacity       893012707  on      64

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 appropriate Advanced GT Modification feature is not shown in the `rtrv-ctrl-feat` output in this step or in *Step 3* on page 488, perform the *Activating the Advanced GT Modification Feature* on page 846 procedure to enable the appropriate Advanced GT Modification feature. After the Advanced GT Modification feature has been enabled, continue the procedure with *Step 5* on page 490.

5. A loopset can be assigned to the global title translation to determine if SCCP messages are being looped. The `loopset` parameter is used to assign a loopset to a global title translation. To assign a loopset to the global title translation, the SCCP Loop Detection feature must be enabled.

   Note: If you do not wish to specify the `loopset` parameter with the `ent-gtt` command, continue the procedure with *Step 7* on page 492.

   If the SCCP Loop Detection feature is enabled, the `LOOPSET` field is shown in the `rtrv-gtt` output, and the entry `SCCP Loop Detection` is shown in the `rtrv-ctrl-feat` output.

   If the `LOOPSET` field is shown in the `rtrv-gtt`output in *Step 2* on page 488, continue the procedure with *Step 6* on page 491.

   If error message `E2405` is displayed in the `rtrv-gtt`output in *Step 2* on page 488, enter the `rtrv-ctrl-feat` command with the SCCP Loop Detection feature part number to verify the status of the SCCP Loop Detection feature. Enter this command.

   `rtrv-ctrl-feat:partnum=893016501`

   The following is an example of the possible output.

```
rlghncxa03w 07-03-28 21:15:37 GMT EAGLE5 35.6.0
The following features have been permanently enabled:
```

```
Feature Name              Partnum     Status  Quantity
SCCP Loop Detection       8930165101  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 SCCP Loop Detection feature is enabled, continue the procedure with *Step 6* on page 491.

If the `LOOPSET` field does not appear in the `rtrv-gtt`output in *Step 2* on page 488, or the `rtrv-ctrl-feat` output shows that the SCCP Loop Detection feature is not enabled, perform the *Activating the SCCP Loop Detection Feature* on page 830 procedure to enable the SCCP Loop Detection feature. After the SCCP Loop Detection feature has been enabled, perform the *Adding a Loopset* on page 442 procedure to add the required loopset. After the loopset has been added, continue the procedure with *Step 7* on page 492.

6. Display all the loopsets in the database by entering this command

   `rtrv-loopset:num=1000:force=yes`

   This is an example of the possible output.

```
LoopSet            Mode          Point Codes
=====================================================================
cary2              notify        005-015-005     007-007-007 (ANSI)
                                 033-004-003     033-007-003
                                 005-027-005     007-004-007
cary4              notify        005-012-005     007-026-007 (ANSI)
                                 003-049-003     033-002-003
                                 005-008-055     007-014-007
apex3              discard       005-017-008     007-017-009 (ANSI)
                                 033-005-043     005-014-005
                                 005-017-005     007-014-007
                                 033-002-043     005-038-005
                                 007-009-027     033-003-043
                                 005-012-005     007-002-027
apex4              discard       005-007-008     027-007-009 (ANSI)
                                 033-005-003     005-004-055
                                 027-001-007     033-008-003
                                 033-007-003     005-003-055
                                 027-008-007
ral5               notify        005-005-005     007-007-007 (ANSI)
                                 003-004-003     003-001-003
                                 005-007-005     007-004-007
                                 003-002-003     005-008-005
                                 007-009-007     003-003-003
                                 005-002-005     007-002-007
ral6               notify        005-007-008     007-007-009 (ANSI)
                                 003-005-003     003-007-003
                                 005-007-005
dunn1              discard       005-002-055     007-051-007 (ANSI)
                                 003-008-033
rtp9               discard       005-002-005     007-001-007 (ANSI)
                                 003-008-003     003-007-003
                                 005-003-005     007-008-007
                                 005-004-005
rtp5               discard       005-007-008     007-007-009 (ANSI)
                                 003-005-003
```

```
rtp1              discard        005-005-005     007-007-007 (ANSI)
                                 003-004-003     003-007-003
                                 005-007-005     007-004-007
                                 005-004-005
rtp2              notify         005-007-008     007-007-009 (ANSI)
                                 003-005-003


rlghncxa03w 07-02-07 08:50:15 GMT Rel 37.0.0
LOOPSET table is (11 of 1000) 1% full
RTRV-LOOPSET: MASP A - COMPLTD
```

Note: If the `rtrv-loopset` command is entered with no other parameters specified, a maximum of 50 entries are displayed. To display more than 50 entries, the `force=yes` parameter must be specified with the `rtrv-loopset` command and the num parameter value must be greater than 50. Since there can be a maximum of 1000 loopsets in the database, to display all the loopsets in the database, the `force=yes` and `num = 1000` parameters must be specified with the `rtrv-loopset` command.

If the required loopset is shown in the `rtrv-loopset` output, continue the procedure with *Step 7* on page 492.

If the required loopset is not shown in the `rtrv-loopset` output, perform the *Adding a Loopset* on page 442 procedure to add the required loopset. After the loopset has been added, continue the procedure with *Step 7* on page 492.

7. Hexadecimal digits (0-9, a-f, A-F) can be specified as values for the `gta`, `egta`, `npds`, or `nsds` parameters only if the Hex Digit Support for GTT feature is enabled. Verify the status of the Hex Digit Support for GTT feature by entering the `rtrv-ctrl-feat` command with the Hex Digit Support for GTT feature part number.

   Note: If hexadecimal digits are shown in the `rtrv-gtt` output in *Step 2* on page 488, or if hexadecimal digits will not be specified for the `gta`, `egta`, `npds`, or `nsds` parameters in this procedure, continue the procedure with *Step 8* on page 493.

   Enter this command.

   `rtrv-ctrl-feat:partnum=893018501`

   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
Hex Digit Support for GTT 893018501      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 Hex Digit Support for GTT feature has not been enabled, perform the *Activating the Hex Digit Support for GTT Feature* on page 806 procedure to enable this feature. After the Hex Digit Support for GTT feature is enabled, continue the procedure with *Step 8* on page 493.

8. Verify that the ANSI-ITU-China SCCP Conversion feature is enabled by entering the rtrv-ctrl-feat:partnum=893012001 command. The following is an example of the possible output.

```
rlghncxa03w 07-02-28 21:15:37 GMT EAGLE5 37.0.0
The following features have been permanently enabled:
Feature Name       Partnum       Status       Quantity
SCCP Conversion    893012001       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 ANSI-ITU-China SCCP Conversion feature is not enabled, perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure and the ANSI-ITU-China SCCP Conversion feature.

Note: If the domain (ANSI or ITU) of the point code and the translation type assigned to the global title translation will be different, and the `ngti` parameter will be specified with the global title translation, the ANSI-ITU-China SCCP Conversion feature (SCCP Conversion) must be enabled. If the ANSI-ITU-China SCCP Conversion feature is not being used, or if the `rtrv-ctrl-feat` output in this step shows that the ANSI-ITU-China SCCP Conversion feature is enabled, continue the procedure with*Step 9* on page 493.

Note: If the EAGLE 5 ISS's true point code and the EAGLE 5 ISS's subsystem number, along with the `ri=ssn` and `xlat=dpcssn` parameters, are being specified with the `ent-gtt` command, continue the procedure with *Step 12* on page 495.

9. Display the destination point codes in the database by entering the `rtrv-dstn` command. This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

DPCA          CLLI        BEI ELEI  ALIASI       ALIASN     DOMAIN
001-207-000   ----------- no  ---   -------      -----------    SS7
001-001-001   ----------- no  ---   -------      -----------    SS7
001-001-002   ----------- no  ---   -------      -----------    SS7
001-005-000   ----------- no  ---   -------      -----------    SS7
001-007-000   ----------- no  ---   -------      -----------    SS7
008-012-003   ----------- no  ---   -------      -----------    SS7
003-002-004   ----------- no  ---   -------      -----------    SS7
009-002-003   ----------- no  ---   -------      -----------    SS7
010-020-005   ----------- no  ---   -------      -----------    SS7

DPCI          CLLI        BEI ELEI  ALIASI       ALIASN      DOMAIN
1-207-0       ----------- no  ---   -------      -----------    SS7
0-015-0       ----------- no  ---   -------      -----------    SS7
0-017-0       ----------- no  ---   -------      -----------    SS7
1-011-1       ----------- no  ---   -------      -----------    SS7
1-011-2       ----------- no  ---   -------      -----------    SS7

DPCN          CLLI        BEI ELEI   ALIASA       ALIASI     DOMAIN

DPCN24        CLLI        BEI ELEI   ALIASA       ALIASI     DOMAIN

Destination table is (14 of 2000) 1% full
```

```
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the required point code is not shown in the `rtrv-dstn` output, perform the "Adding a Destination Point Code" procedure in the *Database Administration Manual - SS7* to add the required point code. A proxy point code cannot be assigned to the point code.

After the new point code has been added, perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database. After the route has been added, continue the procedure with *Step 12* on page 495.

10. Display the point code that will be assigned to the global title translation by using the `rtrv-dstn` command and specifying the point code. For this example, enter this command.

`rtrv-dstn:dpca=010-020-005`

This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
   010-020-005   ----------- no  ---   -------      -----------    SS7

   PPC           NCAI           PRX
   009-002-003   ----           no

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the point code is not shown in the `rtrv-dstn` command output, the following output is displayed.

```
DPCA          CLLI        BEI ELEI  ALIASI       ALIASN/N24    DOMAIN

No destinations meeting the requested criteria were found

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

A proxy point code (a point code value is shown in the `PPC` column) cannot be assigned to the point code. If a proxy point code is shown in this step, choose another point code from the `rtrv-dstn` output in *Step 9* on page 493 and repeat this step.

If the point code is not shown in the `rtrv-dstn` output, perform the “Adding a Destination Point Code” procedure in the Database *Administration Manual* - SS7 and add the point code to the destination point code table.

11. The point code specified with the `ent-gtt` command must be the DPC of a route, unless the point code is the EAGLE 5 ISS’s point code. Enter the `rtrv-rte` command with the `dpc` parameter specifying the point code to be used with the `ent-gtt` command to verify whether or not the point code is the DPC of a route.

For this example, enter these commands.

`rtrv-rte:dpca=007-007-007`

This is an example of the possible output.

```
rlghncxa03w 07-02-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA       ALIASI     ALIASN/N24     LSN        RC      APCA
007-007-007  --------   -----------     ls03       10    007-007-007
```

```
                                        ls02       30    150-150-150
                                        lsa2       50    200-200-200
                                               RTX:No  CLLI=ls03clli
```

`rtrv-rte:dpca=003-003-003`

This is an example of the possible output.

```
rlghncxa03w 07-02-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA        ALIASI     ALIASN/N24    LSN        RC    APCA
003-003-003   --------    ----------    ls02       10    002-002-002
                                        ls08       30    025-025-150
                                        lsa5       50    066-030-100
                                               RTX:No  CLLI=ls07clli
```

`rtrv-rte:dpca=005-005-005`

This is an example of the possible output.

```
rlghncxa03w 07-02-07 11:43:04 GMT  EAGLE5 37.0.0
    DPCA       ALIASI     ALIASN/N24    LSN     RC         APCA
005-005-005    ------    -----------    ls05    10    005-005-005
                                        ls15    30    089-047-123
                                        lsa8    50    077-056-000
                                               RTX:No  CLLI=ls05clli
```

If the point code is not shown in the `rtrv-rte` output, perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database.

12. To use either the `mrnset` parameter (if the routing indicator value for the global title translation is GT) or `mapset` parameter (if the routing indicator value for the global title translation is SSN), the Flexible GTT Load Sharing feature must be enabled.

If the Flexible GTT Load Sharing feature is enabled, either the `mrnset` or `mapset` parameters, depending on the routing indicator value for the global title translation being added in this procedure, must be specified with the `ent-gtt` command.

Verify that the Flexible GTT Load Sharing feature is enabled by entering this command.

`rtrv-ctrl-feat:partnum=893015401`

The following is an example of the possible output.

```
rlghncxa03w 07-02-28 21:15:37 GMT EAGLE5 37.0.0

The following features have been permanently enabled:

Feature Name         Partnum    Status   Quantity
Zero entries found.

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 Flexible GTT Load Sharing feature is enabled, the following is an example of the possible output.

```
rlghncxa03w 07-02-28 21:15:37 GMT EAGLE5 37.0.0

The following features have been permanently enabled:

Feature Name               Partnum      Status       Quantity
Flexible GTT Load Sharing 893015401      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 routing indicator for the global title translation being added is GT, there are three actions that can be taken:

- If theFlexible GTT Load Sharing feature is not enabled, and you do not wish to specify the `mrnset` parameter for the global title translation, continue the procedure with *Step 20* on page 502.
- If the Flexible GTT Load Sharing feature is not enabled, and you do wish to specify the `mrnset` parameter for the global title translation, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure to enable the Flexible GTT Load Sharing feature. After enabling the Flexible GTT Load Sharing feature, continue the procedure with *Step 13* on page 497.
- If the Flexible GTT Load Sharing feature is enabled, continue the procedure with*Step 13* on page 497.

If the routing indicator for the global title translation being added is SSN, there are three actions that can be taken:

- If the Flexible GTT Load Sharing feature is not enabled, and you do not wish to specify the `mapset` parameter for the global title translation, continue the procedure with one of these steps.
  - If the point code value is the EAGLE 5 ISS's point code, continue the procedure with *Step 17* on page 500.
  - If the point code value is a value other than the EAGLE 5 ISS's point code, the `ri` parameter value will be `ssn`, and the `xlat` parameter value will be `dpc`, continue the procedure with *Step 19* on page 501.
  - If the point code value is a value other than the EAGLE 5 ISS's point code, the `ri` parameter value will be `ssn`, and the `xlat` parameter value will be `dpcssn` when this procedure is completed, continue the procedure with *Step 14* on page 498 .
- If the Flexible GTT Load Sharing feature is not enabled, and you do wish to specify the `mapset` parameter for the global title translation, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure to enable the Flexible GTT Load Sharing feature.

After enabling the Flexible GTT Load Sharing feature, continue the procedure with one of these steps:

- If the point code value is the EAGLE 5 ISS's point code continue the procedure with *Step 17* on page 500.
- If the point code value is a value other than the EAGLE 5 ISS's point code, or the `xlat` parameter value will be `dpc`, continue the procedure with *Step 19* on page 501.

- If the Flexible GTT Load Sharing feature is enabled, perform one of these steps.
  - If the point code value is the EAGLE 5 ISS's point code continue the procedure with *Step 17* on page 500.
  - If the point code value is a value other than the EAGLE 5 ISS's point code, or the `xlat` parameter value will be `dpc`, continue the procedure with *Step 19* on page 501.

13. The point code and MRN set ID specified for the global title translation must be shown in the `rtrv-mrn` command output. The point code must be assigned to the MRN set that will be assigned to the global title translation.

Enter the `rtrv-mrn` command to verify that the required MRN set is configured in the database, and that the required point code is assigned to the MRN set. The following is an example of the possible output.

```
rlghncxa03w 07-02-28 21:15:37 GMT EAGLE5 37.0.0

MRNSET   PC             RC
DFLT     001-001-001    10
         001-001-002    20
         001-001-003    30

MRNSET   PC             RC
110      001-001-001    10
         001-001-005    20
         001-001-006    30
         001-001-003    40
         001-001-008    50

MRNSET   PC             RC
111      001-001-001    30
         001-001-005    30
         001-001-006    30
         001-001-003    30
         001-001-008    30

MRNSET   PC             RC
112      001-003-001    10
         001-003-002    10
         001-003-003    30
         001-003-004    30
         001-003-006    60
         001-003-007    60
         001-003-008    80
         001-003-009    80

MRNSET   PCN               RC
113      s-1-1-1-0123-aa   1
```

```
         s-1-1-1-0235-aa   2
         s-1-1-1-0235-aa   3
```

Note: If the Weighted GTT Load Sharing feature is enabled, the WT, %WT, and THR columns are shown in the `rtrv-mrn` output

If the required MRN set is not shown in the `rtrv-mrn` output, or if the required point code is not assigned to the required MRN set, provision the required MRN set by performing the *Provisioning MRN Entries* on page 310 procedure. After provisioning the required MRN set, continue the procedure with *Step 20* on page 502.

If the required MRN set is shown in the `rtrv-mrn` output, or if the required point code is assigned to the required MRN set, continue the procedure with *Step 20* on page 502.

Note: If the EAGLE 5 ISS's point code is not going to used for the `pc` parameter of the `ent-gtt` command, continue the procedure with *Step 19* on page 501.

14. Display the destination point codes in the database by entering the `rtrv-dstn` command. This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

DPCA           CLLI        BEI ELEI  ALIASI       ALIASN     DOMAIN
001-207-000    ----------- no  ---   -------      -----------    SS7
001-001-001    ----------- no  ---   -------      -----------    SS7
001-001-002    ----------- no  ---   -------      -----------    SS7
001-005-000    ----------- no  ---   -------      -----------    SS7
001-007-000    ----------- no  ---   -------      -----------    SS7
008-012-003    ----------- no  ---   -------      -----------    SS7
003-002-004    ----------- no  ---   -------      -----------    SS7
009-002-003    ----------- no  ---   -------      -----------    SS7
010-020-005    ----------- no  ---   -------      -----------    SS7

DPCI           CLLI        BEI ELEI  ALIASI       ALIASN      DOMAIN
1-207-0        ----------- no  ---   -------      -----------    SS7
0-015-0        ----------- no  ---   -------      -----------    SS7
0-017-0        ----------- no  ---   -------      -----------    SS7
1-011-1        ----------- no  ---   -------      -----------    SS7
1-011-2        ----------- no  ---   -------      -----------    SS7

DPCN           CLLI        BEI ELEI   ALIASA       ALIASI     DOMAIN

DPCN24         CLLI        BEI ELEI   ALIASA       ALIASI     DOMAIN

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the required point code is not shown in the `rtrv-dstn` output, perform the "Adding a Destination Point Code" procedure in the *Database Administration Manual - SS7* to add the required point code. A proxy point code cannot be assigned to the point code.

After the new point code has been added, perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database. After the route has been added, continue the procedure with *Step 19* on page 501.

15. Display the point code that will be assigned to the global title translation by using the `rtrv-dstn` command and specifying the point code. For this example, enter this command.

```
rtrv-dstn:dpca=010-020-005
```

This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
   010-020-005   ----------- no  ---   -------      -----------    SS7

   PPC           NCAI           PRX
   009-002-003   ----           no

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the point code is not shown in the `rtrv-dstn` command output, the following output is displayed.

```
DPCA          CLLI        BEI ELEI  ALIASI       ALIASN/N24    DOMAIN

No destinations meeting the requested criteria were found

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

A proxy point code (a point code value is shown in the PPC column) cannot be assigned to the point code. If a proxy point code is shown in this step, choose another point code from the `rtrv-dstn` output in *Step 14* on page 498 and repeat this step.

If the point code is not shown in the `rtrv-dstn` output, perform the "Adding a Destination Point Code" procedure in the Database *Administration Manual* - SS7 and add the point code to the destination point code table.

16. The point code specified with the `ent-gtt` command must be the DPC of a route, unless the point code is the EAGLE 5 ISS's point code. Enter the `rtrv-rte` command with the `dpc` parameter specifying the point code to be used with the `ent-gtt` command to verify whether or not the point code is the DPC of a route.

For this example, enter these commands.

```
rtrv-rte:dpca=007-007-007
```

This is an example of the possible output.

```
rlghncxa03w 07-02-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA       ALIASI     ALIASN/N24     LSN        RC      APCA
007-007-007  --------   -----------     ls03       10    007-007-007
                                        ls02       30    150-150-150
                                        lsa2       50    200-200-200
                                               RTX:No  CLLI=ls03clli
```

```
rtrv-rte:dpca=003-003-003
```

This is an example of the possible output.

```
rlghncxa03w 07-02-07 11:43:04 GMT  EAGLE5 37.0.0
   DPCA        ALIASI     ALIASN/N24    LSN        RC    APCA
003-003-003   --------    ----------    ls02       10    002-002-002
                                        ls08       30    025-025-150
                                        lsa5       50    066-030-100
                                               RTX:No  CLLI=ls07clli
```

```
rtrv-rte:dpca=005-005-005
```

This is an example of the possible output.

```
rlghncxa03w 07-02-07 11:43:04 GMT  EAGLE5 37.0.0
    DPCA       ALIASI     ALIASN/N24    LSN     RC         APCA
005-005-005    ------    -----------    ls05    10    005-005-005
                                        ls15    30    089-047-123
                                        lsa8    50    077-056-000
                                                RTX:No  CLLI=ls05clli
```

If the point code is not shown in the `rtrv-rte` output, perform one of the Adding a Route procedures in the Database *Administration Manual - SS7* and add the required route to the database.

17. If the `ri=ssn` and `xlat=dpcssn` parameters are specified with the `ent-gtt` command, and you wish to use the EAGLE 5 ISS's point code for the value of the `pc` parameter of the `ent-gtt` command, the point code value must be in the EAGLE 5 ISS's self ID table. Display the EAGLE 5 ISS self-identification, using the `rtrv-sid` command.

```
This is an example of the possible output.
rlghncxa03w 07-02-10 11:43:04 GMT EAGLE5 37.0.0

PCA               PCI          PCN           CLLI         PCTYPE
010-020-030     1-023-1      12-0-14-1     rlghncxa03w    OTHER
              s-1-023-1    s-12-0-14-1

CPCA
002-002-002       002-002-003       002-002-004      002-002-005
002-002-006       002-002-007       002-002-008      002-002-009
004-002-001       004-003-003       050-060-070

CPCI
1-001-1           1-001-2           1-001-3          1-001-4
1-002-1           1-002-2           1-002-3          1-002-4
2-001-1           7-222-7

CPCN
2-0-10-3          2-0-11-0          2-0-11-2          2-0-12-1
2-2-3-3           2-2-4-0           10-14-10-1
```

18. Enter the `rtrv-ss-appl` command to verify that either the LNP, EIR, V-Flex, ATINPQ, or INP subsystem number (depending on which feature is on) is in the subsystem application table.

This is an example of the possible output.

```
rlghncxa03w 08-09-28 14:42:38 GMT EAGLE5 39.2.0
APPL       SSN       STAT
LNP        254       ONLINE

SS-APPL table is 20% FULL (1 of 5)
```

If the subsystem number is shown in the `rtrv-ss-appl` output, go to *Step 19* on page 501. If no subsystem number is shown in the `rtrv-ss-appl` output, or if the `rtrv-ss-appl` command is rejected, go to one of these manuals, depending on the type of subsystem you wish to use, to enable and turn on the feature as necessary, and add the subsystem to the subsystem application table.

- EIR subsystem – go to the *Feature Manual - EIR*.
- INP subsystem – go to the *Feature Manual - INP/AINPQ*.
- LNP subsystem – go to the *LNP Feature Activation Guide*.

- V-Flex subsystem – go to the *Feature Manual - V-Flex*.
- ATINPQ subsystem – go to the *Feature Manual - ATINP*.

Note: If the Flexible GTT Load Sharing feature is enabled, shown in *Step 12* on page 495, a MAP set ID must be specified for the final global title translation. The point code and SSN specified for the final global title translation being added in this procedure must be assigned to the MAP set ID that will be assigned to the final global title translation. Perform *Step 19* on page 501 to verify that the required MAP set is configured in the database.

Note: If the Flexible GTT Load Sharing feature is not enabled, and the `ri=ssn` and `xlat=dpc` parameters are not being specified with the `ent-gtt` command, or if the EAGLE 5 ISS's true point code and the EAGLE 5 ISS's subsystem number, along with the `ri=ssn` and `xlat=dpcssn` parameters, are not being specified with the `ent-gtt` command, continue the procedure with *Step 20* on page 502.

19. Enter the `rtrv-map` command with the `pc` parameter specifying the required point code to verify that the required data is in the mated application table.

For this example enter this command.

```
rtrv-map:pca=005-005-005
```

If the Flexible GTT Load Sharing feature is not enabled, this is an example of the possible output.

```
rlghncxa03w 07-03-25 09:42:31  GMT  EAGLE5 37.0.0

MAP TABLE IS (37 of 1024)  4 % FULL

PCA         SSN RC MULT -------Mate-------------SRM MRC GRP NAME SSO
                          PCA       SSN RC MULT
005-005-005 250 10  SOL  ------- --------------  --- --- GRP01    ON
```

If the Flexible GTT Load Sharing feature is enabled, this is an example of the possible output.

```
rlghncxa03w 07-05-25 09:42:31  GMT  EAGLE5 37.0.0

MAP TABLE IS(12 of 36000)   1 % FULL

PCA          SSN RC MULT---------Mate-------------SRM MRC GRP NAME SSO
                          PCA      SSN RC MULT

MAPSET ID =DFLT
005-005-005  55  5   DOM                    DOM  YES YES -------- OFF
                        001-001-002  15 15  DOM  YES YES -------- ON
                        001-001-003  25 20  DOM  YES YES -------- ON
                        001-001-002  40 35  DOM  YES YES -------- OFF
MAPSET ID=    1
005-005-005  50  5   DOM                        YES YES -------- OFF
                        001-001-002  10 15  DOM  YES YES -------- ON
                        001-001-003  20 20  DOM  YES YES -------- ON
                        001-001-002  40 35  DOM  YES YES -------- OFF
MAPSET ID=    2
005-005-005   5 10  SOL                          --- --- ------- OFF
```

If the `ri=ssn` and `xlat=dpc` parameters are being specified with the `ent-gtt` command, the point code must be in the mated application table. If the point code is not in the mated application table when the `ent-gtt` command is executed, the `force=yes` parameter must be specified with the `ent-gtt` command.

If the EAGLE 5 ISS's true point code and the EAGLE 5 ISS's subsystem number, along with the `ri=ssn` and `xlat=dpcssn` parameters are being specified with the `ent-gtt` command, the EAGLE 5 ISS's true point code and the EAGLE 5 ISS's subsystem number must be in the mated application table.

If the required point code, subsystem number, or MAP set ID is not shown in the `rtrv-map` output, perform one of these procedures to add the required information to the mated application table.

- *Provisioning a Solitary Mated Application* on page 112
- *Provisioning a Dominant Mated Application* on page 142
- *Provisioning a Load Shared Mated Application* on page 189
- *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223

20. Add the global title translation to the database using the `ent-gtt` command using the parameter combinations shown in *Table 30: Add GTT Parameter Combinations* on page 502 .

For this example, enter these commands.

```
ent-gtt:typea=5:gta=910460:egta=919460:xlat=dpcngt:ri=gt
:pca=007-007-007:ttn=scp1:ngt=6:npdd=2:nnp=3:nnai=120:npds=34
:mrnset=114:cggtmod=yes
```

```
ent-gtt:typea=10:gta=615370:egta=615380:xlat=dpcssn:ri=ssn
:pca=003-003-003:ssn=254:ttn=scp2:mapset=3
```

```
ent-gtt:typea=15:gta=800:egta=900:xlat=dpc:ri=ssn:pca=005-005-005
:ttn=scp3:mapset=1:loopset=rtp:cggtmod=yes
```

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

```
rlghncxa03w 07-02-07 11:44:13 GMT  EAGLE5 37.0.0
ENT-GTT:  MASP A - COMPLTD
```

Note: The command line on the terminal can contain up to 150 characters. If the parameters and values specified with the `ent-gtt` command are too long to fit on the `ent-gtt` command line, perform the *Changing a Global Title Translation* on page 524 procedure to complete adding the GTT entry.

Table 30: Add GTT Parameter Combinations

RI = GT XLAT= DPCNGT	RI = GT XLAT= DPCSSN	RI = GT XLAT= DPC	RI = SSN XLAT= DCPSSN	RI = SSN XLAT= DPC
Mandatory Parameters				
TYPE/TYPEA/ TYPEI/TYPEN/ TYPEN24 (See Notes 2 and 3)	TYPE/TYPEA/ TYPEI/TYPEN/ TYPEN24 (See Notes 2 and 3)	TYPE/TYPEA/ TYPEI/TYPEN/ TYPEN24 (See Notes 2 and 3)	TYPE/TYPEA/ TYPEI/TYPEN/ TYPEN24 (See Notes 2 and 3)	TYPE/TYPEA/ TYPEI/TYPEN/ TYPEN24 (See Notes 2 and 3)
PC/PCA/PCI/	PC/PCA/PCI/	PC/PCA/PCI/	PC/PCA/PCI/	PC/PCA/PCI/

RI = GT XLAT= DPCNGT	RI = GT XLAT= DPCSSN	RI = GT XLAT= DPC	RI = SSN XLAT= DCPSSN	RI = SSN XLAT= DPC
PCN/PCN24 (See Notes 1, 3, and 12)	PCN/PCN24 (See Notes 1, 3, and 12)	PCN/PCN24 (See Notes 1, 3, and 12)	PCN/PCN24 (See Notes 1, 3, and 12)	PCN/PCN24 (See Notes 1, 3, and 12)
GTA (See Notes 4, 5, 6, 17, 19, and 21)	GTA (See Notes 4, 5, 6, 17, 19, and 21)	GTA (See Notes 4, 5, 6, 17, 19, and 21)	GTA (See Notes 4, 5, 6, 17, 19, and 21)	GTA (See Notes 4, 5, 6, 17, 19, and 21)
NGT	SSN		SSN	
Optional Parameters				
TTN (See Notes 19, 20, and 21)	TTN (See Notes 19, 20, and 21)	TTN (See Notes 19, 20, and 21)	TTN (See Notes 19, 20, and 21)	TTN (See Notes 19, 20, and 21)
EGTA (See Note 22)	EGTA (See Note 22)	EGTA (See Note 22)	EGTA (See Note 22)	EGTA (See Note 22)
NNP (See Notes 7, 9, and 10)	NNP (See Notes 7, 9, and 10)	NNP (See Notes 7, 9, and 10)	NNP (See Notes 7, 9, and 10)	NNP (See Notes 7, 9, and 10)
NNAI (See Notes 7, 9, and 10)	NNAI (See Notes 7, 9, and 10)	NNAI (See Notes 7, 9, and 10)	NNAI (See Notes 7, 9, and 10)	NNAI (See Notes 7, 9, and 10)
NPDD (See Notes 7 and 11)	NPDD (See Notes 7 and 11)	NPDD (See Notes 7 and 11)	NPDD (See Notes 7 and 11)	NPDD (See Notes 7 and 11)
NPDS (See Notes 7, 11, and 17)	NPDS (See Notes 7, 11, and 17)	NPDS (See Notes 7, 11, and 17)	NPDS (See Notes 7, 11, and 17)	NPDS (See Notes 7, 11, and 17)
NSDD (See Notes 7 and 11)	NSDD (See Notes 7 and 11)	NSDD (See Notes 7 and 11)	NSDD (See Notes 7 and 11)	NSDD (See Notes 7 and 11)
NSDS (See Notes 7, 11, and 17)	NSDS (See Notes 7, 11, and 17)	NSDS (See Notes 7, 11, and 17)	NSDS (See Notes 7, 11, and 17)	NSDS (See Notes 7, 11, and 17)
NGTI (See Notes 7, 9, and 10)	NGTI (See Notes 7, 9, and 10)	NGTI (See Notes 7, 9, and 10)	NGTI (See Notes 7, 9, and 10)	NGTI (See Notes 7, 9, and 10)
MRNSET (See Note 14)	MRNSET (See Note 14)	MRNSET (See Note 14)	MAPSET (See Note 16)	FORCE (See Note 15)
LOOPSET (See Note 18)	LOOPSET (See Note 18)	LOOPSET (See Note 18)	LOOPSET (See Note 18)	MAPSET (See Note 16)
CGGTMOD (See Note 8)	CGGTMOD (See Note 8)	NGT (See Note 13)	CGGTMOD (See Note 8)	LOOPSET (See Note 18)
		CGGTMOD (See Note 8)		CGGTMOD (See Note 8)

RI = GT XLAT= DPCNGT	RI = GT XLAT= DPCSSN	RI = GT XLAT= DPC	RI = SSN XLAT= DCPSSN	RI = SSN XLAT= DPC
Parameter Values:				
TYPE / **TYPEA** / **TYPEI** / **TYPEN** / **TYPEN24** – The translation type from the `TYPE/TYPEA/TYPEI/TYPEN/TYPEN24` column of the `rtrv-tt` output. See Note 2. **TTN** – The translation type name from the **TTN** column of the `rtrv-tt` output. **GTA** – 1 - 21 digits or 1 - 21 hexadecimal digits **PC** / **PCA** / **PCI** / **PCN** / **PCN24** – See Note 1 **SSN** – 0 - 255 **NGT** – 0 - 255 **EGTA** – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = same as the **GTA** value **FORCE** – yes, no. Default = no **LOOPSET** – Loopset name from the `rtrv-loopset` output			**NNP** – 0 - 15. Default = 0xFFFF **NNAI** – 0 - 127. Default = 0xFFFF **NPDD** – 0 - 21. Default = 0 **NPDS** – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = no digits **NSDD** – 0 - 21. Default = 0 **NSDS** – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = no digits **NGTI** – 2, 4. Default = not applicable **MRNSET** – MRN set ID from the `rtrv-mrn` output **MAPSET** – MAP set ID from the `rtrv-map` output **CGGTMOD** – yes, no. Default = no	

Notes:

1. The `pc/pca/pci/pcn/pcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes to the global title translation (GTT).
   - `pc/pca` = ANSI point code
   - `pci` = ITU-I or ITU-I spare point code
   - `pcn` = 14-bit ITU-N or 14-bit ITU-N spare point code
   - `pcn24` = 24-bit ITU-N point code.
2. The `type/typea/typei/typen/typen24` parameters specify the translation type and the network type of the translation type.
   - type/typea = ANSI translation type
   - typei = ITU-I translation type
   - typen/typen24 = ITU-N translation type
3. The domain (ANSI or ITU) of the point code and translation type must be the same, unless the ANSI-ITU-China SCCP Conversion feature is enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, a GTT may contain an ANSI point code and an ITU translation type, or an ITU point code and an ANSI translation type. Whether the

RI = GT XLAT= DPCNGT	RI = GT XLAT= DPCSSN	RI = GT XLAT= DPC	RI = SSN XLAT= DCPSSN	RI = SSN XLAT= DPC

ANSI-ITU-China SCCP Conversion feature is enabled or not, the translation type parameters `typei`, `typen`, or `typen24` can be specified with either the `pci`, `pcn`, or `pcn24` parameters.

4. If the VGTT feature is on, shown by the `VGTT = on` entry in the `rtrv-feat` output, and the translation type contains 10 different length GTAs, the length of the GTA must match any existing GTA assigned to the translation type .
5. If the translation type contains less than 10 different length GTAs, the length of the GTA can be from 1 to 21 digits.
6. If the VGTT feature is off, the length of the GTA must contain the number of digits defined by the `NDGT` field of the `rtrv-tt` output.
7. The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, and `nsds` parameters can be specified only if the Advanced GT Modification feature is enabled. The `ngti` parameter can be specified only if the Advanced GT Modification feature is enabled and if the ANSI-ITU-China SCCP Conversion feature is enabled.
8. The `cggtmod` parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled.
9. The `ngti=2` parameter can be specified with an ANSI point code or an ITU point code, and not with the `nnp` and `nnai` parameters.
10. The `ngti=4` parameter can be specified only with an ITU point code, and the `nnp` and `nnai` parameters must also be specified for the GTA.
11. The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified in the `ent-gtt` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters.
12. If the point code is the EAGLE 5 ISS's point code, then the `xlat` parameter value must be `dpcssn` and the `ri` parameter value must be `ssn`.
13. The `ngt` parameter can be specified only if the ANSI-ITU-China SCCP Conversion feature is enabled.
14. The `mrnset` parameter can be specified only, and must be specified, if the Flexible GTTLoad Sharing feature is enabled.
15. If the `pc/pca/pci/pcn/pcn24` parameter value is not shown in the `rtrv-map` output, the `force=yes` parameter must be specified with the `ent-gtt` command.
16. The `mapset` parameter can be specified only, and must be specified, if the Flexible GTTLoad Sharing feature is enabled.
17. Hexadecimal digits (0-9, a-f, A-F) can be specified for the `gta`, `egta`, `npds`, or `nsds` parameters only if the Hex Digit support for GTT feature is enabled.
18. The `loopset` parameter can be specified only if the SCCP Loop Detection feature is enabled.
19. Either the `type` parameter or the `ttn` parameter must be specified.
20. If the `type` parameter is not specified, the translation type name must be assigned to a translation type in the database. This can be verified with the `rtrv-tt` command.
21. If the `type` and `ttn` parameters are specified, the specified translation type must be in the database and the specified translation type name must be assigned to the translation type.

RI = GT XLAT= DPCNGT	RI = GT XLAT= DPCSSN	RI = GT XLAT= DPC	RI = SSN XLAT= DCPSSN	RI = SSN XLAT= DPC
22. The end global title address (`egta`) must be greater than or equal to the start global title address (`gta`) and its length must be equal to the start global title address.				

21. Verify the changes using the `rtrv-gtt` command with the translation type parameter and value, and the `gta` parameter value specified in *Step 20* on page 502. If the `num` parameter is specified with the `rtrv-gtt` command, and the value of the `num` parameter is greater than 1000, the `force=yes` parameter must be specified with the `rtrv-gtt` command.

For this command, enter these commands.

```
rtrv-gtt:typea=5:gta=910460
```

This is an example of the possible output.

```
rlghncxa03w 08-10-25 09:46:31 GMT  EAGLE5 39.2.0
TYPEA  TTN        NDGT
5      scp1       6
GTT TABLE IS (27000 of 269999)  10 % FULL

START GTA             END GTA               XLAT   RI     PC
910460                919460                DPCNGT GT     007-007-007
     MRNSET=114   SSN=--- NGT= 6 CGGTMOD = YES
     NNP=3 NNAI=120 NPDD=3 NPDS=34
     NGTI=

Command Retrieved 1 Entries
```

```
rtrv-gtt:typea=10:gta=615370
```

This is an example of the possible output.

```
rlghncxa03w 08-10-25 09:46:31 GMT  EAGLE5 39.2.0
TYPEA  TTN        NDGT
10     scp2       6
GTT TABLE IS (27000 of 269999)  10 % FULL

START GTA             END GTA               XLAT   RI     PC
615370                615380                DPCSSN SSN    003-003-003
     MAPSET=3     SSN=254 NGT=--- CGGTMOD = NO

Command Retrieved 1 Entries
```

```
rtrv-gtt:typea=15:gta=800
```

This is an example of the possible output.

```
rlghncxa03w 08-10-25 09:48:31 GMT  EAGLE5 39.2.0
TYPEA  TTN        NDGT
15     scp3       3
GTT TABLE IS (27000 of 269999)  10 % FULL

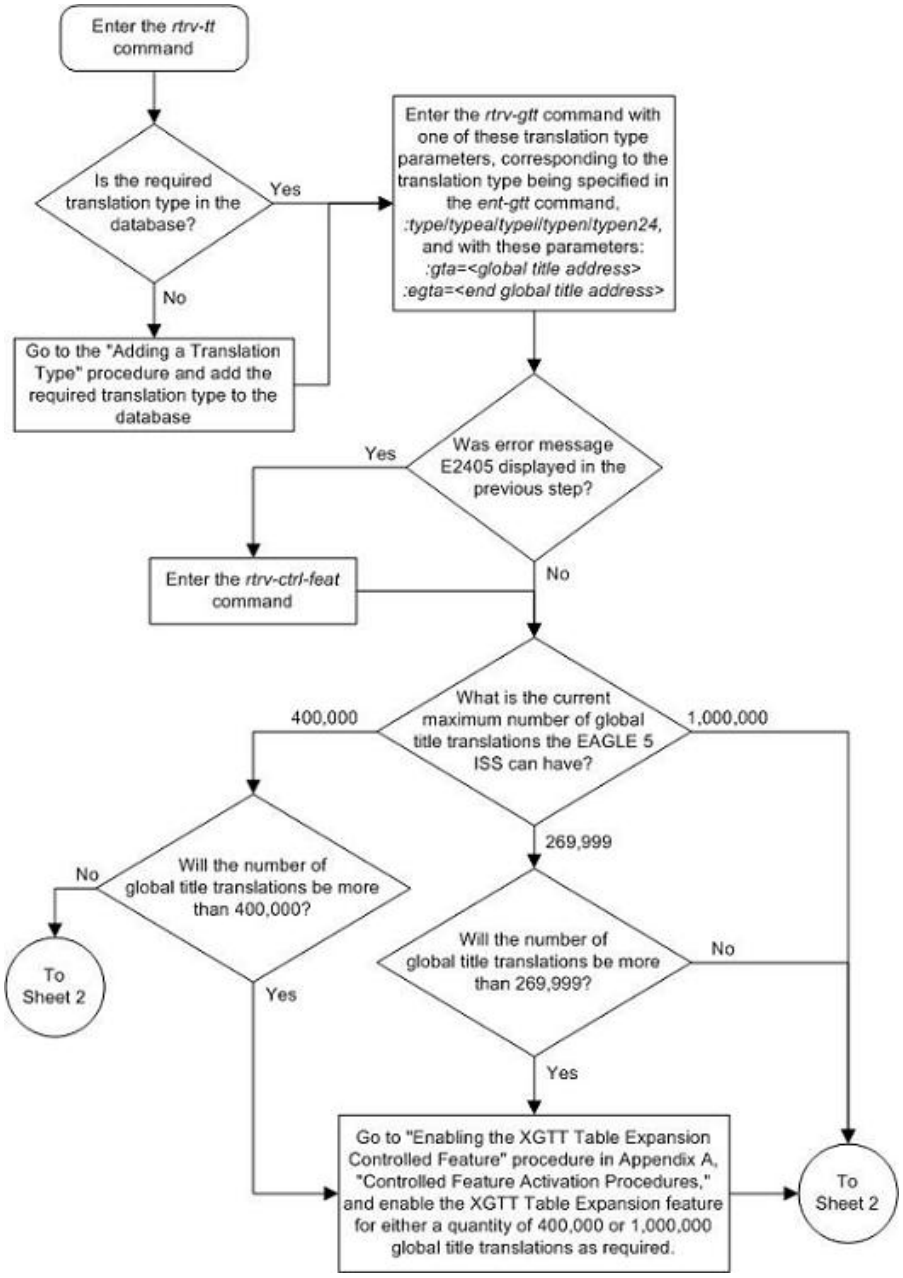
START GTA             END GTA               XLAT   RI     PC
800                   900                   DPC    SSN    005-005-005
     MAPSET=1     SSN=--- NGT=--- CGGTMOD = YES
     LOOPSET = rtp1
```

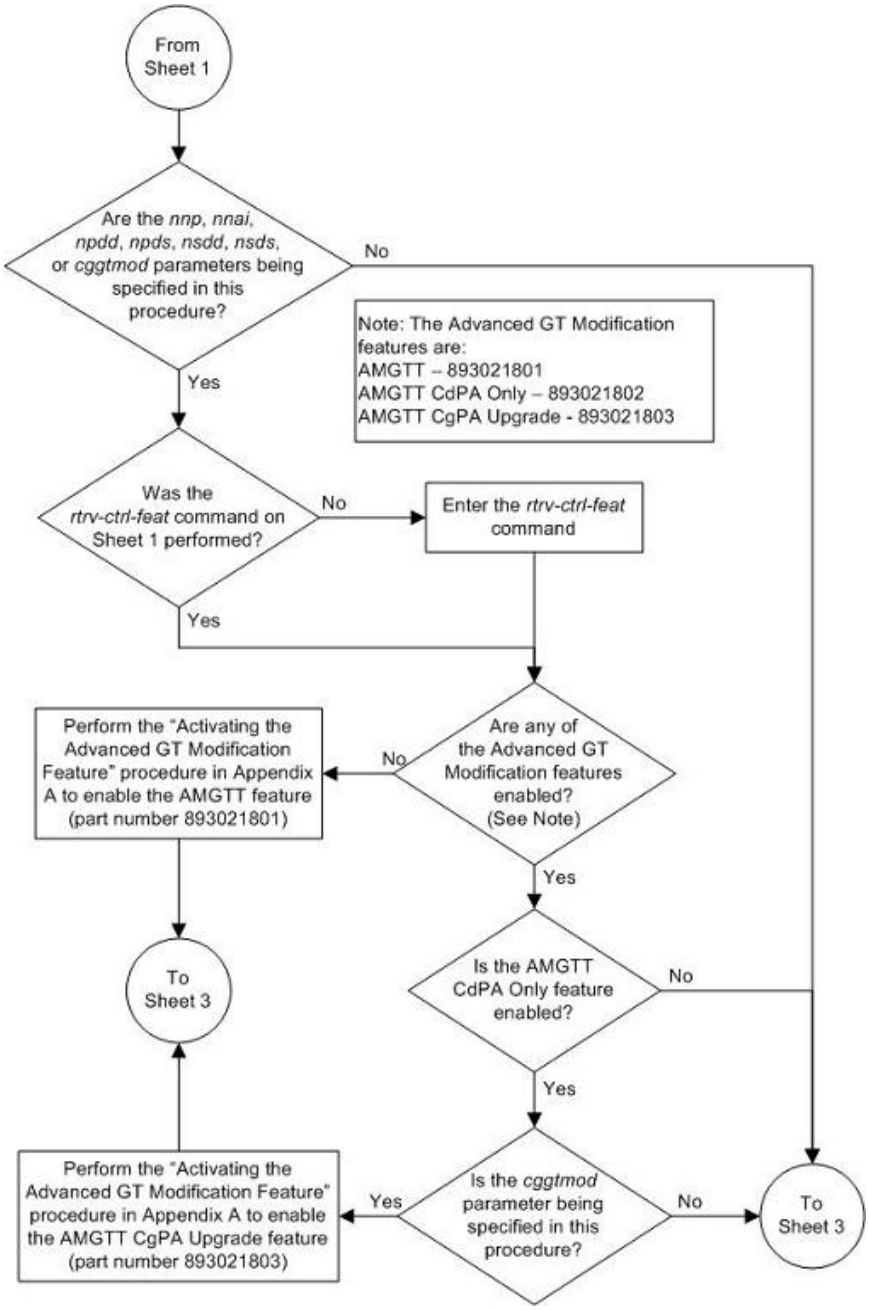
```
Command Retrieved 1 Entries
```

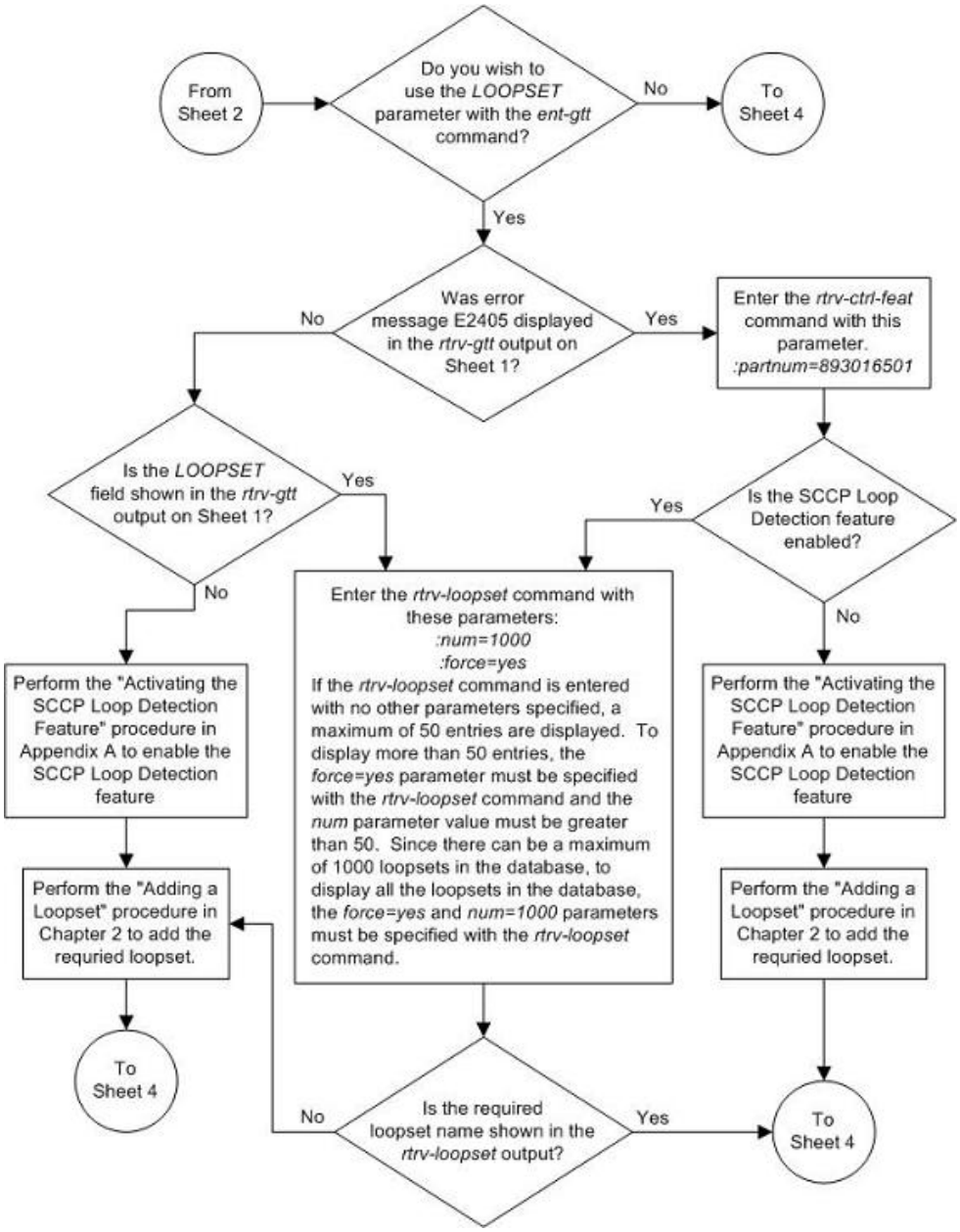
22. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

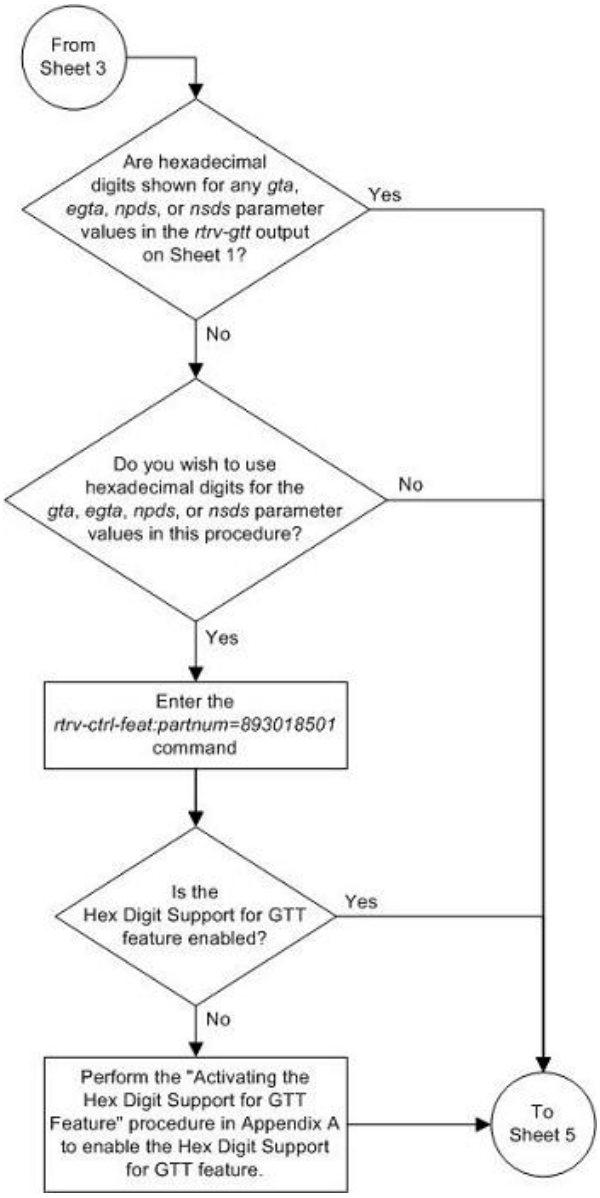
```
BACKUP (FIXED) : MASP A-Backup starts on active MASP.
BACKUP (FIXED) : MASP A-Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A-Backup starts on standby MASP.
BACKUP (FIXED) : MASP A-Backup on standby MASP to fixed disk complete.
```

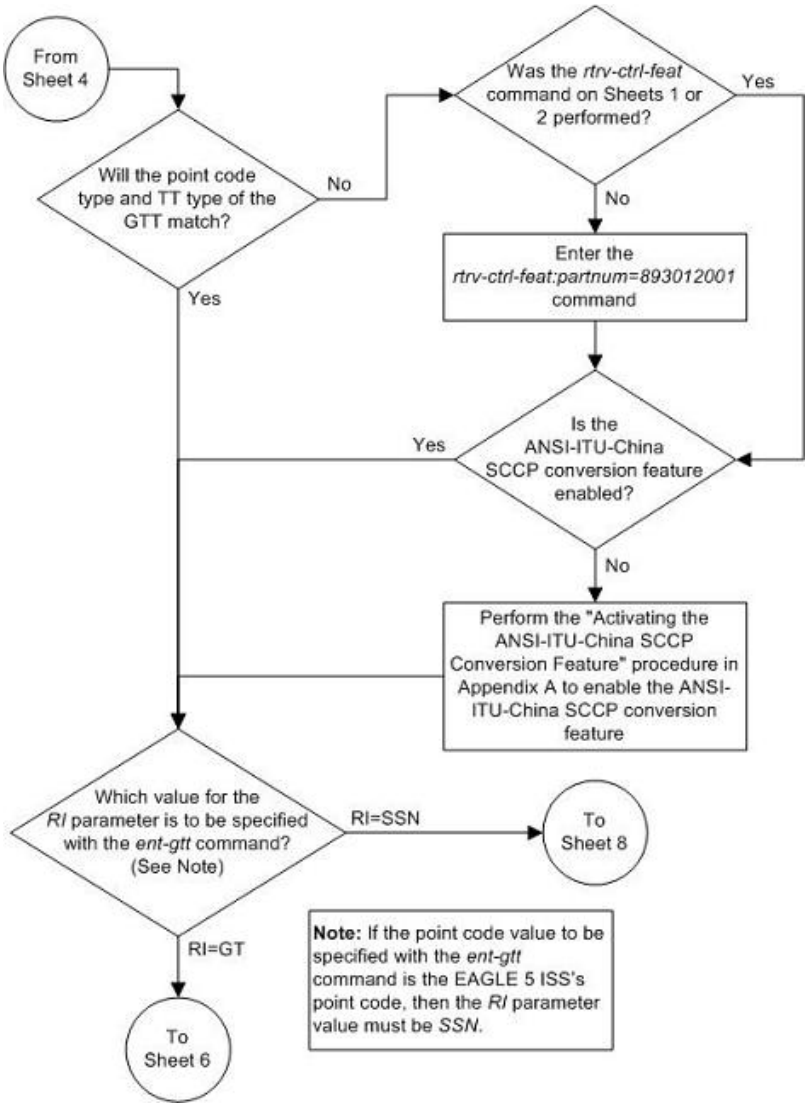
Figure 43: Adding a Global Title Translation

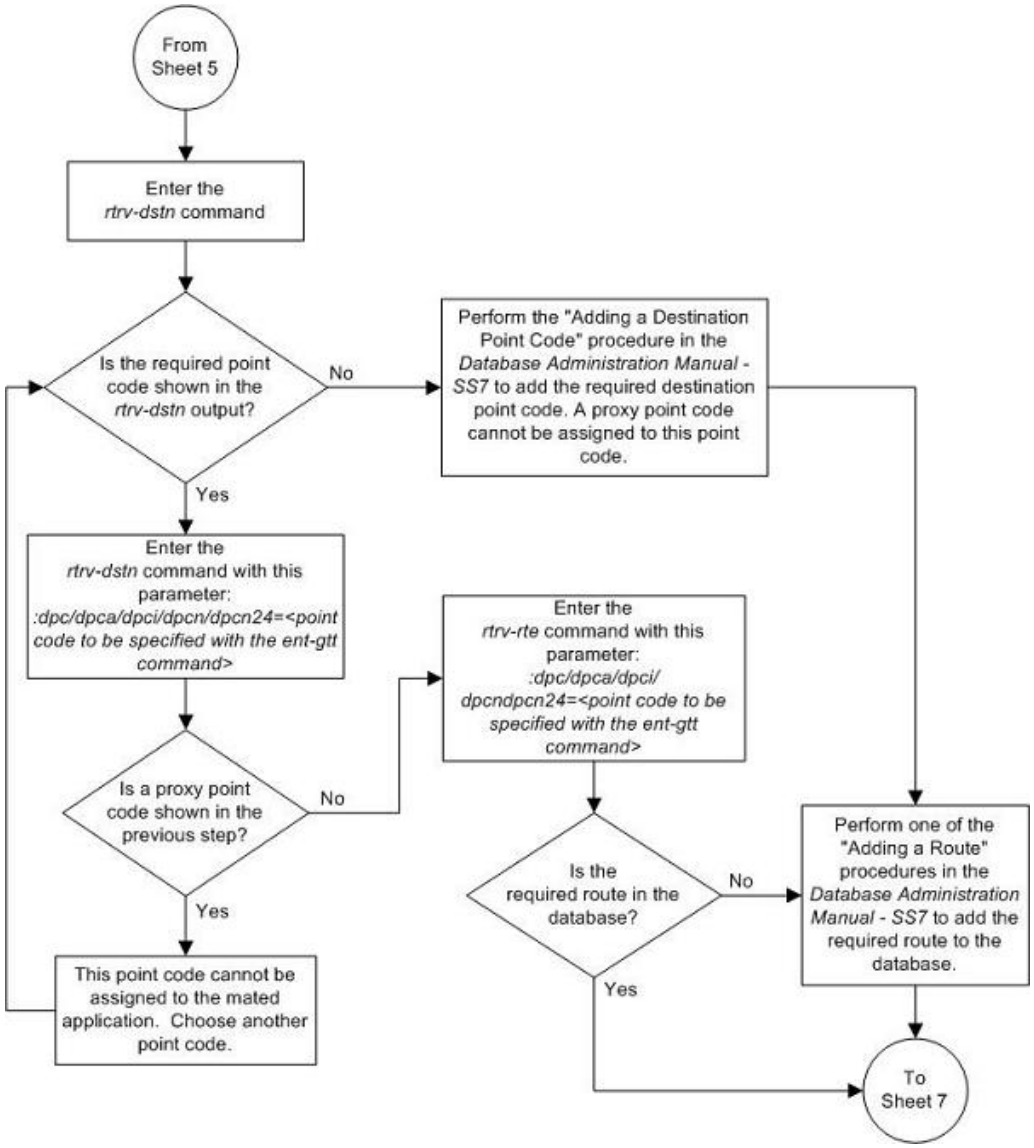

Enter the rtrv-tt command
Is the required translation type in the database?
Yes
No
Enter the rtrv-gtt command with one of these translation type parameters, corresponding to the translation type being specified in the ent-gtt command, :type/typea/typei/typen/typen24, and with these parameters: :gta=<global title address> :egta=<end global title address>
Go to the "Adding a Translation Type" procedure and add the required translation type to the database
Was error message E2405 displayed in the previous step?
Yes
No
Enter the rtrv-ctrl-feat command
What is the current maximum number of global title translations the EAGLE 5 ISS can have?
400,000
1,000,000
269,999
Will the number of global title translations be more than 400,000?
No
Yes
To Sheet 2
Will the number of global title translations be more than 269,999?
No
Yes
Go to "Enabling the XGTT Table Expansion Controlled Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," and enable the XGTT Table Expansion feature for either a quantity of 400,000 or 1,000,000 global title translations as required.
To Sheet 2

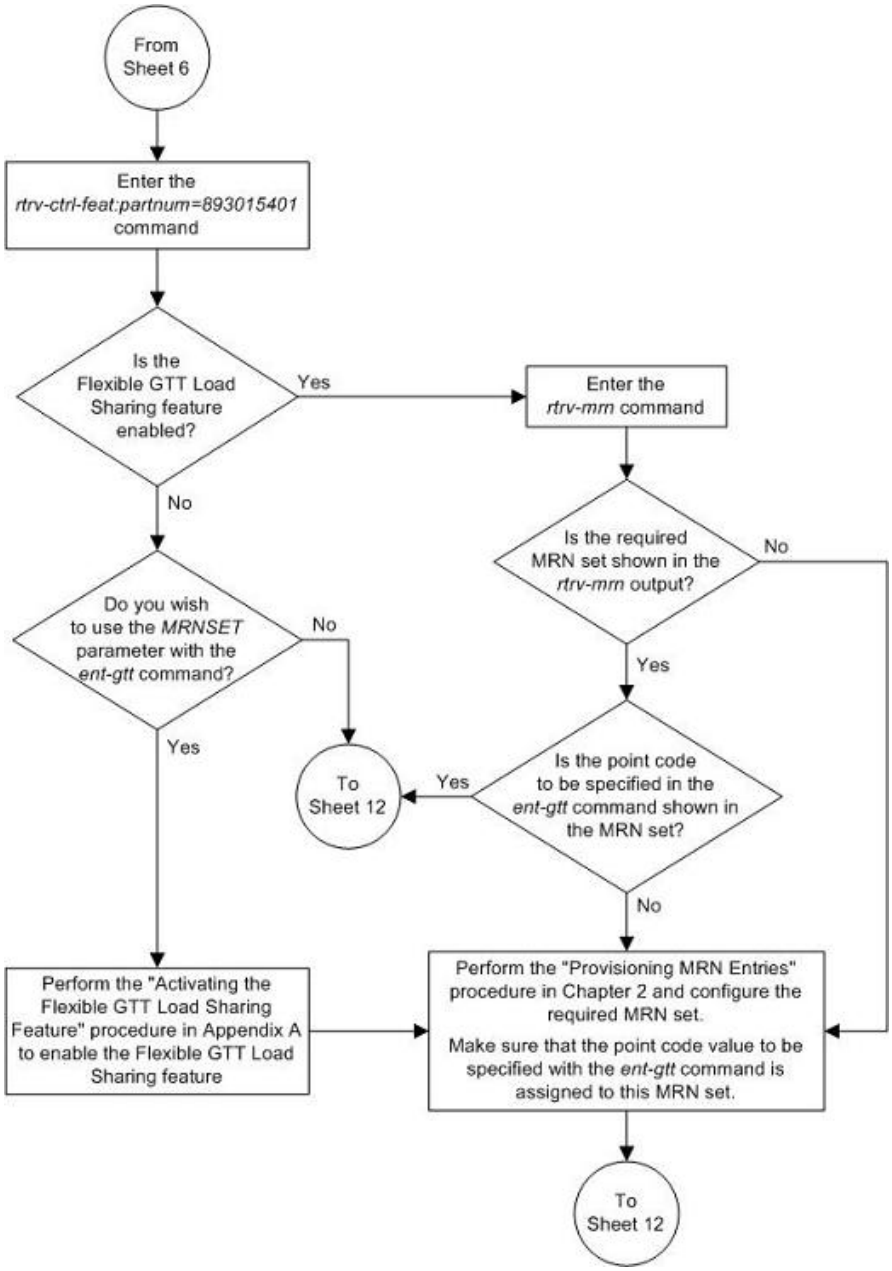

From Sheet 1
Are the nnp, nnai, npdd, npds, nsdd, nsds, or cggtmod parameters being specified in this procedure?
No
Yes
Note: The Advanced GT Modification features are:
AMGTT – 893021801
AMGTT CdPA Only – 893021802
AMGTT CgPA Upgrade - 893021803
Was the rtrv-ctrl-feat command on Sheet 1 performed?
No
Enter the rtrv-ctrl-feat command
Yes
Are any of the Advanced GT Modification features enabled? (See Note)
No
Perform the "Activating the Advanced GT Modification Feature" procedure in Appendix A to enable the AMGTT feature (part number 893021801)
Yes
Is the AMGTT CdPA Only feature enabled?
No
To Sheet 3
Yes
Is the cggtmod parameter being specified in this procedure?
Yes
No
Perform the "Activating the Advanced GT Modification Feature" procedure in Appendix A to enable the AMGTT CgPA Upgrade feature (part number 893021803)
To Sheet 3

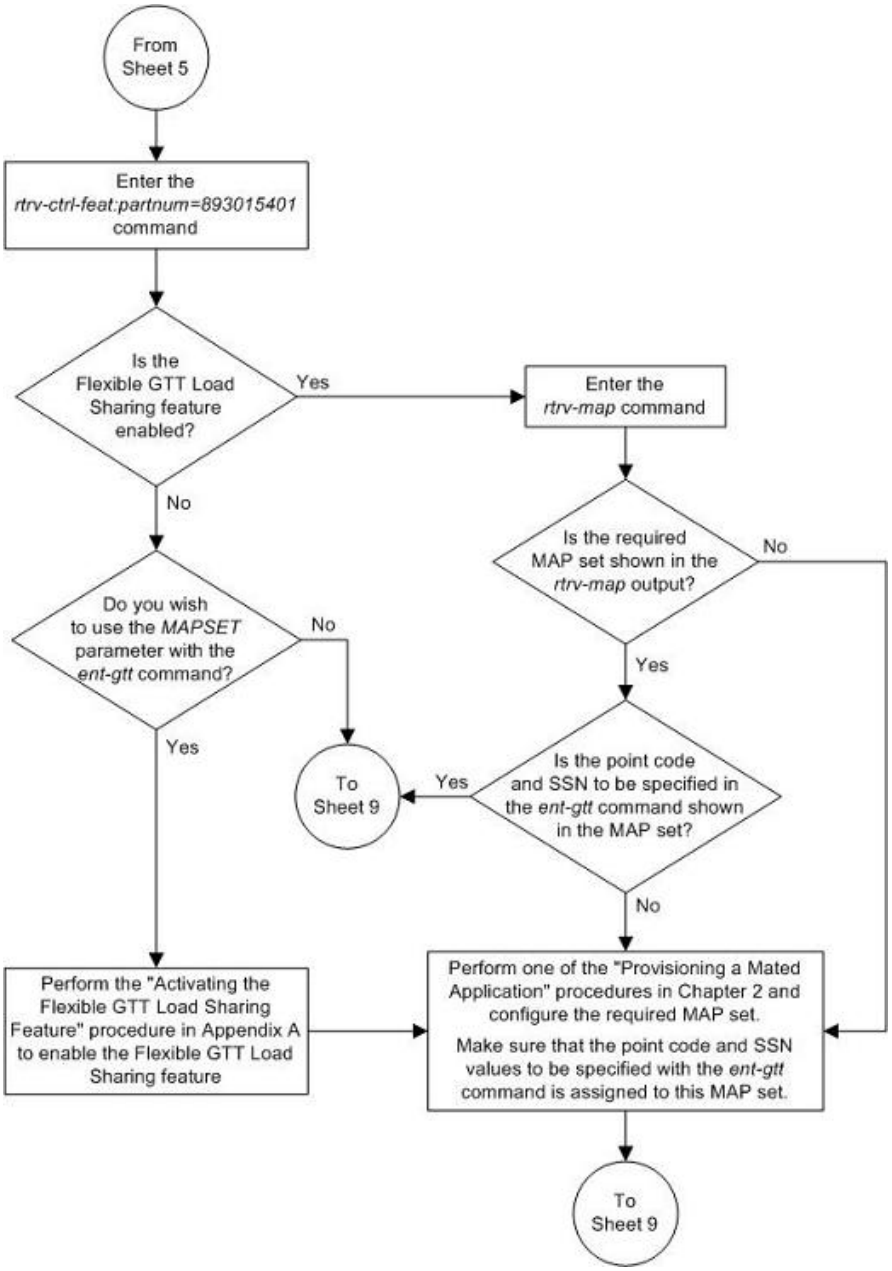

From Sheet 2
Do you wish to use the LOOPSET parameter with the ent-gtt command?
No
To Sheet 4
Yes
Was error message E2405 displayed in the rtrv-gtt output on Sheet 1?
No
Yes
Enter the rtrv-ctrl-feat command with this parameter. :partnum=893016501
Is the LOOPSET field shown in the rtrv-gtt output on Sheet 1?
Yes
No
Is the SCCP Loop Detection feature enabled?
Yes
No
Enter the rtrv-loopset command with these parameters: :num=1000 :force=yes
If the rtrv-loopset command is entered with no other parameters specified, a maximum of 50 entries are displayed. To display more than 50 entries, the force=yes parameter must be specified with the rtrv-loopset command and the num parameter value must be greater than 50. Since there can be a maximum of 1000 loopsets in the database, to display all the loopsets in the database, the force=yes and num=1000 parameters must be specified with the rtrv-loopset command.
Perform the "Activating the SCCP Loop Detection Feature" procedure in Appendix A to enable the SCCP Loop Detection feature
Perform the "Activating the SCCP Loop Detection Feature" procedure in Appendix A to enable the SCCP Loop Detection feature
Perform the "Adding a Loopset" procedure in Chapter 2 to add the requried loopset.
Perform the "Adding a Loopset" procedure in Chapter 2 to add the requried loopset.
To Sheet 4
Is the required loopset name shown in the rtrv-loopset output?
No
Yes
To Sheet 4

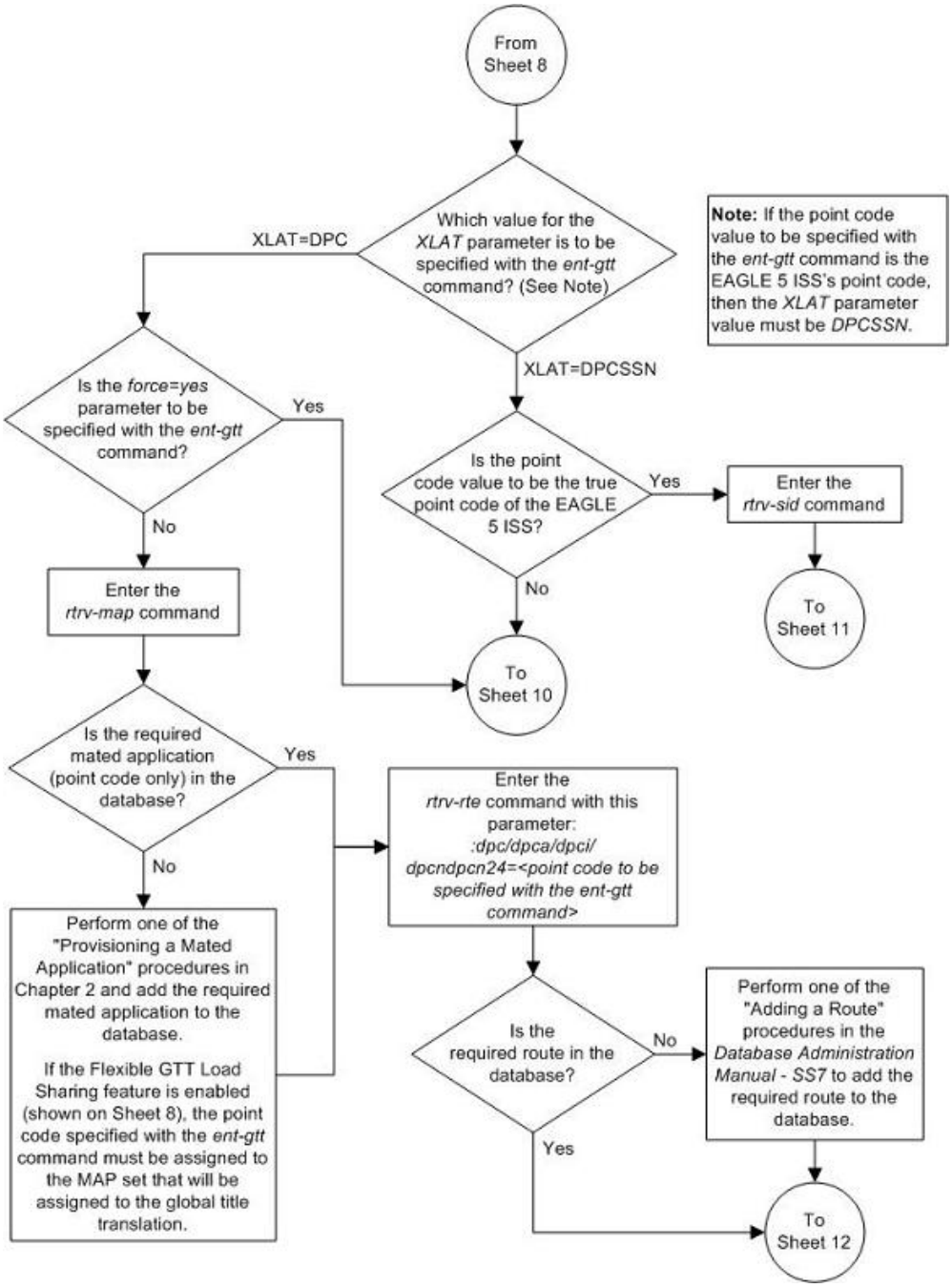

From Sheet 3
Are hexadecimal digits shown for any gta, egta, npds, or nsds parameter values in the rtrv-gtt output on Sheet 1?
Yes
No
Do you wish to use hexadecimal digits for the gta, egta, npds, or nsds parameter values in this procedure?
No
Yes
Enter the rtrv-ctrl-feat:partnum=893018501 command
Is the Hex Digit Support for GTT feature enabled?
Yes
No
Perform the "Activating the Hex Digit Support for GTT Feature" procedure in Appendix A to enable the Hex Digit Support for GTT feature.
To Sheet 5

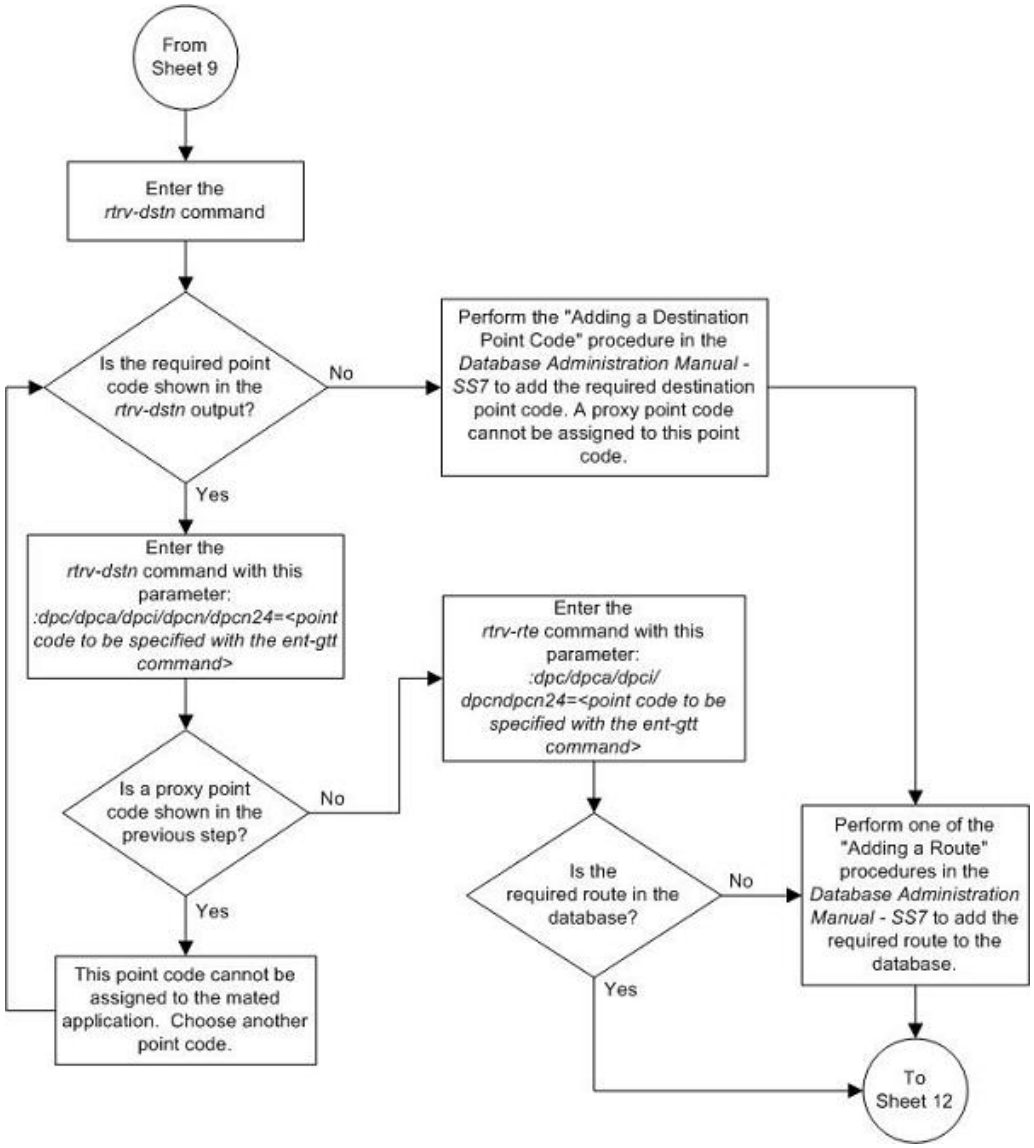

From Sheet 4
Will the point code type and TT type of the GTT match?
No
Was the rtrv-ctrl-feat command on Sheets 1 or 2 performed?
Yes
No
Enter the rtrv-ctrl-feat:partnum=893012001 command
Yes
Is the ANSI-ITU-China SCCP conversion feature enabled?
Yes
No
Perform the "Activating the ANSI-ITU-China SCCP Conversion Feature" procedure in Appendix A to enable the ANSI-ITU-China SCCP conversion feature
Which value for the RI parameter is to be specified with the ent-gtt command? (See Note)
RI=SSN
To Sheet 8
RI=GT
To Sheet 6
Note: If the point code value to be specified with the ent-gtt command is the EAGLE 5 ISS's point code, then the RI parameter value must be SSN.

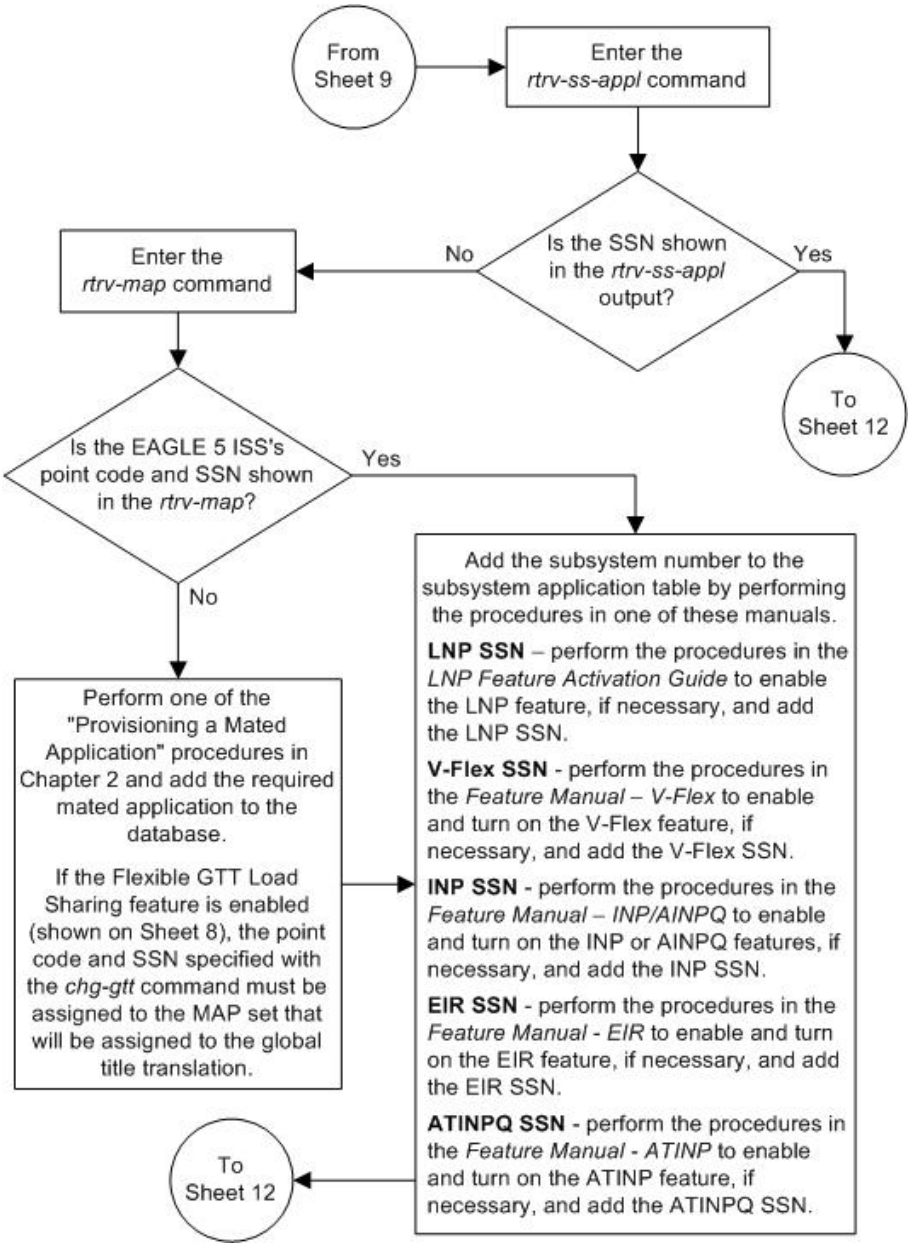

From Sheet 5
Enter the rtrv-dstn command
Is the required point code shown in the rtrv-dstn output?
No
Yes
Perform the "Adding a Destination Point Code" procedure in the Database Administration Manual - SS7 to add the required destination point code. A proxy point code cannot be assigned to this point code.
Enter the rtrv-dstn command with this parameter: :dpc/dpca/dpci/dpcn/dpcn24=<point code to be specified with the ent-gtt command>
Is a proxy point code shown in the previous step?
No
Yes
This point code cannot be assigned to the mated application. Choose another point code.
Enter the rtrv-rte command with this parameter: :dpc/dpca/dpci/ dpcndpcn24=<point code to be specified with the ent-gtt command>
Is the required route in the database?
No
Yes
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 to add the required route to the database.
To Sheet 7

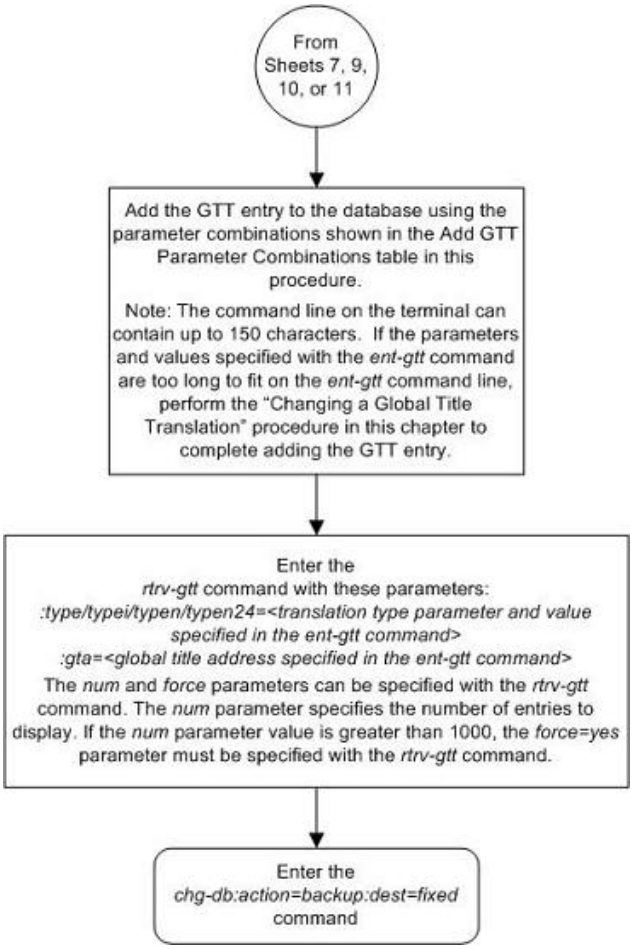

From Sheet 6
Enter the rtrv-ctrl-feat:partnum=893015401 command
Is the Flexible GTT Load Sharing feature enabled?
Yes
No
Enter the rtrv-mrn command
Is the required MRN set shown in the rtrv-mrn output?
No
Yes
Do you wish to use the MRNSET parameter with the ent-gtt command?
No
Yes
To Sheet 12
Yes
Is the point code to be specified in the ent-gtt command shown in the MRN set?
No
Perform the "Activating the Flexible GTT Load Sharing Feature" procedure in Appendix A to enable the Flexible GTT Load Sharing feature
Perform the "Provisioning MRN Entries" procedure in Chapter 2 and configure the required MRN set.
Make sure that the point code value to be specified with the ent-gtt command is assigned to this MRN set.
To Sheet 12


From Sheet 5
Enter the rtrv-ctrl-feat:partnum=893015401 command
Is the Flexible GTT Load Sharing feature enabled?
Yes
No
Enter the rtrv-map command
Is the required MAP set shown in the rtrv-map output?
No
Yes
Do you wish to use the MAPSET parameter with the ent-gtt command?
No
Yes
Is the point code and SSN to be specified in the ent-gtt command shown in the MAP set?
Yes
To Sheet 9
No
Perform the "Activating the Flexible GTT Load Sharing Feature" procedure in Appendix A to enable the Flexible GTT Load Sharing feature
Perform one of the "Provisioning a Mated Application" procedures in Chapter 2 and configure the required MAP set.
Make sure that the point code and SSN values to be specified with the ent-gtt command is assigned to this MAP set.
To Sheet 9


From Sheet 8
Which value for the XLAT parameter is to be specified with the ent-gtt command? (See Note)
XLAT=DPC
XLAT=DPCSSN
Note: If the point code value to be specified with the ent-gtt command is the EAGLE 5 ISS's point code, then the XLAT parameter value must be DPCSSN.
Is the force=yes parameter to be specified with the ent-gtt command?
Yes
No
Is the point code value to be the true point code of the EAGLE 5 ISS?
Yes
No
Enter the rtrv-sid command
To Sheet 11
Enter the rtrv-map command
To Sheet 10
Is the required mated application (point code only) in the database?
Yes
No
Enter the rtrv-rte command with this parameter: :dpc/dpca/dpci/ dpcndpcn24=<point code to be specified with the ent-gtt command>
Perform one of the "Provisioning a Mated Application" procedures in Chapter 2 and add the required mated application to the database.
If the Flexible GTT Load Sharing feature is enabled (shown on Sheet 8), the point code specified with the ent-gtt command must be assigned to the MAP set that will be assigned to the global title translation.
Is the required route in the database?
No
Yes
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 to add the required route to the database.
To Sheet 12


From Sheet 9
Enter the rtrv-dstn command
Is the required point code shown in the rtrv-dstn output?
No
Yes
Perform the "Adding a Destination Point Code" procedure in the Database Administration Manual - SS7 to add the required destination point code. A proxy point code cannot be assigned to this point code.
Enter the rtrv-dstn command with this parameter: :dpc/dpca/dpci/dpcn/dpcn24=<point code to be specified with the ent-gtt command>
Is a proxy point code shown in the previous step?
No
Yes
This point code cannot be assigned to the mated application. Choose another point code.
Enter the rtrv-rte command with this parameter: :dpc/dpca/dpci/ dpcndpcn24=<point code to be specified with the ent-gtt command>
Is the required route in the database?
No
Yes
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 to add the required route to the database.
To Sheet 12


From Sheet 9
Enter the rtrv-ss-appl command
Is the SSN shown in the rtrv-ss-appl output?
No
Yes
Enter the rtrv-map command
To Sheet 12
Is the EAGLE 5 ISS's point code and SSN shown in the rtrv-map?
Yes
No
Add the subsystem number to the subsystem application table by performing the procedures in one of these manuals.
LNP SSN – perform the procedures in the LNP Feature Activation Guide to enable the LNP feature, if necessary, and add the LNP SSN.
V-Flex SSN - perform the procedures in the Feature Manual – V-Flex to enable and turn on the V-Flex feature, if necessary, and add the V-Flex SSN.
INP SSN - perform the procedures in the Feature Manual – INP/AINPQ to enable and turn on the INP or AINPQ features, if necessary, and add the INP SSN.
EIR SSN - perform the procedures in the Feature Manual - EIR to enable and turn on the EIR feature, if necessary, and add the EIR SSN.
ATINPQ SSN - perform the procedures in the Feature Manual - ATINP to enable and turn on the ATINP feature, if necessary, and add the ATINPQ SSN.
Perform one of the "Provisioning a Mated Application" procedures in Chapter 2 and add the required mated application to the database.
If the Flexible GTT Load Sharing feature is enabled (shown on Sheet 8), the point code and SSN specified with the chg-gtt command must be assigned to the MAP set that will be assigned to the global title translation.
To Sheet 12



Removing a Global Title Translation

This procedure is used to remove a global title translation from the database using the `dlt-gtt` command.

The `dlt-gtt` command uses these parameters.

`:gta` – Global title start address – along with the `egta` parameter, identifies all valid global titles for the given translation type to translate to the given `pc`, `ssn`, or `ngt` parameters. These are the non-SS7 addresses transmitted to the EAGLE 5 ISS for translation.

`:egta` – Global title end address – along with the `gta` parameter, identifies all valid global titles for the given translation type to translate to the given `pc`, `ssn`, or `ngt` parameters. These are the non-SS7 addresses transmitted to the EAGLE 5 ISS for translation.

`:type/typea/typei/typen/typen24` – The translation type and network type of that translation type. `:type` or :`typea` – an ANSI network `:typei` – an ITU international network `:typen/typen24` – an ITU national network.

`:ttn` – The name of the global title translation type

The examples in this procedure are used to remove the global title translation data for translation type 10 from the database.

If the translation type is defined as an alias, it cannot be used in the dlt-gtt command.

The range, as specified by the start and end global title addresses, must be in the database for the specified translation type. Each range may be contained completely within a previously defined range, in which case splitting is performed. However, if the ranges overlap, splitting cannot occur, and the dlt-gtt command is rejected with this message.

```
E2401 Cmd Rej:GTA range overlaps a current range
```

Along with error message 2401, a list of the overlapped global title addresses is displayed as shown in the following example.

```
rlghncxa03w 07-05-24 08:29:15 GMT EAGLE5 37.0.0
The following GTA ranges overlap the input GTA range

START GTA               END GTA
8005550000              8005551999
8005552000              8005553999
8005554000              8005555999

DLT-GTT: MASP A - Command Aborted
```

The length of the global title addresses specified by the gta or egta parameters must match the length of any existing global title addresses assigned to the specific translation type. The lengths are shown in the START GTA and END GTA fields of the rtrv-gtt command output, or in the NDGT field of the rtrv-tt command output. If the length of the global title address does not match one of the lengths already assigned to the translation type, the dlt-gtt command is rejected with this message.

```
E2960 Cmd Rej: The GTA length is not defined for the specified TT
```

When the VGTT feature is on, up to 10 different length global title addresses can be assigned to a translation type. The length of the global title address is only limited by the range of values for the gta and egta parameters of the ent-gtt and chg-gtt commands, one to 21 digits, and by the global title addresses already assigned to the translation type. The ndgt parameter of the ent-tt command has no effect on the length of the global title address and cannot be used. If the ndgt parameter is specified with the ent-tt command and the VGTT feature is on, the ent-tt command is rejected with this message.

```
E4011 Cmd Rej: NDGT parameter is invalid for VGTT
```

If the Variable-length Global Title Translation Feature (VGTT) is on, the NDGT field of the rtrv-tt command shows the different lengths of global title addresses assigned to a translation type, as shown in the following example.

```
rlghncxa03w 07-05-25 09:57:31 GMT  EAGLE5 37.0.0
TYPEA
TTN
NDGT
1          lidb       6, 12, 15
2          c800       10
3          d700       6

ALIAS      TYPEA
50         3
65         3
TYPEI      TTN        NDGT
```

```
105         itudb       8

ALIAS       TYPEI
7           105
TYPEN       TTN         NDGT
120         dbitu       7

ALIAS       TYPEN
8           120
```

In this example of the `rtrv-tt` command output, the ANSI translation type 1 contains three different length global title addresses; global title addresses containing six digits, 12 digits, and 15 digits.

When the VGTT feature is on, and the last global title address of a particular length is deleted for the specified translation type, then that length is no longer supported. That length is not displayed in the `NDGT` field of the `rtrv-tt` command output. For example, if the last 6-digit global title address is deleted from ANSI translation type 1 (from the previous example), the `NDGT` field of the `rtrv-tt` command shows only the numbers 12 and 15 in the `NDGT` field indicating that ANSI translation type 1 contains only 12- and 15-digit global title addresses.

Canceling the `RTRV-GTT` Command

Because the `rtrv-gtt` command used in this procedure can output information for a long period of time, the `rtrv-gtt` command can be canceled and the output to the terminal stopped. There are three ways that the `rtrv-gtt` command can be canceled.

- Press the `F9` function key on the keyboard at the terminal where the `rtrv-gtt` command was entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rtrv-gtt` command was entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rtrv-gtt` command was entered, from another terminal other that the terminal where the `rtrv-gtt` command was entered. To enter the `canc-cmd:trm=<xx>` command, the terminal must allow Security Administration commands to be entered from it and the user must be allowed to enter Security Administration commands. The terminal's permissions can be verified with the `rtrv-secu-trm` command. The user's permissions can be verified with the `rtrv-user` or `rtrv-secu-user` commands.

For more information about the `canc-cmd` command, go to the *Commands Manual*.

1. Display the translation types in the database using the `rtrv-tt` command.

   This is an example of the possible output.

```
rlghncxa03w 07-05-25 09:42:31 GMT  EAGLE5 37.0.0
TYPEA       TTN         NDGT
1           lidb        5
2           c800        10
3           d700        6
5           scp1        6
10          scp2        6
15          scp3        3

ALIAS       TYPEA
30          5
40          10
50          3
```

```
65          3

TYPEI       TTN         NDGT
105         itudb       8

ALIAS       TYPEI
7           105

TYPEN       TTN         NDGT
120         dbitu       7

ALIAS       TYPEN
8           120
```

2. Display the global title translations in the database using the `rtrv-gtt` command specifying a translation type, translation type name, or both from the `rtrv-tt` command output shown in step 1.

   For this example, enter this command.

   `rtrv-gtt:typea=10`

   This is an example of the possible output.

```
rlghncxa03w 08-10-25 09:43:31 GMT  EAGLE5 39.2.0
TYPEA  TTN         NDGT
10     scp2        6

GTT TABLE IS  10 % FULL    (27000 of 269999)

START GTA             END GTA               XLAT   RI     PC
615370                615380                DPCSSN SSN    003-003-003
     SSN=254 NGT=---
423555                423600                DPCSSN SSN    004-003-003
     SSN=254 NGT=---
336200                336399                DPCSSN SSN    004-005-003
     SSN=254 NGT=---

Command Retrieved 3 Entries
```

3. Remove the global title translation from the database using the `dlt-gtt` command.

   For this example, enter this command.

   `dlt-gtt:typea=10:ttn=scp2:gta=615370:egta=615380`

   This message should appear.

```
rlghncxa03w 07-05-25 09:44:31 GMT  EAGLE5 37.0.0
DLT-GTT:  MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-gtt` command specifying the translation type, translation type name, or both used in step 3.

   For this example, enter this command.

   `rtrv-gtt:typea=10`

   This is an example of the possible output.

```
rlghncxa03w 08-10-25 09:43:31 GMT  EAGLE5 39.2.0
TYPEA  TTN         NDGT
10     scp2        6
```

```
GTT TABLE IS  10 % FULL    (27000 of 269999)

START GTA             END GTA               XLAT   RI     PC
423555                423600                DPCSSN SSN    004-003-003
     SSN=254 NGT=---
336200                336399                DPCSSN SSN    004-005-003
     SSN=254 NGT=---

Command Retrieved 2 Entries
```

If all the entries for the translation type have been removed in step 3, then this message should appear.

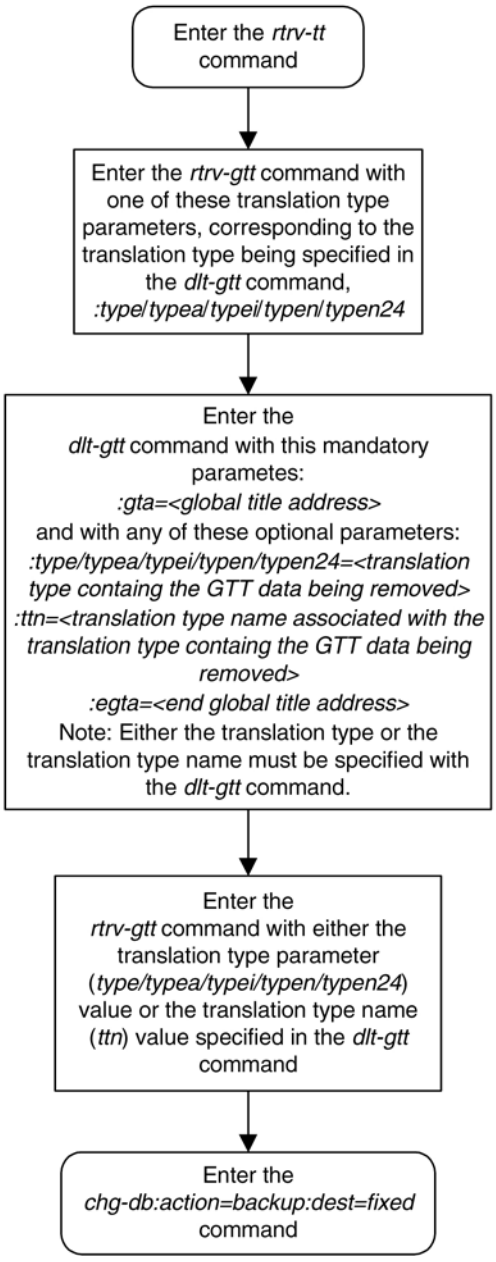
```
E2466 Cmd Rej: Translation TYPE specified does not exist
```

5. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

   These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 44: Removing a Global Title Translation



Changing a Global Title Translation

This procedure is used to change the routing objects for messages requiring global title translation in the database using the `chg-gtt` command.

The `chg-gtt` command uses these parameters.

:gta – Global title start address – along with the egta parameter, identifies all valid global titles for the given translation type to translate to the given pc, ssn, or ngt parameters. These are the non-SS7 addresses transmitted to the STP for translation.

:type/typea/typei/typen/typen24 – The translation type and network type of that translation type. :type or :typea – an ANSI network :typei – an ITU international network :typen/typen24 – an ITU national network.

:ttn – The name of the global title translation type

:egta – Global title end address. This parameter, along with the gta parameter, identifies all valid global titles for the given translation type to translate to the given pc, ssn, or ngt parameters. These are the non-SS7 addresses transmitted to the STP for translation.

:ngt – New global title – identifies the type of global title translation to replace the received global title.

:xlat – Translate indicator – defines the type of global title translation that is to be performed.

:ri – Route indicator – indicates whether a subsequent global title translation is required.

:pc/pca/pci/pcn/pcn24 – The point code of the signaling point that is to receive the message.

Note: See Chapter 2, Configuring Destination Tables, in the Database *Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

:ssn – Subsystem number – identifies the subsystem address that is to receive the message.

:nnp – The new numbering plan

:nnai – The new nature of address indicator

:npdd – The number of digits to be deleted from the beginning of the Global Title Address digits (the prefix digits)

:npds – The digits that are being substituted for the prefix digits

:rmgtt – removes the current values for the nnp, nnai, ngti, npdd, npds, nsdd, and nsds parameters.

:nsdd – The number of digits to be deleted from the end of the Global Title Address digits (the suffix digits)

:nsds – The digits that are being substituted for the suffix digits

:ngti – The new GT indicator value

:mrnset – The MRN set ID, shown in the rtrv-mrn command. The mrnset parameter can be specified only if the Flexible GTT Load Sharing feature is enabled. If the Flexible GTT Load Sharing feature is enabled and the ri parameter value will be ri=gt when this procedure is completed, and the original global title translation being changed in this procedure did not have an MRN set ID assigned to it, the mrnset parameter must be specified with the chg-gtt command. The MRN set ID assigned to the global title translation in this step must contain the point code value that will be assigned to the global title translation being changed in this step.

:mapset – The MRN set ID, shown in the rtrv-mrn command. The mapset parameter can be specified only if the Flexible GTT Load Sharing feature is enabled. If the Flexible GTT Load Sharing feature is enabled and the ri parameter value will be ri=ssn when this procedure is completed, and the original global title translation being changed in this procedure did not have an MAP set ID assigned to it, the mapset parameter must be specified with the chg-gtt command. The MAP

set ID assigned to the global title translation in this step must contain the point code and SSN values that will be assigned to the global title translation being changed in this step.

The status of the Flexible GTT Load Sharing feature is shown in the `rtrv-ctrl-feat` output. To enable the Flexible GTT Load Sharing feature, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure.

`:loopset` - The value of this parameter is the name of the loopset that is assigned to the GTT. This parameter can be specified only if the SCCP Loop Detection feature is enabled. Enter the `rtrv-loopset` command to verify that the SCCP Loop Detection feature is enabled. Perform the *Activating the SCCP Loop Detection Feature* on page 830 procedure, if necessary.

`:cggtmod` - The calling party GT modification indicator. This parameter specifies whether or not calling party global title modification is required. The values for this parameter are `yes` (calling party global title modification is required) or `no` (calling party global title modification is not required). This parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled. Enter the `rtrv-ctrl-feat` command to verify that either the AMGTT or AMGTT CgPA Upgrade feature is enabled. If the AMGTT or AMGTT CgPA Upgrade feature is not enabled, perform the *Activating the Advanced GT Modification Feature* on page 846 procedure to enable the required feature.

`:split` – Split or change the range of global title addresses. If the `split=yes` parameter is specified, the existing range of global title addresses is split based on the values of the `gta` and `egta` parameters. New entries are created in the global title translation table for each new range created by the `split` parameter. The attributes of each new entry, other than the range of global title addresses, are the same as the original global title translation entry, if these values are not changed when the `chg-gtt` command is executed. If other attributes are changed when the `chg-gtt` command is executed, the changed values are in each new entry created by the `split` parameter.

If the `split=no` parameter is specified, the range of global title addresses is replaced with the new range of global title addresses specified by the `gta` and `egta` parameters.

The default value for the `split` parameter is `yes`.



CAUTION: Changes to the range of global title addresses occur only if the both the `gta` and `egta` parameters are specified and the values for either of these parameters, or both parameters are different from the original values in the global title translation. If the `gta` and `egta` parameters are specified for the global title translation being changed, and you do not wish to change either of these values, make sure the `gta` and `egta` values shown in the `rtrv-gtt` output for the global title translation being changed are specified in the `chg-gtt` command.

The following examples illustrate how the `split` parameter works and ranges of global title addresses can be changed.

A global title translation entry in the database contains this range of global title addresses, 5556000 - 5558000.

```
rlghncxa03w 08-10-25 09:45:31 GMT  EAGLE5 39.2.0

TYPEA  TTN        NDGT
15     tst1       7

GTT TABLE IS     (27000 of 269999)     10 % FULL

START GTA             END GTA               XLAT   RI     PC
```

```
5556000               5558000               DPCSSN GT     003-003-003
     MRNSET=114   SSN=254 NGT=---

Command Retrieved 1 Entries
```

The global title translation is changed with a new range of global title addresses, 5556800 - 5559000, and with the `split=no` parameter.

```
chg-gtt:ttn=tst1:gta=5556800:egta=5559000:split=no
```

The range of global title addresses is changed to 5556800 - 5559000.

```
rlghncxa03w 08-10-25 09:45:31 GMT  EAGLE5 39.2.0

TYPEA  TTN        NDGT
15     tst1       7

GTT TABLE IS     (27000 of 269999)      10 % FULL

START GTA             END GTA               XLAT   RI     PC
5556800               5559000               DPCSSN GT     003-003-003
     MRNSET=114   SSN=254 NGT=---

Command Retrieved 1 Entries
```

In this example, the range of global title addresses is made smaller by specifying the range of global title addresses 5556500 - 5557500, and with the `split=no` parameter.

```
chg-gtt:ttn=tst1:gta=5556500:egta=5557500:split=no
```

```
rlghncxa03w 08-10-25 09:45:31 GMT  EAGLE5 39.2.0

TYPEA  TTN        NDGT
15     tst1       7

GTT TABLE IS      (27000 of 269999)     10 % FULL

START GTA             END GTA               XLAT   RI     PC
5556500               5557500               DPCSSN GT     003-003-003
     MRNSET=114   SSN=254 NGT=---

Command Retrieved 1 Entries
```

In this next example, the range of global title addresses is split with the `gta=5556900` and `egta=5557000` defining where the splits occur.

```
chg-gtt:ttn=tst1:gta=5556900:egta=5557000
```

Since the default value for the `split` parameter is `yes`, the `split=yes` parameter does not have to be specified to split the range of global title addresses. When the `chg-gtt` command is entered, three new global title translation entries with the new global title address ranges are created, and the original global title translation entry is removed from the database. Since the `gta` and `egta` parameter values specified in this example are within the original range of global title addresses, the original range of global title addresses is split into three new ranges. The `START GTA` value of the first new range is the original `START GTA` value and the `END GTA` value is the `gta` parameter value minus one. The `START GTA` value of the second new range is the `gta` parameter value and the `END GTA` value is the `egta` parameter value. The `START GTA` value of the third new range is the `egta` parameter value plus 1 and the `END GTA` value is the original `END GTA` value.

```
rlghncxa03w 08-10-25 09:45:31 GMT  EAGLE5 39.2.0
TYPEA  TTN        NDGT
```

```
15     tst1       7

GTT TABLE IS     (27000 of 269999)        10 % FULL
START GTA             END GTA               XLAT   RI     PC
5556000               5556899               DPCSSN GT     003-003-003
     MRNSET=114   SSN=254 NGT=---

Command Retrieved 1 Entries


rlghncxa03w 08-10-25 09:45:31 GMT  EAGLE5 39.2.0
TYPEA  TTN        NDGT
15     tst1       7

GTT TABLE IS     (27000 of 269999)        10 % FULL
START GTA             END GTA               XLAT   RI     PC
5556900               5557000               DPCSSN GT     003-003-003
     MRNSET=114   SSN=254 NGT=---

Command Retrieved 1 Entries


rlghncxa03w 08-10-25 09:45:31 GMT  EAGLE5 39.2.0
TYPEA  TTN        NDGT
15     tst1       7

GTT TABLE IS     (27000 of 269999)        10 % FULL
START GTA             END GTA               XLAT   RI     PC
5557001               5558000               DPCSSN GT     003-003-003
     MRNSET=114   SSN=254 NGT=---

Command Retrieved 1 Entries
```

In this next example, the global title translation containing the range of global title addresses 5557001 - 5558000 is split into two new ranges with the `gta=5557501` and `egta=5558000` defining where the split occurs.

```
chg-gtt:ttn=tst1:gta=5557501:egta=5558000:split=yes
```

When the `chg-gtt` command is entered, two new global title translation entries with the new global title address ranges are created, and the original global title translation entry is removed from the database. The `START GTA` value of the first new range is the original `START GTA` value and the `END GTA` value is the `gta` parameter value minus one. The `START GTA` value of the second new range is the `gta` parameter value and the `END GTA` value is the `egta` parameter value. In this example, the `egta` parameter is also the original `END GTA` value.

```
rlghncxa03w 08-10-25 09:45:31 GMT  EAGLE5 39.2.0
TYPEA  TTN        NDGT
15     tst1       7

GTT TABLE IS     (27000 of 269999)      10 % FULL

START GTA             END GTA               XLAT   RI     PC
5557001               5557500               DPCSSN GT     003-003-003
     MRNSET=114   SSN=254 NGT=---

Command Retrieved 1 Entries


rlghncxa03w 08-10-25 09:45:31 GMT  EAGLE5 39.2.0
TYPEA  TTN        NDGT
15     tst1       7
```

```
GTT TABLE IS      (27000 of 269999)      10 % FULL
START GTA             END GTA               XLAT   RI     PC
5557501               5558000               DPCSSN GT     003-003-003
     MRNSET=114   SSN=254 NGT=---

Command Retrieved 1 Entries
```

The range of global title addresses can be changed so long as the new range of global title addresses does not overlap an existing range of global title addresses.

For example, using the range of global title addresses from the previous examples, 5556000 - 5558000, you wish to extend the range of global title addresses to 5556000 - 5559000. The range of global title addresses can be extended to 5559000 by specifying the `egta=5559000` and `split=no` parameters with the chg-gtt command. However, if another range of global title addresses begins with the value 5558500, the `egta=5559000` parameter cannot be specified with the `chg-gtt` command as the new range created with the egta=5559000 parameter would overlap the range of global title addresses beginning with the value 5558500. In this situation, the maximum value for the egta parameter would be 5558499.

Note: The command line on the terminal can contain up to 150 characters. If the parameters and values specified with the `chg-gtt` command are too long to fit on the chg-gtt command line, perform the `chg-gtt` command as many times as necessary to complete the GTT entry.

The `XLAT` parameter does not have a SEAS equivalent. When global title translations are configured at the SEAS interface, the values for the SEAS parameters `RI`, `DPC`, and `SSN`, all mandatory parameters for the SEAS `ADD-GTT` and `CHG-GTT` commands, are converted to the EAGLE 5 ISS parameters and values shown in *Table 31: SEAS and Global Title Translation Parameter Conversion* on page 529.

Table 31: SEAS and Global Title Translation Parameter Conversion

SEASGTT Parameters			GTT Parameters			
RI	DPC	SSN	XLAT	RI	PC/PCA	SSN
G	xxx-xxx-xxx	000	DPC	GT	xxx-xxx-xxx	Not Specified
D	xxx-xxx-xxx	002-255	DPCSSN	SSN	xxx-xxx-xxx	002-255
G	xxx-xxx-xxx	002-255	DPCSSN	GT	xxx-xxx-xxx	002-255
D	xxx-xxx-xxx	000	DPC	SSN	xxx-xxx-xxx	Not Specified

Notes:

- The SEAS `RI=G` parameter denotes global title routing, further global title translation is required.
- The SEAS `RI=D` parameter denotes DPC routing, no further global title translation is required.

SEASGTT Parameters	GTT Parameters
• The RI=GT parameter denotes further global title translation is required and uses MTP routing. • The RI=SSN parameter denotes final global title translation and uses MAP routing. • The XLAT=DPC parameter indicates that the DPC & RI values in the MSU are to be replaced. • The XLAT=DPCSSN parameter indicates that the DPC, RI, & SSN values in the MSU are to be replaced. • The XLAT=DPCNGT parameter indicates that the DPC, RI, & TT values in the MSU are to be replaced.	

The examples in this procedure are used to change the global title translation data for translation type 15 in the database.

If the translation type is defined as an alias, it cannot be used in the chg-gtt command.

If the translate indicator is equal to dpc (xlat=dpc) and the routing indicator is equal to ssn (ri=ssn), the point code and subsystem number specified in the chg-gtt command must be defined in the database as a mated application. Verify this by entering the rtrv-map command. If this point code and subsystem number is not defined as a mated application, perform one of these procedures to add the point code and subsystem number to the database as a mated application:

- *Provisioning a Solitary Mated Application* on page 112
- *Provisioning a Dominant Mated Application* on page 142
- *Provisioning a Load Shared Mated Application* on page 189
- *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223

The point code and subsystem number do not have to be in the mated application table when the chg-gtt command is executed when these parameters are specified with the chg-gtt command.

- ri=gt
- xlat=dpcssn and ri=ssn

If the point code and subsystem are not in the mated application table when either of these parameters are specified with the chg-gtt command, the EAGLE 5 ISS creates a solitary mated application in the mated application table using the point code and subsystem values specified in the chg-gtt command.

If the xlat=dpcssn parameter is specified, the ssn parameter must be specified. Otherwise, the ssn parameter cannot be specified.

If a point code is the STP's True PC, then the value of the XLAT parameter must be set to DPCSSN and the value of the RI parameter must be set to SSN. If the SSN parameter is specified and a point code is the STP's True PC, then the subsystem number specified must exist in the SS-APPL table. This can be verified with the rtrv-ss-appl command. To execute the rtrv-ss-appl command, either the LNP or ATINP features must be enabled, or the EIR, INP, V-Flex, or ANSI-41 INP Query features must be enabled and turned on. If the LNP feature is enabled, the entry LNP TNs with a quantity greater than zero is shown in the rtrv-ctrl-feat command output. If the EIR feature is enabled and turned on, the entry EIR is shown in the rtrv-ctrl-feat command output as being permanently or temporarily enabled and with the status set to on. If the INP feature is enabled and turned on, the entry INP is shown in the rtrv-ctrl-feat command output with

the status set to on. If the ANSI-41 INP Query feature is enabled and turned on, the entry `ANSI-41 INP Query` is shown in the `rtrv-ctrl-feat` command output with the status set to on. If the V-Flex feature is enabled and turned on, the entry `VFLEX` is shown in the `rtrv-ctrl-feat` command output with the status set to on. If the ATINP feature is enabled and turned on, the entry `ATINP` is shown in the `rtrv-ctrl-feat` command output with the status set to on.

Note: The Local Number Portability (LNP), Equipment Identity Register (EIR), INAP Number Portability (INP), V-Flex, ATINP, or ANSI-41 INP Query features must be purchased before you can enable the LNP or ATINP features, or enable and turn on the EIR, INP, V-Flex, or ANSI-41 INP Query features. If you are not sure whether you have purchased the LNP, EIR, or INP, V-Flex, ATINP, or ANSI-41 INP Query feature, contact your Tekelec Sales Representative or Account Representative.

Once the LNP or ATINP feature is enabled with the `enable-ctrl-feat` command, or the EIR, INP, V-Flex, and ANSI-41 INP Query features are turned on with the `chg-ctrl-feat` command, they cannot be turned off or disabled.

The point code specified in the `chg-gtt` command (`pc/pca`, `pci`, `pcn` or `pcn24`) must be defined in the routing table. For ANSI point codes (`pc/pca`), the point code specified in the `chg-gtt` command, must be a full point code. That point code can be defined as a full point code in the destination point code table, or can be a member of a cluster point code defined in the destination point code table. Cluster point codes or a network routing point codes cannot be specified with this command. The `rtrv-rte` command can be used to verify the point codes in the routing table. The point codes are shown in the `DPCA`, `DPCI`, `DPCN`, or `DPCN24` fields of the `rtrv-rte` command output. If the point code is not defined as a route, perform one of the Adding a Route procedures in the Database *Administration Manual – SS7* to define the point code as a route.

If the EAGLE 5 ISS's point code is specified with the `chg-gtt` command, then the `xlat=dpcssn` and `ri=ssn` parameters must be specified. The EAGLE 5 ISS's point code is shown in the `PCA`, `PCI`, `PCN`, or `PCN24` fields of the `rtrv-sid` command output.

If the `xlat=dpcngt` parameter is specified, the `ngt` parameter and the `ri=gt` parameters must be specified. Otherwise, the `ngt` parameter cannot be specified.

A point code containing all zeros is not a valid point code.

An ANSI point code or ITU international point code containing all zeros is not a valid point code and cannot be entered into the database. An ITU national point code containing all zeros is a valid point code and can be entered into the database.

Either the `type` parameter or the `ttn` parameter must be specified.

If the `type` parameter is specified, the translation type must be in the database. This can be verified with the `rtrv-tt` command.

If the `type` parameter is not specified, the translation type name must be assigned to a translation type in the database. This can be verified with the `rtrv-tt` command.

The end global title address (`egta`) must be greater than or equal to the start global title address (`gta`) and its length must be equal to the start global title address.

If the Variable-Length Global Title Translation (VGTT) feature is off, shown the entry `VGTT = off`, the global title address length must be equal to the number of digits specified by the given translation type. The length of the global title address can be verified with the `rtrv-tt` command.

If the Variable-Length Global Title Translation (VGTT) feature is on, shown the entry `VGTT = on`, and the translation type has 10 different length global title addresses assigned to it, the length of the new global title address must be the same as one of the 10 lengths already assigned to the

translation type. If the length of the global title address does not match one of the 10 lengths already assigned to the translation type (`tt`) , the `chg-gtt` command is rejected with this message.

```
E2960 Cmd Rej: The GTA length is not defined for the specified TT
```

If the translation type has less than 10 different length global title addresses assigned to it, the length of the global title address can be from one to 21 digits and does not have to match the length of the other global title addresses assigned to the translation type.

If the Variable-Length Global Title Translation (VGTT) feature is on, the `ndgt` parameter of the `ent-tt` command has no effect on the length of the global title address. As global title addresses of different lengths are assigned to a specific translation type, these lengths are displayed in the `NDGT` field of the `rtrv-tt` command output.

Go to the *Variable-length Global Title Translation Feature* on page 20 section for more information about this feature.

Note: The Variable-Length Global Title Translation (VGTT) feature allows a variable-length global title address. Before enabling the VGTT feature, make sure you have purchased this feature. If you are not sure whether you have purchased the VGTT feature, contact your Tekelec Sales Representative or Account Representative.

If you have purchased this feature, refer to the *Variable-length Global Title Translation Feature* on page 20 section for more information about this feature.

If the range as specified by the `gta` and `egta` parameters does not exactly match the existing range, the existing range is split. All addresses in the existing range that are outside the range specified by `gta` and `egta`, retain the original `xlat`, `ri`, `pc`, `ssn`, and `ngt` parameters. A new range is created and bounded by the `gta` and `egta` containing new values of `xlat`, `ri`, `pc`, `ssn` and `ngt` as present in the command, and retaining parameter values from the previous range that do not have corresponding new values in the command.

However, if the ranges overlap, splitting cannot occur and the command is rejected. However, if the ranges overlap, splitting cannot occur, and the `chg-gtt` command is rejected with this message.

```
E2401 Cmd Rej:GTA range overlaps a current range
```

Along with error message 2401, a list of the overlapped global title addresses is displayed as shown in the following example.

```
rlghncxa03w 07-02-24 08:29:15 GMT EAGLE5 37.0.0

The following GTA ranges overlap the input GTA range

START GTA               END GTA
8005550000              8005551999
8005552000              8005553999
8005554000              8005555999

CHG-GTT: MASP A - Command Aborted
```

If the translation type is ANSI (`type` or `typea`), the `pc` type must be ANSI (`pc` or `pca`). If the translation type is one of the ITU types (`typei`, `typen`, or `typen24`) the `pc` type may be either of the ITU types (`pci`, `pcn`, or `pcn24`). If the ANSI-ITU-China SCCP Conversion feature is enabled, the domain (ANSI or ITU) of the translation type and point code do not have to be the same.

The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, and `nsds` parameters are used by the Advanced GT Modification feature to modify the numbering plan, nature of address indicator, and the prefix

or suffix digits in the called party address portion of outbound MSUs in addition to the translation type when the MSU requires further global title translation and the translation type is to be replaced.

Being able to change the numbering plan, nature of address indicator, and either the prefix or suffix digits in the called party address portion of outbound MSUs makes the MSU more compatible with the network that the MSU is being sent to and to ensure that the MSU is routed correctly. These changes are made after the global title translation process, but before the MSU is routed to its destination.

The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified in the `chg-gtt` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters.

The prefix and suffix parameter values can be removed from the global title translation with the `rmgtt=yes` parameter.

To change the prefix parameter values to suffix parameter values, or suffix parameter values to prefix parameter values, the `chg-gtt` command must be entered twice, once with the `rmgtt=yes` parameter to remove the exiting prefix or suffix parameter values, then with either the `npdd` and `npds` or the `nsdd` and `nsds` parameters.

The `rmgtt` parameter cannot be specified with either the `nnp`, `nnai`, `ngti`, `npdd`, `npds`, `nsdd`, or `nsds` parameters.

The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, `nsds` , and `rmgtt` parameters can be specified only when the Advanced GT Modification feature is enabled. This can be verified by entering the `rtrv-ctrl-feat` command. For more information on the Advanced GT Modification feature, refer to the *Advanced GT Modification Feature* on page 22 section.

The values specified for the gta, egta, npds, and nsds parameters can be decimal digits (0-9) or hexadecimal digits (0-9, a-f, A-F). Hexadecimal digits can be specified only if the Hex Digit Support for GTT feature is enabled. Verify the status of the Hex Digit Support for GTT feature with the `rtrv-ctrl-feat` command. See the *Hex Digit Support for GTT* on page 39 section for more information on this feature. If the Hex Digit Support for GTT feature is not enabled, perform the *Activating the Hex Digit Support for GTT Feature* on page 806 procedure to enable the Hex Digit Support for GTT feature.

The `ngti=2` parameter can be specified with an ANSI point code or an ITU point code and not with the `nnp` and `nnai` parameters.

The `ngti=4` parameter can be specified only with an ITU point code. The `nnp` and `nnai` parameters must be specified with the `ngti=4` parameter.

The `ngti` parameter can be specified only if the domain (ANSI or ITU) of the translation type and point code of the global title translation are not the same(the translation type is ANSI and the point code is ITU or the translation type is ITU and the point code is ANSI), or if the domain of the translation type and point code is ITU. The Advanced GT Modification feature must be enabled and the ANSI-ITU-China SCCP Conversion feature must be enabled before the `ngti` parameter can be specified with the global title translation.

Table 32: Valid Parameter Combinations for the chg-gtt Routing Parameters on page 534 shows the valid combinations for the `xlat`, `ri`, `ssn`, and `ngt` parameters. All other combinations are rejected.

Table 32: Valid Parameter Combinations for the `chg-gtt` Routing Parameters

New or Existing XLAT Value	New or Existing RI Value	Routing Action	SSN Value	NGT Value
DPC	GT	Translate DPC only and route on GT	Cannot be specified. The current database entry is removed.	Can be specified (See note)
DPC	SSN	Translate DPC only and route on SSN	Cannot be specified. The current database entry is removed.	Cannot be specified. The current database entry is removed.
DPCSSN	GT	Translate DPC and SSN and route on GT	Must be specified.	Cannot be specified. The current database entry is removed.
DPCSSN	SSN	Translate DPC and SSN and route on SSN	Must be specified.	Cannot be specified. The current database entry is removed.
DPCNGT	GT	Translate DPC, new translation type (TT), and route on GT	Cannot be specified. The current database entry is removed.	Must be specified.
Note: The `ngt` parameter can be specified with the `xlat=dpc` and `ri=gt` parameters only if the ANSI-ITU-China SCCP Conversion feature is enabled. If this type of entry is changed by specifying the `xlat=dpc` parameter without specifying the `ngt` parameter, the existing `ngt` parameter value is removed. If the ANSI-ITU-China SCCP Conversion feature not enabled, the `ngt` parameter cannot be specified with the `xlat=dpc` and `ri=gt` parameters.				

Canceling the `RTRV-GTT` Command

Because the `rtrv-gtt` command used in this procedure can output information for a long period of time, the `rtrv-gtt` command can be canceled and the output to the terminal stopped. There are three ways that the `rtrv-gtt` command can be canceled.

- Press the `F9` function key on the keyboard at the terminal where the `rtrv-gtt` command was entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rtrv-gtt` command was entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rtrv-gtt` command was entered, from another terminal other that the terminal where the `rtrv-gtt` command was entered. To enter the `canc-cmd:trm=<xx>` command, the terminal must allow Security

Administration commands to be entered from it and the user must be allowed to enter Security Administration commands. The terminal's permissions can be verified with the `rtrv-secu-trm` command. The user's permissions can be verified with the `rtrv-user` or `rtrv-secu-user` commands.

For more information about the `canc-cmd` command, go to the *Commands Manual*.

1. Display the translation types in the database using the `rtrv-tt` command. This is an example of the possible output.

```
rlghncxa03w 07-02-25 09:42:31 GMT  EAGLE5 37.0.0
TYPEA      TTN        NDGT
1          lidb       5
2          c800       10
3          d700       6
5          scp1       6
10         scp2       6
15         scp3       3

ALIAS      TYPEA
30         5
40         10
50         3
65         3

TYPEI      TTN        NDGT
105        itudb      8

ALIAS      TYPEI
7          105

TYPEN      TTN        NDGT
120        dbitu      7

ALIAS      TYPEN
8          120
```

2. Display the global title translations in the database using the `rtrv-gtt` command specifying a translation type, translation type name, or both from the `rtrv-tt` command output shown in *Step 1* on page 535.

   For this example, enter this command.

   `rtrv-gtt:typea=15:gta=800`

   This is an example of the possible output.

```
rlghncxa03w 08-10-25 09:43:31 GMT  EAGLE5 39.2.0
TYPEA  TTN        NDGT
15     scp3       3

GTT TABLE IS      (27000 of 269999)      10 % FULL

START GTA             END GTA               XLAT   RI     PC
800                   900                   DPC    SSN    001-001-001
     SSN=--- NGT=---

Command Retrieved 1 Entries
```

   `rtrv-gtt:typea=15:gta=919`

This is an example of the possible output.

```
rlghncxa03w 08-10-25 09:43:31 GMT  EAGLE5 39.2.0
TYPEA  TTN        NDGT
15     scp3       3

GTT TABLE IS      (27000 of 269999)      10 % FULL
START GTA             END GTA               XLAT   RI     PC
919                   919                   DPCSSN SSN    002-002-002
     SSN=50  NGT=---

Command Retrieved 1 Entries
```

Note: If the nnp, nnai, npdd, npds, nsdd, nsds, or cggtmod parameters will not be specified in this procedure, continue the procedure with *Step 4* on page 537 .

3. To specify the nnp, nnai, npdd, npds, nsdd, nsds, rmgtt, or cggtmod parameters in this procedure, the Advanced GT Modification feature must be enabled.

   If the Advanced GT Modification feature is enabled, one of these entries is shown in the rtrv-ctrl-feat output.

   - AMGTT
   - AMGTT CdPA Only
   - AMGTT CgPA Upgrade

   Note: If the entry AMGTT CdPA Only is shown in the rtrv-ctrl-feat output, the cggtmod parameter cannot be specified in this procedure. To specify the cggtmode parameter, either the AMGTT or AMGTT CgPA Upgrade entry must be shown in the rtrv-ctrl-feat output.

   Enter the rtrv-ctrl-feat command to verify the status of the AMGTT feature.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 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  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
HC-MIM SLK Capacity       893012707  on      64

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 appropriate Advanced GT Modification feature is not shown in the rtrv-ctrl-feat output in this step, perform the *Activating the Advanced GT Modification Feature* on page 846 procedure to enable the appropriate Advanced GT Modification feature. After the Advanced GT Modification feature has been enabled, continue the procedure with *Step 4* on page 537.

4. If the domain (ANSI or ITU) of the point code and the translation type assigned to the global title translation type will be different, and the `ngti` parameter will be specified with the global title translation, the ANSI-ITU-China SCCP Conversion feature (SCCP Conversion) must be enabled. If the ANSI-ITU-China SCCP Conversion feature is not being used, continue the procedure with *Step 6* on page 537.

   Verify that the ANSI-ITU-China SCCP Conversion feature is enabled by entering the `rtrv-ctrl-feat:partnum=893012001` command.

   The following is an example of the possible output.

```
rlghncxa03w 07-02-28 21:15:37 GMT EAGLE5 37.0.0
The following features have been permanently enabled:

Feature Name           Partnum    Status  Quantity
SCCP Conversion        893012001  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 ANSI-ITU-China SCCP Conversion feature is not enabled, perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure to enable the ANSI-ITU-China SCCP Conversion feature.

5. If the `rtrv-gtt` output in *Step 2* on page 535 shows that the maximum number of global title translations is 1,000,000, do not perform this step. Continue the procedure with *Step 6* on page 537.

   Note: If a range of GTAs is not shown in *Step 2* on page 535, or if the range of GTAs will not be split in this procedure, continue the procedure with *Step 6* on page 537.

   If the `rtrv-gtt` output in *Step 2* on page 535 shows that the maximum number of global title addresses is either 269,999 or 400,000, and the number of global title addresses will not increase the number beyond the quantity shown in the `rtrv-gtt` output in *Step 2* on page 535 when the range of GTAs is split, do not perform this step. Continue the procedure with *Step 6* on page 537.

   If the `rtrv-gtt` output in *Step 2* on page 535 shows that the maximum number of global title addresses is either 269,999 or 400,000, and the number of global title addresses will be more than the maximum number of global title addresses when the range of GTAs is split, perform the *Enabling the XGTT Table Expansion Feature* on page 762 procedure to enable XGTTTable Expansion controlled feature for either 400,000 or 1,000,000 global title addresses as required, then continue the procedure with *Step 6* on page 537.

6. Hexadecimal digits (0-9, a-f, A-F) can be specified as values for the `gta`, `egta`, `npds`, or `nsds` parameters only if the Hex Digit Support for GTT feature is enabled. Verify the status of the Hex Digit Support for GTT feature by entering the `rtrv-ctrl-feat` command with the Hex Digit Support for GTT feature part number.

   Enter this command.

   `rtrv-ctrl-feat:partnum=893018501`

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
Hex Digit Support for GTT  893018501   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 Hex Digit Support for GTT feature has not been enabled, perform the *Activating the Hex Digit Support for GTT Feature* on page 806 procedure to enable this feature. After the Hex Digit Support for GTT feature is enabled, continue the procedure with *Step 7* on page 538.

Note: If the point code value will be the EAGLE 5 ISS's point code, the `ri` parameter value will be `ssn`, and the `xlat` parameter value will be `dpcssn` when this procedure is completed, continue the procedure with *Step 12* on page 541.

Note: If you do not wish to change the loopset parameter value with the `chg-gtt` command, continue the procedure with *Step 9* on page 539.

7. If the loopset field appears in the output shown in *Step 2* on page 535, the SCCP Loop Detection feature is enabled, continue the procedure with *Step 8* on page 538.

   If the loopset field appears in the output shown in *Step 2* on page 535, the SCCP Loop Detection feature is not enabled. Perform the *Activating the SCCP Loop Detection Feature* on page 830 procedure to enable the SCCP Loop Detection feature. After the SCCP Loop Detection Feature has been enabled, perform the *Adding a Loopset* on page 442 procedure to add the required loopset. After the loopset has been added, continue the procedure with *Step 9* on page 539.

8. Display all the loopsets in the database by entering this command.

   `rtrv-loopset:num=1000:force=yes`

   This is an example of the possible output.

```
LoopSet       Mode       Point Codes
=====================================================================
cary2         notify     005-015-005       007-007-007       (ANSI)
                         033-004-003       033-007-003
                         005-027-005       007-004-007

cary4         notify     005-012-005       007-026-007       (ANSI)
                         003-049-003       033-002-003
                         005-008-055       007-014-007

apex3         discard    005-017-008       007-017-009       (ANSI)
                         033-005-043       005-014-005
                         005-017-005       007-014-007
                         033-002-043       005-038-005
                         007-009-027       033-003-043
                         005-012-005       007-002-027

apex4         discard    005-007-008       027-007-009       (ANSI)
                         033-005-003       005-004-055
                         027-001-007       033-008-003
                         033-007-003       005-003-055
```

```
                          027-008-007

ral5           notify     005-005-005       007-007-007       (ANSI)
                          003-004-003       003-001-003
                          005-007-005       007-004-007
                          003-002-003       005-008-005
                          007-009-007       003-003-003
                          005-002-005       007-002-007

ral6           notify     005-007-008       007-007-009       (ANSI)
                          003-005-003       003-007-003
                          005-007-005

dunn1          discard    005-002-055       007-051-007       (ANSI)
                          003-008-033

rtp9           discard    005-002-005       007-001-007       (ANSI)
                          003-008-003       003-007-003
                          005-003-005       007-008-007
                          005-004-005

rtp5           discard    005-007-008       007-007-009       (ANSI)
                          003-005-003

rtp1           discard    005-005-005       007-007-007       (ANSI)
                          003-004-003       003-007-003
                          005-007-005       007-004-007
                          005-004-005

rtp2           notify     005-007-008       007-007-009       (ANSI)
                          003-005-003


rlghncxa03w 07-03-07 08:50:15 GMT Rel 37.0.0
LOOPSET table is (11 of 1000) 1% full
RTRV-LOOPSET: MASP A - COMPLTD
```

Note: If the `rtrv-loopset` command is entered with no other parameters specified, a maximum of 50 entries are displayed. To display more than 50 entries, the `force=yes` parameter must be specified with the `rtrv-loopset` command and the num parameter value must be greater than 50. Since there can be a maximum of 1000 loopsets in the database, to display all the loopsets in the database, the `force=yes` and `num=1000` parameters must be specified with the `rtrv-loopset` command.

If the required loopset is shown in the `rtrv-loopset` output, continue the procedure with *Step 9* on page 539.

If the required loopset is not shown in the `rtrv-loopset` output, perform the *Adding a Loopset* on page 442 procedure to add the required loopset. After the loopset has been added, continue the procedure with *Step 9* on page 539.

Note: If the point code value will be the EAGLE 5 ISS's point code, the `ri` parameter value will be `ssn`, and the `xlat` parameter value will be `dpcssn` when this procedure is completed, continue the procedure with *Step 12* on page 541.

9. Display the destination point codes in the database by entering the `rtrv-dstn` command. This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

DPCA          CLLI        BEI ELEI  ALIASI       ALIASN    DOMAIN
001-207-000   ----------- no  ---   -------      --------    SS7
001-001-001   ----------- no  ---   -------      --------    SS7
```

```
001-001-002   ----------- no  ---   -------      --------    SS7
001-005-000   ----------- no  ---   -------      --------    SS7
001-007-000   ----------- no  ---   -------      --------    SS7
008-012-003   ----------- no  ---   -------      --------    SS7
003-002-004   ----------- no  ---   -------      --------    SS7
009-002-003   ----------- no  ---   -------      --------    SS7
010-020-005   ----------- no  ---   -------      --------    SS7

DPCI          CLLI        BEI ELEI  ALIASI       ALIASN      DOMAIN
1-207-0       ----------- no  ---   -------      --------    SS7
0-015-0       ----------- no  ---   -------      --------    SS7
0-017-0       ----------- no  ---   -------      --------    SS7
1-011-1       ----------- no  ---   -------      --------    SS7
1-011-2       ----------- no  ---   -------      --------    SS7

DPCN          CLLI        BEI ELEI   ALIASA          ALIASI  DOMAIN

DPCN24        CLLI        BEI ELEI   ALIASA          ALIASI  DOMAIN

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the required point code is not shown in the `rtrv-dstn` output, perform the "Adding a Destination Point Code" procedure in the *Database Administration Manual - SS7* to add the required point code. A proxy point code cannot be assigned to the point code.

After the new point code has been added, and perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database. After the route has been added, continue the procedure with *Step 12* on page 541.

10. Display the point code that will be assigned to the global title translation by using the `rtrv-dstn` command and specifying the point code. For this example, enter this command.

    `rtrv-dstn:dpca=010-020-005`

    This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN     DOMAIN
   010-020-005   ----------- no  ---   -------      --------     SS7

   PPC           NCAI           PRX
   009-002-003   ----           no

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the adjacent point code is not shown in the `rtrv-dstn` command output, the following output is displayed.

```
DPCA          CLLI        BEI ELEI  ALIASI       ALIASN/N24    DOMAIN

No destinations meeting the requested criteria were found

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

A proxy point code (a point code value is shown in the PPC column) cannot be assigned to the point code. If a proxy point code is shown in this step, choose another point code from the `rtrv-dstn` output in the previous step and repeat this step.

If the point code is not shown in the `rtrv-dstn` output, perform the "Adding a Destination Point Code" procedure in the Database *Administration Manual* - SS7 and add the point code to the destination point code table.

11. The point code specified with the `chg-gtt` command must be the DPC of a route, unless the point code is the EAGLE 5 ISS's point code.

Enter the `rtrv-rte` command with the `dpc` parameter specifying the point code to be used with the `chg-gtt` command to verify whether or not the point code is the DPC of a route. For this example, enter these commands.

```
rtrv-rte:dpca=003-003-003
```

This is an example of the possible output.

```
rlghncxa03w 07-02-07 11:43:04 GMT  EAGLE5 37.0.0
DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
002-002-003   --------   ------------   ls05       10   002-002-003
                                        ls15       30   089-047-123
                                        lsa8       50   077-056-000
                                               RTX:No  CLLI=ls05clli
```

```
rtrv-rte:dpca=002-002-003
```

This is an example of the possible output.

```
rlghncxa03w 07-05-07 11:43:04 GMT  EAGLE5 37.0.0
DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
003-003-003   --------   ------------   ls07       10   003-003-003
                                        ls08       30   025-025-150
                                        lsa5       50   066-030-100
                                               RTX:No  CLLI=ls07clli
```

If the point code is not shown in the `rtrv-rte` output, perform one of the procedures in the Database *Administration Manual* - SS7 and add the required route to the database.

12. To use either the `mrnset` parameter (if the routing indicator value for the global title translation is GT when this procedure is completed) or `mapset` parameter (if the routing indicator value for the global title translation is SSN when this procedure is completed), the Flexible GTT Load Sharing feature must be enabled

If the Flexible GTT Load Sharing feature is enabled, either the `mrnset` or `mapset` parameters, depending on the routing indicator value for the global title translation when this procedure is completed, must be specified with the `chg-gtt` command.

Verify that the Flexible GTT Load Sharing feature is enabled by entering the `rtrv-ctrl-feat:partnum=893015401` command. The following is an example of the possible output.

```
rlghncxa03w 07-02-28 21:15:37 GMT EAGLE5 37.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Zero entries found.

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 Flexible GTT Load Sharing feature is enabled, the following is an example of the possible output.

```
rlghncxa03w 07-02-28 21:15:37 GMT EAGLE5 37.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Flexible GTT Load Sharing 893015401    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 routing indicator for the global title translation will be GT when this procedure is completed, there are three actions that can be taken:

- If the Flexible GTT Load Sharing feature is not enabled, and you do not wish to specify the `mrnset` parameter for the global title translation, continue the procedure with *Step 20* on page 548.
- If the Flexible GTT Load Sharing feature is not enabled, and you do wish to specify the `mrnset` parameter for the global title translation, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure to enable the Flexible GTT Load Sharing feature. After enabling the Flexible GTT Load Sharing feature, continue the procedure with *Step 13* on page 543.
- If the Flexible GTT Load Sharing feature is enabled, continue the procedure with *Step 13* on page 543.

If the routing indicator for the global title translation will be SSN when this procedure is completed, there are three actions that can be taken:

- If the Flexible GTT Load Sharing feature is not enabled, and you do not wish to specify the `mapset` parameter for the global title translation, continue the procedure with one of these steps.
  - If the point code value is being changed to the EAGLE 5 ISS's point code, continue the procedure with *Step 17* on page 546.
  - If the point code value is being changed to a point code other than the EAGLE 5 ISS's point code, and the `ri` parameter value will be `ssn`, and the `xlat` parameter value will be `dpc` when this procedure is completed, continue the procedure with *Step 19* on page 547.
  - If the point code value is being changed to a point code other than the EAGLE 5 ISS's point code, and the `ri` parameter value will be `ssn`, and the `xlat` parameter value will be `dpcssn` when this procedure is completed, continue the procedure with *Step 14* on page 544 .
  - If the point code value is not being changed, continue the procedure with *Step 20* on page 548.

- If the Flexible GTT Load Sharing feature is not enabled, and you do wish to specify the `mapset` parameter for the global title translation, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure to enable the Flexible GTT Load Sharing feature. After enabling the Flexible GTT Load Sharing feature, continue the procedure with one of these steps:
  - If the point code value is being changed to the EAGLE 5 ISS's point code, continue the procedure with *Step 17* on page 546.
  - If the point code value is being changed to a point code other than the EAGLE 5 ISS's point code, or the `xlat` parameter value is being changed to `dpc`, continue the procedure with *Step 19* on page 547.
  - If the point code value is not being changed, continue the procedure with *Step 19* on page 547 to verify that the required MAP set is provisioned in the database.
- If the Flexible GTT Load Sharing feature is enabled, perform one of these steps:
  - If the point code value is being changed to the EAGLE 5 ISS's point code, continue the procedure with *Step 17* on page 546.
  - If the point code value is being changed to a point code other than the EAGLE 5 ISS's point code, the `mapset` parameter value is being changed, or the `xlat` parameter value is being changed to `dpc`, continue the procedure with *Step 19* on page 547.
  - If the point code and the `mapset` parameter values are not being changed, continue the procedure with *Step 20* on page 548.

13. The point code and MRN set ID specified for the global title translation must be shown in the `rtrv-mrn` command output. The point code must be assigned to the MRN set that will be assigned to the global title translation.

Enter the `rtrv-mrn` command to verify that the required MRN set is configured in the database, and that the required point code is assigned to the MRN set. The following is an example of the possible output.

```
rlghncxa03w 07-02-28 21:15:37 GMT EAGLE5 37.0.0


MRNSET   PC             RC
DFLT     001-001-001    10
         001-001-002    20
         001-001-003    30

MRNSET   PC             RC
110      001-001-001    10
         001-001-005    20
         001-001-006    30
         001-001-003    40
         001-001-008    50

MRNSET   PC             RC
111      001-001-001    30
         001-001-005    30
         001-001-006    30
         001-001-003    30
         001-001-008    30

MRNSET   PC             RC
112      001-003-001    10
         001-003-002    10
```

```
          001-003-003    30
          001-003-004    30
          001-003-006    60
          001-003-007    60
          001-003-008    80
          001-003-009    80

MRNSET    PCN                RC
113       s-1-1-1-0123-aa    1
          s-1-1-1-0235-aa    2
          s-1-1-1-0235-aa    3
```

Note: If the Weighted GTT Load Sharing feature is enabled, the WT, %WT, and THR columns are shown in the `rtrv-mrn` output

If the required MRN set is not shown in the `rtrv-mrn` output, or if the required point code is not assigned to the required MRN set, provision the required MRN set by performing the *Provisioning MRN Entries* on page 310 procedure. After provisioning the required MRN set, continue the procedure with *Step 20* on page 548. If the required MRN set is shown in the `rtrv-mrn` output, or if the required point code is assigned to the required MRN set, continue the procedure with *Step 20* on page 548.

14. Display the destination point codes in the database by entering the `rtrv-dstn` command. This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

DPCA           CLLI         BEI ELEI  ALIASI       ALIASN     DOMAIN
001-207-000    ------------ no  ---   -------      --------     SS7
001-001-001    ------------ no  ---   -------      --------     SS7
001-001-002    ------------ no  ---   -------      --------     SS7
001-005-000    ------------ no  ---   -------      --------     SS7
001-007-000    ------------ no  ---   -------      --------     SS7
008-012-003    ------------ no  ---   -------      --------     SS7
003-002-004    ------------ no  ---   -------      --------     SS7
009-002-003    ------------ no  ---   -------      --------     SS7
010-020-005    ------------ no  ---   -------      --------     SS7

DPCI           CLLI         BEI ELEI  ALIASI       ALIASN       DOMAIN
1-207-0        ------------ no  ---   -------      --------     SS7
0-015-0        ------------ no  ---   -------      --------     SS7
0-017-0        ------------ no  ---   -------      --------     SS7
1-011-1        ------------ no  ---   -------      --------     SS7
1-011-2        ------------ no  ---   -------      --------     SS7

DPCN           CLLI         BEI ELEI   ALIASA          ALIASI  DOMAIN

DPCN24         CLLI         BEI ELEI   ALIASA          ALIASI  DOMAIN

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the required point code is not shown in the `rtrv-dstn` output, perform the "Adding a Destination Point Code" procedure in the *Database Administration Manual - SS7* to add the required point code. A proxy point code cannot be assigned to the point code.

After the new point code has been added, and perform one of the Adding a Route procedures in the Database *Administration Manual - SS7* and add the required route to the database. After the route has been added, continue the procedure with *Step 19* on page 547.

15. Display the point code that will be assigned to the global title translation by using the `rtrv-dstn` command and specifying the point code. For this example, enter this command.

```
rtrv-dstn:dpca=010-020-005
```

This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN     DOMAIN
   010-020-005   ----------- no  ---   -------      --------     SS7

   PPC           NCAI           PRX
   009-002-003   ----           no

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the adjacent point code is not shown in the `rtrv-dstn` command output, the following output is displayed.

```
DPCA          CLLI        BEI ELEI  ALIASI       ALIASN/N24    DOMAIN

No destinations meeting the requested criteria were found

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

A proxy point code (a point code value is shown in the `PPC` column) cannot be assigned to the point code. If a proxy point code is shown in this step, choose another point code from the `rtrv-dstn` output in the previous step and repeat this step.

If the point code is not shown in the `rtrv-dstn` output, perform the "Adding a Destination Point Code" procedure in the Database *Administration Manual - SS7* and add the point code to the destination point code table.

16. The point code specified with the `chg-gtt` command must be the DPC of a route, unless the point code is the EAGLE 5 ISS's point code.

Enter the `rtrv-rte` command with the `dpc` parameter specifying the point code to be used with the `chg-gtt` command to verify whether or not the point code is the DPC of a route. For this example, enter these commands.

```
rtrv-rte:dpca=003-003-003
```

This is an example of the possible output.

```
rlghncxa03w 07-02-07 11:43:04 GMT  EAGLE5 37.0.0
DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
002-002-003   --------   ------------   ls05       10   002-002-003
                                        ls15       30   089-047-123
                                        lsa8       50   077-056-000
                                               RTX:No  CLLI=ls05clli
```

```
rtrv-rte:dpca=002-002-003
```

This is an example of the possible output.

```
rlghncxa03w 07-05-07 11:43:04 GMT  EAGLE5 37.0.0
DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
003-003-003   --------   ------------   ls07       10   003-003-003
                                        ls08       30   025-025-150
```

```
                                          lsa5       50   066-030-100
                                                 RTX:No  CLLI=ls07clli
```

If the point code is not shown in the `rtrv-rte` output, perform one of the procedures in the Database *Administration Manual - SS7* and add the required route to the database.

17. If the `ri=ssn` and `xlat=dpcssn` parameters are specified with the `chg-gtt` command, and you wish to use the EAGLE 5 ISS's point code for the value of the `pc` parameter of the `chg-gtt` command, the point code value must be in the EAGLE 5 ISS's self ID table.

    Display the EAGLE 5 ISS self-identification, using the `rtrv-sid` command. This is an example of the possible output.

```
rlghncxa03w 07-02-10 11:43:04 GMT EAGLE5 37.0.0
   PCA            PCI         PCN              CLLI            PCTYPE
   010-020-030   1-023-1      12-0-14-1       rlghncxa03w       OTHER
              s-1-023-1    s-12-0-14-1
   CPCA
   002-002-002       002-002-003       002-002-004      002-002-005
   002-002-006       002-002-007       002-002-008      002-002-009
   004-002-001       004-003-003       050-060-070

   CPCI
   1-001-1           1-001-2           1-001-3          1-001-4
   1-002-1           1-002-2           1-002-3          1-002-4
   2-001-1           7-222-7

   CPCN
   2-0-10-3          2-0-11-0          2-0-11-2          2-0-12-1
   2-2-3-3           2-2-4-0           10-14-10-1
```

18. Enter the `rtrv-ss-appl` command to verify that either the LNP, EIR, INP, V-Flex, or ATINPQ subsystem number (depending on which feature is on) is the subsystem application table.

    This is an example of the possible output.

```
rlghncxa03w 08-09-28 14:42:38 GMT EAGLE5 39.2.0
APPL       SSN       STAT
LNP        254       ONLINE

SS-APPL table is 20% FULL (1 of 5)
```

    If the subsystem number is shown in the `rtrv-ss-appl` output, continue the procedure with *Step 20* on page 548.

    If no subsystem number is shown in the `rtrv-ss-appl` output, or if the `rtrv-ss-appl` command is rejected, go to one of these manuals, depending on the type of subsystem you wish to use, and enable the feature if necessary, and add the subsystem to the subsystem application table.

    - EIR subsystem – go to the *Feature Manual - EIR*.
    - INP subsystem – go to the *Feature Manual - INP/AINPQ*.
    - LNP subsystem – go to the *LNP Feature Activation Guide*.
    - V-Flex subsystem – go to the *Feature Manual - V-Flex*.
    - ATINPQ subsystem – go to the *Feature Manual - ATINP*.

    Note: If the Flexible GTT Load Sharing feature is enabled, shown in *Step 12* on page 541, a MAP set ID must be specified for the final global title translation. The point code and SSN specified for the final global title translation being changed in this procedure must be assigned to the

MAP set ID that will be assigned to the final global title translation. Perform *Step 19* on page 547 to verify that the required MAP set is configured in the database.

Note: If the Flexible GTT Load Sharing feature is not enabled, and the `ri` parameter value will be `ssn`, the `xlat` parameter value will be `dpcssn`, the point code value will not be the EAGLE 5 ISS's point code, and the SSN parameter value will not be the EAGLE 5 ISS's subsystem number when this procedure is completed, continue the procedure with *Step 20* on page 548.

19. Enter the `rtrv-map` command with the `pc` parameter specifying the required point code to verify that the required data is in the mated application table.

For this example enter this command.

```
rtrv-map:pca=002-002-003
```

If the Flexible GTT Load Sharing feature is not enabled, this is an example of the possible output.

```
rlghncxa03w 07-02-25 09:42:31  GMT  EAGLE5 37.0.0

MAP TABLE IS       (37 of 1024)      4 % FULL

   PCA     SSN RC MULT-------Mate--------------SRM MRC GRP NAME   SSO
                        PCA          SSN RC MULT
002-002-003 250 10  SOL                          --- ---   GRP01    ON
```

If the Flexible GTT Load Sharing feature is enabled, this is an example of the possible output.

```
rlghncxa03w 07-02-25 09:42:31  GMT  EAGLE5 37.0.0

MAP TABLE IS   (12 of 36000)      1 % FULL

PCA         SSN RC MULT----------Mate----------- SRM MRC GRP NAME SSO
                         PCA         SSN  RC MULT

MAPSET ID=DFLT
002-002-003  55  5  DOM                            YES YES ------- OFF
                     001-001-002    15  15  DOM    YES YES ------- ON
                     001-001-003    25  20  DOM    YES YES ------- ON
                     001-001-002    40  35  DOM    YES YES ------- OFF
MAPSET ID=  1
002-002-003 254  5  DOM                            YES YES ------- OFF
                     001-001-002    10 15  DOM     YES YES ------- ON
                     001-001-003    20 20  DOM     YES YES ------- ON
                     001-001-002    40 35  DOM     YES YES ------- OFF
MAPSET ID=  2
002-002-003                          5 10  SOL    --- --- -------- OFF
```

Note: If the Weighted GTT Load Sharing feature is enabled, the WT, %WT, and THR columns are shown in the `rtrv-mrn` output

Note: If the parameter values for the `ri` and `xlat` parameters will be `ri=ssn` and `xlat=dpc` when this procedure is completed, the point code value must be in the mated application table. If the point code is not in the mated application table when the `chg-gtt` command is executed, the `force=yes` parameter must be specified with the `chg-gtt` command.

If the parameter values for the `ri` and `xlat` parameters will be `ri=ssn` and `xlat=dpcssn`, and the point code and subsystem number values will be the EAGLE 5 ISS's true point code and the EAGLE 5 ISS's subsystem number when this procedure is completed, the EAGLE 5

ISS's true point code and the EAGLE 5 ISS's subsystem number must be in the mated application table.

If the required point code, subsystem number, or MAP set ID is not shown in the `rtrv-map` output, perform one of these procedures to add the required information mated application table:

- *Provisioning a Solitary Mated Application* on page 112
- *Provisioning a Dominant Mated Application* on page 142
- *Provisioning a Load Shared Mated Application* on page 189
- *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223

20. Change the global title translation using the `chg-gtt` command using the parameter combinations shown in *Table 33: Change GTT Parameter Combinations* on page 548 .

For this example, enter this command.

```
chg-gtt:type=15:gta=800:egta=850:xlat=dpcssn:ri=gt:pc=003-003-003:ssn=254
:mrnset=114
```

```
chg-gtt:type=15:gta=919:xlat=dpcssn:ri=ssn:pc=002-002-003:ssn=254:mapset=1
:loopset=rtp2
```

This message should appear.

```
rlghncxa03w 07-02-25 09:44:31  GMT  EAGLE5 37.0.0
CHG-GTT:  MASP A - COMPLTD
```

Table 33: Change GTT Parameter Combinations

RI = GT XLAT= DPCNGT	RI = GT XLAT= DCPSSN	RI = GT XLAT= DPC	RI = SSN XLAT= DCPSSN	RI = SSN XLAT= DPC
Mandatory Parameters				
TYPE/TYPEA/ TYPEI/TYPEN TYPEN24 (See Notes 2 and 3)	TYPE/TYPEA/ TYPEI/TYPEN TYPEN24 (See Notes 2 and 3)	TYPE/TYPEA/ TYPEI/TYPEN TYPEN24 (See Notes 2 and 3)	TYPE/TYPEA/ TYPEI/TYPEN TYPEN24 (See Notes 2 and 3)	TYPE/TYPEA/ TYPEI/TYPEN TYPEN24 (See Notes 2 and 3)
GTA (See Notes 4, 5, 6, 17, 19, and 21)	GTA (See Notes 4, 5, 6, 17, 19, and 21)	GTA (See Notes 4, 5, 6, 17, 19, and 21)	GTA (See Notes 4, 5, 6, 17, 19, and 21)	GTA (See Notes 4, 5, 6, 17, 19, and 21)
Optional Parameters (See Note 26)				
PC/PCA/PCI/ PCN/PCN24 (See Notes 1, 3, and 12)	PC/PCA/PCI/ PCN/PCN24 (See Notes 1, 3, and 12)	PC/PCA/PCI/ PCN/PCN24 (See Notes 1, 3, and 12)	PC/PCA/PCI/ PCN/PCN24 (See Notes 1, 3, and 12)	PC/PCA/PCI/ PCN/PCN24 (See Notes 1, 3, and 12)

RI = GT XLAT= DPCNGT	RI = GT XLAT= DCPSSN	RI = GT XLAT= DPC	RI = SSN XLAT= DCPSSN	RI = SSN XLAT= DPC
TTN (See Notes 19, 20, and 21)	TTN (See Notes 19, 20, and 21)	TTN (See Notes 19, 20, and 21)	TTN (See Notes 19, 20, and 21)	TTN (See Notes 19, 20, and 21)
EGTA (See Notes 17, 22, and 25)	EGTA (See Notes 17, 22, and 25)	EGTA (See Notes 17, 22, and 25)	EGTA (See Notes 17, 22, and 25)	EGTA (See Notes 17, 22, and 25)
NNP (See Notes 7, 9, and 10)	NNP (See Notes 7, 9, and 10)	NNP (See Notes 7, 9, and 10)	NNP (See Notes 7, 9, and 10)	NNP (See Notes 7, 9, and 10)
NNAI (See Notes 7, 9, and 10)	NNAI (See Notes 7, 9, and 10)	NNAI (See Notes 7, 9, and 10)	NNAI (See Notes 7, 9, and 10)	NNAI (See Notes 7, 9, and 10)
NPDD (See Notes 7 and 11)	NPDD (See Notes 7 and 11)	NPDD (See Notes 7 and 11)	NPDD (See Notes 7 and 11)	NPDD (See Notes 7 and 11)
NPDS (See Notes 7, 11, and 17)	NPDS (See Notes 7, 11, and 17)	NPDS (See Notes 7, 11, and 17)	NPDS (See Notes 7, 11, and 17)	NPDS (See Notes 7, 11, and 17)
NSDD (See Notes 7 and 11)	NSDD (See Notes 7 and 11)	NSDD (See Notes 7 and 11)	NSDD (See Notes 7 and 11)	NSDD (See Notes 7 and 11)
NSDS (See Notes 7, 11, and 17)	NSDS (See Notes 7, 11, and 17)	NSDS (See Notes 7, 11, and 17)	NSDS (See Notes 7, 11, and 17)	NSDS (See Notes 7, 11, and 17)
NGTI (See Notes 7, 9, and 10)	NGTI (See Notes 7, 9, and 10)	NGTI (See Notes 7, 9, and 10)	NGTI (See Notes 7, 9, and 10)	NGTI (See Notes 7, 9, and 10)
MRNSET (See Notes 14 and 23)	MRNSET (See Notes 14 and 23)	MRNSET (See Notes 14 and 23)	MAPSET (See Notes 16 and 24)	MAPSET (See Notes 16 and 24)
SPLIT (See Note 25)	SPLIT (See Note 25)	SPLIT (See Note 25)	SPLIT (See Note 25)	SPLIT (See Note 25)
RMGTT (See Note 7)	RMGTT (See Note 7)	RMGTT (See Note 7)	RMGTT (See Note 7)	RMGTT (See Note 7)
LOOPSET (See Note 18)	LOOPSET (See Note 18)	LOOPSET (See Note 18)	LOOPSET (See Note 18)	LOOPSET (See Note 18)
CGGTMOD (See Note 8)	CGGTMOD (See Note 8)	CGGTMOD (See Note 8)	CGGTMOD (See Note 8)	CGGTMOD (See Note 8)
NGT	SSN	NGT (See Note 13)	SSN	FORCE (See Note 15)
Parameter Values:				
TYPE / **TYPEA** / **TYPEI** / **TYPEN** / **TYPEN24** – The translation type from the			**NNP** – 0 - 15. Default = 0xFFFF **NNAI** – 0 - 127. Default = 0xFFFF	

RI = GT XLAT= DPCNGT	RI = GT XLAT= DCPSSN	RI = GT XLAT= DPC	RI = SSN XLAT= DCPSSN	RI = SSN XLAT= DPC
`TYPE/TYPEA/TYPEI/TYPEN/TYPEN24` column of the `rtrv-tt` output – See Note 2 **TTN** – The translation type name from the **TTN** column of the `rtrv-tt` output. **GTA** – 1 - 21 digits or 1 - 21 hexadecimal digits **PC** / **PCA** / **PCI** / **PCN** / **PCN24** – See Note 1 **SSN** – 0 - 255 **NGT** – 0 - 255 **EGTA** – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = same as the **GTA** value **FORCE** – yes, no. Default = no **LOOPSET** – Loopset name from the `rtrv-loopset` output **SPLIT** - yes, no. Default = yes **RMGTT** - yes, no. Default = no			**NPDD** – 0 - 21. Default = 0 **NPDS** – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = no digits **NSDD** – 0 - 21. Default = 0 **NSDS** – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = no digits **NGTI** – 2, 4. Default = not applicable **MRNSET** – MRN set ID from the `rtrv-mrn` output **MAPSET** – MAP set ID from the `rtrv-map` output **CGGTMOD** – yes, no. Default = no	

Notes:

1. The `pc/pca/pci/pcn/pcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes to the global title translation (GTT).
   - `pc/pca` = ANSI point code
   - `pci` = ITU-I or ITU-I spare point code
   - `pcn` = 14-bit ITU-N or 14-bit ITU-N spare point code
   - `pcn24` = 24-bit ITU-N point code.
2. The `type/typea/typei/typen/typen24` parameters specify the translation type and the network type of the translation type.
   - type/typea = ANSI translation type
   - typei = ITU-I translation type
   - typen/typen24 = ITU-N translation type
3. The domain (ANSI or ITU) of the point code and translation type must be the same, unless the ANSI-ITU-China SCCP Conversion feature is enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, a GTT may contain an ANSI point code and an ITU translation type, or an ITU point code and an ANSI translation type. Whether the ANSI-ITU-China SCCP Conversion feature is enabled or not, the translation type parameters `typei`, `typen`, or `typen24` can be specified with either the `pci`, `pcn`, or `pcn24` parameters.

RI = GT XLAT= DPCNGT	RI = GT XLAT= DCPSSN	RI = GT XLAT= DPC	RI = SSN XLAT= DCPSSN	RI = SSN XLAT= DPC

4. If the VGTT feature is on, shown by the `VGTT = on` entry in the `rtrv-feat` output, and the translation type contains 10 different length GTAs, the length of the GTA must match any existing GTA assigned to the translation type .
5. If the translation type contains less than 10 different length GTAs, the length of the GTA can be from 1 to 21 digits.
6. If the VGTT feature is off, the length of the GTA must contain the number of digits defined by the `NDGT` field of the `rtrv-tt` output.
7. The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, `nsds` and `rmgtt` parameters can be specified only if the Advanced GT Modification feature is enabled. The `ngti` parameter can be specified only if the Advanced GT Modification feature is enabled and if the ANSI-ITU-China SCCP Conversion feature is enabled. The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, `nsds`, and `ngti` parameters cannot be specified with the `rmgtt` parameter.
8. The `cggtmod` parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled.
9. The `ngti=2` parameter can be specified with an ANSI point code or an ITU point code, and not with the `nnp` and `nnai` parameters.
10. The `ngti=4` parameter can be specified only with an ITU point code, and the `nnp` and `nnai` parameters must also be specified for the GTA.
11. The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified in the `ent-gtt` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters.
12. If the point code is the EAGLE 5 ISS's point code, then the `xlat` parameter value must be `dpcssn` and the `ri` parameter value must be `ssn`.
13. The `ngt` parameter can be specified only if the ANSI-ITU-China SCCP Conversion feature is enabled.
14. The `mrnset` parameter can be specified only, and must be specified, if the Flexible GTTLoad Sharing feature is enabled.
15. If the `pc/pca/pci/pcn/pcn24` parameter value is not shown in the `rtrv-map` output, the `force=yes` parameter must be specified with the `ent-gtt` command.
16. The `mapset` parameter can be specified only, and must be specified, if the Flexible GTTLoad Sharing feature is enabled.
17. Hexadecimal digits (0-9, a-f, A-F) can be specified for the `gta`, `egta`, `npds`, or `nsds` parameters only if the Hex Digit support for GTT feature is enabled.
18. The `loopset` parameter can be specified only if the SCCP Loop Detection feature is enabled.
19. Either the `type` parameter or the `ttn` parameter must be specified.
20. If the `type` parameter is not specified, the translation type name must be assigned to a translation type in the database. This can be verified with the `rtrv-tt` command.
21. If the `type` and `ttn` parameters are specified, the specified translation type must be in the database and the specified translation type name must be assigned to the translation type.
22. The end global title address (`egta`) must be greater than or equal to the start global title address (`gta`) and its length must be equal to the start global title address.

RI = GT XLAT= DPCNGT	RI = GT XLAT= DCPSSN	RI = GT XLAT= DPC	RI = SSN XLAT= DCPSSN	RI = SSN XLAT= DPC

23. Specifying the `mrnset=none` parameter removes the MRN set ID assignment from the global title translation.

24. Specifying the `mapset=none` parameter removes the MAP set ID assignment from the global title translation.

25. The range of global title addresses assigned to a global title translation can be extended, reduced, or split to create a new range of global title addresses. See the *`split` parameter description* on page 526 section in this procedure for information on changing the range of global title addresses.

26. Unless a default value is shown in this table, the value of any optional parameter that is not specified in this procedure is not changed.

21. Verify the changes using the `rtrv-gtt` command specifying the translation type, translation type name, or both used in *Step 20* on page 548. If the `num` parameter is specified with the `rtrv-gtt` command, and the value of the `num` parameter is greater than 1000, the `force=yes` parameter must be specified with the `rtrv-gtt` command.

For this example, enter this command.

```
rtrv-gtt:typea=15:gta=800
```

This is an example of the possible output.

```
rlghncxa03w 08-10-25 09:45:31 GMT  EAGLE5 39.2.0
TYPEA  TTN        NDGT
15     scp3       3

GTT TABLE IS      (27000 of 269999)      10 % FULL

START GTA             END GTA               XLAT   RI     PC
800                   850                   DPCSSN GT     003-003-003
     MRNSET=114   SSN=254 NGT=---
     LOOPSET = none

Command Retrieved 1 Entries
```

```
rtrv-gtt:typea=15:gta=919
```

This is an example of the possible output.

```
rlghncxa03w 08-10-25 09:43:31 GMT  EAGLE5 39.2.0
TYPEA  TTN        NDGT
15     scp3       3

GTT TABLE IS      (27000 of 269999)      10 % FULL

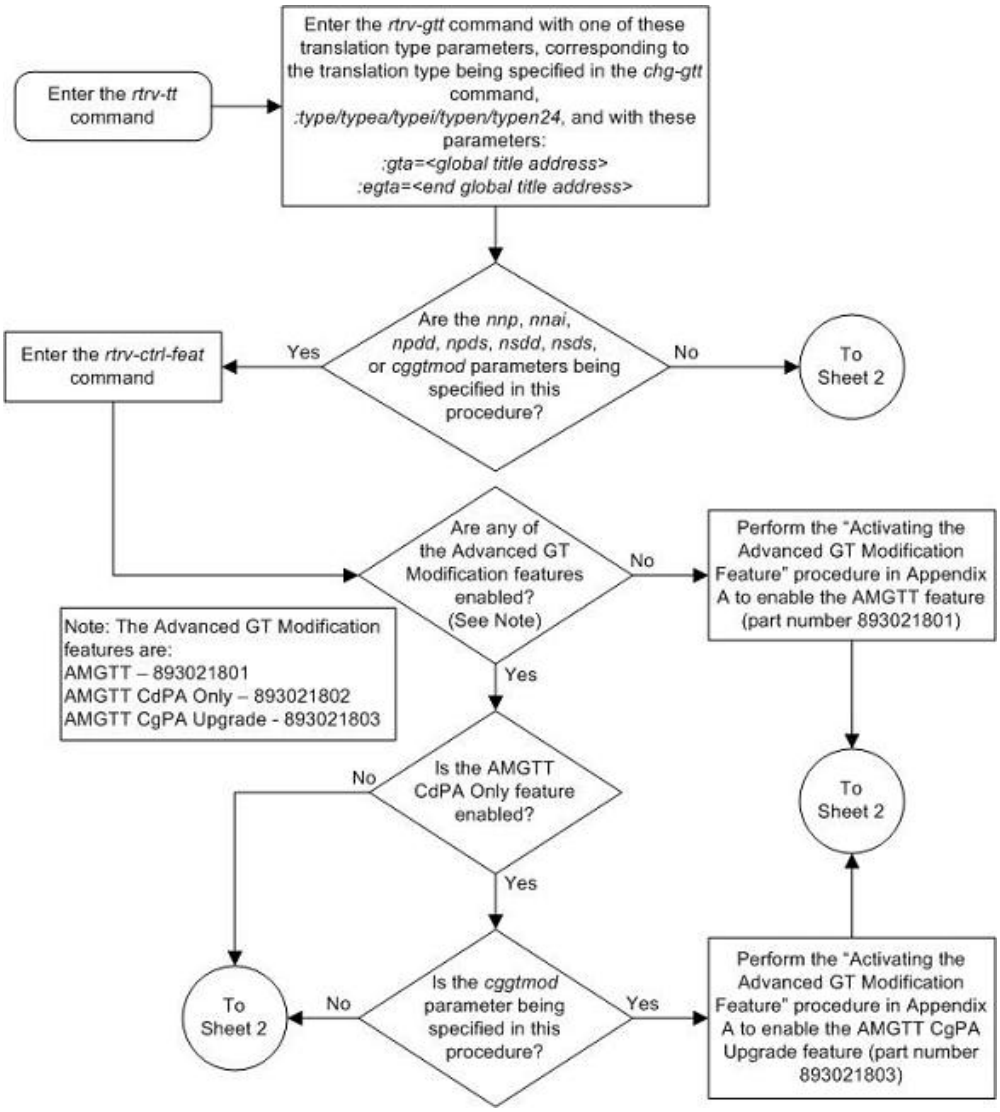
START GTA             END GTA               XLAT   RI     PC
919                   919                   DPCSSN SSN    002-002-003
     MAPSET=1     SSN=254 NGT=---
     LOOPSET = rtp2

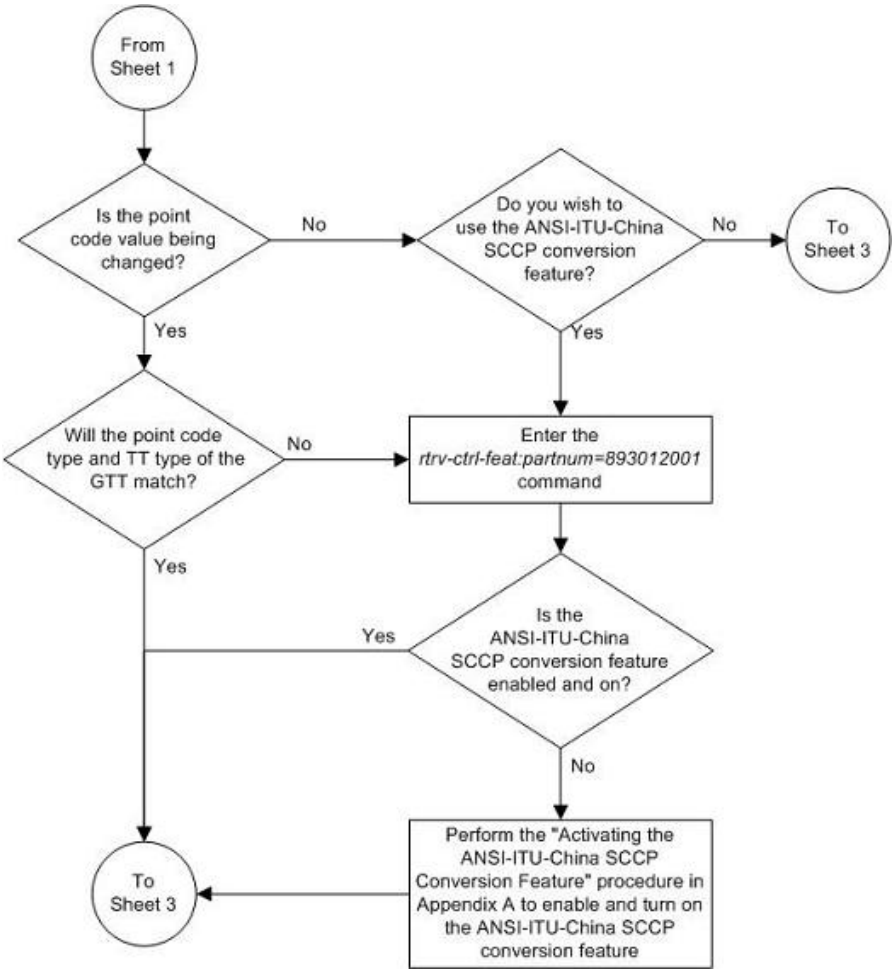
Command Retrieved 1 Entries
```

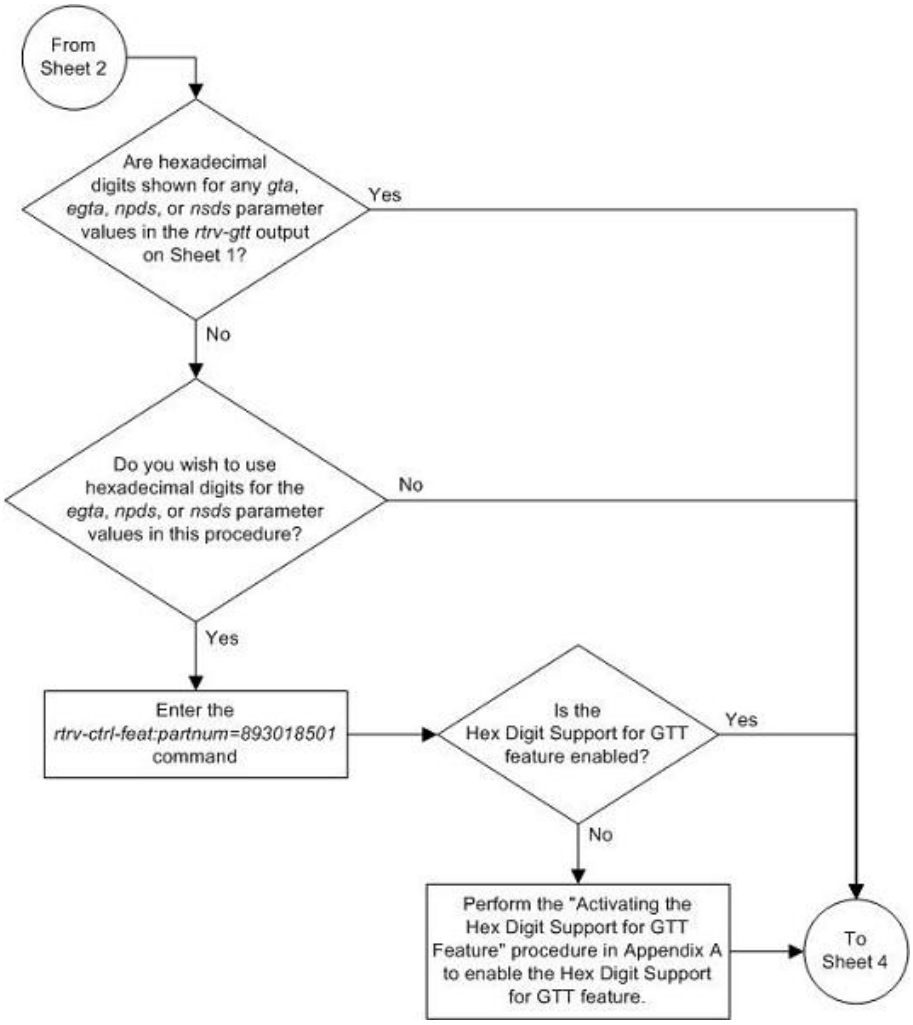
22. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

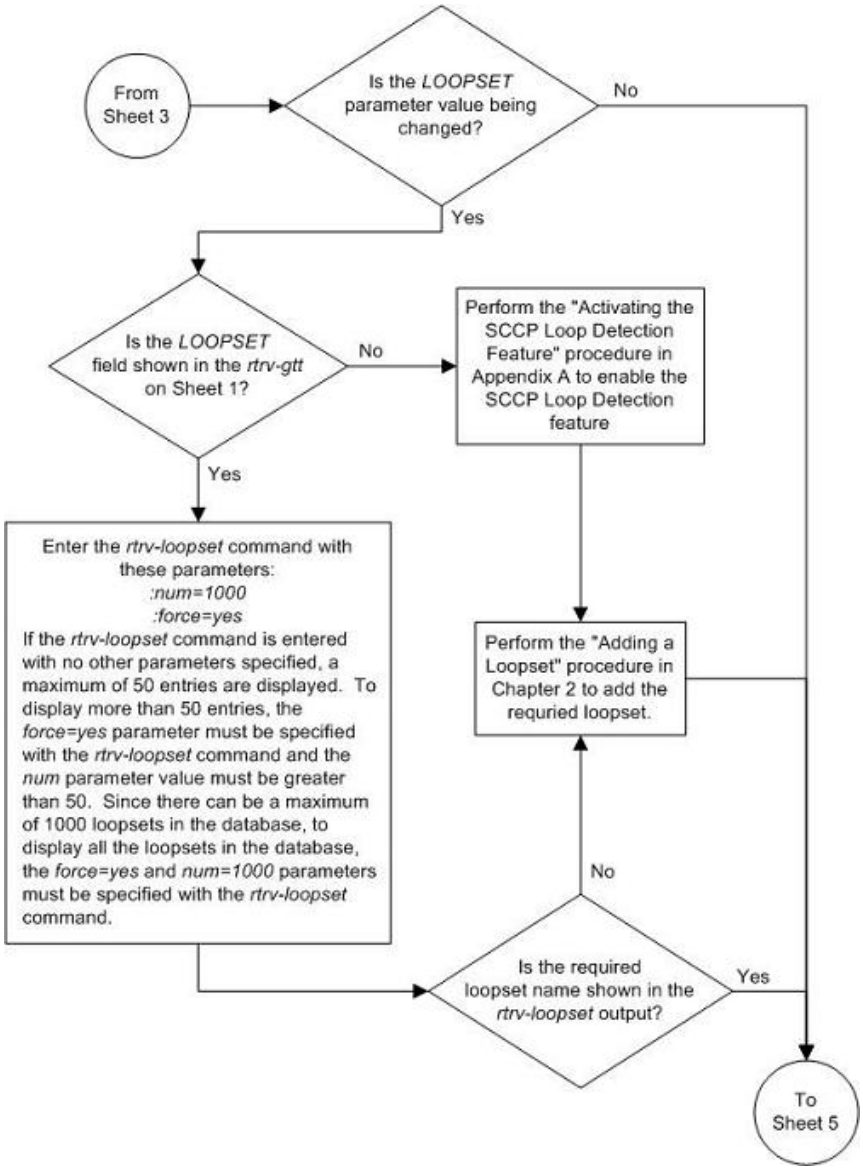
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

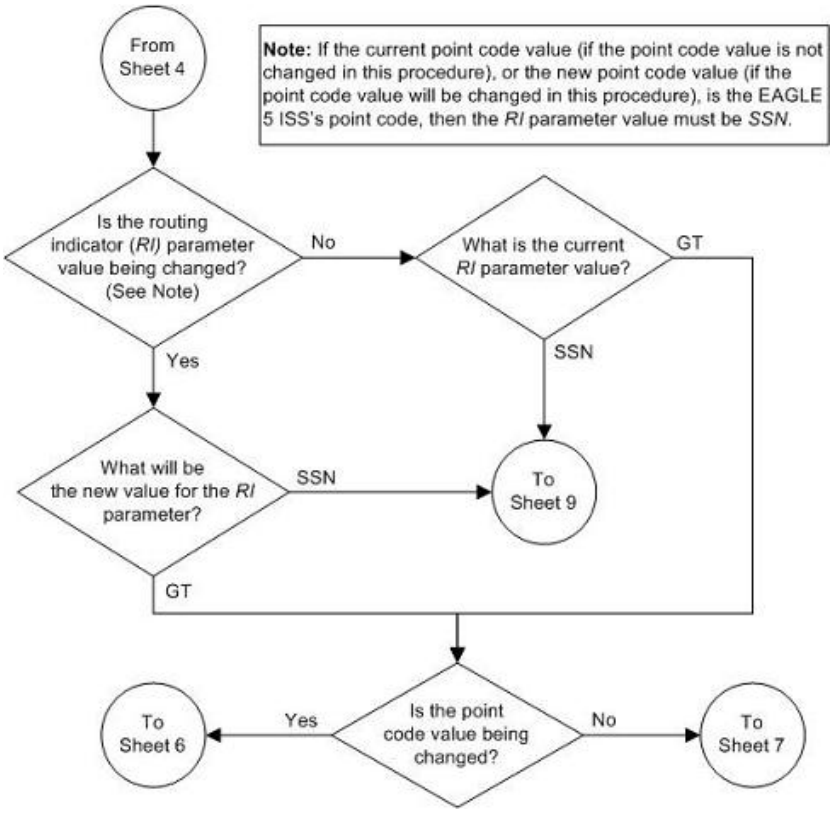
Figure 45: Changing a Global Title Translation

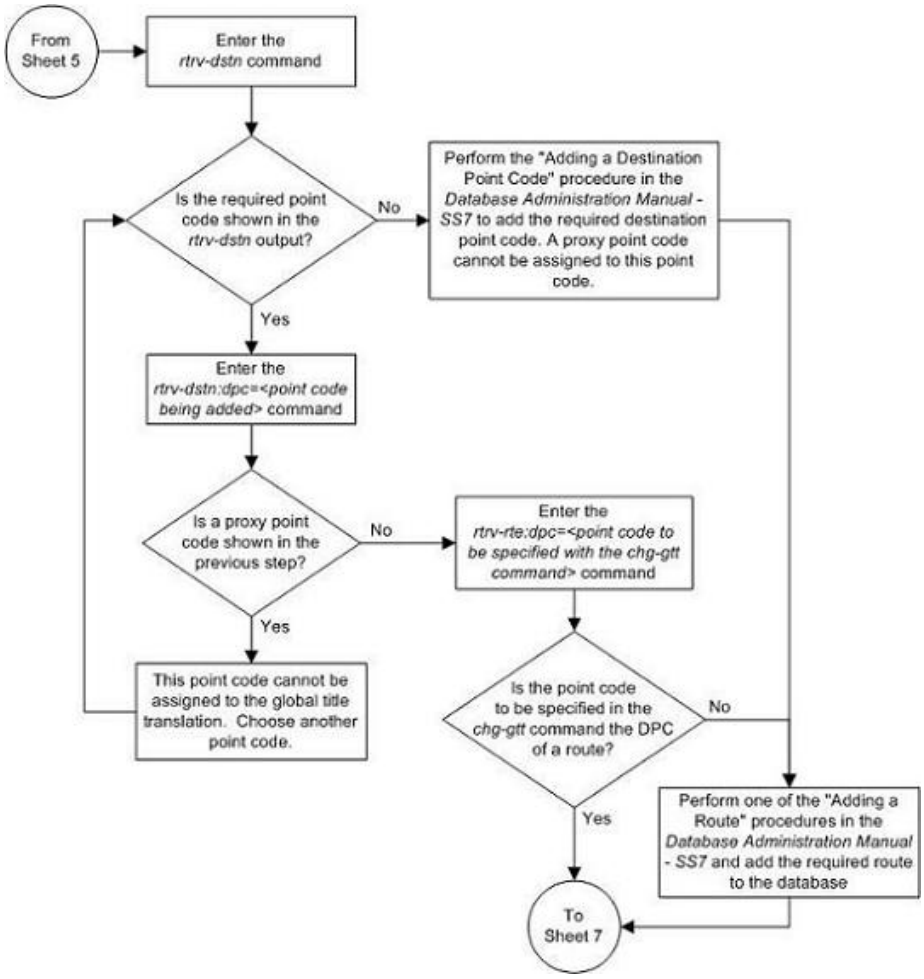


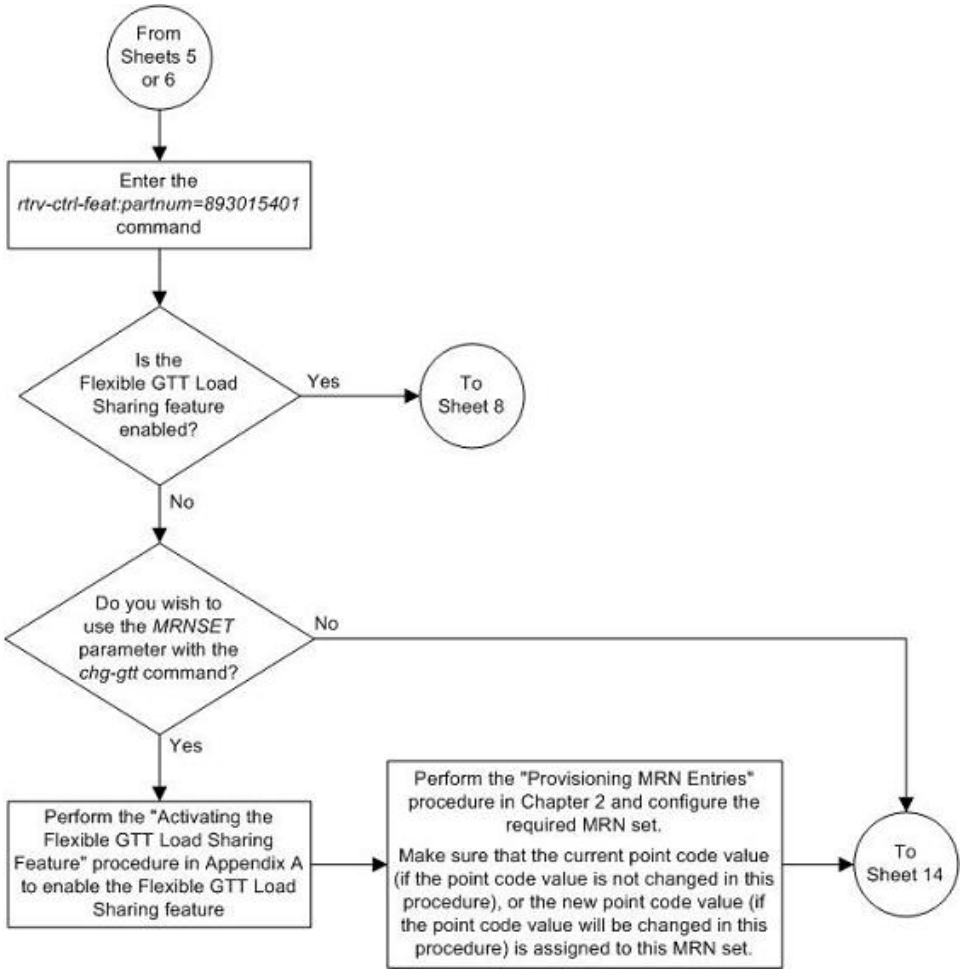

From Sheet 1
Is the point code value being changed?
No
Do you wish to use the ANSI-ITU-China SCCP conversion feature?
No
To Sheet 3
Yes
Yes
Will the point code type and TT type of the GTT match?
No
Enter the rtrv-ctrl-feat:partnum=893012001 command
Yes
Yes
Is the ANSI-ITU-China SCCP conversion feature enabled and on?
No
Perform the "Activating the ANSI-ITU-China SCCP Conversion Feature" procedure in Appendix A to enable and turn on the ANSI-ITU-China SCCP conversion feature
To Sheet 3

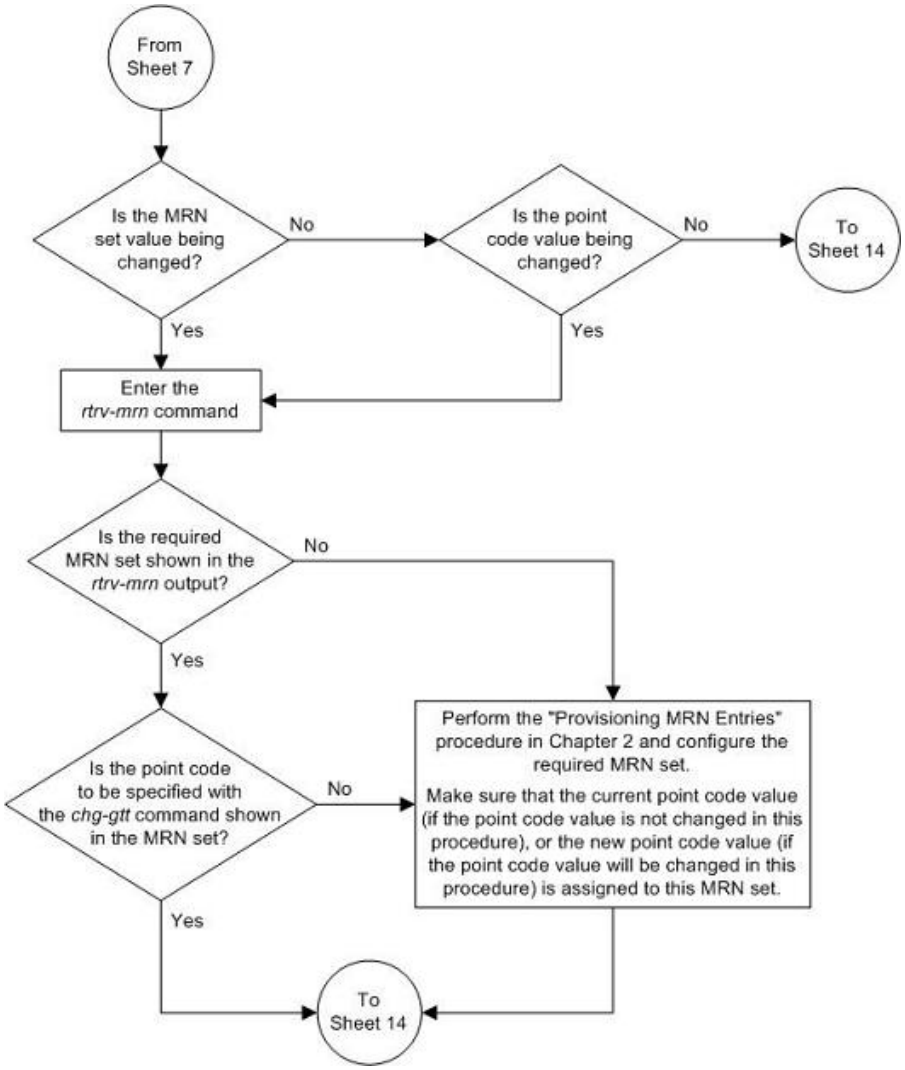

From Sheet 2
Are hexadecimal digits shown for any gta, egta, npds, or nsds parameter values in the rtrv-gtt output on Sheet 1?
Yes
No
Do you wish to use hexadecimal digits for the egta, npds, or nsds parameter values in this procedure?
No
Yes
Enter the rtrv-ctrl-feat:partnum=893018501 command
Is the Hex Digit Support for GTT feature enabled?
Yes
No
Perform the "Activating the Hex Digit Support for GTT Feature" procedure in Appendix A to enable the Hex Digit Support for GTT feature.
To Sheet 4

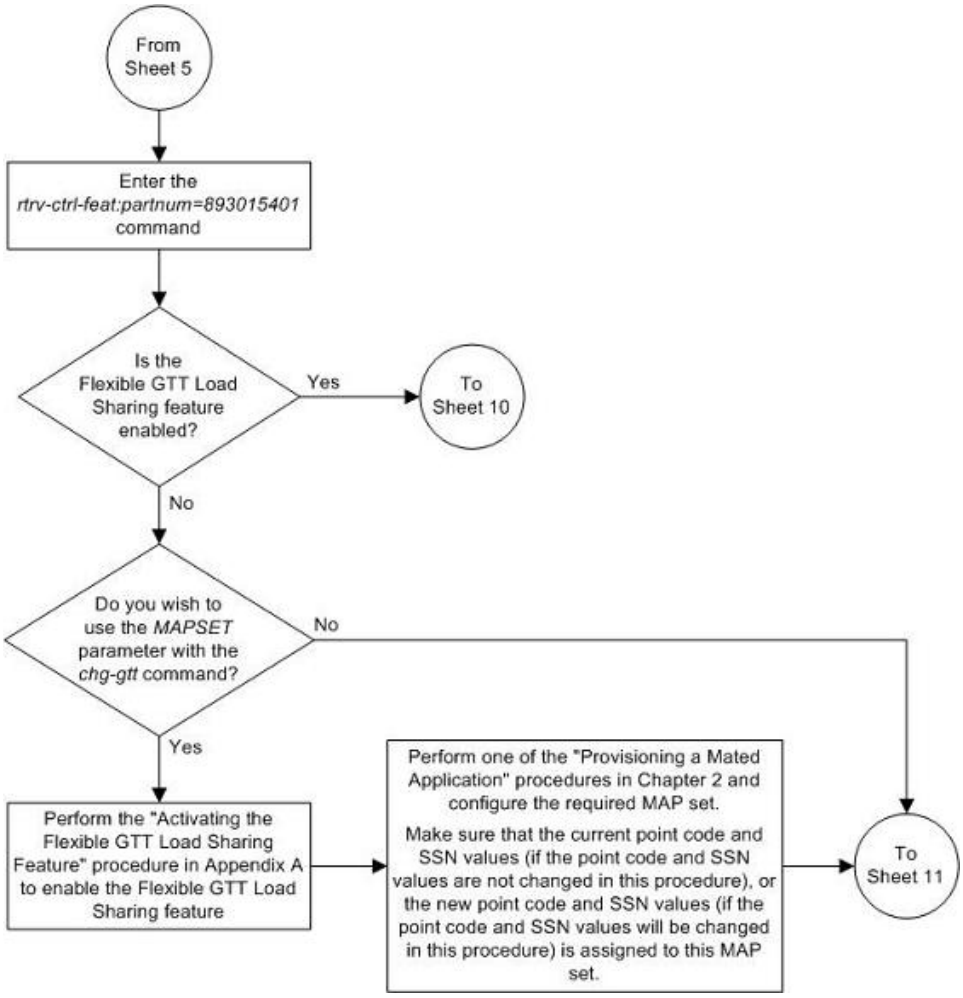

From Sheet 3
Is the LOOPSET parameter value being changed?
No
Yes
Is the LOOPSET field shown in the rtrv-gtt on Sheet 1?
No
Perform the "Activating the SCCP Loop Detection Feature" procedure in Appendix A to enable the SCCP Loop Detection feature
Yes
Enter the rtrv-loopset command with these parameters:
:num=1000
:force=yes
If the rtrv-loopset command is entered with no other parameters specified, a maximum of 50 entries are displayed. To display more than 50 entries, the force=yes parameter must be specified with the rtrv-loopset command and the num parameter value must be greater than 50. Since there can be a maximum of 1000 loopsets in the database, to display all the loopsets in the database, the force=yes and num=1000 parameters must be specified with the rtrv-loopset command.
Perform the "Adding a Loopset" procedure in Chapter 2 to add the requried loopset.
No
Is the required loopset name shown in the rtrv-loopset output?
Yes
To Sheet 5

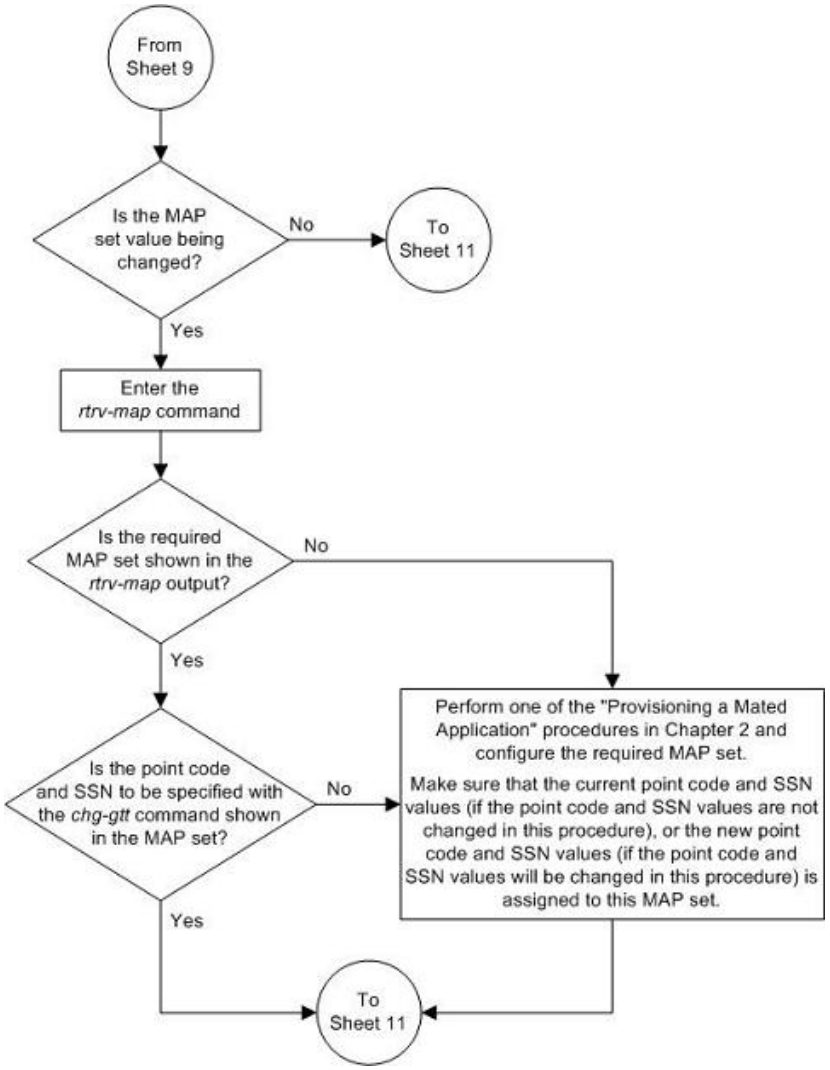

From Sheet 4
Note: If the current point code value (if the point code value is not changed in this procedure), or the new point code value (if the point code value will be changed in this procedure), is the EAGLE 5 ISS's point code, then the RI parameter value must be SSN.
Is the routing indicator (RI) parameter value being changed? (See Note)
No
What is the current RI parameter value?
GT
SSN
Yes
What will be the new value for the RI parameter?
SSN
To Sheet 9
GT
To Sheet 6
Yes
Is the point code value being changed?
No
To Sheet 7

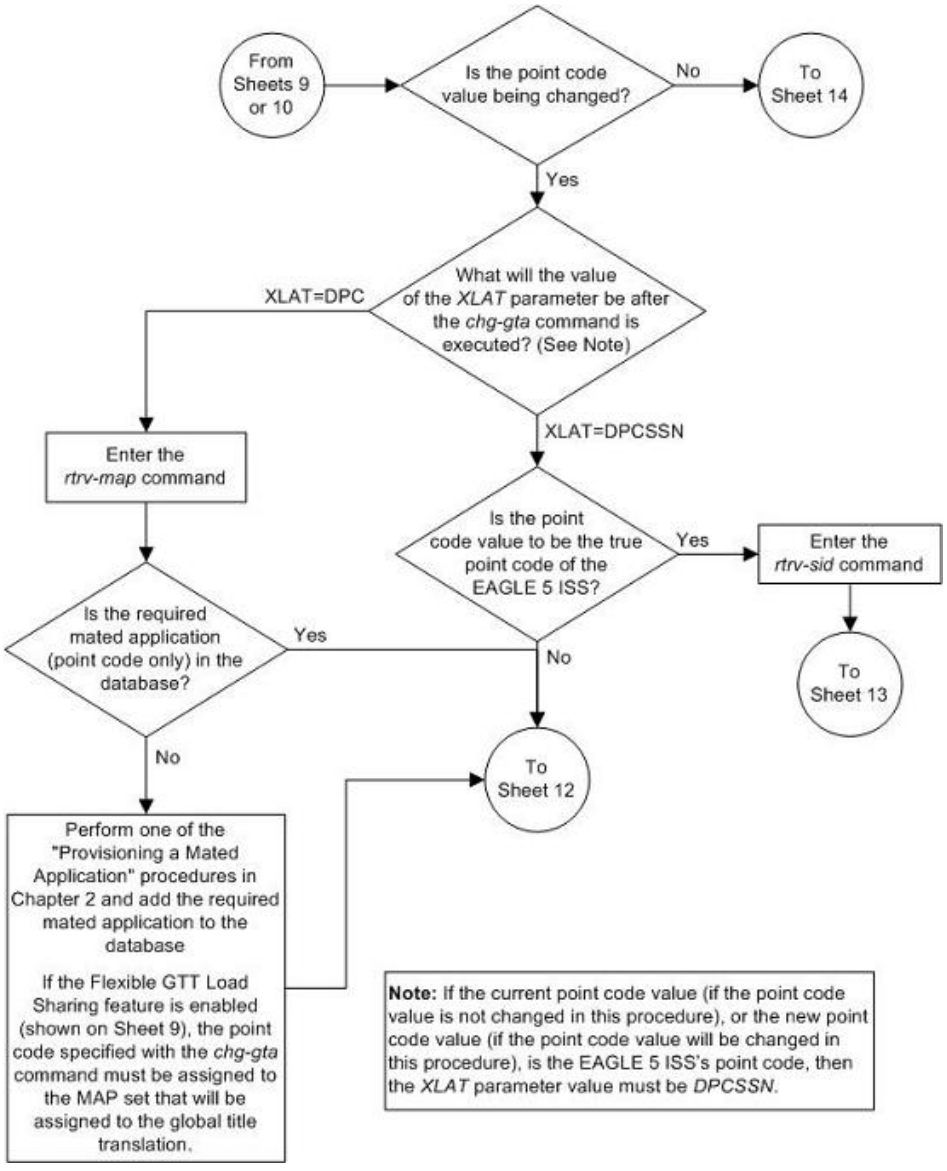

From Sheet 5
Enter the rtrv-dstn command
Is the required point code shown in the rtrv-dstn output?
No
Perform the "Adding a Destination Point Code" procedure in the Database Administration Manual - SS7 to add the required destination point code. A proxy point code cannot be assigned to this point code.
Yes
Enter the rtrv-dstn:dpc=<point code being added> command
Is a proxy point code shown in the previous step?
No
Enter the rtrv-rte:dpc=<point code to be specified with the chg-gtt command> command
Yes
This point code cannot be assigned to the global title translation. Choose another point code.
Is the point code to be specified in the chg-gtt command the DPC of a route?
No
Yes
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 and add the required route to the database
To Sheet 7

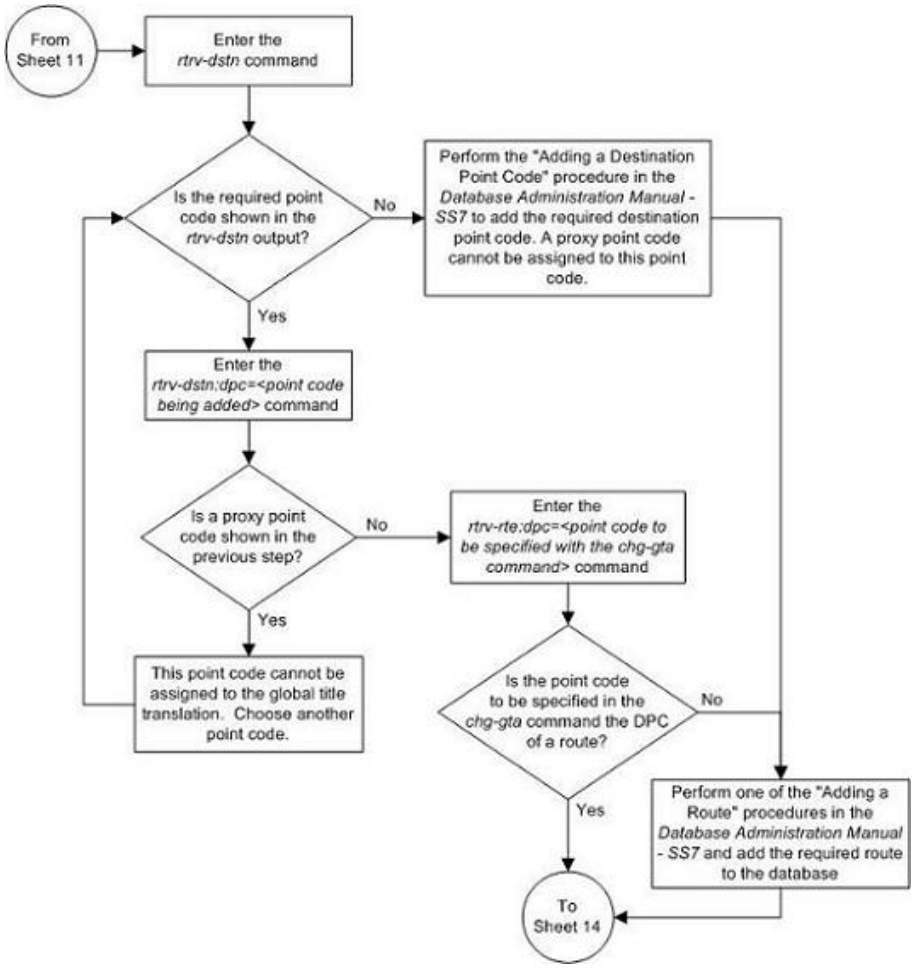

From Sheets 5 or 6
Enter the rtrv-ctrl-feat:partnum=893015401 command
Is the Flexible GTT Load Sharing feature enabled?
Yes
To Sheet 8
No
Do you wish to use the MRNSET parameter with the chg-gtt command?
No
Yes
Perform the "Activating the Flexible GTT Load Sharing Feature" procedure in Appendix A to enable the Flexible GTT Load Sharing feature
Perform the "Provisioning MRN Entries" procedure in Chapter 2 and configure the required MRN set.
Make sure that the current point code value (if the point code value is not changed in this procedure), or the new point code value (if the point code value will be changed in this procedure) is assigned to this MRN set.
To Sheet 14

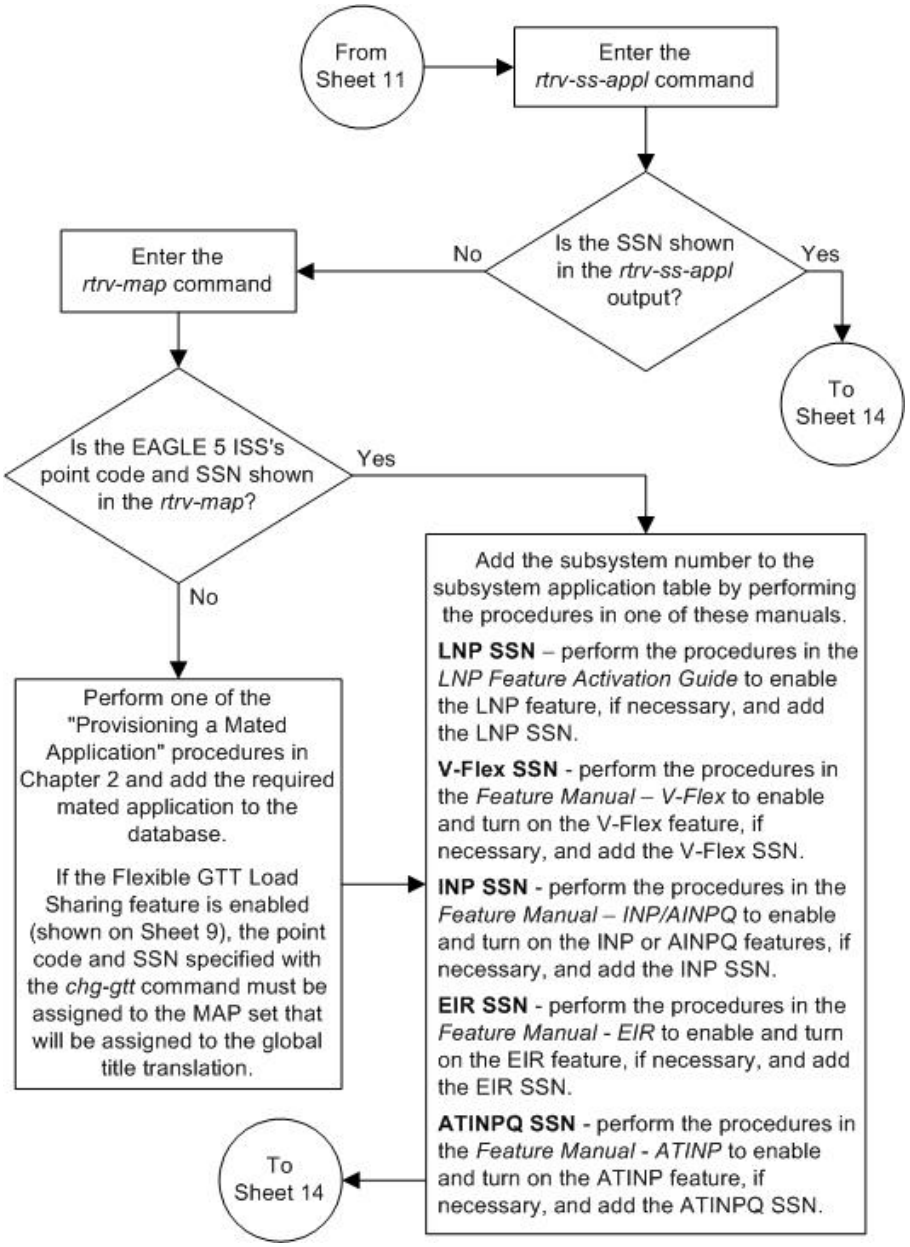

From Sheet 7
Is the MRN set value being changed?
No
Is the point code value being changed?
No
To Sheet 14
Yes
Yes
Enter the rtrv-mrn command
Is the required MRN set shown in the rtrv-mrn output?
No
Yes
Perform the "Provisioning MRN Entries" procedure in Chapter 2 and configure the required MRN set.
Make sure that the current point code value (if the point code value is not changed in this procedure), or the new point code value (if the point code value will be changed in this procedure) is assigned to this MRN set.
Is the point code to be specified with the chg-gtt command shown in the MRN set?
No
Yes
To Sheet 14

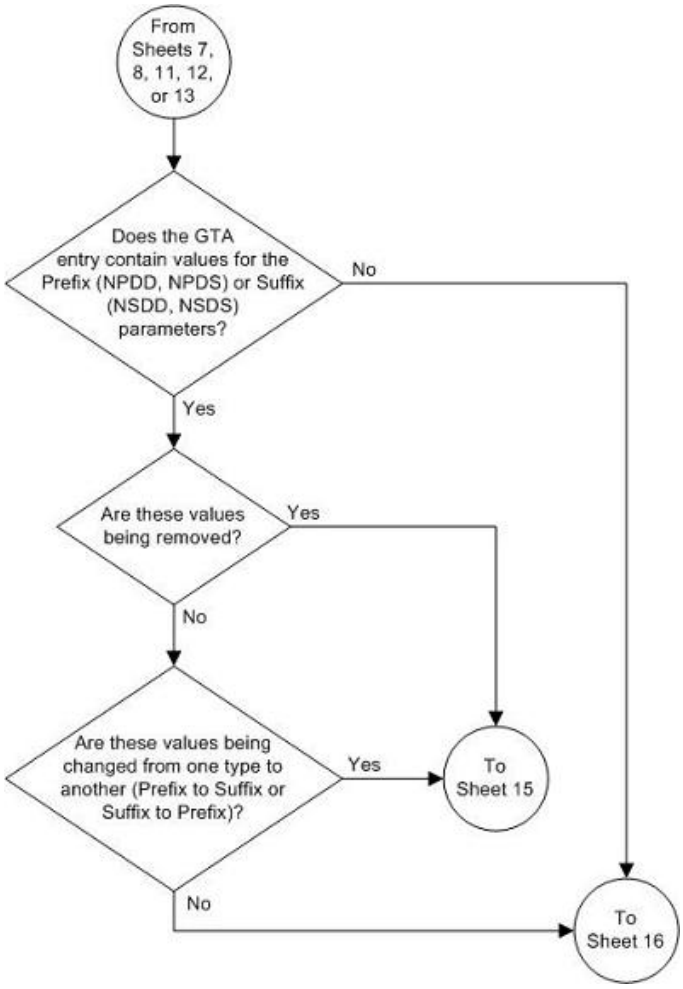

From Sheet 5
Enter the rtrv-ctrl-feat:partnum=893015401 command
Is the Flexible GTT Load Sharing feature enabled?
Yes
To Sheet 10
No
Do you wish to use the MAPSET parameter with the chg-gtt command?
No
Yes
Perform the "Activating the Flexible GTT Load Sharing Feature" procedure in Appendix A to enable the Flexible GTT Load Sharing feature
Perform one of the "Provisioning a Mated Application" procedures in Chapter 2 and configure the required MAP set.
Make sure that the current point code and SSN values (if the point code and SSN values are not changed in this procedure), or the new point code and SSN values (if the point code and SSN values will be changed in this procedure) is assigned to this MAP set.
To Sheet 11

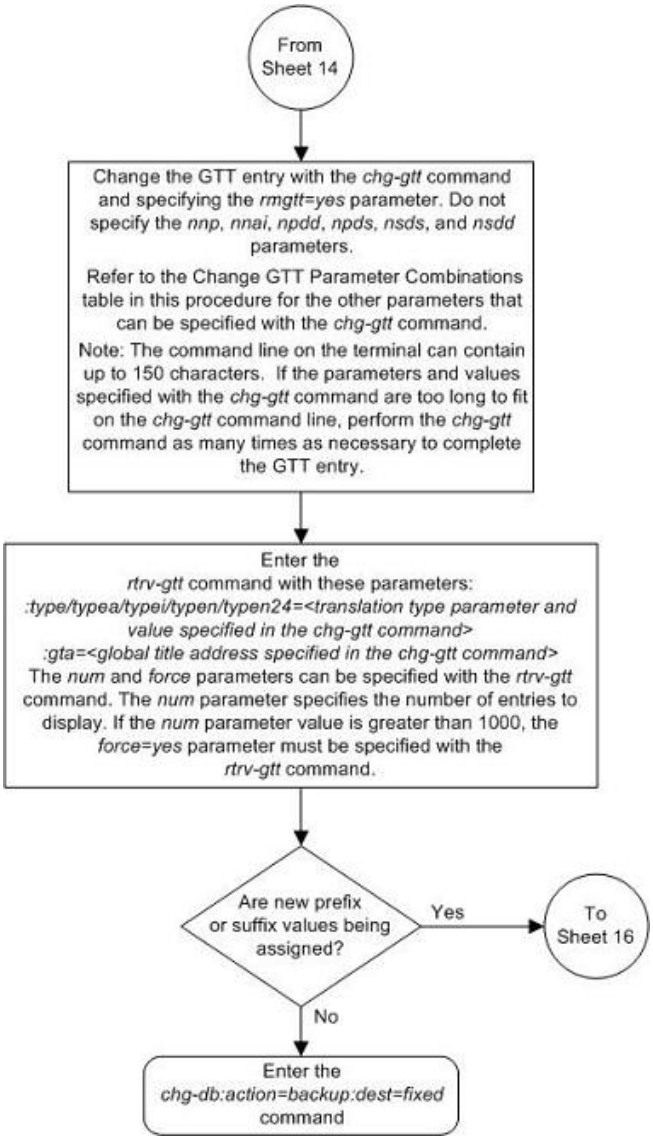

From Sheet 9
Is the MAP set value being changed?
No
To Sheet 11
Yes
Enter the *rtrv-map* command
Is the required MAP set shown in the *rtrv-map* output?
No
Yes
Perform one of the "Provisioning a Mated Application" procedures in Chapter 2 and configure the required MAP set.
Make sure that the current point code and SSN values (if the point code and SSN values are not changed in this procedure), or the new point code and SSN values (if the point code and SSN values will be changed in this procedure) is assigned to this MAP set.
Is the point code and SSN to be specified with the *chg-gtt* command shown in the MAP set?
No
Yes
To Sheet 11

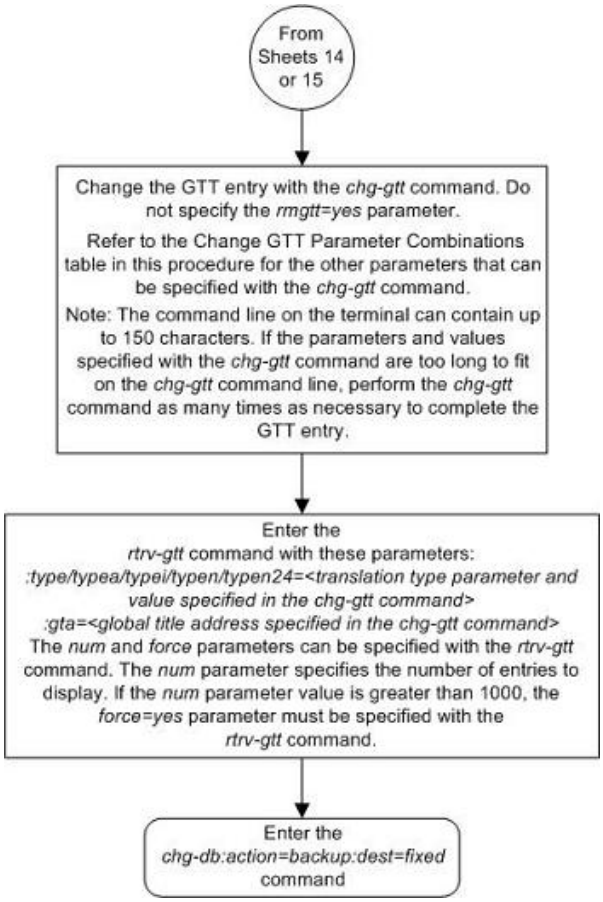

From Sheets 9 or 10
Is the point code value being changed?
No
To Sheet 14
Yes
What will the value of the XLAT parameter be after the chg-gta command is executed? (See Note)
XLAT=DPC
XLAT=DPCSSN
Enter the rtrv-map command
Is the point code value to be the true point code of the EAGLE 5 ISS?
Yes
Enter the rtrv-sid command
To Sheet 13
Is the required mated application (point code only) in the database?
Yes
No
No
To Sheet 12
Perform one of the "Provisioning a Mated Application" procedures in Chapter 2 and add the required mated application to the database
If the Flexible GTT Load Sharing feature is enabled (shown on Sheet 9), the point code specified with the chg-gta command must be assigned to the MAP set that will be assigned to the global title translation.
Note: If the current point code value (if the point code value is not changed in this procedure), or the new point code value (if the point code value will be changed in this procedure), is the EAGLE 5 ISS's point code, then the XLAT parameter value must be DPCSSN.


From Sheet 11
Enter the rtrv-dstn command
Is the required point code shown in the rtrv-dstn output?
No
Perform the "Adding a Destination Point Code" procedure in the Database Administration Manual - SS7 to add the required destination point code. A proxy point code cannot be assigned to this point code.
Yes
Enter the rtrv-dstn:dpc=<point code being added> command
Is a proxy point code shown in the previous step?
No
Enter the rtrv-rte:dpc=<point code to be specified with the chg-gta command> command
Yes
This point code cannot be assigned to the global title translation. Choose another point code.
Is the point code to be specified in the chg-gta command the DPC of a route?
No
Yes
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 and add the required route to the database
To Sheet 14


From Sheet 11
Enter the rtrv-ss-appl command
Is the SSN shown in the rtrv-ss-appl output?
No
Yes
Enter the rtrv-map command
To Sheet 14
Is the EAGLE 5 ISS's point code and SSN shown in the rtrv-map?
Yes
No
Add the subsystem number to the subsystem application table by performing the procedures in one of these manuals.
LNP SSN – perform the procedures in the LNP Feature Activation Guide to enable the LNP feature, if necessary, and add the LNP SSN.
V-Flex SSN - perform the procedures in the Feature Manual – V-Flex to enable and turn on the V-Flex feature, if necessary, and add the V-Flex SSN.
INP SSN - perform the procedures in the Feature Manual – INP/AINPQ to enable and turn on the INP or AINPQ features, if necessary, and add the INP SSN.
EIR SSN - perform the procedures in the Feature Manual - EIR to enable and turn on the EIR feature, if necessary, and add the EIR SSN.
ATINPQ SSN - perform the procedures in the Feature Manual - ATINP to enable and turn on the ATINP feature, if necessary, and add the ATINPQ SSN.
Perform one of the "Provisioning a Mated Application" procedures in Chapter 2 and add the required mated application to the database.
If the Flexible GTT Load Sharing feature is enabled (shown on Sheet 9), the point code and SSN specified with the chg-gtt command must be assigned to the MAP set that will be assigned to the global title translation.
To Sheet 14


From Sheets 7, 8, 11, 12, or 13
Does the GTA entry contain values for the Prefix (NPDD, NPDS) or Suffix (NSDD, NSDS) parameters?
No
Yes
Are these values being removed?
Yes
No
Are these values being changed from one type to another (Prefix to Suffix or Suffix to Prefix)?
Yes
To Sheet 15
No
To Sheet 16


From Sheet 14
Change the GTT entry with the chg-gtt command and specifying the rmgtt=yes parameter. Do not specify the nnp, nnai, npdd, npds, nsds, and nsdd parameters.
Refer to the Change GTT Parameter Combinations table in this procedure for the other parameters that can be specified with the chg-gtt command.
Note: The command line on the terminal can contain up to 150 characters. If the parameters and values specified with the chg-gtt command are too long to fit on the chg-gtt command line, perform the chg-gtt command as many times as necessary to complete the GTT entry.
Enter the rtrv-gtt command with these parameters:
:type/typea/typei/typen/typen24=<translation type parameter and value specified in the chg-gtt command>
:gta=<global title address specified in the chg-gtt command>
The num and force parameters can be specified with the rtrv-gtt command. The num parameter specifies the number of entries to display. If the num parameter value is greater than 1000, the force=yes parameter must be specified with the rtrv-gtt command.
Are new prefix or suffix values being assigned?
Yes
To Sheet 16
No
Enter the chg-db:action=backup:dest=fixed command


From Sheets 14 or 15
Change the GTT entry with the chg-gtt command. Do not specify the rmgtt=yes parameter.
Refer to the Change GTT Parameter Combinations table in this procedure for the other parameters that can be specified with the chg-gtt command.
Note: The command line on the terminal can contain up to 150 characters. If the parameters and values specified with the chg-gtt command are too long to fit on the chg-gtt command line, perform the chg-gtt command as many times as necessary to complete the GTT entry.
Enter the rtrv-gtt command with these parameters:
:type/typea/typei/typen/typen24=<translation type parameter and value specified in the chg-gtt command>
:gta=<global title address specified in the chg-gtt command>
The num and force parameters can be specified with the rtrv-gtt command. The num parameter specifies the number of entries to display. If the num parameter value is greater than 1000, the force=yes parameter must be specified with the rtrv-gtt command.
Enter the chg-db:action=backup:dest=fixed command

Chapter 4

Enhanced Global Title Translation (EGTT) Configuration

Topics:

- *Introduction Page 570*
- *Adding a GTT Set Page 570*
- *Removing a GTT Set Page 579*
- *Changing a GTT Set Page 585*
- *Adding a GTT Selector Page 593*
- *Removing a GTT Selector Page 602*
- *Changing a GTT Selector Page 607*
- *Adding Global Title Address Information Page 617*
- *Removing Global Title Address Information Page 672*
- *Changing Global Title Address Information Page 681*
- *Changing the Default GTT Mode Options Page 743*

Chapter 4, Enhanced Global Title Translation (EGTT) Configuration, contains the procedures specific to configure the enhanced global title translation feature.

Introduction

This chapter describes the procedures needed to add, remove, or change enhanced global title translation (EGTT) data in the database.

The items configured in this section are:

- GTT selectors
- GTT sets
- Global title addresses.

The following items must also be configured for the Enhanced Global Title Translation feature. The procedures to configure these items are located in *Enhanced Global Title Translation (EGTT) Configuration* on page 569.

- Service modules
- Translation type mapping
- Concerned signaling point codes
- Mate applications
- Mated relay node groups
- GT Conversion Table Entries for the ANSI-ITU-China SCCP Conversion feature.

The procedures shown in this chapter use a variety of commands. For more information on these commands, refer to the *Commands Manual*.



CAUTION: The Enhanced Global Title Translation (EGTT) feature overrides the Global Title Translation (GTT) feature when the EGTT feature is turned on with the `chg-feat:egtt=on` command. The override causes an immediate and automatic update of the GTT database and the rejection of GTT feature commands when entered. Only turn on the EGTT feature if you intend to configure the EAGLE 5 ISS for enhanced global title translation. Once a feature is turned on with the `chg-feat` command, it cannot be turned off.

Notes:

1. Before turning the Enhanced Global Title Translation (EGTT) feature on with the `chg-feat:egtt=on` command, make sure you have purchased this feature. If you are not sure whether you have purchased the EGTT feature, contact your Tekelec Sales Representative or Account Representative.
2. The GTT feature has to be turned on (`chg-feat:gtt=on` command) but not configured before the Enhanced Global Title Translation (EGTT) feature is enabled. If the GTT feature has been configured previously, enabling the EGTT feature will upgrade the GTT database. For more information on the upgrade process, refer to the *Upgrading from Global Title Translation (GTT) to Enhanced Global Title Translation (EGTT)* on page 55 section.

Adding a GTT Set

Use this procedure to add a global title translation (GTT) set to the database using the `ent-gttset` command. This command also creates a tree to which global title addresses (GTAs) can be added.

Subsequent global title selector (gttsel) or global title address (gta) commands may then be entered.

The ent-gttset command uses these parameters:

:gttsn – The GTT set name.

:netdom – The network domain of the global title translation set, either ANSI, ITU, or CROSS.

The network domain CROSS can be specified only if the ANSI-ITU-China SCCP Conversion feature, part number 893012001, is enabled. The CROSS GTT set can be assigned to either an ANSI or ITU GTT selector.

Note: The ITU domain does not distinguish between ITU-N (either ITU-N or ITU-N24) and ITU-I since the Enhanced Global Title Translation (EGTT) database does not yet distinguish ITU-National and ITU-International translations.

:ndgt – The number of digits contained in the global title translation.

:settype – The type of GTT set being added in this procedure, either CDGTA, CGGTA, CGPC, CGSSN, or OPC. This parameter can be specified only if the Origin-Based SCCP Routing feature is enabled. If the SETTYPE column is shown in the rtrv-gttset output, the Origin-Based SCCP Routing feature is enabled. The Origin-Based SCCP Routing feature is enabled by performing the procedure *Activating the Origin-Based SCCP Routing Feature* on page 797.

The Global Title Translation (GTT) and the Enhanced Global Title Translation (EGTT) features must be on before using this command. Use the rtrv-feat command to verify the settings. If the features are off, go to the procedure *Adding a Service Module* on page 76 to turn these features on and to make sure that the correct hardware is installed to support these features.

Note: Once the Global Title Translation (GTT) feature and the Enhanced Global Title Translation (EGTT) feature are turned on with the chg-feat command, they cannot be turned off.

The GTT feature and the EGTT feature must be purchased before you turn these features on. If you are not sure whether you have purchased the GTT feature and/or the EGTT feature, contact your Tekelec Sales Representative or Account Representative.

The GTT set name (gttsn) may not already exist and must be specified with the domain. The GTT set table may not have more than 2000 entries.

If the Variable-length Global Title Translation Feature (VGTT) is on, shown by the entry VGTT = on in the rtrv-feat command output, the ndgt parameter cannot be specified with the ent-gttset command. The length of the global title address is determined when the global title address is entered with the ent-gta command. For more information on the VGTT feature and the length of global title addresses, refer to the section *Variable-length Global Title Translation Feature* on page 20 and the procedure *Adding Global Title Address Information* on page 617.

If the Variable-length Global Title Translation Feature (VGTT) is on, the NDGT field of the rtrv-gttset command shows the different lengths of global title addresses assigned to a GTT set name, as shown in the following example.

```
rlghncxa03w 07-05-07 00:30:31 GMT EAGLE5 37.0.0
GTTSN     NETDOM  NDGT
lidb      ansi    3, 7, 10
t800      ansi    6
si000     itu     15
```

```
imsi      itu     15
abcd1234  itu     12
```

In this example of the `rtrv-gttset` command output, the GTT set `lidb` contains three different length global title addresses; global title addresses containing three digits, seven digits, and 10 digits.

If the Variable-length Global Title Translation Feature (VGTT) feature is off and you wish to turn it on, enter the `chg-feat:vgtt=on` command.

Note: Once the Variable-length Global Title Translation (VGTT) feature is turned on with the `chg-feat` command, it cannot be turned off.

The VGTT feature must be purchased before turning it on. If you are not sure whether you have purchased the VGTT feature, contact your Tekelec Sales Representative or Account Representative.

If the Origin-Based SCCP Routing feature is enabled, VGTT functionality is supported only for CDPA GTT sets (`settype=cdgta`) and CGPA GTT sets (`settype=cggta`).

Table 34: GTT Set Parameter Combinations - The Origin-Based SCCP Routing Feature is Not Enabled

SCCP Conversion Not Enabled VGTT=off	SCCP Conversion Not Enabled VGTT=on	SCCP Conversion Enabled VGTT=off	SCCP Conversion Enabled VGTT=on
Mandatory Parameters			
GTTSN	GTTSN	GTTSN	GTTSN
NETDOM = ANSI, ITU	NETDOM = ANSI, ITU	NETDOM = CROSS, ANSI, ITU	NETDOM = CROSS, ANSI, ITU
Optional Parameter			
NDGT		NDGT	

Notes:

SCCP Conversion refers to the ANSI-ITU-China SCCP Conversion feature - part number 893012001

VGTT refers to the Variable Global Title Translation feature

Parameter Values:

GTTSN = the GTT Set Name consisting of 1 to 9 alpha-numeric characters - the first character must be a letter, the remaining characters must be letters or numbers. The gttsn value cannot be the word none.

NDGT = the number of digits in the global title address - 1 to 21. The default value is 6.

Table 35: GTT Set Parameter Combinations - The Origin-Based SCCP Routing Feature is Enabled

SCCP Conversion Not Enabled VGTT=off	SCCP Conversion Not Enabled VGTT=on (See Note 3)	SCCP Conversion Enabled VGTT=off	SCCP Conversion Enabled VGTT=on (See Note 3)
Mandatory Parameters			
GTTSN	GTTSN	GTTSN	GTTSN
NETDOM = ANSI, ITU	NETDOM = ANSI, ITU	NETDOM = CROSS, ANSI, ITU (See Note 2)	NETDOM = CROSS, ANSI, ITU (See Note 2)
SETTYPE	SETTYPE	SETTYPE	SETTYPE
Optional Parameter			
NDGT (See Note 1)		NDGT (See Note 1)	

Notes:

SCCP Conversion refers to the ANSI-ITU-China SCCP Conversion feature - part number 893012001

VGTT refers to the Variable Global Title Translation feature

Parameter Values:

GTTSN = the GTT Set Name consisting of 1 to 9 alpha-numeric characters - the first character must be a letter, the remaining characters must be letters or numbers. The gttsn value cannot be the word none.

NDGT = the number of digits in the global title address - 1 to 21.

SETTYPE = the GTA set type - CDGTA, CGGTA, CGPC, CGSSN, OPC

1. The NDGT parameter can be specified only if the SETTYPE parameter value is either CDGTA or CGGTA. The default value is 6.

2. The NETDOM=CROSS parameter can be specified only if the SETTYPE parameter is CDGTA, and only if the ANSI-ITU-China SCCP Conversion feature is enabled.

3. VGTT functionality is supported only if the SETTYPE parameter value is either CDGTA or CGGTA.

1. Verify that the Enhanced Global Title Translation (EGTT) feature is on by entering the `rtrv-feat` command. If the EGTT feature is on, the `EGTT` field should be set to `on`. For this example, the `EGTT` feature are on.

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 EGTT feature are off, go to the procedure *Adding a Service Module* on page 76 to turn the EGTT feature on and to make sure that the correct hardware is installed to support the EGTT feature and other GTT features that may be used. Skip step 2 and go to step 3.

2. Display the existing GTT sets in the database using the `rtrv-gttset` command. This is an example of the possible output.

```
rlghncxa03w 07-05-07 00:29:31 GMT EAGLE5 37.0.0
GTTSN     NETDOM  NDGT
imsi      itu     15
abcd1234  itu     12
```

If the Origin-Based SCCP Routing feature is enabled, the `SETTYPE` column is shown in the `rtrv-gttset` output as shown in the following example.

```
rlghncxa03w 07-05-07 00:29:31 GMT EAGLE5 37.0.0

GTTSN      NETDOM  SETTYPE  NDGT
imsi       itu     CDGTA    15
abcd1234   itu     CGGTA    12
```

3. If the `SETTYPE` column is shown in the `rtrv-gttset` output in step 2, skip this step and go to step 4.

   If the `SETTYPE` column is not shown in the `rtrv-gttset` output in step 2, and you do not wish to use `settype` parameter in this procedure, skip this step and go to step 4.

   If the `SETTYPE` column is not shown in the `rtrv-gttset` output in step 2, and you wish to use `settype` parameter in this procedure, perform the procedure *Activating the Origin-Based SCCP Routing Feature* on page 797 to enable the Origin-Based SCCP Routing feature.

4. If the `NETDOM` value `CROSS` is shown in the `rtrv-gttset` output in step 2, skip this step and go to step 5.

   If the `NETDOM` value `CROSS` is not shown in the `rtrv-gttset` output in step 2, and you do not wish to use `NETDOM` value `CROSS` in this procedure, skip this step and go to step 5. If you wish to use `NETDOM` value `CROSS` in this procedure, display the status of the ANSI-ITU-China SCCP Conversion feature by entering this command.

   `rtrv-ctrl-feat:partnum=893012001`

   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
SCCP Conversion           893012001  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 ANSI-ITU-China SCCP Conversion feature is enabled, go to step 5.

If the ANSI-ITU-China SCCP Conversion feature is not enabled, perform the procedure *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 to enable the ANSI-ITU-China SCCP Conversion feature. After the ANSI-ITU-China SCCP Conversion is enabled, go to step 5.

Note: If the Variable-length Global Title Translation (VGTT) feature is on in step 1, or if the VGTT feature is not being used, skip step 5, and go to step 6.

5. Turn the VGTT feature on by entering this command.

   `chg-feat:vgtt=on`

   Note: Once the Variable-length Global Title Translation (VGTT) feature is turned on with the `chg-feat` command, it cannot be turned off.

   The VGTT feature must be purchased before you turn this feature on. If you are not sure whether you have purchased the VGTT feature, contact your Tekelec Sales Representative or Account Representative.

   When the `chg-feat` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 07-05-07 00:28:31 GMT EAGLE5 37.0.0
   CHG-FEAT: MASP A - COMPLTD
   ```

6. Add the GTT sets to the database using the `ent-gttset` command.

   Table 34: GTT Set Parameter Combinations - The Origin-Based SCCP Routing Feature is Not Enabled on page 572 and *Table 35: GTT Set Parameter Combinations - The Origin-Based SCCP Routing Feature is Enabled* on page 573 show the parameter combinations that can be used with the `ent-gttset` command.

   If the Origin-Based SCCP routing feature is not enabled for this example, enter these commands.

   `ent-gttset:gttsn=lidb:ndgt=10:netdom=ansi`

   `ent-gttset:gttsn=t800:netdom=ansi:ndgt=6`

   `ent-gttset:gttsn=si000:netdom=itu:ndgt=15`

   If the Origin-Based SCCP routing feature is enabled for this example, enter these commands.

   `ent-gttset:gttsn=lidb:ndgt=10:netdom=ansi:settype=cdgta`

   `ent-gttset:gttsn=t800:netdom=ansi:ndgt=6:settype=cggta`

   `ent-gttset:gttsn=si000:netdom=itu:ndgt=15:settype=cgpc`

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

   ```
   rlghncxa03w 07-05-07 00:29:31 GMT EAGLE5 37.0.0
   ENT-GTTSEL: MASP A - COMPLTD
   ```

7. Verify the changes using the `rtrv-gttset` command with the `gttsn` parameter and value specified in step 6.

   If the Origin-Based SCCP routing feature is not enabled for this example, enter these commands.

```
rtrv-gttset:gttsn=lidb

rlghncxa03w 07-05-07 00:30:31 GMT EAGLE5 37.0.0

GTTSN     NETDOM  NDGT
lidb      ansi    10
```

```
rtrv-gttset:gttsn=t800

rlghncxa03w 07-05-07 00:30:31 GMT EAGLE5 37.0.0

GTTSN     NETDOM  NDGT
t800      ansi    6
```

```
rtrv-gttset:gttsn=si000

rlghncxa03w 07-05-07 00:30:31 GMT EAGLE5 37.0.0

GTTSN     NETDOM  NDGT
si000     itu     15
```

If the Origin-Based SCCP routing feature is enabled for this example, enter these commands.

```
rtrv-gttset:gttsn=lidb

rlghncxa03w 07-05-07 00:30:31 GMT EAGLE5 37.0.0

GTTSN      NETDOM  SETTYPE  NDGT
lidb       ansi    CDGTA    10
```

```
rtrv-gttset:gttsn=t800

rlghncxa03w 07-05-07 00:30:31 GMT EAGLE5 37.0.0

GTTSN      NETDOM  SETTYPE  NDGT
t800       ansi    CGGTA    6
```

```
rtrv-gttset:gttsn=si000

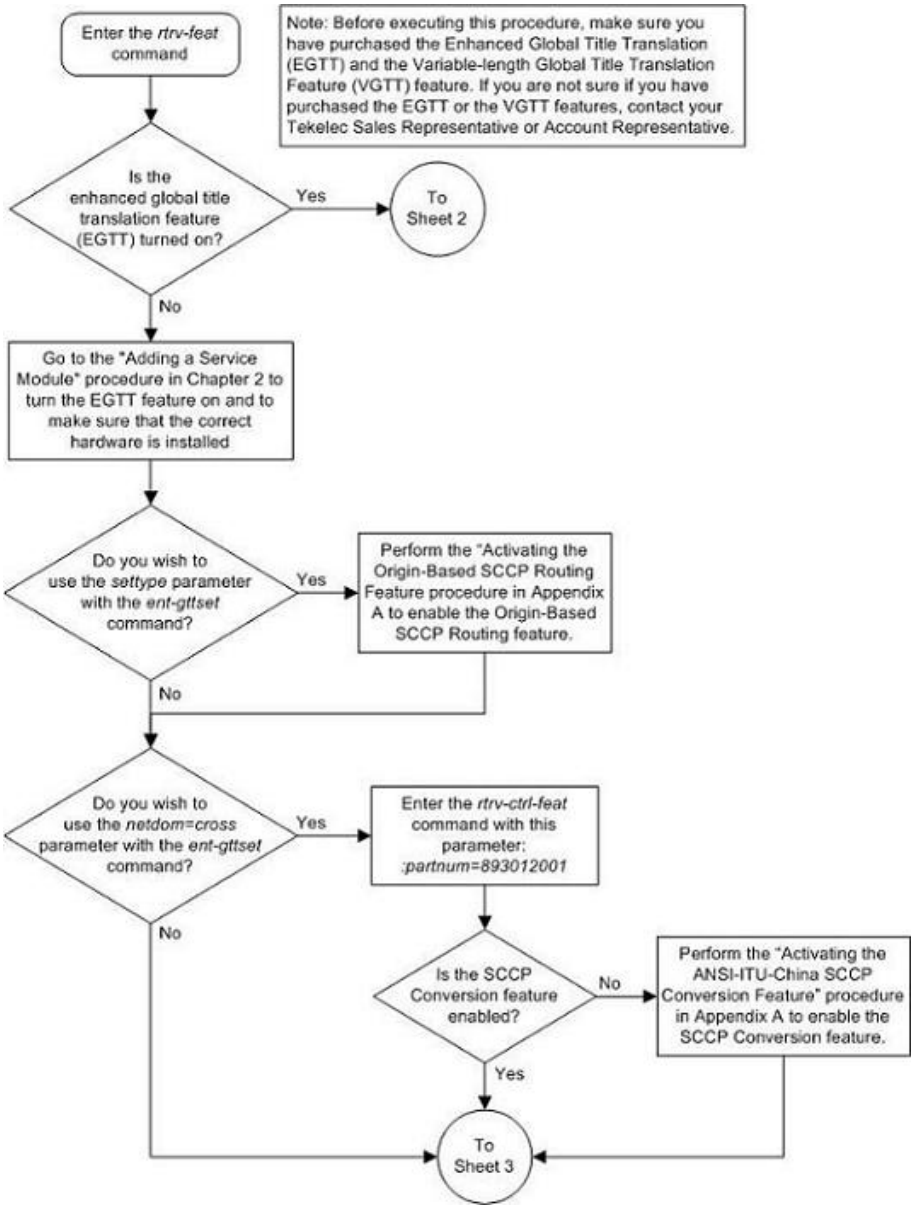
rlghncxa03w 07-05-07 00:30:31 GMT EAGLE5 37.0.0

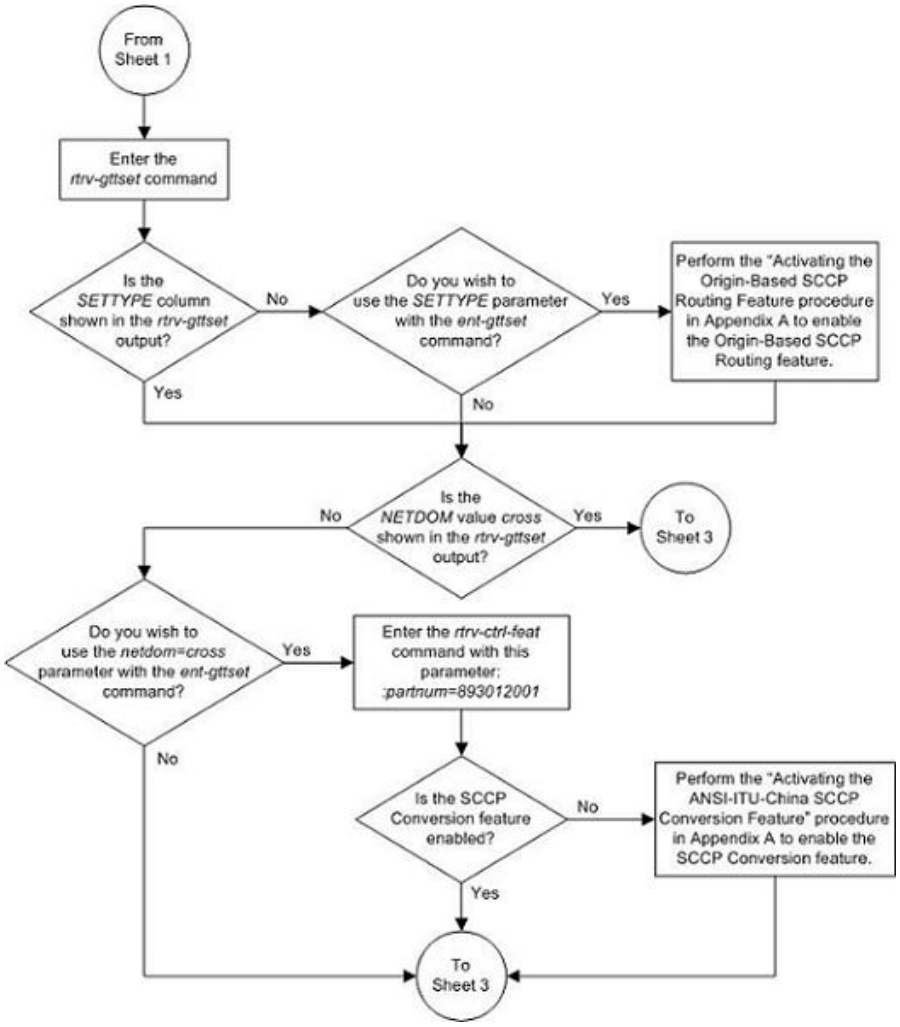
GTTSN      NETDOM  SETTYPE  NDGT
si000      itu     CGPC     -
```

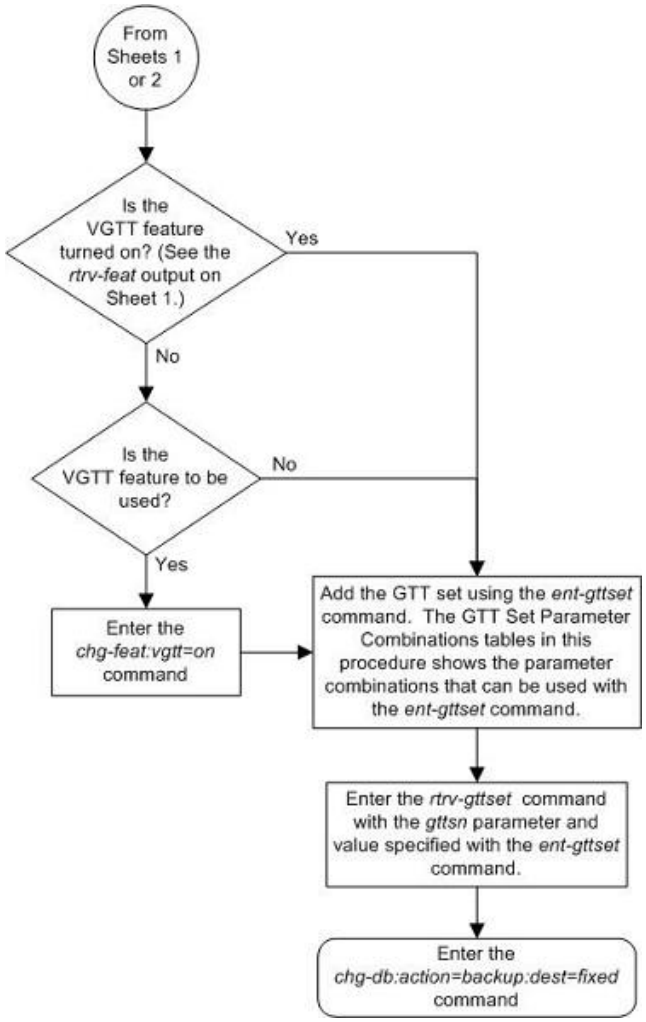
8. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 46: Adding a GTT Set


Enter the rtrv-feat command
Note: Before executing this procedure, make sure you have purchased the Enhanced Global Title Translation (EGTT) and the Variable-length Global Title Translation Feature (VGTT) feature. If you are not sure if you have purchased the EGTT or the VGTT features, contact your Tekelec Sales Representative or Account Representative.
Is the enhanced global title translation feature (EGTT) turned on?
Yes
To Sheet 2
No
Go to the "Adding a Service Module" procedure in Chapter 2 to turn the EGTT feature on and to make sure that the correct hardware is installed
Do you wish to use the settype parameter with the ent-gttset command?
Yes
Perform the "Activating the Origin-Based SCCP Routing Feature procedure in Appendix A to enable the Origin-Based SCCP Routing feature.
No
Do you wish to use the netdom=cross parameter with the ent-gttset command?
Yes
Enter the rtrv-ctrl-feat command with this parameter: :partnum=893012001
No
Is the SCCP Conversion feature enabled?
No
Perform the "Activating the ANSI-ITU-China SCCP Conversion Feature" procedure in Appendix A to enable the SCCP Conversion feature.
Yes
To Sheet 3


From Sheet 1
Enter the rtrv-gttset command
Is the SETTYPE column shown in the rtrv-gttset output?
No
Do you wish to use the SETTYPE parameter with the ent-gttset command?
Yes
Perform the "Activating the Origin-Based SCCP Routing Feature procedure in Appendix A to enable the Origin-Based SCCP Routing feature.
Yes
No
Is the NETDOM value cross shown in the rtrv-gttset output?
No
Yes
To Sheet 3
Do you wish to use the netdom=cross parameter with the ent-gttset command?
Yes
Enter the rtrv-ctrl-feat command with this parameter: :partnum=893012001
No
Is the SCCP Conversion feature enabled?
No
Perform the "Activating the ANSI-ITU-China SCCP Conversion Feature" procedure in Appendix A to enable the SCCP Conversion feature.
Yes
To Sheet 3



Removing a GTT Set

Use this procedure to remove a GTT Set from the database using the `dlt-gttset` command.

The `dlt-gttset` command uses this parameter.

`:gttsn` – The GTT set name.

The GTT set name (`gttsn`) must be specified and match an existing GTT set. Use the `rtrv-gttset` command to view the GTT set names.

The specified GTT set cannot have any GTT selectors or GTAs using it. If the GTT set is a CGPC GTT set, the CGPC GTT set name cannot shown in the `rtrv-sccpopts` output as either the `DFLTCGPCASN` or `DFLTCGPCISN` values.

Use the `rtrv-gta:gttsn=<GTT set name>` command to view the global title address information using the specified GTT set name. If any GTAs are assigned to this GTT set name, go

to the *Removing Global Title Address Information* on page 672 procedure and remove the global title address information from the database.

Use the `rtrv-gttsel:gttsn=<GTT set name>` command to view the GTT selectors using the specified GTT set name. If any GTT selectors are assigned to this GTT set name, go to the *Removing a GTT Selector* on page 602 procedure and remove the selector from the database.

If the Variable-length Global Title Translation Feature (VGTT) is on, the `NDGT` field of the `rtrv-gttset` command shows the different lengths of global title addresses assigned to a GTT set name, as shown in the following example.

```
rlghncxa03w 07-05-07 00:30:31 GMT EAGLE5 37.0.0
GTTSN     NETDOM  NDGT
lidb      ansi    3, 7, 10
t800      ansi    6
si000     itu     15
imsi      itu     15
abcd1234  itu     12
```

In this example of the `rtrv-gttset` command output, the GTT set `lidb` contains three different length global title addresses; global title addresses containing three digits, seven digits, and 10 digits.

The examples in this procedure are used to remove the GTT set name `t800` from the database.

1. Display the existing GTT sets from the database using the `rtrv-gttset` command.

   If the Origin-Based SCCP Routing feature is not enabled, this is an example of the possible output.

   ```
   rlghncxa03w 07-05-07 00:27:31 GMT EAGLE5 37.0.0
   GTTSN     NETDOM  NDGT
   abcd1234  itu     12
   imsi      itu     15
   lidb      ansi    10
   si000     itu     15
   t800      ansi    10
   ```

   If the Origin-Based SCCP Routing feature is enabled, this is an example of the possible output.

   ```
   rlghncxa03w 07-05-07 00:27:31 GMT EAGLE5 37.0.0
   GTTSN      NETDOM  SETTYPE  NDGT
   abcd1234   itu     CDGTA    12
   gttset1    ansi    CDGTA    6
   gttset2    ansi    CGGTA    10
   gttset3    ansi    OPC      -
   gttset4    ansi    CGPC     -
   gttset5    itu     CGPC     -
   imsi       itu     CDGTA    15
   lidb       ansi    CDGTA    10
   si000      itu     CDGTA    15
   t800       ansi    CDGTA    10
   ```

2. Verify that no global title address information references the GTT set name being removed from the database.Use the `rtrv-gta` command with the `gttsn` parameter specifying the GTT set name being removed from the database. If the `num` parameter is specified with the `rtrv-gta` command, and the value of the `num` parameter is greater than 1000, the `force=yes` parameter must be specified with the `rtrv-gta` command. For this example, enter this command.

   ```
   rtrv-gta:gttsn=t800
   ```

This is an example of the possible output if the Origin-Based SCCP Routing feature is not enabled.

```
rlghncxa03w 08-10-07 00:28:31 GMT EAGLE5 39.2.0

GTTSN     NETDOM  NDGT
t800      ansi    10
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
8005550000 8005551999 dpcssn ssn    001-254-255
     SSN=255 CCGT=no  NTT=---
8005552000 8005553999 dpc    gt     001-254-255
     SSN=0   CCGT=no  NTT=---
8005554000 8005555999 dpcngt gt     001-254-255
     SSN=--- CCGT=no  NTT=123
8005556000 8005557999 dpcssn ssn    001-254-255
     SSN=255 CCGT=no  NTT=---
8005558000 8005559999 dpcssn ssn    001-254-255
     SSN=255 CCGT=yes NTT=---
9195551212 9195551212 dpcssn ssn    008-001-001
     SSN=222 CCGT=no  NTT=---
9194600000 9194600000 dpc    gt     001-255-252
     SSN=0   CCGT=no  NTT=---
9194610000 9194680000 dpcssn ssn    001-255-252
     SSN=222 CCGT=no  NTT=---
9762428487 9762428487 dpcssn ssn    001-254-255
     SSN=222 CCGT=no  NTT=---
9766423277 9766423277 dpcssn ssn    001-254-255
     SSN=222 CCGT=no  NTT=---
9769388928 9769388928 dpcssn ssn    001-254-255
     SSN=222 CCGT=no  NTT=---

Command Retrieved 11 Entries
```

This is an example of the possible output if the Origin-Based SCCP Routing feature is enabled.

```
rlghncxa03w 08-10-07 00:28:31 GMT EAGLE5 39.2.0
GTTSN      NETDOM  SETTYPE  NDGT
imsi       itu     CDGTA    10
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
8005550000 8005551999 dpcssn ssn    001-254-255
     SSN=255 CCGT=no  NTT=---
     CGGTASN=gttset1  CGPCSN=--------- SELID=----- OPCSN=---------
8005552000 8005553999 dpc    gt     001-254-255
     SSN=0   CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=gttset2  SELID=----- OPCSN=---------
8005554000 8005555999 dpcngt gt     001-254-255
     SSN=--- CCGT=no  NTT=123
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset3
8005556000 8005557999 dpcssn ssn    001-254-255
     SSN=255 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
8005558000 8005559999 dpcssn ssn    001-254-255
     SSN=255 CCGT=yes NTT=---
     CGGTASN=--------- CGPCSN=gttset2  SELID=----- OPCSN=---------
9195551212 9195551212 dpcssn ssn    008-001-001
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
9194600000 9194600000 dpc    gt     001-255-252
     SSN=0   CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
```

```
9194610000 9194680000 dpcssn ssn    001-255-252
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
9762428487 9762428487 dpcssn ssn    001-254-255
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
9766423277 9766423277 dpcssn ssn    001-254-255
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
9769388928 9769388928 dpcssn ssn    001-254-255
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------

Command Retrieved 11 Entries
```

Go to the procedure *Removing Global Title Address Information* on page 672 and remove any global title address entries that are shown in the `rtrv-gta` command output.

3. Verify that no GTT selectors reference the GTT set name being removed from the database.

   Use the `rtrv-gttsel` command with the GTT set name being removed from the database.

   If the `SETTYPE` column is not shown in the `rtrv-gttset` output, or if the `SETTYPE` column is shown in the `rtrv-gttset` output and the GTT set type is CDGTA, specify the `cdgtasn` parameter (if the Origin-Based SCCP Routing feature is enabled) or the `gttsn` parameter (if the Origin-Based SCCP Routing feature is not enabled) with the `rtrv-gttsel` command.

   If the `SETTYPE` column is shown in the `rtrv-gttset` output and the GTT set type is CGGTA, specify the `cggtasn` parameter with the `rtrv-gttsel` command.

   If the `SETTYPE` column is shown in the `rtrv-gttset` output and the GTT set type is CGSSN, specify the `cgssnsn` parameter with the `rtrv-gttsel` command.

   If the `SETTYPE` column is shown in the `rtrv-gttset` output and the GTT set type is CGPC, specify the `cgpcsn` parameter with the `rtrv-gttsel` command.

   For this example, enter this command if the Origin-Based SCCP Routing feature is not enabled.

   ```
   rtrv-gttsel:gttsn=t800
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 07-05-07 00:29:31 GMT EAGLE5 37.0.0
   GTIA  TT   NP       NAI   GTTSN
   2     10   --       ---   t800
   ```

   If the Origin-Based SCCP Routing feature is enabled, for this example, enter this command.

   ```
   rtrv-gttsel:cdgtasn=t800
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 07-05-07 00:29:31 GMT EAGLE5 37.0.0
   GTIA  TT   NP       NAI   CDGTASN
   2     10   --       ---   t800
   ```

   Go to the procedure *Removing a GTT Selector* on page 602 and remove any GTT selectors that are shown in the `rtrv-gttsel` command output.

   Note: If the GTT set being removed in this procedure is not a CGPCGTT set, skip step 4 and go to step 5.

4. Verify that the CGPC GTT set being removed in this procedure is not shown in the `rtrv-sccpopts` output as either the `DFLTCGPCASN` or `DFLTCGPCISN` values.

   Enter the `rtrv-sccpopts` command. This is an example of the possible output.

```
rlghncxa03w 07-05-17 16:02:05 GMT  EAGLE5 37.0.0

SCCP OPTIONS
------------------------------
CLASS1SEQ                    off
DFLTGTTMODE                 CdPA
DFLTCGPCASN              gttset4
DFLTCGPCISN              gttset5
```

   The CGPCGTT set being removed in this procedure is shown in the `rtrv-sccpopts` output as either the `DFLTCGPCASN` or `DFLTCGPCISN` values, remove the CGPCGTT set name rtrv-sccpopts output by performing the procedure *Changing the Default GTT Mode Options* on page 743 and specify the value none for either the `dfltcgpcasn` or `dfltcgpcisn` parameter as required.

5. Remove the GTT set from the database using the `dlt-gttset` command with the `gttsn` parameter specifying the GTT set name being removed from the database.

   For this example, enter this command.

   `dlt-gttset:gttsn=t800`

   When the command has successfully completed, this message should appear:

```
rlghncxa03w 07-05-07 00:30:31 GMT EAGLE5 37.0.0
DLT-GTTSET: MASP A – COMPLTD
```

6. Verify the changes using the `rtrv-gttset` command with the `gttsn` parameter and GTT set name specified in step 5.

   The following message is displayed.

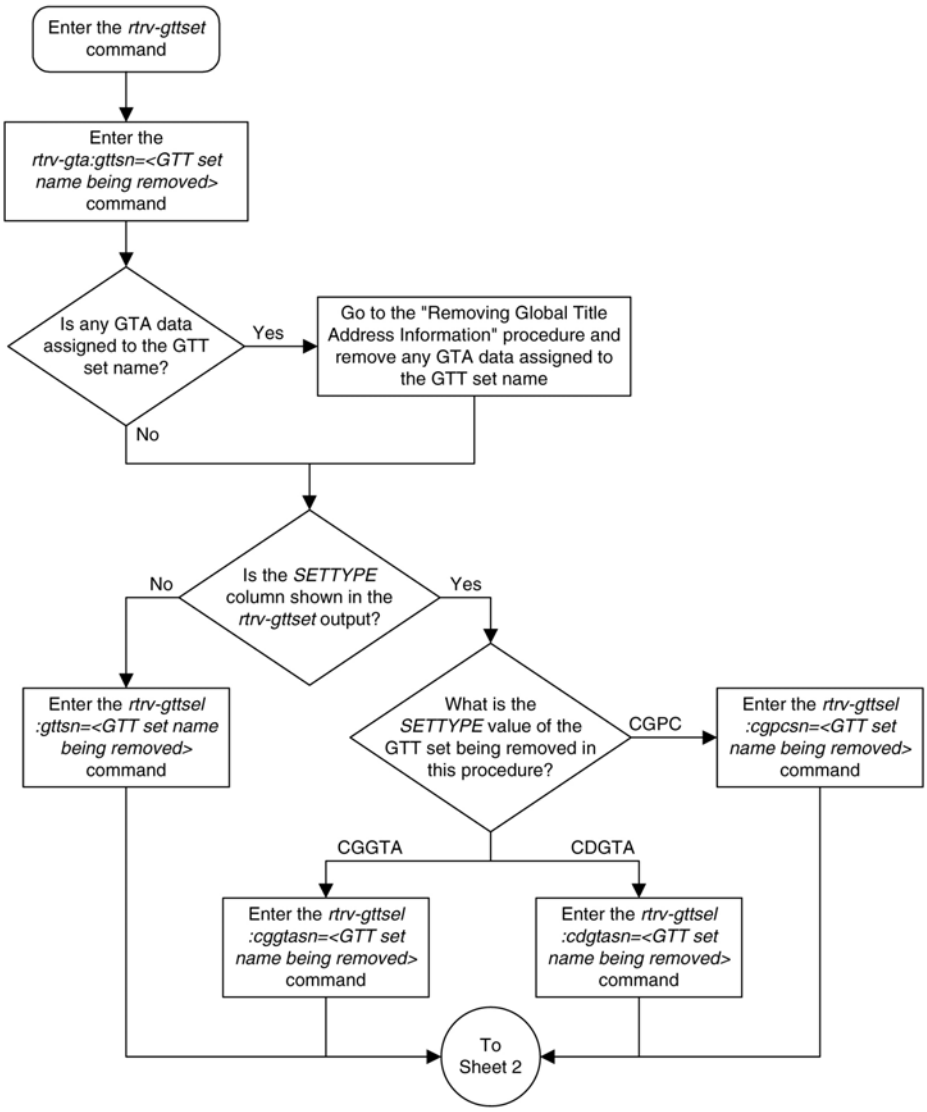
```
E3561 Cmd Rej: GTT Set specified by GTT Set Name does not exist
```

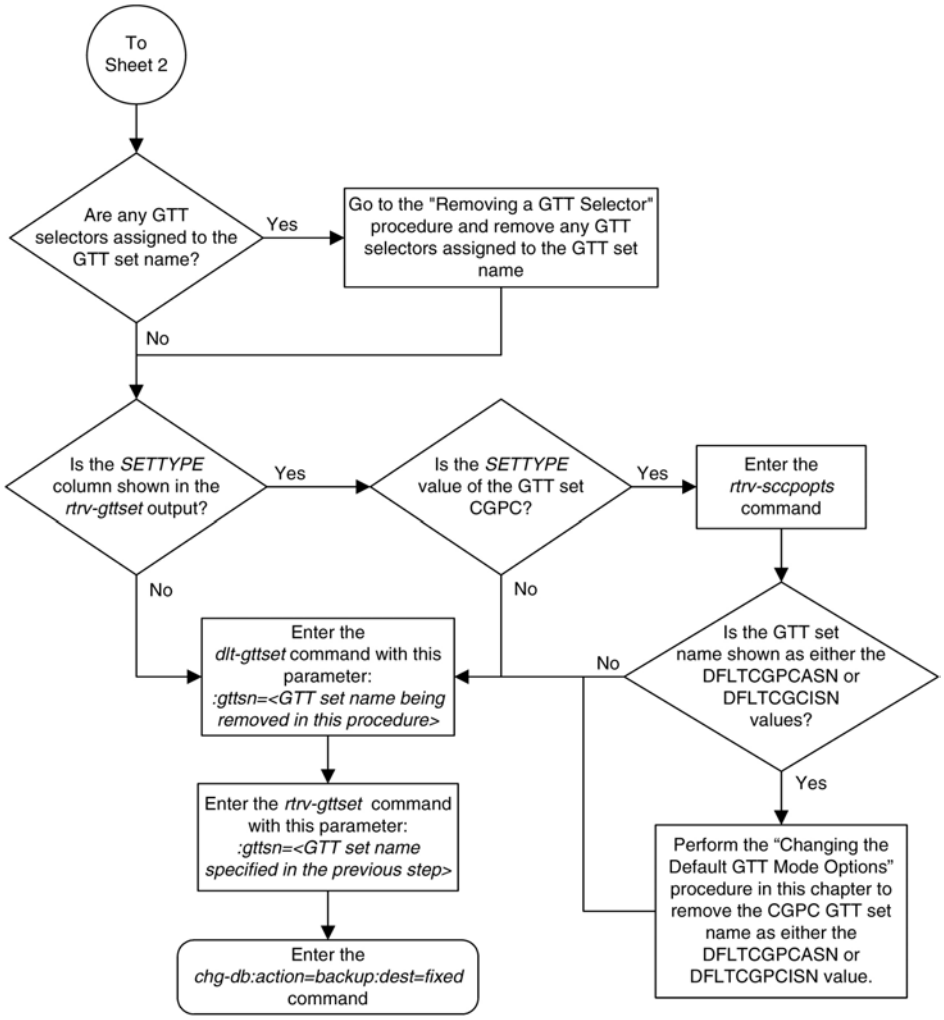
7. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

   These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 47: Removing a GTT Set


Enter the *rtrv-gttset* command
Enter the *rtrv-gta:gttsn=<GTT set name being removed>* command
Is any GTA data assigned to the GTT set name?
Yes
Go to the "Removing Global Title Address Information" procedure and remove any GTA data assigned to the GTT set name
No
Is the *SETTYPE* column shown in the *rtrv-gttset* output?
No
Yes
Enter the *rtrv-gttsel :gttsn=<GTT set name being removed>* command
What is the *SETTYPE* value of the GTT set being removed in this procedure?
CGPC
Enter the *rtrv-gttsel :cgpcsn=<GTT set name being removed>* command
CGGTA
CDGTA
Enter the *rtrv-gttsel :cggtasn=<GTT set name being removed>* command
Enter the *rtrv-gttsel :cdgtasn=<GTT set name being removed>* command
To Sheet 2



Changing a GTT Set

Use this procedure to change the number of digits assigned to a global title translation (GTT) set, or change the network domain of the GTT set to CROSS using the `chg-gttset` command.

The `chg-gttset` command uses these parameters:

`:gttsn` – The GTT set name. The GTT set name (`gttsn`) specifies the GTT set being changed and must be shown in the `rtrv-gttset` output.

`:netdom=cross` – The CROSS network domain of the global title translation set. The network domain CROSS can be specified only if the ANSI-ITU-China SCCP Conversion feature, part number 893012001, is enabled. If the Origin-Based SCCP Routing feature is enabled, the `SETTYPE` value of the GTT set must be `CDGTA`. The CROSS GTT set can be assigned to either an ANSI or ITU GTT selector. For more information, see the ANSI/ITU Translation Enhancement section in Chapter 2.

:ndgt – The number of digits contained in the global title translation. The ndgt parameter cannot be specified:

- If the Origin-Based SCCP Routing feature is enabled, the SETTYPE value of the GTT set is CGSSN, CGPC, or OPC.
- If GTAs are assigned to the GTT set. This can be verified with the rtrv-gta command and the GTT set name being changed in this procedure.
- If the VGTT feature is on, shown by the entry VGTT = on in the rtrv-feat command output. The length of the global title address is determined when the global title address is entered with the ent-gta command. For more information on the VGTT feature and the length of global title addresses, see the *Variable-length Global Title Translation Feature* on page 20 section and the *Adding Global Title Address Information* on page 617 procedure.

  If the Variable-length Global Title Translation Feature (VGTT) is on, the NDGT field of the rtrv-gttset command shows the different lengths of global title addresses assigned to a GTT set name, as shown in the following example.

```
rlghncxa03w 07-05-07 00:30:31 GMT EAGLE5 37.0.0
GTTSN     NETDOM  NDGT
lidb      ansi    3, 7, 10
t800      ansi    6
si000     itu     15
imsi      itu     15
abcd1234  itu     12
```

  In this example of the rtrv-gttset command output, the GTT set lidb contains three different length global title addresses; global title addresses containing three digits, seven digits, and 10 digits.



CAUTION: If the VGTT feature is on and the ANSI-ITU-China SCCP Conversion feature is not enabled, this procedure cannot be performed.

1. Display the existing GTT sets in the database using the rtrv-gttset command. This is an example of the possible output.

```
rlghncxa03w 07-05-07 00:29:31 GMT EAGLE5 37.0.0
GTTSN     NETDOM  NDGT
imsi      itu     15
abcd1234  itu     12
```

   If the Origin-Based SCCP Routing feature is enabled, the SETTYPE column is shown in the rtrv-gttset output as shown in the following example.

```
rlghncxa03w 07-05-07 00:29:31 GMT EAGLE5 37.0.0

GTTSN      NETDOM  SETTYPE  NDGT
imsi       itu     CDGTA    15
abcd1234   itu     CGGTA    12
```

2. Verify whether or not either the VGTT feature is on by entering the rtrv-feat command.

   Note: If any entries in the rtrv-gttset output in step 1 contain multiple entries in the NDGT column, the VGTT feature is turned on. Skip this step and go to step 3.

   The entry VGTT = on is shown if the VGTT feature is on.

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 VGTT feature is on, the `ndgt` parameter cannot be specified with the `chg-gttset` command. If the ANSI-ITU-China SCCP Conversion feature is not enabled, shown in the `rtrv-ctrl-feat` output as SCCP Conversion, this procedure cannot be performed.

3. Display the status of the ANSI-ITU-China SCCP Conversion feature by entering this command.

Note: If any entries in the `rtrv-gttset` output in step 1 contain the value `CROSS` in the `NETDOM` column, the ANSI-ITU-China SCCP Conversion feature is enabled. Skip this step and go to step 4.

```
rtrv-ctrl-feat:partnum=893012001
```

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
SCCP Conversion           893012001  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 ANSI-ITU-China SCCP Conversion feature is enabled, go to step 4.

If the ANSI-ITU-China SCCP Conversion feature is not enabled, the `netdom=cross` parameter cannot be specified with the `chg-gttset` command. If the ANSI-ITU-China SCCP Conversion feature is not enabled and the VGTT feature is on, this procedure cannot be performed.

If the ANSI-ITU-China SCCP Conversion feature is not enabled, perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure to enable the ANSI-ITU-China SCCP Conversion feature. After the ANSI-ITU-China SCCP Conversion is enabled, go to step 4.

4. If the `SETTYPE` column is shown in the `rtrv-gttset` output in step 1, the Origin-Based SCCP Routing feature is enabled.

If the Origin-Based SCCP Routing feature is not enabled, go to step 5.

The `netdom=cross` parameter can be specified only if the ANSI-ITU-China SCCP Conversion feature is enabled. If the Origin-Based SCCP Routing feature is enabled, the `netdom=cross` parameter can be specified only for a CDGTA GTT set.

The `ndgt` parameter can be specified only if the VGTT feature is off. If the Origin-Based SCCP Routing feature is enabled, the `ndgt` parameter can be specified only for a CDGTA or CGGTA GTT set.

If the required GTT set is shown in the `rtrv-gttset` output in step 1, go to step 5.

5. Verify that no global title address information references the GTT set name being changed in this procedure.

   Note: If the VGTT feature is turned on, or if the `ndgt` parameter will not be specified in step 6, skip this step and go to step 6.

   Use the `rtrv-gta` command with the `gttsn` parameter specifying the GTT set name being removed from the database. If the `num` parameter is specified with the `rtrv-gta` command, and the value of the `num` parameter is greater than 1000, the `force=yes` parameter must be specified with the `rtrv-gta` command. For this example, enter this command.

   `rtrv-gta:gttsn=imsi`

   This is an example of the possible output if the Origin-Based SCCP Routing feature is not enabled.

```
rlghncxa03w 08-10-07 00:28:31 GMT EAGLE5 39.2.0
GTTSN     NETDOM  NDGT
imsi      itu     10
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
8005550000 8005551999 dpcssn ssn    001-254-255
     SSN=255 CCGT=no  NTT=---
8005552000 8005553999 dpc    gt     001-254-255
     SSN=0   CCGT=no  NTT=---
8005554000 8005555999 dpcngt gt     001-254-255
     SSN=--- CCGT=no  NTT=123
8005556000 8005557999 dpcssn ssn    001-254-255
     SSN=255 CCGT=no  NTT=---
8005558000 8005559999 dpcssn ssn    001-254-255
     SSN=255 CCGT=yes NTT=---
9195551212 9195551212 dpcssn ssn    008-001-001
     SSN=222 CCGT=no  NTT=---
9194600000 9194600000 dpc    gt     001-255-252
     SSN=0   CCGT=no  NTT=---
9194610000 9194680000 dpcssn ssn    001-255-252
     SSN=222 CCGT=no  NTT=---
9762428487 9762428487 dpcssn ssn    001-254-255
     SSN=222 CCGT=no  NTT=---
9766423277 9766423277 dpcssn ssn    001-254-255
     SSN=222 CCGT=no  NTT=---
9769388928 9769388928 dpcssn ssn    001-254-255
     SSN=222 CCGT=no  NTT=---

Command Retrieved 11 Entries
```

   This is an example of the possible output if the Origin-Based SCCP Routing feature is enabled.

```
rlghncxa03w 08-10-07 00:28:31 GMT EAGLE5 39.2.0
GTTSN      NETDOM  SETTYPE  NDGT
imsi       itu     CDGTA    10
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
8005550000 8005551999 dpcssn ssn    001-254-255
     SSN=255 CCGT=no  NTT=---
     CGGTASN=gttset1  CGPCSN=---------- SELID=----- OPCSN=---------
8005552000 8005553999 dpc    gt     001-254-255
     SSN=0   CCGT=no  NTT=---
     CGGTASN=---------- CGPCSN=gttset2  SELID=----- OPCSN=---------
8005554000 8005555999 dpcngt gt     001-254-255
     SSN=--- CCGT=no  NTT=123
```

```
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset3
8005556000 8005557999 dpcssn ssn    001-254-255
     SSN=255 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
8005558000 8005559999 dpcssn ssn    001-254-255
     SSN=255 CCGT=yes NTT=---
     CGGTASN=--------- CGPCSN=gttset2  SELID=----- OPCSN=---------
9195551212 9195551212 dpcssn ssn    008-001-001
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
9194600000 9194600000 dpc    gt     001-255-252
     SSN=0   CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
9194610000 9194680000 dpcssn ssn    001-255-252
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
9762428487 9762428487 dpcssn ssn    001-254-255
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
9766423277 9766423277 dpcssn ssn    001-254-255
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
9769388928 9769388928 dpcssn ssn    001-254-255
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------

Command Retrieved 11 Entries
```

Go to the *Removing Global Title Address Information* on page 672 procedure and remove any global title address entries that are shown in the `rtrv-gta` command output.

6. Change the GTT set using the `chg-gttset` command.

   For this example, enter this command.

   ```
   chg-gttset:gttsn=imsi:ndgt=10:netdom=cross
   ```

   Note:

   1. The `netdom=cross` parameter can be specified only if the ANSI-ITU-China SCCP Conversion feature is enabled. If the Origin-Based SCCP Routing feature is enabled, the `netdom=cross` parameter can be specified only for a CDGTA GTT set.
   2. The `ndgt` parameter can be specified only if the VGTT feature is off. If the Origin-Based SCCP Routing feature is enabled, the `ndgt` parameter can be specified only for a CDGTA or CGGTA GTT set.

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

   ```
   rlghncxa03w 07-05-07 00:29:31 GMT EAGLE5 37.0.0
   ENT-GTTSEL: MASP A - COMPLTD
   ```

7. Verify the changes using the `rtrv-gttset` command with the `gttsn` parameter and value specified in step 6.

   For this example, enter this command.

   ```
   rtrv-gttset:gttsn=imsi
   ```

   If the Origin-Based SCCP routing feature is not enabled, the following is an example of the possible output.

   ```
   rlghncxa03w 07-05-07 00:30:31 GMT EAGLE5 37.0.0
   ```

```
GTTSN     NETDOM  NDGT
imsi      cross   10
```

If the Origin-Based SCCP routing feature is enabled, the following is an example of the possible output.

```
rlghncxa03w 07-05-07 00:30:31 GMT EAGLE5 37.0.0

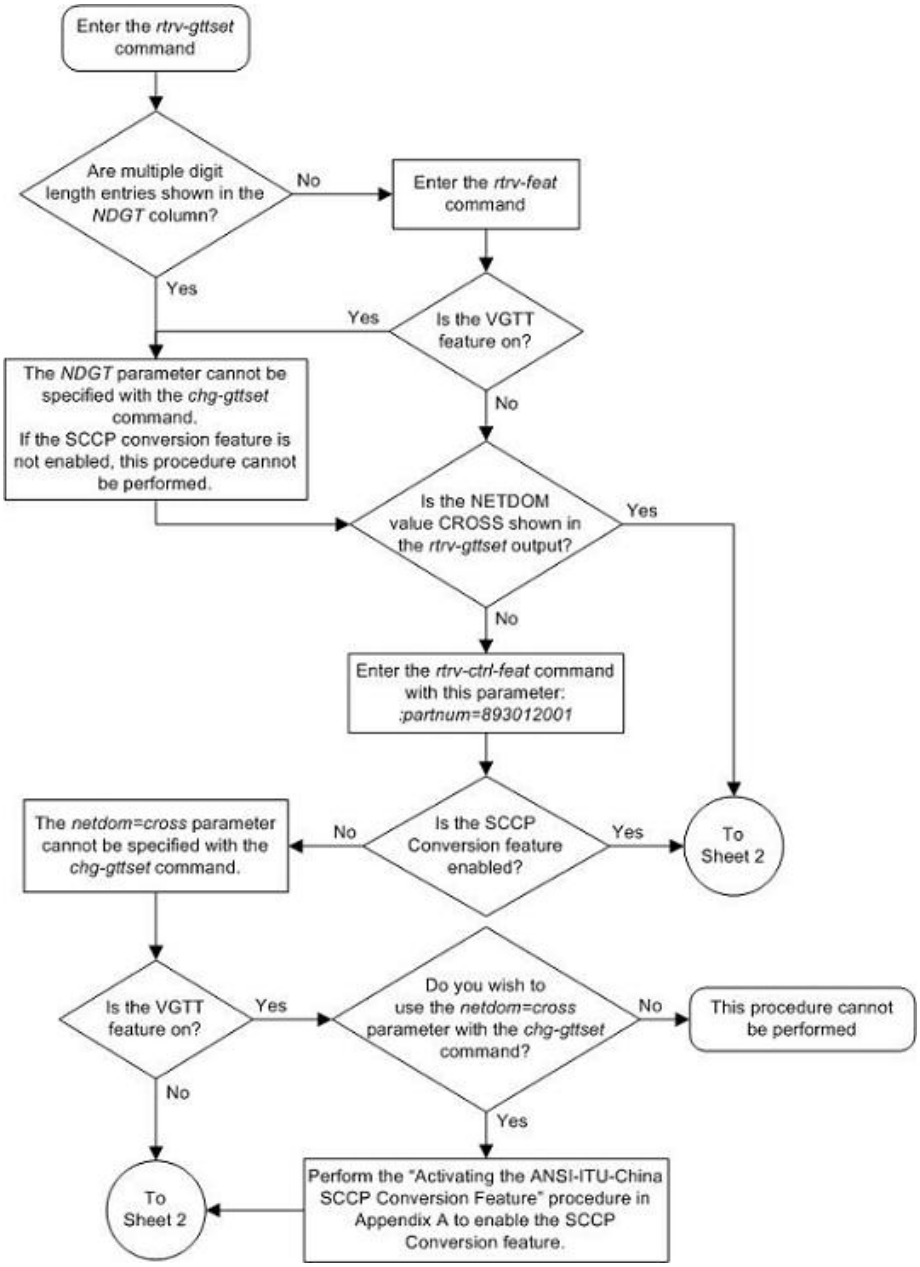
GTTSN      NETDOM  SETTYPE  NDGT
imsi       cross   CDGTA    10
```

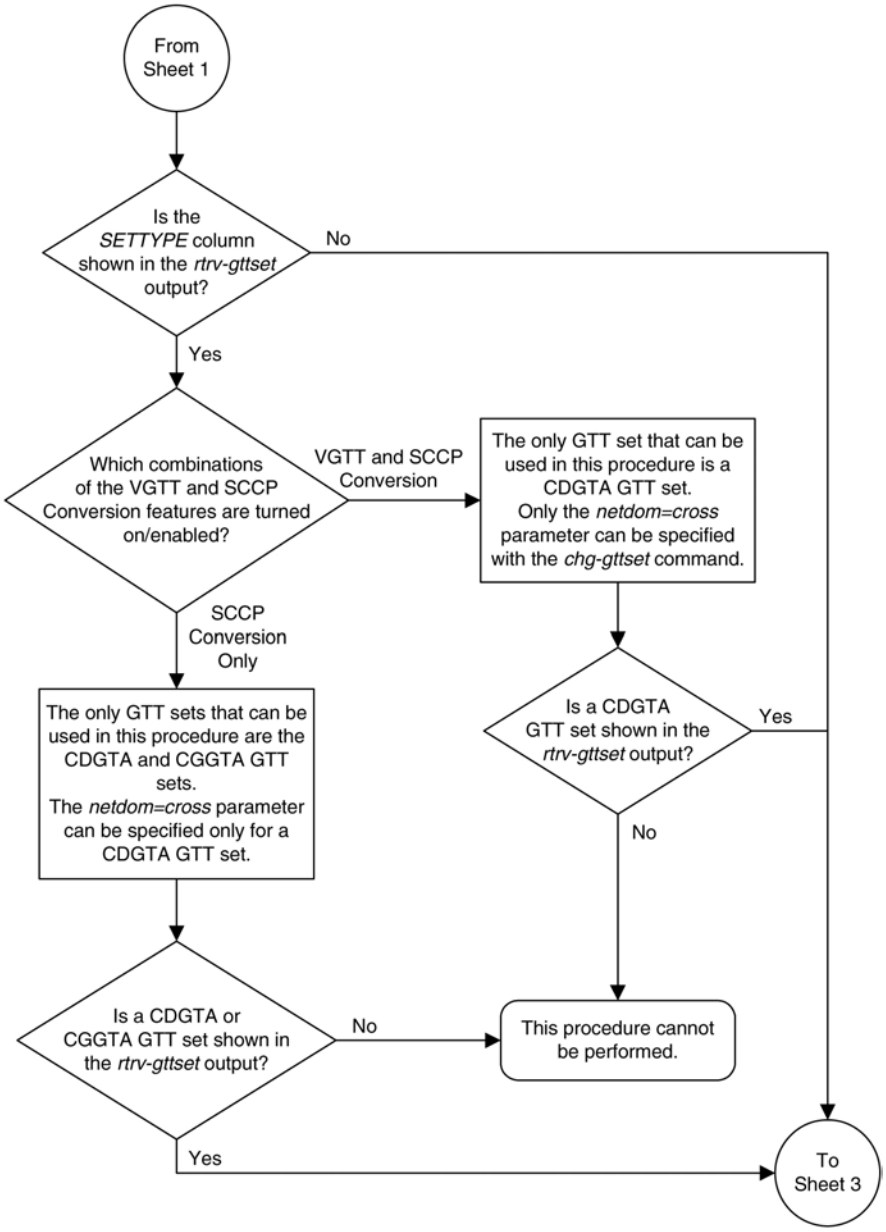
8. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

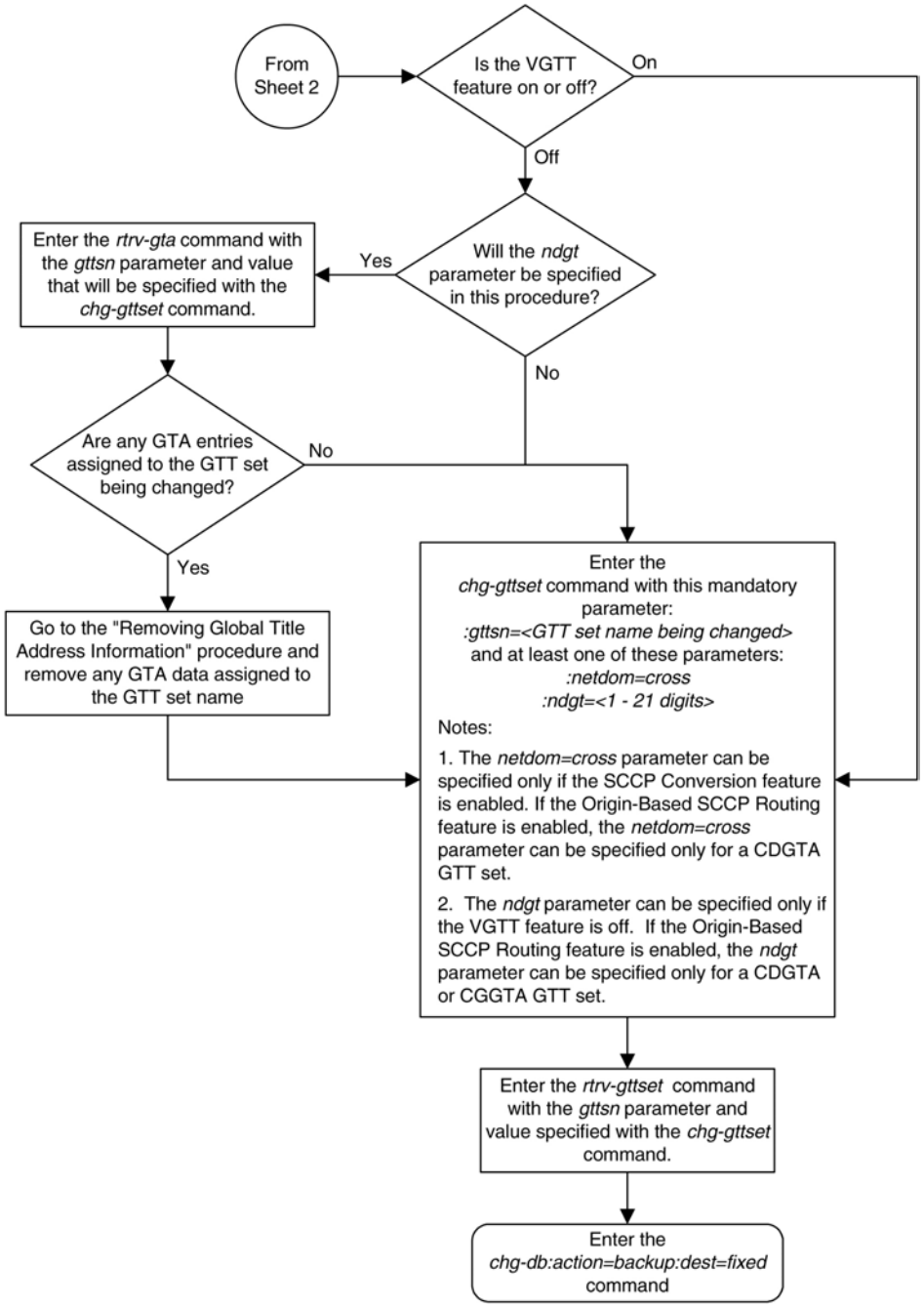
   These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 48: Changing a GTT Set


Enter the rtrv-gttset command
Are multiple digit length entries shown in the NDGT column?
No
Enter the rtrv-feat command
Yes
Yes
Is the VGTT feature on?
The NDGT parameter cannot be specified with the chg-gttset command.
If the SCCP conversion feature is not enabled, this procedure cannot be performed.
No
Is the NETDOM value CROSS shown in the rtrv-gttset output?
Yes
No
Enter the rtrv-ctrl-feat command with this parameter:
:partnum=893012001
The netdom=cross parameter cannot be specified with the chg-gttset command.
No
Is the SCCP Conversion feature enabled?
Yes
To Sheet 2
Is the VGTT feature on?
Yes
Do you wish to use the netdom=cross parameter with the chg-gttset command?
No
This procedure cannot be performed
No
Yes
To Sheet 2
Perform the "Activating the ANSI-ITU-China SCCP Conversion Feature" procedure in Appendix A to enable the SCCP Conversion feature.


From Sheet 1
Is the SETTYPE column shown in the rtrv-gttset output?
No
Yes
Which combinations of the VGTT and SCCP Conversion features are turned on/enabled?
VGTT and SCCP Conversion
The only GTT set that can be used in this procedure is a CDGTA GTT set. Only the netdom=cross parameter can be specified with the chg-gttset command.
SCCP Conversion Only
Is a CDGTA GTT set shown in the rtrv-gttset output?
Yes
No
The only GTT sets that can be used in this procedure are the CDGTA and CGGTA GTT sets. The netdom=cross parameter can be specified only for a CDGTA GTT set.
Is a CDGTA or CGGTA GTT set shown in the rtrv-gttset output?
No
This procedure cannot be performed.
Yes
To Sheet 3



Adding a GTT Selector

Use the following procedure to specify the applicable GTT selectors for a global title entry using the `ent-gttsel` command.

The `ent-gttsel` command uses these parameters:

`:gti/gtia/gtii/gtin/gtin24` – The global title indicator. The GTI defines the domain as

- `gti` and `gtia` (ANSI) with GTI=2
- `gtii` (ITU international) with GTI=2 or GTI=4, and
- `gtin` and `gtin24` (ITU national) with GTI=2 or GTI=4.

For purposes of the selector commands, `gti` and `gtia`are equivalent, and `gtii` and `gtin/gtin24` are mutually exclusive because the EGTT database does not distinguish between ITU national and ITU international translations. This means that, while ITU-I and ITU-N selectors are stored separately, two separate ITU-I and ITU-N entries with the same selector values cannot exist. For example, if an entry with `gtii=2` and `tt=4` already exists, an entry of `gtin=2` (or `gtin24=2`) and `tt=4` cannot be entered.

`:tt` – The global title translation type. (0-255)

`:nai` – The nature of address indicator.

`:naiv` – The nature of address indicator value. (0-127) (See *Table 36: NAIV/NAI Mapping* on page 595 for NAI/NAIV mapping)

Note: The nature of address indicator parameters (`naiv` or `nai`) can be specified by supplying either a mnemonic or an explicit value. At no time may both the mnemonic and the explicit value be specified at the same time for the same parameter. You can specify either the `naiv` or `nai` parameter. *Table 36: NAIV/NAI Mapping* on page 595 shows the mapping between the `naiv` and the `nai` parameters.

`:np` – The numbering plan.

`:npv` – The numbering plan value. (0-15) (See *Table 37: NPV/NP Mapping* on page 595 for NP/NPV mapping)

Note: The numbering plan parameters (`npv` or `np`) can be specified by supplying either a mnemonic or an explicit value. At no time may both the mnemonic and the explicit value be specified at the same time for the same parameter. You can specify either the `npv` or `np` parameter. *Table 37: NPV/NP Mapping* on page 595 shows the mapping between the `npv` and the `np` parameters.

`:gttsn` – the GTT set name.

`:cdgtasn` – The CDGTA GTT set name.

`:cggtasn` – The CGGTA GTT set name.

`:cgpcsn` – The CGPC GTT set name.

`:cgssn` – The CGPA SSN.

`:selid` – The selector ID.

If the Origin-Based SCCP Routing feature is not enabled, the `gttsn` parameter must be specified and the `cdgtasn`, `cggtasn`, `cgpcsn`, `cgssn`, and `selid` parameters cannot be specified. If the Origin-Based SCCP Routing feature is enabled, the `cdgtasn`, `cggtasn`, `cgpcsn`, `cgssn`, or `selid` parameters must be specified, and the `gttsn` parameter cannot be specified. See *Table 38: GTT Selector Parameter Combinations* on page 596 for the valid parameter combinations.

Table 38: GTT Selector Parameter Combinations on page 596 shows the parameter combinations and the rules for the parameters of the `ent-gttsel` command.

Table 36: NAIV/NAI Mapping

NAIV	NAI	Description
0	--	Unknown
1	Sub	Subscriber Number
2	Rsvd	Reserved for national use
3	Natl	National significant number
4	Intl	International number
5-127	---	Spare

Table 37: NPV/NP Mapping

NPV	NP	Description
0	--	Unknown
1	E164	ISDN/telephony numbering plan
2	Generic	Generic numbering plan
3	X121	Data numbering plan
4	F69	Telex numbering plan
5	E210	Maritime mobile numbering plan
6	E212	Land mobile numbering plan
7	E214	ISDN/mobile numbering plan
8	Private	Private network or network-specific numbering plan
9-15	---	Spare

The Global Title Translation (GTT) feature and the Enhanced Global Title Translation (EGTT) features must be `on` before using this command. Use the `rtrv-feat` command to verify the settings. If the features are off, turn them on using the `chg-feat:gtt=on:egtt=on` command.

Note: Once the Global Title Translation (GTT) feature and the Enhanced Global Title Translation (EGTT) feature are turned on with the `chg-feat` command, they cannot be turned off.

The GTT feature and the EGTT feature must be purchased before you turn these features on. If you are not sure whether you have purchased the GTT feature and/or the EGTT feature, contact your Tekelec Sales Representative or Account Representative.

An entry must not already exist that exactly matches the specified `gti`, `tt`, `npv`, and `naiv` parameter combination.

The GTT selector table may not have more than 20,992 entries for CdPA selectors:

- 256 ANSI selectors
- 256 ITU selectors with GTI=2
- 20,480 ITU selectors with GTI=4 (256 TTs * 16 NPs per TT * 5 NAIs per NP)

The GTT selector table can also have 10,000 CgPA selectors.

For the `gtin=4` (or `gtin24=4`) parameter, although the entry `DFLT` may appear in the `rtrv-gttsel` output, the value `dflt` cannot be specified as value for the `np` or `nai` parameters when you specify the `ent-gttsel` command. If you enter a new GTT selector that matches an existing GTT selector's `gti` and `tt` and the existing selector has `dflt` as value for the `np` or `nai` parameters, a new entry is created with the new `np` or `nai` parameter values. The existing GTT selector entry with the `dflt` value is also retained. Use the `chg-gttsel` or `dlt-gttsel` commands to change or delete the `dflt` value. The parameter combination `npv/naiv` cannot be specified if `gtin=2` (or `gtin24=2`) or `gtii=2`. `GTIA=4` is not supported.

If the Variable-length Global Title Translation Feature (VGTT) is on, the `NDGT` field of the `rtrv-gttset` command shows the different lengths of global title addresses assigned to a GTT set name, as shown in the following example.

```
rlghncxa03w 06-10-07 00:30:31 GMT EAGLE5 36.0.0
GTTSN     NETDOM  NDGT
lidb      ansi    3, 7, 10
t800      ansi    6
si000     itu     15
imsi      itu     15
abcd1234  itu     12
```

In this example of the `rtrv-gttset` command output, the GTT set `lidb` contains three different length global title addresses; global title addresses containing three digits, seven digits, and 10 digits.

Table 38: GTT Selector Parameter Combinations

Origin-Based SCCP Routing Not Enabled	Origin-Based SCCP Routing Enabled
MANDATORY PARAMETERS	

Origin-Based SCCP Routing Not Enabled			Origin-Based SCCP Routing Enabled		
GTI/GTIA = 2	GTII/GTIN/ GTIN24 = 2	GTII/GTIN/ GTIN24 = 4	GTI/GTIA = 2	GTII/GTIN/ GTIN24 = 2	GTII/GTIN/ GTIN24 = 4
TT = 0 to 255	TT = 0 to 255	TT = 0 to 255	TT = 0 to 255	TT = 0 to 255	TT = 0 to 255
GTTSN (See Notes 2 and 3)	GTTSN (See Notes 2 and 4)	GTTSN (See Notes 2 and 4)	Either CDGTASN, CGGTASN, or CGPCSN (See Notes 1, 2, 3, 5, 6, 8, 9, and 10)	Either CDGTASN, CGGTASN, or CGPCSN (See Notes 1, 2, 4, 5, 6, 8, 9, and 10)	Either CDGTASN, CGGTASN, or CGPCSN (See Notes 1, 2, 3, 5, 6, 8, 9, and 10)
		NP or NPV (See Note 7)			NP or NPV (See Note 7)
		NAI or NAIV (See Note 7)			NAI or NAIV (See Note 7)
OPTIONAL PARAMETERS					
			CGSSN = 0 to 255 (See Note 6)	CGSSN = 0 to 255 (See Note 6)	CGSSN = 0 to 255 (See Note 6)
			SELID = 0 to 65534 (See Note 6)	SELID = 0 to 65534 (See Note 6)	SELID = 0 to 65534 (See Note 6)

Notes:

Each translation type (TT) and NP (NPV) combination can have a maximum of five different NAI (NAIV) assigned to it. If the Origin-Based SCCP Routing feature is enabled, the TT, NP (NPV), and NAI, (NAIV) combination can have more than five entries as long as different CGSSN and SELID values are assigned to each entry. (See Note 9).

The maximum number of CdPA entries that can be provisioned with the ENT-GTTSEL command is 20,992.

The maximum number of CgPA entries that can be provisioned with the ENT-GTTSEL command is 10,000.

SCCP Conversion refers to the ANSI-ITU-China SCCP Conversion feature - part number 893012001

1. The GTT set names and parameters used in this procedure are:

Origin-Based SCCP Routing Not Enabled	Origin-Based SCCP Routing Enabled

- CDGTASN = The CDPA GTT set name from the RTRV-GTTSET output, shown in the GTTSN column. If the Origin-Based SCCP Routing feature is enabled, the SETTYPE column contains the entry CDGTA.
- CGGTASN = The CGPA GTT set name from the RTRV-GTTSET output, shown in the GTTSN column. The SETTYPE column contains the entry CGGTA.
- CGPCSN = The CGPC GTT set name from the RTRV-GTTSET output, shown in the GTTSN column. The SETTYPE column contains the entry CGPC.
- If the CGGTASN, CGPCSN, CGSSN, and SELID columns are shown in the rtrv-gttsel output, the Origin-Based SCCP Routing feature is enabled.
- If the SETTYPE column is shown in the rtrv-gttset output, the Origin-Based SCCP Routing feature is enabled.
- If the NETDOM value cross is shown in the rtrv-gttset output, the SCCP Conversion feature is enabled.

2. If the SCCP Conversion feature is enabled, the CROSS GTT set, NETDOM value CROSS in the RTRV-GTTSET output, can be specified for the CDGTASN or GTTSN parameters.

3. The NETDOM values, shown in the RTRV-GTTSET output, for the GTT set name specified by the GTTSN, CDGTASN, CGGTASN, or CGPCSN parameters must be ANSI.

4. The NETDOM values, shown in the RTRV-GTTSET output, for the GTT set name specified by the GTTSN, CDGTASN, CGGTASN, or CGPCSN parameters must be ITU.

5. The following combinations of GTT set name parameters can be used with the ENT-GTTSEL command:

- CDGTASN only • CDGTASN and CGGTASN
- CGGTASN only • CDGTASN and CGPCSN
- CGPCSN only

6. If either the CGSSN or SELID parameters, or both parameters, are specified with the ENT-GTTSEL command, either the CGGTASN or CDPCSN parameters must be specified with the ENT-GTTSEL command.

7. The np and npv, and the nai and naiv parameters cannot be specified together in the ent-gttsel command. See the NAIV/NAI Mapping table in this procedure for the nai and naiv parameter values. See the NPV/NP Mapping table in this procedure for the np and npv parameter values.

8. If a CGGTA or CGPC GTT set is specified for a selector that has a CDGTA GTT set assigned to it, the selector will have the CGGTA or CGPC GTT set and the CDGTA GTT set assigned to it.

9. Multiple entries can be assigned to a selector only if the CGGTASN or CGPCSN parameters are specified for the selector. The CGSSN and SELID must be different for each entry that has the same CGGTASN or CGPCSN value. The first time a selector is added, the CDGTASN and either the CGGTASN or CGPCSN parameters can be specified. If additional entries are added to the selector, only the CGGTASN or CGPCSN parameters can be specified. All of these entries will contain the CDGTASN value and either the CGGTASN or CGPCSN values.

Origin-Based SCCP Routing Not Enabled	Origin-Based SCCP Routing Enabled
10. If the selector contains multiple entries containing only the CGGTASN or CGPCSN values, and the CDGTASN parameter is specified for one of the entries of the selector, the CDGTASN value is added to all the entries of the selector.	

1. Display the GTT selectors in the database by entering the `rtrv-gttsel` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 36.0.0

GTIA    TT     NP      NAI  GTTSN
2       75     --      ---  lidb
2       100    --      ---  t800
2       150    --      ---  lidb

GTII    TT     NP      NAI  GTTSN
2       0      --      ---  s1000
2       87     --      ---  imsi
2       100    --      ---  imsi
4       0      dflt    dflt s1000
4       97     e212    100  abcd1234
4       101    e210    5    imsi
4       150    e210    5    abcd1234

GTIN    TT     NP      NAI  GTTSN

GTIN24  TT     NP      NAI  GTTSN
```

   If the Origin-Based SCCP Routing feature is enabled, the `CGGTASN`, `CGPCSN`, `CGSSN`, and `SELID` columns are shown in the `rtrv-gttsel` output as shown in the following example.

```
rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 36.0.0

GTIA    TT     NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID
2       75     --      ---  lidb       -------    ------     ---    ----
2       100    --      ---  t800       -------    ------     ---    ----
2       150    --      ---  lidb       -------    ------     ---    ----

GTII    TT     NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID
2       0      --      ---  s1000      -------    ------     ---    ----
2       87     --      ---  imsi       -------    ------     ---    ----
2       100    --      ---  imsi       -------    ------     ---    ----
4       0      dflt    dflt s1000      -------    ------     ---    ----
4       97     e212    100  abcd1234   -------    ------     ---    ----
4       101    e210    5    imsi       -------    ------     ---    ----
4       150    e210    5    abcd1234   -------    ------     ---    ----

GTIN    TT     NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID

GTIN24  TT     NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID
```

   If the desired GTT set name is shown in the `rtrv-gttsel` output, in either the `CDGTASN`, `CGGTASN`, `CGPCSN`, `CGSSN`, and `SELID` columns, skip step 2 and go to step 3.

   If the desired GTT set name is not shown in the `rtrv-gttsel` output, go to step 3.

2. Display the GTT sets in the database using the `rtrv-gttset` command. This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:27:31 GMT EAGLE5 36.0.0
GTTSN     NETDOM  NDGT
abcd1234  itu     12
imsi      itu     15
lidb      ansi    10
t800      ansi    10
s1000     itu     15
```

   If the Origin-Based SCCP Routing feature is enabled, the `SETTYPE` column is shown in the `rtrv-gttset` output as shown in the following example.

```
rlghncxa03w 06-10-07 00:29:31 GMT EAGLE5 36.0.0

GTTSN      NETDOM  SETTYPE  NDGT
abcd1234   itu     CGGTA    12
imsi       itu     CDGTA    15
lidb       ansi    CDGTA    10
t800       ansi    CGGTA    6
s1000      itu     CDGTA    15
s2000      itu     CGPC     -
```

   If the desired GTT set name is shown in the `rtrv-gttset` output, go to step 3.

   If the desired GTT set name is not shown in the `rtrv-gttset` output, perform the *Adding a GTT Set* on page 570 procedure and add the required GTT set.

3. Add the GTT selector to the database with the `ent-gttsel` command.

   Table 38: GTT Selector Parameter Combinations on page 596 shows the parameter combinations that can be used with the `ent-gttsel` command.

   For this example, enter this command.

   `ent-gttsel:gtii=4:tt=0:cdgtasn=s1000:np=e164:nai=intl`

   If the Origin-Based SCCP routing feature is enabled for this example, enter this command.

   `ent-gttsel:gtii=4:tt=0:cgpcsn=s2000:np=e164:nai=intl`

   When this command has successfully completed, this message appears.

```
rlghncxa03w 06-10-07 00:29:31 GMT EAGLE5 36.0.0
ENT-GTTSEL: MASP A   COMPLTD
```

4. Verify the changes using the `rtrv-gttse1` command with the `gti`, `tt`, and either the `cdgtasn`, `cggtasn`, or `cgpcsn` parameters and values specified in step 3.

   For this example, enter this command.

   `rtrv-gttse1:tt=0:gtii=4:cdgtasn=s1000`

   This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:30:31 GMT EAGLE5 36.0.0

GTII    TT      NP      NAI  CDGTASN
4       0       e164    intl s1000
```

   If the Origin-Based SCCP routing feature is enabled for this example, enter this command.

```
rtrv-gttsel:gtii=4:tt=0:cgpcsn=s2000
```

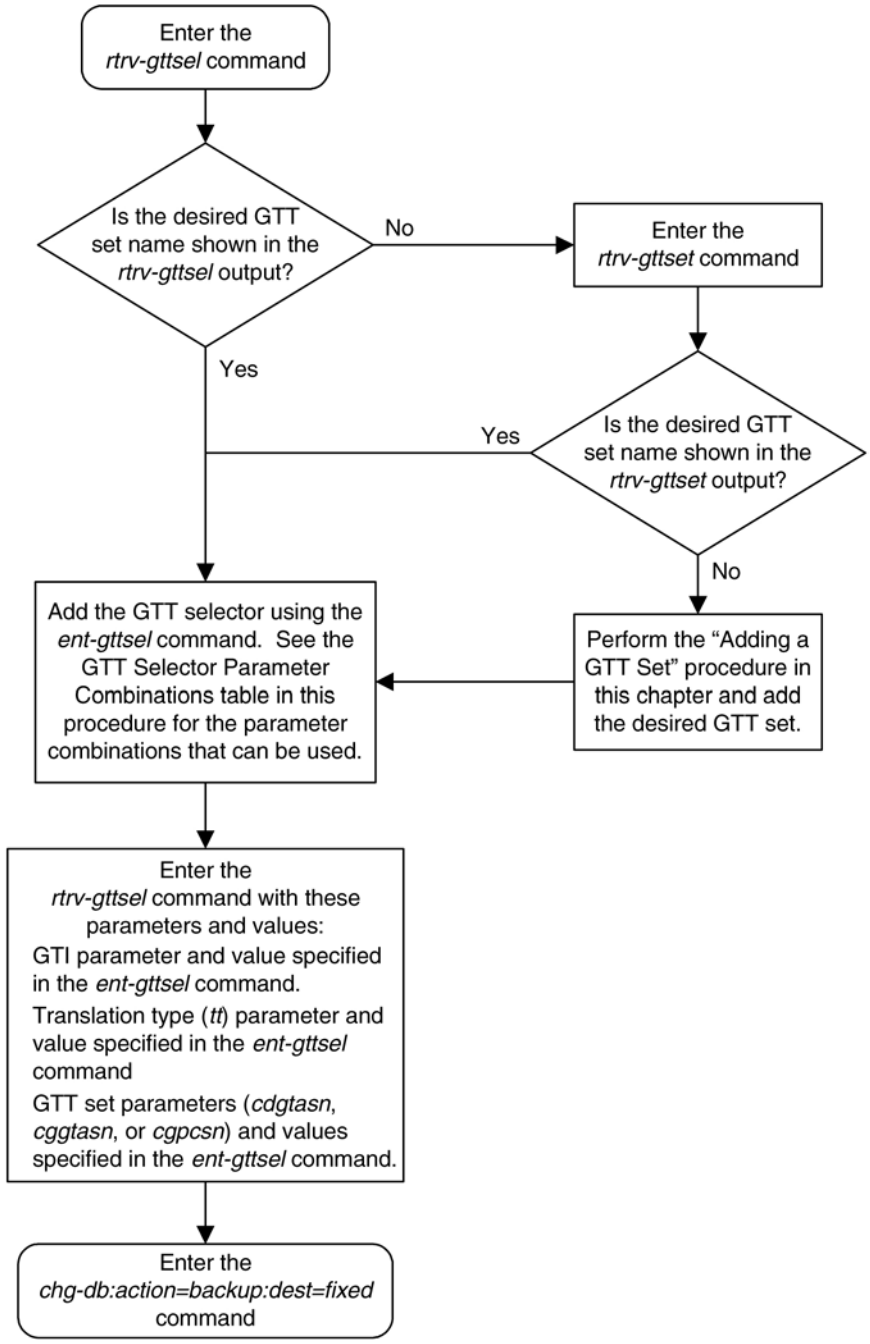
```
rlghncxa03w 06-10-07 00:30:31 GMT EAGLE5 36.0.0

GTII    TT     NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID
4       0      e164    intl -------    -------    s2000      ANY    NONE
```

5. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 49: Adding a GTT Selector



Removing a GTT Selector

Use the following procedure to delete the global title selector using the `dlt-gttsel` command.

The `dlt-gttsel` command uses these parameters:

`:gti/gtia/gtii/gtin/gtin24` – The global title indicator. The GTI defines the domain as

- `gti` and `gtia` (ANSI) with GTI=2
- `gtii` (ITU international) with GTI=2 or GTI=4, and
- `gtin` and `gtin24` (ITU national) with GTI=2 or GTI=4.

For purposes of the selector commands, `gti` and `gtia`are equivalent, and `gtii` and `gtin/gtin24` are mutually exclusive because the EGTT database does not distinguish between ITU national and ITU international translations. This means that, while ITU-I and ITU-N selectors are stored separately, two separate ITU-I and ITU-N entries with the same selector values cannot exist. For example, if an entry with `gtii=2` and `tt=4` already exists, an entry of `gtin=2` (or `gtin24=2`) and `tt=4` cannot be entered.

`:tt` – The global title translation type. (0-255)

`:nai` – The nature of address indicator.

`:naiv` – The nature of address indicator value. (0-127) (See *Table 39: NAIV/NAI Mapping* on page 603 for NAI/NAIV mapping)

Note: The nature of address indicator parameters (`naiv` or `nai`) can be specified by supplying either a mnemonic or an explicit value. At no time may both the mnemonic and the explicit value be specified at the same time for the same parameter. You can specify either the `naiv` or `nai` parameter. *Table 39: NAIV/NAI Mapping* on page 603 shows the mapping between the `naiv` and the `nai` parameters.

Table 39: NAIV/NAI Mapping

NAIV	NAI	Description
0	--	Unknown
1	Sub	Subscriber Number
2	Rsvd	Reserved for national use
3	Natl	National significant number
4	Intl	International number
5-127	---	Spare

`:np` – The numbering plan.

`:npv` – The numbering plan value. (0-15) (See *Table 40: NPV/NP Mapping* on page 604 for NP/NPV mapping)

Note: The numbering plan parameters (`npv` or `np`) can be specified by supplying either a mnemonic or an explicit value. At no time may both the mnemonic and the explicit value be specified at the same time for the same parameter. You can specify either the `npv` or `np` parameter. *Table 40: NPV/NP Mapping* on page 604 shows the mapping between the `npv` and the `np` parameters.

Table 40: NPV/NP Mapping

NPV	NP	Description
0	--	Unknown
1	E164	ISDN/telephony numbering plan
2	Generic	Generic numbering plan
3	X121	Data numbering plan
4	F69	Telex numbering plan
5	E210	Maritime mobile numbering plan
6	E212	Land mobile numbering plan
7	E214	ISDN/mobile numbering plan
8	Private	Private network or network-specific numbering plan
9-15	---	Spare

The entry being removed, specified `gti`, `tt`, `npv`, and `naiv` parameter combination, must be in the database. If the GTI (`gtii`, `gtin`, `gtin24`) parameter value is 4, the `np/npv` and `nai/naiv` parameters must be specified. The `np/npv` and `nai/naiv` parameter combination cannot be specified if the GTI (`gti/gtia/gtii/gtin/gtin24`) parameter value is 2. The `gti/gtia=4` parameter is not supported.

A GTT selector that contains contains multiple entries contains the same GTI, TT, NP, NAI, CGGTASN, and CGPCSN values, but contains different CGSSN and SELID values. GTT selectors cannot be removed in this procedure if the selector contains multiple `CGSSN` and `SELID` values. To remove the GTT selector, all of the multiple entries for the GTT selector, except one, must be removed by performing the *Changing a GTT Selector* on page 607 procedure specifying either the `cggtasn=none` or `cgpcsn=none` parameters, as applicable, for each entry being removed. One of the original entires must remain in the database. If you wish to remove some but not all of the multiple entries, perform the *Changing a GTT Selector* on page 607 procedure specifying either the `cggtasn=none` or `cgpcsn=none` parameters, as applicable, for each entry being removed.

1. Display the GTT selectors assigned to a specified domain using the `rtrv-gttsel` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 36.0.0

GTIA    TT     NP      NAI  GTTSN
2       75     --      ---  lidb
2       100    --      ---  t800
2       150    --      ---  lidb

GTII    TT     NP      NAI  GTTSN
2       0      --      ---  s1000
2       87     --      ---  imsi
2       100    --      ---  imsi
4       0      dflt    dflt s1000
4       0      e164    intl s1000
4       97     e212    100  abcd1234
4       101    e210    5    imsi
4       150    e210    5    abcd1234

GTIN    TT     NP      NAI  GTTSN

GTIN24  TT     NP      NAI  GTTSN
```

If the Origin-Based SCCP Routing feature is enabled, the `CGGTASN`, `CGPCSN`, `CGSSN`, and `SELID` columns are shown in the `rtrv-gttsel` output as shown in the following example.

```
rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 36.0.0

GTIA    TT     NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID
2       75     --      ---  lidb       -------    ------     ---    ----
2       100    --      ---  t800       -------    ------     ---    ----
2       150    --      ---  lidb       -------    ------     ---    ----

GTII    TT     NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID
2       0      --      ---  s1000      -------    ------     ---    ----
2       87     --      ---  imsi       -------    ------     ---    ----
2       100    --      ---  imsi       -------    ------     ---    ----
4       0      dflt    dflt s1000      -------    ------     ---    ----
4       0      e164    intl -------    -------    s2000      ANY    NONE
4       97     e212    100  abcd1234   -------    ------     ---    ----
4       101    e210    5    imsi       -------    ------     ---    ----
4       150    e210    5    abcd1234   -------    ------     ---    ----
4       219    e210    11   -------    gttset9    ------     20     20
4       219    e210    11   -------    gttset9    ------     21     20
4       219    e210    11   -------    gttset9    ------     21     22
4       219    e210    11   -------    gttset9    ------     23     22
4       219    e210    11   -------    gttset9    ------     23     24
4       219    e210    11   -------    gttset9    ------     23     25
4       219    e210    11   -------    gttset9    ------     26     25

GTIN    TT     NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID

GTIN24  TT     NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID
```

Note: If the `GTTSN` column is shown in the `rtrv-gttsel` output in step 1, skip step 2 and go to step 3.

Note: A GTT selector that contains contains multiple entries contains the same GTI, TT, NP, NAI, CGGTASN, and CGPCSN values, but contains different CGSSN and SELID values. If the GTT selector being removed contains only one entry, skip step 2 and go to step 3.

2. GTT selectors cannot be removed in this procedure if the selector contains multiple `CGSSN` and `SELID` values.

   If you wish to remove all the entries for the GTT selector, all of the multiple entries, except one, must be removed by performing the *Changing a GTT Selector* on page 607 procedure specifying either the `cggtasn=none` or `cgpcsn=none` parameters, as applicable, for each entry being removed. One of the original entires must remain in the database. After the multiple entries have been removed, go to step 3 to remove the remaining entry.

   If you wish to remove some but not all of the multiple entries, perform the *Changing a GTT Selector* on page 607 procedure specifying either the `cggtasn=none` or `cgpcsn=none` parameters, as applicable, for each entry being removed. After the entries have been removed, skip step 3 and go to step 4.

3. Delete the GTT selector from the database using the `dlt-gttsel` command.

   The `gti/gtia/gtii/gtin/gtin24`, `tt`, `np/npv`, and `nai/naiv` parameters and values assigned to the GTT selector must be specified with the `dlt-gttsel` command. If the `NP` and `NAI` columns contain dashes, the `np`, `npv`, `nai`, or `naiv` parameters cannot be specified with the `dlt-gttsel` command. See the notes for the `np/npv`, and `nai/naiv` parameters in the beginning of this procedure for more information on using the `np/npv`, and `nai/naiv` parameters. For this example, enter this command.

   ```
   dlt-gttsel:gtii=4:tt=0:np=e164:nai=intl
   ```

   When the command has successfully completed, this message should appear:

   ```
   rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 36.0.0
   DLT-GTTSEL: MASP A – COMPLTD
   ```

4. Verify the changes using the `rtrv-gttsel` command with the `gti/gtia/gtii/gtin/gtin24` and `tt` parameters and values specified in step 3.

   For this procedure, enter the following command.

   ```
   rtrv-gttsel:gtii=4:tt=0
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 06-10-07 00:27:31 GMT EAGLE5 36.0.0
   GTII  TT   NP       NAI   GTTSN
   4     0    e164     sub   setint000
   4     0    dflt     dflt  setint000
   ```

   If the Origin-Based SCCP Routing feature is enabled, this is an example of the possible output.

   ```
   rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 36.0.0

   GTII    TT     NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID
   4       0      dflt    dflt s1000      -------    ------     ---    ----
   ```

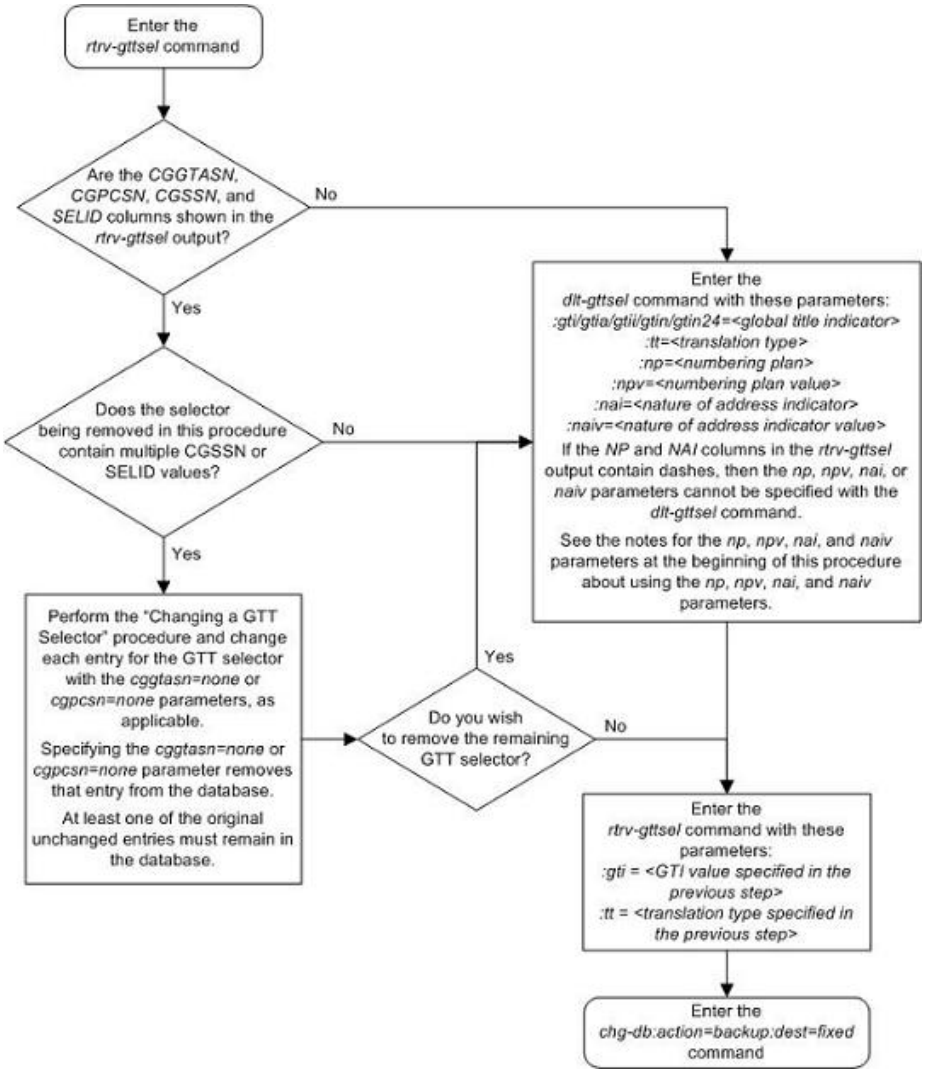
5. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

   These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

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

Figure 50: Removing a GTT Selector



Changing a GTT Selector

Use the following procedure to change the GTT set assigned to a selector using the `chg-gttsel` command.

The `chg-gttsel` command uses these parameters:

`:gti/gtia/gtii/gtin/gtin24` – The global title indicator. The GTI defines the domain as

- `gti` and `gtia` (ANSI) with GTI=2
- `gtii` (ITU international) with GTI=2 or GTI=4

- gtin and gtin24 (ITU national) with GTI=2 or GTI=4.

For purposes of the selector commands, gti and gtiaare equivalent, and gtii and gtin/gtin24 are mutually exclusive because the EGTT database does not distinguish between ITU national and ITU international translations. This means that, while ITU-I and ITU-N selectors are stored separately, two separate ITU-I and ITU-N entries with the same selector values cannot exist. For example, if an entry with gtii=2 and tt=4 already exists, an entry of gtin=2 (or gtin24=2) and tt=4 cannot be entered.

:tt – The global title translation type. (0-255)

:nai – The nature of address indicator.

:naiv – The nature of address indicator value. (0-127) (See *Table 41: NAIV/NAI Mapping* on page 608 for NAI/NAIV mapping)

Note: The nature of address indicator parameters (naiv or nai) can be specified by supplying either a mnemonic or an explicit value. At no time may both the mnemonic and the explicit value be specified at the same time for the same parameter. You can specify either the naiv or nai parameter. *Table 41: NAIV/NAI Mapping* on page 608 shows the mapping between the naiv and the nai parameters.

:np – The numbering plan.

:npv – The numbering plan value. (0-15) (See *Table 42: NPV/NP Mapping* on page 609 for NP/NPV mapping)

Note: The numbering plan parameters (npv or np) can be specified by supplying either a mnemonic or an explicit value. At no time may both the mnemonic and the explicit value be specified at the same time for the same parameter. You can specify either the npv or np parameter. *Table 42: NPV/NP Mapping* on page 609 shows the mapping between the npv and the np parameters.

:gttsn – the GTT set name.

:cdgtasn – The CDGTA GTT set name or the value none.

:cggtasn – The CGGTA GTT set name or the value none.

:cgpcsn – The CGPC GTT set name or the value none.

:cgssn – The CGPA SSN.

:selid – The selector ID.

If the Origin-Based SCCP Routing feature is not enabled, the gttsn parameter must be specified and the cdgtasn, cggtasn, cgpcsn, cgssn, and selid parameters cannot be specified. If the Origin-Based SCCP Routing feature is enabled, the cdgtasn, cggtasn, cgpcsn, cgssn, or selid parameters must be specified, and the gttsn parameter cannot be specified. See *Table 43: Change GTT Selector Parameter Combinations* on page 612 for the valid parameter combinations.

Table 41: NAIV/NAI Mapping

NAIV	NAI	Description
0	--	Unknown
1	Sub	Subscriber Number

NAIV	NAI	Description
2	Rsvd	Reserved for national use
3	Natl	National significant number
4	Intl	International number
5-127	---	Spare

Table 42: NPV/NP Mapping

NPV	NP	Description
0	--	Unknown
1	E164	ISDN/telephony numbering plan
2	Generic	Generic numbering plan
3	X121	Data numbering plan
4	F69	Telex numbering plan
5	E210	Maritime mobile numbering plan
6	E212	Land mobile numbering plan
7	E214	ISDN/mobile numbering plan
8	Private	Private network or network-specific numbering plan
9-15	---	Spare

The `np` (or `npv`) and `nai` (or `naiv`) parameters can be specified only if the `gtii/gtin/gtin24` parameter value is 4. If the `gtii/gtin/gtin24` parameter value is 4, the `np/npv` and `nai/naiv` parameters must be specified. The `np/npv` and `nai/naiv` parameters cannot be specified if the GTI (`gti/gtia/gtii/gtin/gtin24`) value is 2.

Only the GTT set names (`gttsn`, `cdgtasn`, `cggtasn`, `cgpcsn` parameters) assigned to the GTT selector can be changed. The `cdgtasn`, `cggtasn` and `cgpcsn` parameters can be specified only

if the Origin-Based SCCP Routing feature is enabled. The `gti/gtia/gtii/gtin/gtin24`, `tt`, `np/npv`, `nai/naiv`, `cgssn`, and `selid` parameter values are specified to identify the GTT selector to change. The `cgssn` and `selid` parameters can be specified only if the Origin-Based SCCP Routing feature is enabled. The new GTT set name must be shown in the `rtrv-gttset` output. The domain of the new GTT set name must be the same as the domain of the `gti/gtia/gtii/gtin/gtin24` parameter. For example, if the `gti/gtia` parameter is specified, the domain of the new GTT set must be ANSI. If the `gtii/gtin/gtin24` parameter is specified, the domain of the new GTT set must be ITU. However, if the ANSI-ITU-China SCCP conversion feature is enabled, the domain of the GTT set can be CROSS, and the CROSS GTT set can be assigned to any selector regardless of the domain of the `gti/gtia/gtii/gtin/gtin24` parameter. The CROSS GTT set can be specified only with the `cdgtasn` or `gttsn` parameters.

The GTT set parameter value `none` removes a GTT set name from the selector or will remove an entry from a GTT selector that has multiple entries. The value `none` can be specified only if the Origin-Based SCCP Routing feature is enabled.

If the GTT selector has only one entry, the value `none` can be specified only if the selector has two GTT set names assigned to it. At least one GTT set must always be assigned to the GTT selector.

A GTT selector that contains contains multiple entries contains the same GTI, TT, NP, NAI, CGGTASN, and CGPCSN values, but contains different CGSSN and SELID values. If there are multiple entries for a given GTT selector, and that selector has a `cdgtasn` value assigned, when the `cdgtasn=none` parameter is specified and the `cgssn` and `selid` are not specified, the `cdgtasn` value is removed from all entries in that GTT selector. If there are multiple entries for the selector, and either the `cggtasn=none` or `cgpcsn=none` parameter is specified, that entry is removed from the database.

If there are multiple entries for a given GTT selector, and the `cdgtasn=<CDGTA GTT set name>` parameter is specified, the `cdgtasn` value is added to all entries in the specified GTT selector.

If the `CGSSN` value in the `rtrv-gttsel` output is `ANY`, the `cgssn` parameter cannot be specified. If the `SELID` value in the `rtrv-gttsel` output is `NONE`, the `selid` parameter cannot be specified.

If the Variable-length Global Title Translation Feature (VGTT) is on, the `NDGT` field of the `rtrv-gttset` command shows the different lengths of global title addresses assigned to a GTT set name, as shown in the following example.

```
rlghncxa03w 06-10-07 00:30:31 GMT EAGLE5 36.0.0
GTTSN     NETDOM  NDGT
lidb      ansi    3, 7, 10
t800      ansi    6
si000     itu     15
imsi      itu     15
abcd1234  itu     12
```

In this example of the `rtrv-gttset` command output, the GTT set `lidb` contains three different length global title addresses; global title addresses containing three digits, seven digits, and 10 digits.

1. Display the GTT set names in the database using the `rtrv-gttset` command. This is an example of the possible output.

   ```
   rlghncxa03w 06-10-07 00:27:31 GMT EAGLE5 36.0.0
   GTTSN     NETDOM  NDGT
   abcd1234  itu     12
   imsi      itu     15
   lidb      ansi    10
   ```

```
t800      ansi    10
si000     itu     15
```

If the Origin-Based SCCP Routing feature is enabled, the SETTYPE column is shown in the rtrv-gttset output as shown in the following example.

```
rlghncxa03w 06-10-07 00:29:31 GMT EAGLE5 36.0.0

GTTSN      NETDOM  SETTYPE  NDGT
abcd1234   itu     CGGTA    12
imsi       itu     CDGTA    15
lidb       ansi    CDGTA    10
t800       ansi    CGGTA    6
s1000      itu     CDGTA    15
s2000      itu     CGPC     -
```

If the desired GTT set name is shown in the rtrv-gttset output, go to step 3.

Note: If the gti/gtia parameter is specified, the domain of the new GTT set must be ANSI. If the gtii/gtin/gtin24 parameter is specified, the domain of the new GTT set must be ITU. If the cdgtasn parameter is specified, the domain of the CDGTAGTT set can be CROSS, regardless of what the gti parameter is.

If the desired GTT set name is not shown in the rtrv-gttset output, perform the *Adding a GTT Set* on page 570 procedure and add the required GTT set.

2. Display the GTT selector you wish to change using the rtrv-gttse1 command specifying the name of the GTT set containing the GTT selector being changed.

   If the SETTYPE column is not shown in the rtrv-gttset output in step 1, the Origin-Based SCCP Routing feature is not enabled. The cdgtasn parameter must be used to specify the GTT set name.

   If the SETTYPE column is shown in the rtrv-gttset output in step 1, the Origin-Based SCCP Routing feature is enabled. One of these parameters can be used to specify the GTT set name:

   - cdgtasn - if the GTT set is a CDGTA GTT set.
   - cggtasn - if the GTT set is a CGGTA GTT set.
   - cgpcsn - if the GTT set is a CGPC GTT set.

   Note: The rtrv-gttsel command cannot be canceled. Avoid lengthy output by specifying parameter combinations, for example, gti and tt, to filter the output.

   For this procedure, enter the following command.

   ```
   rtrv-gttsel:cdgtasn=imsi
   ```

   This is an example of the possible output.

   ```
   GTII  TT   NP       NAI   GTTSN
   4     0    e164     intl  imsi
   4     0    dflt     dflt  imsi
   ```

   If the Origin-Based SCCP Routing feature is enabled, this is an example of the possible output.

   ```
   rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 36.0.0
   GTII    TT     NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID
   ```

```
4       0       dflt    dflt imsi       -------     ------      ---     ----
4       0       e164    intl imsi       -------     s2000       ANY     NONE
```

The following example shows a GTT selector containing multiple entries.

```
rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 36.0.0
GTII    TT      NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID
4       0       e210    intl -------    t800       ------     20     20
4       0       e210    intl -------    t800       ------     21     20
4       0       e210    intl -------    t800       ------     23     22
4       0       e210    intl -------    t800       ------     23     24
4       0       e210    intl -------    t800       ------     23     25
4       0       e210    intl -------    t800       ------     26     25
```

3. Change the selector using the `chg-gttsel` command.

   Table 43: Change GTT Selector Parameter Combinations on page 612 shows the parameter combinations that can be used with the `chg-gttsel` command.

Table 43: Change GTT Selector Parameter Combinations

Origin-Based SCCP Routing Not Enabled		Origin-Based SCCP Routing Enabled			
GTI/GTIA/ GTII/GTIN/ GTIN24 = 2 (See Note 7)	GTII/GTIN/ GTIN24 = 4 (See Note 7)	GTI/GTIA/ GTII/GTIN/ GTIN24 = 2 (See Note 7)	GTI/GTIA/ GTII/GTIN/ GTIN24 = 2 (See Note 7)	GTII/GTIN/ GTIN24 = 4 (See Note 7)	GTII/GTIN/ GTIN24 = 4 (See Note 7)
TT = < current translation type>	TT = < current translation type>	TT = < current translation type>	TT = < current translation type>	TT = < current translation type>	TT = < current translation type>
GTTSN = <the new GTT set name> (See Note 7)	GTTSN = <the new GTT set name> (See Note 7)	CDGTASN = <the new CDGTA GTT set name> or the value none (See Notes 1, 2, 4, 7, and 8)	CGGTASN = <the new CGGTA GTT set name> or the value none (See Notes 3, 4, and 7) or CGPCSN = <the new CGPC GTT set name> or the value none (See Notes 3, 4, 7, and 8)	CDGTASN = <the new CDGTA GTT set name> or the value none (See Notes 1, 2, 4, 7, and 8)	CGGTASN = <the new CGGTA GTT set name> or the value none [3, 4, 7, 8] or CGPCSN = <the new CGPC GTT set name> or the value none (See Notes 3, 4, 7, and 8)

Origin-Based SCCP Routing Not Enabled		Origin-Based SCCP Routing Enabled			
	NP = <current numbering plan> (See Note 6) or NPV = <current numbering plan value> (See Note 6)		CGSSN = <current CGSSN value> (See Note 5)	NP=<current numbering plan> (See Note 6) or NPV = <current numbering plan value> (See Note 6)	NP=<current numbering plan> (See Note 6) or NPV = <current numbering plan value> (See Note 6)
	NAI = <current nature of address indicator> (See Note 6) or NAIV = <current nature of address indicator value> (See Note 6)		SELID = <current SELID value> (See Note 5)	NAI = <current nature of address indicator> (See Note 6) or NAIV = <current nature of address indicator value> (See Note 6)	NAI = <current nature of address indicator> (See Note 6) or NAIV = <current nature of address indicator value> (See Note 6)
					CGSSN = <current CGSSN value> (See Note 5)
					SELID = <current SELID value> (See Note 5)

Notes:

1. If there are multiple entries for the selector, and the selector has a cdgtasn value assigned, if the cdgtasn=none parameter is specified in this procedure, the cdgtasn value is removed from all entries in the selector.

2. If there are multiple entries for the selector, and the cdgtasn=<CDGTA GTT set name> parameter is specified in this procedure, the cdgtasn value is added to all entries in the selector.

Origin-Based SCCP Routing Not Enabled	Origin-Based SCCP Routing Enabled
3. If there are multiple entries for the selector, and either the cggtasn=none or cgpcsn=none parameter is specified, that entry is removed from the database. 4. If only a single entry exists for the selector, only the GTT set name can be changed. The value none cannot be specified for the cdgtasn, cggtasn, or cgpcsn parameters. 5. If the cgssn parameter value is ANY, the cgssn parameter cannot be specified. If the selid parameter is NONE, the selid parameter cannot be specified. 6. The np and npv, and the nai and naiv parameters cannot be specified together in the chg-gttsel command. See the NAIV/NAI Mapping table in this procedure for the nai and naiv parameter values. See the NPV/NP Mapping table in this procedure for the np and npv parameter values. 7. If the gti/gtia parameter is specified, the domain of the new GTT set must be ANSI. If the gtii/gtin/gtin24 parameter is specified, the domain of the new GTT set must be ITU. If the cdgtasn parameter is specified in this procedure, the domain of the CDGTA GTT set can be CROSS, regardless of what the gti parameter is. 8. A GTT selector can contain the following combinations of GTT set name parameters: • CDGTASN only • CGGTASN only • CGPCSN only • CDGTASN and CGGTASN • CDGTASN and CGPCSN	

For example, enter this command.

```
chg-gttsel:gtii=4:tt=0:np=e164:nai=intl:cdgtasn=si000
```

If a GTT set name is being changed and the Origin-Based SCCP Routing feature is enabled, for this example enter this command.

```
chg-gttsel:gtii=4:tt=0:np=e164:nai=intl:cgpcsn=s3000
```

If a GTT set name is being removed, for this example enter one of these commands.

```
chg-gttsel:gtii=4:tt=0:np=e164:nai=intl:cgpcsn=none
```

```
chg-gttsel:gtii=4:tt=0:np=e164:nai=intl:cdgtasn=none
```

If a GTT set name is being removed from a selector containing multiple entries, for this example enter this command.

```
chg-gttsel:gtii=4:tt=0:np=e210:nai=intl:cggtasn=none:cgssn=23:selid=22
```

If a CDGTA GTT set name is being added to a selector containing multiple entries, for this example enter this command.

```
chg-gttsel:gtii=4:tt=0:np=e210:nai=intl:cdgtasn=s1000
```

After the successful completion of this command, this message appears:

```
rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 36.0.0
CHG-GTTSEL: MASP A – COMPLTD
```

4. Verify the changes using the `rtrv-gttsel` command with the `gti/gtia/gtii/gtin/gtin24`, `tt`, `np/npv`, `nai/naiv` parameters specified in step 3.

   For this example, enter this command.

   `rtrv-gttsel:gtii=4:tt=0:np=e164:nai=intl`

   This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:27:31 GMT EAGLE5 36.0.0
GTII  TT   NP       NAI   CDGTASN
4     0    e164     intl  si000
```

   If a GTT set name was changed in step 3 and the Origin-Based SCCP Routing feature is enabled, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 36.0.0

GTII    TT     NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID
4       0      e164    intl imsi       -------    s3000      ANY    NONE
```

   If the CGPCGTT set name was removed in step 3, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 36.0.0
GTII    TT     NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID
4       0      e164    intl imsi       -------    ------     ---    ----
```

   If the CDGTAGTT set name was removed in step 3, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 36.0.0
GTII    TT     NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID
4       0      e164    intl -------    -------    s2000      ANY    NONE
```

   If a GTT set name was removed from a selector in step 3 containing multiple entries, this is an example of the possible output.

```
rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 36.0.0
GTII    TT     NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID
4       0      e210    intl -------    t800       ------     20     20
4       0      e210    intl -------    t800       ------     21     20
4       0      e210    intl -------    t800       ------     23     24
4       0      e210    intl -------    t800       ------     23     25
4       0      e210    intl -------    t800       ------     26     25
```

   If a CDGTAGTT set name was added to a selector in step 3 containing multiple entries, this is an example of the possible output.

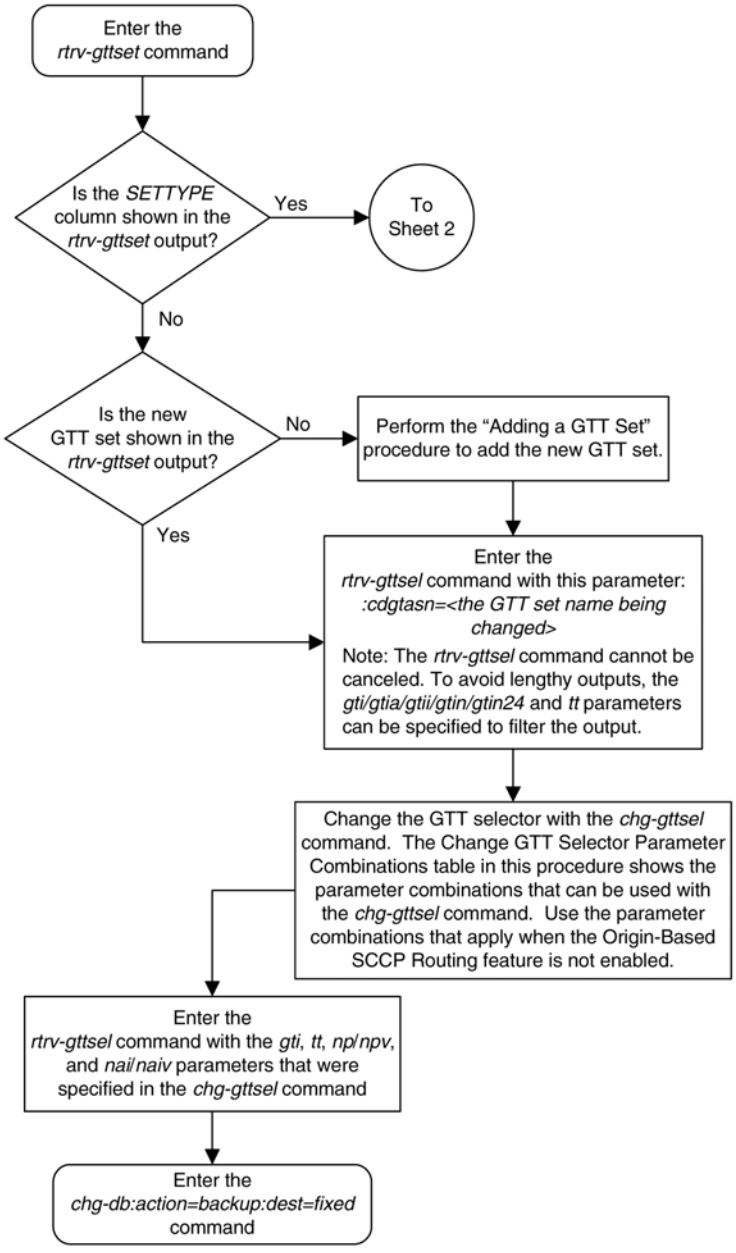
```
rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 36.0.0
GTII    TT     NP      NAI  CDGTASN    CGGTASN    CGPCSN     CGSSN  SELID
4       0      e210    intl s1000      t800       ------     20     20
4       0      e210    intl s1000      t800       ------     21     20
4       0      e210    intl s1000      t800       ------     23     22
4       0      e210    intl s1000      t800       ------     23     24
4       0      e210    intl s1000      t800       ------     23     25
4       0      e210    intl s1000      t800       ------     26     25
```

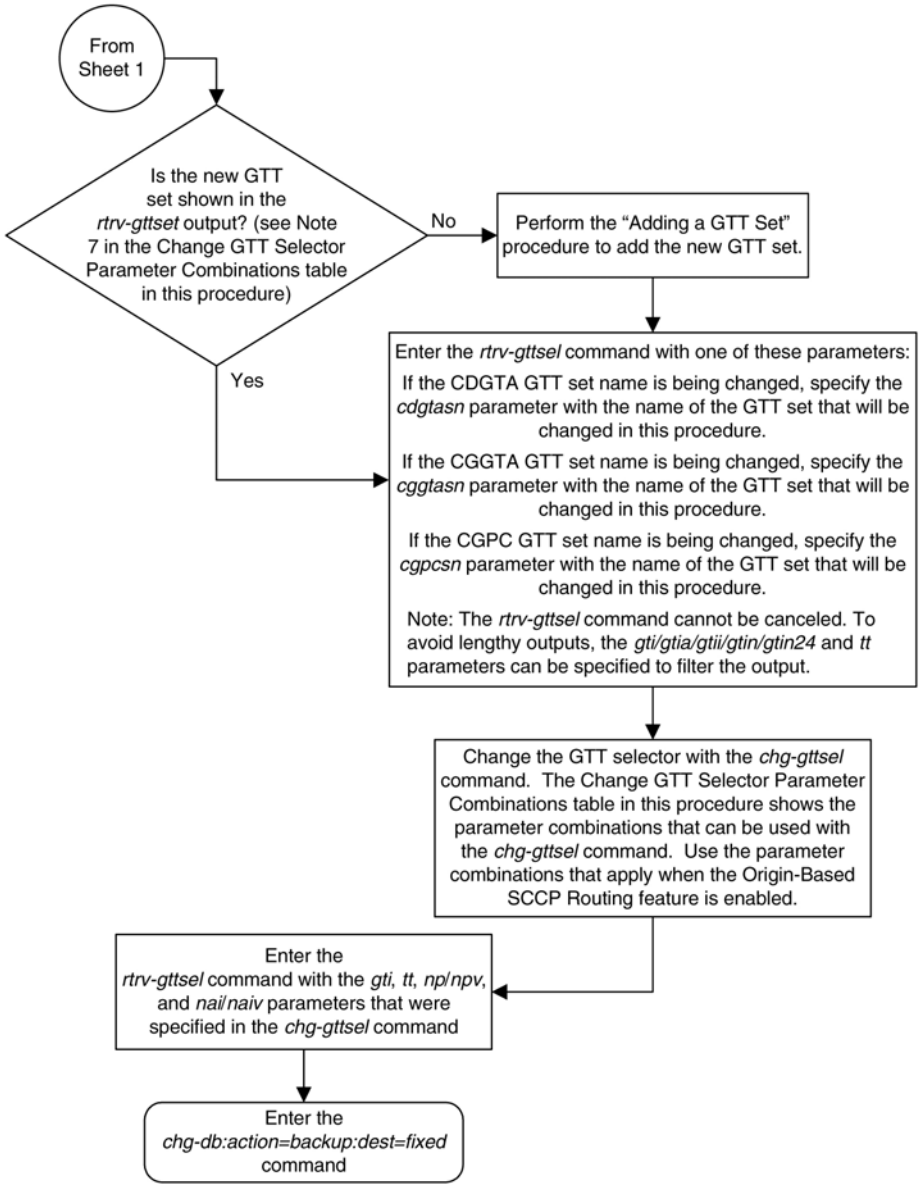
5. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

   These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 51: Changing a Global Title Translation Selector





Adding Global Title Address Information

This procedure is used to add global title address (GTA) information for applicable global title selectors required to specify a global title entry. This command adds the routing object (a destination address and a subsystem number) for messages requiring global title translation. The translation is performed on the basis of the GTA, global title indicator (GTI), numbering plan (NP), nature of address indicator (NAI), and translation type (TT) of each SS7 SCCP message directed to the STP with a routing indicator of 0, indicating that global title translation is required.

The `ent-gta` command uses these parameters:

`:gttsn` – The GTT set name

`:gta` – The global title address or the beginning value of a range of global title addresses

`:egta` – The end of global title address

`:pc/pca/pci/pcn/pcn24` – The translated point code

`:ssn` – The translated subsystem number

`:ri` – The routing indicator

`:xlat` – The translate indicator

`:ntt` – The new translation type

`:ccgt` – The cancel called global title indicator

`:force` – The check mated application override

`:nnp` – The new numbering plan

`:nnai` – The new nature of address indicator

`:npdd` – The number of digits to be deleted from the beginning of the Global Title Address digits (the prefix digits)

`:npds` – The digits that are being substituted for the prefix digits

`:nsdd` – The number of digits to be deleted from the end of the Global Title Address digits (the suffix digits)

`:nsds` – The digits that are being substituted for the suffix digits

`:ngti` – The new GT indicator value

`:mrnset` – The MRN set ID, shown in the `rtrv-mrn` output. This parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled and if the `ri=gt` parameter is specified with the `ent-gta` command. If the Flexible GTT Load Sharing feature is enabled, the point code specified with the `ent-gta` command must be assigned to the MRN set specified by this parameter. The status of the Flexible GTT Load Sharing feature is shown in the `rtrv-ctrl-feat` output. To enable the Flexible GTT Load Sharing feature, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure.

`:mapset` – The MAP set ID, shown in the `rtrv-map` output. This parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled and if the `ri=ssn` parameter is specified with the `ent-gta` command. If the Flexible GTT Load Sharing feature is enabled, the point code and SSN specified with the `ent-gta` command must be assigned to the MAP set specified by this parameter. The status of the Flexible GTT Load Sharing feature is shown in the `rtrv-ctrl-feat` output. To enable the Flexible GTT Load Sharing feature, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure.

`:cggtasn` – The CGGTA GTT set name shown in the `rtrv-gttset` output.

`:cgpcsn` – The CGPC GTT set name shown in the `rtrv-gttset` output.

`:cgssnsn` – The CGSSN GTT set name shown in the `rtrv-gttset` output.

`:opcsn` – The OPC GTT set name shown in the `rtrv-gttset` output.

`:cgssn` – The CGPA subsystem number or the beginning value of a range of CGPA subsystem numbers

`:ecgssn` – The end value of a range of CGPA subsystem numbers

`:cgpc/cgpca/cgpci/cgpcn/cgpcn24` – The CGPA point code

`:opc/opca/opci/opcn/opcn24` – The originating point code

`:selid` – The selector ID

The `cggtasn`, `cgpcsn`, `cgssnsn`, `opcsn`, `cgssn`, `ecgssn`, `cgpc/cgpca/cgpci/cgpcn/cgpcn24`, `opc/opca/opci/opcn/opcn24`, `selid`, `xlat=udts`, and `xlat=disc` parameters can be specified only if the Origin-Based SCCP Routing feature is enabled. The status of the Origin-Based SCCP Routing feature is shown in the `rtrv-ctrl-feat` output. If the `SETTYPE` column is shown in the `rtrv-gttset` output, or if the `CGGTASN`, `CGPCSN`, `CGSSNSN`, `OPCSN`, `START SSN`, `END SSN`, `CGPC`, `OPC`, or `SELID` columns are shown in the `rtrv-gta` output, the Origin-Based SCCP Routing feature is enabled. To enable the Origin-Based SCCP Routing feature, perform the *Activating the Origin-Based SCCP Routing Feature* on page 797 procedure.

`:loopset` - The value of this parameter is the name of the loopset that is assigned to the GTA. This parameter can be specified only if the SCCP Loop Detection feature is enabled. Enter the `rtrv-loopset` command to verify that the SCCP Loop Detection feature is enabled. Perform the procedure *Activating the SCCP Loop Detection Feature* on page 830, if necessary. By default, the value of the `loopset` parameter is "none" because no loopset is assigned to the GTA.

`:cggtmod` - The calling party GT modification indicator. This parameter specifies whether or not calling party global title modification is required. The values for this parameter are `yes` (calling party global title modification is required) or `no` (calling party global title modification is not required). This parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled. Enter the `rtrv-ctrl-feat` command to verify that either the AMGTT or AMGTT CgPA Upgrade feature is enabled. If the AMGTT or AMGTT CgPA Upgrade feature is not enabled, perform the *Activating the Advanced GT Modification Feature* on page 846 procedure to enable the required feature.

Note: The command line on the terminal can contain up to 150 characters. If the parameters and values specified with the `ent-gta` command are too long to fit on the `ent-gta` command line, perform the *Changing Global Title Address Information* on page 681 procedure to complete adding the GTA entry.

The Global Title Translation (GTT) feature and the Enhanced Global Title Translation (EGTT) feature must be `on` before using this command. Use the `rtrv-feat` command to verify the settings. If the features are off, turn them on using the `chg-feat:gtt=on:egtt=on` command.

Note: Once the Global Title Translation (GTT) feature and the Enhanced Global Title Translation (EGTT) feature are turned on with the `chg-feat` command, they cannot be turned off.

The GTT feature and the EGTT feature must be purchased before you turn these features on. If you are not sure whether you have purchased the GTT feature and/or the EGTT feature, contact your Tekelec Sales Representative or Account Representative.

The global title address cannot contain alphabetic characters

The GTT set name (`gttsn`) must be specified and match that of an existing GTT set name. Use the `rtrv-gttset` command to view the GTT set names. If the specified GTT set is an ANSI set, the `pc` or `pca` value must be a valid ANSI point code. If the specified GTT set is an ITU set, the `pci`, `pcn`, or `pcn24` value must be a valid ITU point code. The point code (PC) must be a full point code and cannot be out of range. If the ANSI-ITU-China SCCP Conversion feature is enabled, the domain (ANSI or ITU) of the GTT set name and point code do not have to be the same.

Note: See Chapter 2, "Configuring Destination Tables" in the *Database Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

If the Variable-Length Global Title Translation (VGTT) feature is off, shown the entry `VGTT = off`, the global title address length must be equal to the number of digits specified by the given GTT set name. The length of the global title address can be verified with the `rtrv-gttset` command.

If the Variable-Length Global Title Translation (VGTT) feature is on, shown the entry `VGTT = on`, up to 10 different length global title addresses can be assigned to a translation type. The length of the global title address is only limited by the range of values for the `gta` and `egta` parameters, one to 21 digits, and by the global title addresses already assigned to the GTT set name. The `ndgt` parameter of the `ent-gttset` command has no effect on the length of the global title address. As global title addresses of different lengths are assigned to a specific translation type, these lengths are displayed in the `NDGT` field of the `rtrv-gttset` command output, as shown in the following example.

```
rlghncxa03w 06-10-07 00:30:31 GMT EAGLE5 36.0.0
GTTSN     NETDOM  NDGT
lidb      ansi    3, 7, 10
t800      ansi    6
si000     itu     15
imsi      itu     15
abcd1234  itu     12
```

In this example of the `rtrv-gttset` command output, the GTT set `lidb` contains three different length global title addresses; global title addresses containing three digits, seven digits, and 10 digits.

If the translation type has 10 different length global title addresses assigned to it, and another global title address is specified for the GTT set name, the length of the global title address being added to the GTT set name must be the same as one of the 10 lengths already assigned to the GTT set name. If the length of the global title address does not match one of the 10 lengths already assigned to the GTT set name, the `ent-gta` command is rejected with this message.

```
E2959 Cmd Rej: No more than 10 GTA lengths supported per GTTSET for VGTT
```

If the GTT set name has less than 10 different length global title addresses assigned to it, and another global title address is specified for the GTT set name, the length of the global title address can be from one to 21 digits and does not have to match the length of the other global title addresses assigned to the GTT set name.

Go to the *Variable-length Global Title Translation Feature* on page 20 section for more information about this feature.

If the end of the global title address (`EGTA`) parameter is specified, GTA and EGTA must have the same number of digits, but EGTA must be larger than GTA. The GTA range cannot overlap a currently existing range for the specified GTT set in the active data base.

The range, as specified by the start and end global title addresses, cannot already exist in the global title translation data for the specified translation type. If the ranges overlap, the range of global title addresses cannot be split and the `ent-gta` command is rejected with this message.

```
E2401 Cmd Rej:GTA range overlaps a current range
```

Along with error message 2401, a list of the overlapped global title addresses is displayed as shown in the following example.

```
rlghncxa03w 06-10-24 08:29:15 GMT EAGLE5 36.0.0
The following GTA ranges overlap the input GTA range

START GTA               END GTA
8005550000              8005551999
8005552000              8005553999
8005554000              8005555999

ENT-GTA: MASP A - Command Aborted
```

The translate indicator (`xlat`) must be `DPCSSN` if the `SSN` parameter is specified. If the translate indicator is set to `DPCNGT`, the value of the `RI` parameter must be `GT`. If the translate indicator is set to `DPCNGT`, the new translation type (`NTT`) parameter must be specified and `NTT` parameter value must be set to `DPCNGT`.

The translation type (`tt`) must match that of an existing ANSI GTT selector which is assigned to a GTT set and may not be defined as an alias.

If a point code is the STP's True PC, then the value of the `XLAT` parameter must be set to `DPCSSN` and the value of the `RI` parameter must be set to `SSN`. If the `SSN` parameter is specified and a point code is the STP's True PC, then the subsystem number specified must exist in the SS-APPL table. This can be verified with the `rtrv-ss-appl` command. To execute the `rtrv-ss-appl` command, either the LNP or ATINP features must be enabled, or the EIR, INP, V-Flex or ANSI-41 IN Query features must be enabled and turned on. If the LNP feature is enabled, the entry `LNP TNs` with a quantity greater than zero is shown in the `rtrv-ctrl-feat` command output. If the EIR feature is enabled and turned on, the entry `EIR` is shown in the `rtrv-ctrl-feat` command output as being permanently or temporarily enabled and with the status set to on. If the INP feature is enabled and turned on, the entry `INP` is shown in the `rtrv-ctrl-feat` command output with the status set to on. If the ANSI-41 INP Query feature is enabled and turned on, the entry `ANSI-41 INP Query` is shown in the `rtrv-ctrl-feat` command output with the status set to on. If the V-Flex feature is enabled and turned on, the entry `VFLEX` is shown in the `rtrv-ctrl-feat` command output with the status set to on. If the ATINP feature is enabled and turned on, the entry `ATINP` is shown in the `rtrv-ctrl-feat` command output with the status set to on.

Note: The Local Number Portability (LNP), Equipment Identity Register (EIR), INAP Number Portability (INP), V-Flex, ATINP, or ANSI-41 INP Query features must be purchased before you can enable the LNPor ATINP features, or enable and turn on the EIR, INP, V-Flex, or ANSI-41 INP Query features. If you are not sure whether you have purchased the LNP, EIR, or INP, V-Flex, ATINP, or ANSI-41 INP Query feature, contact your Tekelec Sales Representative or Account Representative.

Once the LNP or ATINP feature is enabled with the `enable-ctrl-feat` command, or the EIR, INP, V-Flex, and ANSI-41 INP Query features are turned on with the `chg-ctrl-feat` command, they cannot be turned off or disabled.

A point code must exist as a destination in the route table or reside in a cluster that exists as a destination in the route table (for global title routing) unless the point code is the STP's true point code.

If a final GTT is specified (`ri=ssn`) with the `xlat=dpc` parameter, and the value of the `force` parameter is `no`, the point code must be in the Remote Point Code/Mated Application table. Verify this by entering the `rtrv-map` command. If this point code and subsystem number is not defined

as a mated application, perform one of these procedures to add the point code and subsystem number to the database as a mated application:

- *Provisioning a Solitary Mated Application* on page 112
- *Provisioning a Dominant Mated Application* on page 142
- *Provisioning a Load Shared Mated Application* on page 189
- *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223 .

The point code and subsystem number do not have to be in the mated application table when the `ent-gta` command is executed when these parameters are specified with the `ent-gta` command.

- `ri=gt`
- `xlat=dpcssn` and `ri=ssn` (provided the point code value is not the STP's true point code)

If the point code and subsystem are not in the mated application table when either of these parameters are specified with the `ent-gta` command, the EAGLE 5 ISS creates a solitary mated application in the mated application table using the point code and subsystem values specified in the `ent-gta` command.

If the `ccgt=yes` parameter is specified, then the `ri` parameter must be set to `ssn`. If the point code is the EAGLE 5 ISS's point code, then the value of the `ccgt` parameter must be set to `no`.

If the `xlat=udts` parameter is specified for a global title translation, messages containing the CdPA GTA, or range of GTAs, the CgPA GTA, or range of GTAs, the CgPA point code, CgPA subsystem number, or OPC is discarded. UIM 1192 "SCCP translation found: XLAT=UDTS" is generated, and a UDTS (or XUDTS for XUDT) with Return Cause = 1 "No translation for address" is also generated regardless of Message Handling value in the MSU.

If the `xlat=disc` parameter is specified for a global title translation, messages containing the CdPA GTA, or range of GTAs, the CgPA GTA, or range of GTAs, the CgPA point code, CgPA subsystem number, or OPC will be discarded. UIM 1193 "SCCP translation found: XLAT=DISCARD" is generated.

For more information on these UIMs, see the *Unsolicited Alarm and Information Messages Manual* . The following tables show the valid parameter combinations that can be used with the `xlat=udts` and `xlat-disc` parameters.

- *Table 45: GTTSN = CDGTA GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 627
- *Table 46: GTTSN = CGGTA GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 631
- *Table 47: GTTSN = CGSSN GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 634
- *Table 48: GTTSN = CGPC GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 636
- *Table 49: GTTSN = OPC GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 639

The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, and `nsds` parameters are used by the Advanced GT Modification feature to modify the numbering plan, nature of address indicator, and the prefix or suffix digits in the called party address portion of outbound MSUs in addition to the translation type when the MSU requires further global title translation and the translation type is to be replaced.

Being able to change the numbering plan, nature of address indicator, and either the prefix or suffix digits in the called party address portion of outbound MSUs makes the MSU more compatible

with the network that the MSU is being sent to and to ensure that the MSU is routed correctly. These changes are made after the global title translation process, but before the MSU is routed to its destination.

The nnp, nnai, npdd, npds, nsdd, and nsds parameters can be specified only when the Advanced GT Modification feature is enabled. This can be verified by entering the rtrv-ctrl-feat command. For more information on the Advanced GT Modification feature, refer to the *Advanced GT Modification Feature* on page 22 section.

The ngti=2 parameter can be specified only with an ANSI point code and not with the nnp and nai parameters.

The ngti=4 parameter can be specified only with an ITU point code. The nnp and nai parameters must be specified with the ngti=4 parameter.

The ngti parameter can be specified only if the domain (ANSI or ITU) of the translation type and point code of the global title translation are not the same(the translation type is ANSI and the point code is ITU or the translation type is ITU and the point code is ANSI), or if the domain of the translation type and point code is ITU. The Advanced GT Modification feature must be enabled and the ANSI-ITU-China SCCP Conversion feature must be enabled before the ngti parameter can be specified with the global title translation.

Either ccgt or ngti parameters can be specified with the ent-gta command, but both parameters cannot be specified together with the ent-gta command.

The prefix parameters (npdd and npds) and the suffix parameters (nsdd and nsds) cannot be specified with the ent-gta command at the same time. If you wish to specify these parameters, you must specify either the npdd and npds or the nsdd and nsds parameters.

The EAGLE 5 ISS can contain 269,999, 400,000, or 1,000,000 global title addresses. The system default is 269,999 global title addresses. This quantity can be increased to 400,000 by enabling the feature access key for part number 893-0061-01, or to 1,000,000 by enabling the feature access key for part number 893-0061-10. For more information on enabling these feature access keys, go to the *Enabling the XGTT Table Expansion Feature* on page 762 procedure.

Canceling the RTRV-GTA Command

Because the rtrv-gta command used in this procedure can output information for a long period of time, the rtrv-gta command can be canceled and the output to the terminal stopped. There are three ways that the rtrv-gta command can be canceled.

- Press the F9 function key on the keyboard at the terminal where the rtrv-gta command was entered.
- Enter the canc-cmd without the trm parameter at the terminal where the rtrv-gta command was entered.
- Enter the canc-cmd:trm=<xx>, where <xx> is the terminal where the rtrv-gta command was entered, from another terminal other that the terminal where the rtrv-gta 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*.

Table 44: GTA Parameter Combinations - Origin-Based SCCP Routing Feature Not Enabled

RI = GT XLAT=DPCNGT	RI = GT XLAT=DPCSSN	RI = GT XLAT=DPC	RI = SSN XLAT=DPCSSN	RI = SSN XLAT=DPC
Mandatory Parameters				
GTTSN	GTTSN	GTTSN	GTTSN	GTTSN
PC/PCA/PCI/ PCN/PCN24 (See Notes 1, 2, and 11)	PC/PCA/PCI/ PCN/PCN24 (See Notes 1, 2, and 11)	PC/PCA/PCI/ PCN/PCN24 (See Notes 1, 2, and 11)	PC/PCA/PCI/ PCN/PCN24 (See Notes 1, 2, and 11)	PC/PCA/PCI/ PCN/PCN24 (See Notes 1, 2, and 11)
GTA (See Notes 3, 4, 5, and 17)	GTA (See Notes 3, 4, 5, and 17)	GTA (See Notes 3, 4, 5, and 17)	GTA (See Notes 3, 4, 5, and 17)	GTA (See Notes 3, 4, 5, and 17)
NTT	SSN		SSN	
Optional Parameters				
EGTA	EGTA	EGTA	EGTA	EGTA
NNP (See Notes 6, 8, and 9)	NNP (See Notes 6, 8, and 9)	NNP (See Notes 6, 8, and 9)	NNP (See Notes 6, 8, and 9)	NNP (See Notes 6, 8, and 9)
NNAI (See Notes 6, 8, and 9)	NNAI (See Notes 6, 8, and 9)	NNAI (See Notes 6, 8, and 9)	NNAI (See Notes 6, 8, and 9)	NNAI (See Notes 6, 8, and 9)
NPDD (See Notes 6 and 10)	NPDD (See Notes 6 and 10)	NPDD (See Notes 6 and 10)	NPDD (See Notes 6 and 10)	NPDD (See Notes 6 and 10)
NPDS (See Notes 6, 10, and 17)	NPDS (See Notes 6, 10, and 17)	NPDS (See Notes 6, 10, and 17)	NPDS (See Notes 6, 10, and 17)	NPDS (See Notes 6, 10, and 17)
NSDD (See Notes 6 and 10)	NSDD (See Notes 6 and 10)	NSDD (See Notes 6 and 10)	NSDD (See Notes 6 and 10)	NSDD (See Notes 6 and 10)
NSDS (See Notes 6, 10, and 17)	NSDS (See Notes 6, 10, and 17)	NSDS (See Notes 6, 10, and 17)	NSDS (See Notes 6, 10, and 17)	NSDS (See Notes 6, 10, and 17)
NGTI (See Notes 6, 8, 9, and 14)	NGTI (See Notes 6, 8, 9, and 14)	NGTI (See Notes 6, 8, 9, and 14)	NGTI (See Notes 6, 8, 9, and 14)	NGTI (See Notes 6, 8, 9, and 14)

RI = GT XLAT=DPCNGT	RI = GT XLAT=DPCSSN	RI = GT XLAT=DPC	RI = SSN XLAT=DPCSSN	RI = SSN XLAT=DPC
MRNSET (See Note 12)	MRNSET (See Note 12)	MRNSET (See Note 12)	CCGT (See Notes 13 and 14)	CCGT (See Note 14)
LOOPSET (See Note 18)	LOOPSET (See Note 18)	NTT (See Note 7)	MAPSET (See Note 16)	FORCE (See Note 15)
CGGTMOD (See Note 19)	CGGTMOD (See Note 19)	LOOPSET (See Note 18)	LOOPSET (See Note 18)	MAPSET (See Note 16)
		CGGTMOD (See Note 19)	CGGTMOD (See Note 19)	LOOPSET (See Note 18)
				CGGTMOD (See Note 19)

Parameter Values:

GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output.

GTA – 1 - 21 digits or 1 - 21 hexadecimal digits

PC / PCA / PCI / PCN / PCN24 – See Note 1

SSN – 0 - 255

NTT – 0 - 255

EGTA – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = same as the **GTA** value

CCGT – yes, no. Default = no

FORCE – yes, no. Default = no

LOOPSET – Loopset name from the `rtrv-loopset` output

CGGTMOD – yes, no. Default = no

NNP – 0 - 15. Default = 0xFFFF

NNAI – 0 - 127. Default = 0xFFFF

NPDD – 0 - 21. Default = 0

NPDS – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = no digits

NSDD – 0 - 21. Default = 0

NSDS – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = no digits

NGTI – 2, 4. Default = not applicable

MRNSET – MRN set ID from the `rtrv-mrn` output

MAPSET – MAP set ID from the `rtrv-map` output

Notes:

1. The `pc/pca/pci/pcn/pcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes to the global title address (GTA).
   - `pc/pca` = ANSI point code
   - `pci` = ITU-I or ITU-I spare point code
   - `pcn` = 14-bit ITU-N or 14-bit ITU-N spare point code
   - `pcn24` = 24-bit ITU-N point code.

RI = GT XLAT=DPCNGT	RI = GT XLAT=DPCSSN	RI = GT XLAT=DPC	RI = SSN XLAT=DPCSSN	RI = SSN XLAT=DPC

2. The domain (ANSI or ITU) of the point code and GTT set must be the same, unless the ANSI-ITU-China SCCP Conversion feature is enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, a GTA may contain an ANSI point code and an ITUGTT set, or an ITU point code and an ANSIGTT set. The CROSSGTT set, a GTT set containing the `NETDOM` value `CROSS`, can be specified with either ANSI or ITU point codes.
3. If the VGTT feature is on, shown by the `VGTT = on` entry in the `rtrv-feat` output, and the GTT set name contains 10 different length GTAs, the length of the GTA must match any existing GTA assigned to the GTT set name .
4. If the GTT set name contains less than 10 different length GTAs, the length of the GTA can be from 1 to 21 digits.
5. If the VGTT feature is off, the length of the GTA must contain the number of digits defined by the `NDGT` field of the `rtrv-gttset` output.
6. The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, and `nsds` parameters can be specified only if the Advanced GT Modification feature is enabled. The `ngti` parameter can be specified only if the Advanced GT Modification feature is enabled and if the ANSI-ITU-China SCCP Conversion feature is enabled.
7. The `xlat=dpc` parameter can be specified with the `ntt` parameter only if the ANSI-ITU-China SCCP Conversion feature is enabled.
8. The `ngti=2` parameter can be specified only with an ANSI point code, and not with the `nnp` and `nnai` parameters.
9. The `ngti=4` parameter can be specified only with an ITU point code, and the `nnp` and `nnai` parameters must also be specified for the GTA.
10. The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified in the `ent-gta` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters.
11. If the point code is the EAGLE 5 ISS's point code, then the `xlat` parameter value must be `dpcssn` and the `ri` parameter value must be `ssn`.
12. The `mrnset` parameter can be specified only, and must be specified, if the Flexible GTTLoad Sharing feature is enabled.
13. If the point code is the EAGLE 5 ISS's point code, then the value of the `ccgt` parameter must be set to `no`.
14. Either `ccgt` or `ngti` parameters can be specified with the `ent-gta` command, but both parameters cannot be specified together with the `ent-gta` command.
15. If the `pc/pca/pci/pcn/pcn24` parameter value is not shown in the `rtrv-map` output, the `force=yes` parameter must be specified with the `ent-gta` command.
16. The `mapset` parameter can be specified only, and must be specified, if the Flexible GTTLoad Sharing feature is enabled.
17. Hexadecimal digits (0-9, a-f, A-F) can be specified for the `gta`, `egta`, `npds`, or `nsds` parameters only if the Hex Digit support for GTT feature is enabled.
18. The `loopset` parameter can be specified only if the SCCP Loop Detection feature is enabled.
19. The `cggtmod` parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled.

Table 45: GTTSN = CDGTA GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled

GTTSN XLAT=DPCNGT, DPCSSN, or DPC	GTTSN CGGTASN XLAT=DPCNGT, DPCSSN, or DPC	GTTSN OPCSN XLAT=DPCNGT, DPCSSN, or DPC	GTTSN CGPCSN XLAT=DPCNGT, DPCSSN, or DPC	GTTSN XLAT=DISC, or UDTS
Mandatory Parameters				
RI = GT, SSN (See Notes 11 and 17)	RI = GT, SSN (See Notes 11 and 17)	RI = GT, SSN (See Notes 11 and 17)	RI = GT, SSN (See Notes 11 and 17)	GTA (See Notes 3, 4, 5, and 20)
PC/PCA/PCI/PCN/ PCN24 (See Notes 1, 2, 11, and 13)	PC/PCA/PCI/PCN/ PCN24 (See Notes 1, 2, 11, and 13)	PC/PCA/PCI/PCN/ PCN24 (See Notes 1, 2, 11, and 13)	PC/PCA/PCI/PCN/ PCN24 (See Notes 1, 2, 11, and 13)	
GTA (See Notes 3, 4, 5, and 20)	GTA (See Notes 3, 4, 5, and 20)	GTA (See Notes 3, 4, 5, and 20)	GTA (See Notes 3, 4, 5, and 20)	
Optional Parameters				
SSN (See Note 18)	SSN (See Note 18)	SSN (See Note 18)	SSN (See Note 18)	
NTT (See Note 7)	NTT (See Note 7)	NTT (See Note 7)	NTT (See Note 7)	
SELID	OPCSN	CGGTASN (See Note 19)	OPCSN	
EGTA	EGTA	CGPCSN (See Note 19)	EGTA	
FORCE (See Note 15)	FORCE (See Note 15)	EGTA	FORCE (See Note 15)	
CCGT (See Notes 13 and 14)	CCGT (See Notes 13 and 14)	FORCE (See Note 15)	CCGT (See Note 13 and 14)	
NNP (See Notes 6, 8, and 9)	NNP (See Notes 6, 8, and 9)	CCGT (See Notes 13 and 14)	NNP (See Notes 6, 8, and 9)	
NNAI (See Notes 6, 8, and 9)	NNAI (See Notes 6, 8, and 9)	NNP (See Notes 6, 8, and 9)	NNAI (See Notes 6, 8, and 9)	

GTTSN XLAT=DPCNGT, DPCSSN, or DPC	GTTSN CGGTASN XLAT=DPCNGT, DPCSSN, or DPC	GTTSN OPCSN XLAT=DPCNGT, DPCSSN, or DPC	GTTSN CGPCSN XLAT=DPCNGT, DPCSSN, or DPC	GTTSN XLAT=DISC, or UDTS
NPDD (See Notes 6 and 10)	NPDD (See Notes 6 and 10)	NNAI (See Notes 6, 8, and 9)	NPDD (See Notes 6 and 10)	
NPDS (See Notes 6, 10, and 20)	NPDS (See Notes 6, 10, and 20)	NPDD (See Notes 6, 10, and 20)	NPDS (See Notes 6, 10, and 20)	
NSDD (See Notes 6 and 10)	NSDD (See Notes 6 and 10)	NPDS (See Notes 6 and 10)	NSDD (See Notes 6 and 10)	
NSDS (See Notes 6, 10, and 20)	NSDS (See Notes 6, 10, and 20)	NSDD (See Notes 6, 10, and 20)	NSDS (See Notes 6, 10, and 20)	
NGTI (See Notes 6, 8, 9, and 14)	NGTI (See Notes 6, 8, 9, and 14)	NSDS (See Notes 6 and 10)	NGTI (See Notes 6, 8, 9, and 14)	
MRNSET (See Note 12)	MRNSET (See Note 12)	NGTI (See Notes 6, 8, 9, and 14)	MRNSET (See Note 12)	
MAPSET (See Note 16)	MAPSET (See Note 16)	MRNSET (See Note 12)	MAPSET (See Note 16)	
LOOPSET (See Note 21)	LOOPSET (See Note 21)	MAPSET (See Note 16)	LOOPSET (See Note 21)	
CGGTMOD (See Note 22)	CGGTMOD (See Note 22)	LOOPSET (See Note 21)	CGGTMOD (See Note 22)	
		CGGTMOD (See Note 22)		

Parameter Values:

GTTSN – The GTT set name from the `GTTSN` column of the`rtrv-gttset` output containing the value `CDGTA` in the `SETTYPE` column.

GTA – 1 - 21 digits or 1 - 21 hexadecimal digits

PC / PCA / PCI / PCN / PCN24 – See Note 1

SSN – 0 - 255. Default = no **SSN** value specified.

NTT – 0 - 255. Default = no **NTT** value specified.

NNAI – 0 - 127. Default = 0xFFFF

NPDD – 0 - 21. Default = 0

NPDS – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = no digits

NSDD – 0 - 21. Default = 0

NSDS – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = no digits

GTTSN XLAT=DPCNGT, DPCSSN, or DPC	GTTSN CGGTASN XLAT=DPCNGT, DPCSSN, or DPC	GTTSN OPCSN XLAT=DPCNGT, DPCSSN, or DPC	GTTSN CGPCSN XLAT=DPCNGT, DPCSSN, or DPC	GTTSN XLAT=DISC, or UDTS
EGTA – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = same as **GTA** value **CCGT** – yes, no. Default = no **FORCE** – yes, no. Default = no **SELID** – 0 - 65534. Default = no SELID value specified. **CGGTASN** – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGGTA` in the `SETTYPE` column. Default = no **CGGTASN** value specified. **NNP** – 0 - 15. Default = 0xFFFF **LOOPSET** – Loopset name from the `rtrv-loopset` output **CGGTMOD** – yes, no. Default = no			**NGTI** – 2, 4. Default = not applicable **MRNSET** – MRN set ID from the `rtrv-mrn` output **MAPSET** – MAP set ID from the `rtrv-map` output **OPCSN** – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `OPC` in the `SETTYPE` column. Default = no **OPCSN** value specified. **CGPCSN** – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGPC` in the `SETTYPE` column. Default = no **CGPCSN** value specified.	

Notes:

1. The `pc/pca/pci/pcn/pcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes to the global title address (GTA).
   - `pc/pca` = ANSI point code
   - `pci` = ITU-I or ITU-I spare point code
   - `pcn` = 14-bit ITU-N or 14-bit ITU-N spare point code
   - `pcn24` = 24-bit ITU-N point code.
2. The domain (ANSI or ITU) of the point code and GTT set must be the same, unless the ANSI-ITU-China SCCP Conversion feature is enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, a GTA may contain an ANSI point code and an ITUGTT set, or an ITU point code and an ANSIGTT set. The GTT sets can be specified with the `gttsn`, `cggtasn`, `cgpcsn`, or `opcsn` parameters. The CROSSGTT set, a GTT set containing the `NETDOM` value `CROSS`, can be specified with either ANSI or ITU point codes, but can be specified only with the `gttsn` parameter.
3. If the VGTT feature is on, shown by the `VGTT = on` entry in the `rtrv-feat` output, and the GTT set name contains 10 different length GTAs, the length of the GTA must match any existing GTA assigned to the GTT set name.
4. If the GTT set name contains less than 10 different length GTAs, the length of the GTA can be from 1 to 21 digits.
5. If the VGTT feature is off, the length of the GTA must contain the number of digits defined by the `NDGT` field of the `rtrv-gttset` output.

GTTSN XLAT=DPCNGT, DPCSSN, or DPC	GTTSN CGGTASN XLAT=DPCNGT, DPCSSN, or DPC	GTTSN OPCSN XLAT=DPCNGT, DPCSSN, or DPC	GTTSN CGPCSN XLAT=DPCNGT, DPCSSN, or DPC	GTTSN XLAT=DISC, or UDTS

6. The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, and `nsds` parameters can be specified only if the Advanced GT Modification feature is enabled. The `ngti` parameter can be specified only if the Advanced GT Modification feature is enabled and if the ANSI-ITU-China SCCP Conversion feature is enabled.
7. If the `xlat` parameter value is `dpcngt`, the `ntt` parameter must be specified. The `ntt` parameter value can be specified with the `xlat=dpc` parameter only if the ANSI-ITU-China SCCP Conversion feature is enabled.
8. The `ngti=2` parameter can be specified only with an ANSI point code, and not with the `nnp` and `nnai` parameters.
9. The `ngti=4` parameter can be specified only with an ITU point code, and the `nnp` and `nnai` parameters must also be specified for the GTA.
10. The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified in the `ent-gta` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters.
11. If the point code is the EAGLE 5 ISS's point code, then the `xlat` parameter value must be `dpcssn` and the `ri` parameter value must be `ssn`.
12. The `mrnset` parameter can be specified only, and must be specified, if the Flexible GTTLoad Sharing feature is enabled. The `mrnset` parameter can be specified only if the `ri` parameter value is `gt`.
13. If the point code is the EAGLE 5 ISS's point code, then the value of the `ccgt` parameter must be set to `no`.
14. Either `ccgt` or `ngti` parameters can be specified with the `ent-gta` command, but both parameters cannot be specified together with the `ent-gta` command.
15. The `force` parameter can be specified only if the `ri` parameter is `ssn` and the `xlat` parameter value is `dpc`. If the `pc/pca/pci/pcn/pcn24` parameter value is not shown in the `rtrv-map` output, the `force=yes` parameter must be specified with the `ent-gta` command.
16. The `mapset` parameter can be specified only, and must be specified, if the Flexible GTTLoad Sharing feature is enabled. The `mapset` parameter can be specified only if the `ri` parameter value is `ssn`.
17. If the `ri` parameter value is `gt`, the `xlat` parameter value can be `dpcngt`, `dpcssn`, or `dpc`. If the `ri` parameter value is `ssn`, the `xlat` parameter value can be `dpcssn` or `dpc`.
18. The `ssn` parameter can be specified, and must be specified, only if the `xlat` parameter is `dpcssn`.
19. If the `cggtasn` parameter is specified, the `cgpcsn` parameter cannot be specified. If the `cgpcsn` parameter is specified, the `cggtasn` parameter cannot be specified.
20. Hexadecimal digits (0-9, a-f, A-F) can be specified for the `gta`, `egta`, `npds`, or `nsds` parameters only if the Hex Digit support for GTT feature is enabled.
21. The `loopset` parameter can be specified only if the SCCP Loop Detection feature is enabled.
22. The `cggtmod` parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled.

Table 46: GTTSN = CGGTA GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC	XLAT=DISC, XLAT=UDTS
Mandatory Parameters	
GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGGTA` in the `SETTYPE` column.	GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGGTA` in the `SETTYPE` column.
RI = GT, SSN (See Notes 11 and 17)	GTA– 1 - 21 digits or 1 - 21 hexadecimal digits (See Notes 3, 4, 5, and 19)
PC/PCA/PCI/PCN/PCN24 (See Notes 1, 2, 11, and 13)	
GTA– 1 - 21 digits or 1 - 21 hexadecimal digits (See Notes 3, 4, 5, and 19)	
Optional Parameters	
CGSSNSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGSSN` in the `SETTYPE` column. Default = no **CGSSNSN** value specified	
SSN – 0 - 255. Default = no **SSN** value specified (See Note 18)	
NTT – 0 - 255. Default = no **NTT** value specified. (See Note 7)	
EGTA – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = same as **GTA** value	
FORCE – yes, no. Default = no (See Note 15)	
CCGT – yes, no. Default = no (See Notes 13 and 14)	
NNP – 0 - 15. Default = 0xFFFF (See Notes 6, 8, and 9)	

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC	XLAT=DISC, XLAT=UDTS
NNAI – 0 - 127. Default = 0xFFFF (See Notes 6, 8, and 9)	
NPDD – 0 - 21. Default = 0 (See Notes 6 and 10)	
NPDS – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = no digits (See Notes 6, 10, and 19)	
NSDD – 0 - 21. Default = 0 (See Notes 6 and 10)	
NSDS – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = no digits (See Notes 6, 10, and 19)	
NGTI – 2, 4. Default = not applicable (See Notes 6, 8, 9, and 14)	
MRNSET – MRN set ID from the `rtrv-mrn` output (See Note 12)	
MAPSET – MAP set ID from the `rtrv-map` output (See Note 16)	
LOOPSET – Loopset name from the `rtrv-loopset` output (See Note 20)	
CGGTMOD – yes, no. Default = no (See Note 21)	

Notes:

1. The `pc/pca/pci/pcn/pcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes to the global title address (GTA)
   - `pc/pca` = ANSI point code
   - `pci` = ITU-I or ITU-I spare point code
   - `pcn` = 14-bit ITU-N or 14-bit ITU-N spare point code
   - `pcn24` = 24-bit ITU-N point code.
2. The domain (ANSI or ITU) of the point code and GTT set must be the same, unless the ANSI-ITU-China SCCP Conversion feature is enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, a GTA may contain an ANSI point code and an ITUGTT set, or an ITU point code and an ANSIGTT set. The GTT sets can be specified with the `gttsn` or `cgssnsn` parameters. The CROSSGTT set, a GTT set containing the `NETDOM` value `CROSS`, cannot be specified for the `gttsn` parameter value in this procedure.

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC	XLAT=DISC, XLAT=UDTS

3. If the VGTT feature is on, shown by the `VGTT = on` entry in the `rtrv-feat` output, and the GTT set name contains 10 different length GTAs, the length of the GTA must match any existing GTA assigned to the GTT set name.
4. If the GTT set name contains less than 10 different length GTAs, the length of the GTA can be from 1 to 21 digits.
5. If the VGTT feature is off, the length of the GTA must contain the number of digits defined by the `NDGT` field of the `rtrv-gttset` output.
6. The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, and `nsds` parameters can be specified only if the Advanced GT Modification feature is enabled. The `ngti` parameter can be specified only if the Advanced GT Modification feature is enabled and if the ANSI-ITU-China SCCP Conversion feature is enabled.
7. If the `xlat` parameter value is `dpcngt`, the `ntt` parameter must be specified. The `ntt` parameter value can be specified with the `xlat=dpc` parameter only if the ANSI-ITU-China SCCP Conversion feature is enabled.
8. The `ngti=2` parameter can be specified only with an ANSI point code, and not with the `nnp` and `nnai` parameters.
9. The `ngti=4` parameter can be specified only with an ITU point code, and the `nnp` and `nnai` parameters must also be specified for the GTA.
10. The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified in the `ent-gta` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters.
11. If the point code is the EAGLE 5 ISS's point code, then the `xlat` parameter value must be `dpcssn` and the `ri` parameter value must be `ssn`.
12. The `mrnset` parameter can be specified only, and must be specified, if the Flexible GTTLoad Sharing feature is enabled. The `mrnset` parameter can be specified only if the `ri` parameter value is `gt`.
13. If the point code is the EAGLE 5 ISS's point code, then the value of the `ccgt` parameter must be set to `no`.
14. Either `ccgt` or `ngti` parameters can be specified with the `ent-gta` command, but both parameters cannot be specified together with the `ent-gta` command.
15. The `force` parameter can be specified only if the `ri` parameter is `ssn` and the `xlat` parameter value is `dpc`. If the `pc/pca/pci/pcn/pcn24` parameter value is not shown in the `rtrv-map` output, the `force=yes` parameter must be specified with the `ent-gta` command.
16. The `mapset` parameter can be specified only, and must be specified, if the Flexible GTTLoad Sharing feature is enabled. The `mapset` parameter can be specified only if the `ri` parameter value is `ssn`.
17. If the `ri` parameter value is `gt`, the `xlat` parameter value can be `dpcngt`, `dpcssn`, or `dpc`. If the `ri` parameter value is `ssn`, the `xlat` parameter value can be `dpcssn` or `dpc`.
18. The `ssn` parameter can be specified, and must be specified, only if the `xlat` parameter is `dpcssn`.
19. Hexadecimal digits (0-9, a-f, A-F) can be specified for the `gta`, `egta`, `npds`, or `nsds` parameters only if the Hex Digit support for GTT feature is enabled.
20. The `loopset` parameter can be specified only if the SCCP Loop Detection feature is enabled.
21. The `cggtmod` parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled.

Table 47: GTTSN = CGSSN GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC	XLAT=DISC, XLAT=UDTS
Mandatory Parameters	
GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGSSN` in the `SETTYPE` column	GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGSSN` in the `SETTYPE` column
RI = GT, SSN (See Notes 8 and 14)	CGSSN – 0 - 255
PC/PCA/PCI/PCN/PCN24 (See Notes 1, 2, 8, and 10)	
CGSSN – 0 - 255	
Optional Parameters	
SSN – 0 - 255. Default = no **SSN** value specified. (See Note 15)	
NTT – 0 - 255. Default = no **NTT** value specified. (See Note 4)	
ECGSSN – 0 - 255. Default = no **ECGSSN** value specified.	
FORCE – yes, no. Default = no (See Note 12)	
CCGT – yes, no. Default = no (See Notes 10 and 11)	
NNP – 0 - 15. Default = 0xFFFF (See Notes 3, 5, and 6)	
NNAI – 0 - 127. Default = 0xFFFF (See Notes 3, 5, and 6)	
NPDD – 0 - 21. Default = 0 (See Notes 3 and 7)	
NPDS – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = no digits (See Notes 3, 7, and 16)	

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC	XLAT=DISC, XLAT=UDTS
NSDD – 0 - 21. Default = 0 (See Notes 3 and 7)	
NSDS – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = no digits (See Notes 3, 7, and 16)	
NGTI – 2, 4. Default = not applicable (See Notes 3, 5, 6, and 11)	
MRNSET – MRN set ID from the `rtrv-mrn` output (See Note 9)	
MAPSET – MAP set ID from the `rtrv-map` output (See Note 13)	
LOOPSET – Loopset name from the `rtrv-loopset` output (See Note 17)	
CGGTMOD – yes, no. Default = no (See Note 18)	

Notes:

1. The `pc/pca/pci/pcn/pcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes to the CGSSN.
   - `pc/pca` = ANSI point code
   - `pci` = ITU-I or ITU-I spare point code
   - `pcn` = 14-bit ITU-N or 14-bit ITU-N spare point code
   - `pcn24` = 24-bit ITU-N point code.
2. The domain (ANSI or ITU) of the point code and GTT set must be the same, unless the ANSI-ITU-China SCCP Conversion feature is enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, a GTA may contain an ANSI point code and an ITUGTT set, or an ITU point code and an ANSIGTT set. The GTT sets can be specified with the `gttsn` parameter. The CROSSGTT set, a GTT set containing the `NETDOM` value `CROSS`, cannot be specified for the `gttsn` parameter value in this procedure.
3. The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, and `nsds` parameters can be specified only if the Advanced GT Modification feature is enabled. The `ngti` parameter can be specified only if the Advanced GT Modification feature is enabled and if the ANSI-ITU-China SCCP Conversion feature is enabled.
4. If the `xlat` parameter value is `dpcngt`, the `ntt` parameter must be specified. The `ntt` parameter value can be specified with the `xlat=dpc` parameter only if the ANSI-ITU-China SCCP Conversion feature is enabled.
5. The `ngti=2` parameter can be specified only with an ANSI point code, and not with the `nnp` and `nnai` parameters.

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC	XLAT=DISC, XLAT=UDTS
6. The `ngti=4` parameter can be specified only with an ITU point code, and the `nnp` and `nnai` parameters must also be specified for the GTA. **7.** The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified in the `ent-gta` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters. **8.** If the point code is the EAGLE 5 ISS's point code, then the `xlat` parameter value must be `dpcssn` and the `ri` parameter value must be `ssn`. **9.** The `mrnset` parameter can be specified only, and must be specified, if the Flexible GTTLoad Sharing feature is enabled. The `mrnset` parameter can be specified only if the `ri` parameter value is `gt`. **10.** If the point code is the EAGLE 5 ISS's point code, then the value of the `ccgt` parameter must be set to `no`. **11.** Either `ccgt` or `ngti` parameters can be specified with the `ent-gta` command, but both parameters cannot be specified together with the `ent-gta` command. **12.** The `force` parameter can be specified only if the `ri` parameter is `ssn` and the `xlat` parameter value is `dpc`. If the `pc/pca/pci/pcn/pcn24` parameter value is not shown in the `rtrv-map` output, the `force=yes` parameter must be specified with the `ent-gta` command. **13.** The `mapset` parameter can be specified only, and must be specified, if the Flexible GTTLoad Sharing feature is enabled. The `mapset` parameter can be specified only if the `ri` parameter value is `ssn`. **14.** If the `ri` parameter value is `gt`, the `xlat` parameter value can be `dpcngt`, `dpcssn`, or `dpc`. If the `ri` parameter value is `ssn`, the `xlat` parameter value can be `dpcssn` or `dpc`. **15.** The `ssn` parameter can be specified, and must be specified, only if the `xlat` parameter is `dpcssn`. **16.** Hexadecimal digits (0-9, a-f, A-F) can be specified for the `gta`, `egta`, `npds`, or `nsds` parameters only if the Hex Digit support for GTT feature is enabled. **17.** The `loopset` parameter can be specified only if the SCCP Loop Detection feature is enabled. **18.** The `cggtmod` parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled.	

Table 48: GTTSN = CGPC GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC	XLAT=DISC, XLAT=UDTS
Mandatory Parameters	
GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGPC` in the `SETTYPE` column.	GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGPC` in the `SETTYPE` column.

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC	XLAT=DISC, XLAT=UDTS
RI = GT, SSN (See Notes 8 and 14)	CGPC/CGPCA/CGPCI/CGPCN/CGPCN24 (See Notes 1, 2, 8, and 10)
PC/PCA/PCI/PCN/PCN24 (See Notes 1, 2, 8, and 10)	
CGPC/CGPCA/CGPCI/CGPCN/CGPCN24 (See Notes 1, 2, 8, and 10)	
Optional Parameters	
SSN – 0 - 255. Default = no **SSN** value specified. (See Note 15)	
NTT – 0 - 255. Default = no **NTT** value specified. (See Note 4)	
CGSSNSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGSSN` in the `SETTYPE` column.	
FORCE – yes, no. Default = no (See Note 12)	
CCGT – yes, no. Default = no (See Notes 10 and 11)	
NNP – 0 - 15. Default = 0xFFFF (See Notes 3, 5, and 6)	
NNAI – 0 - 127. Default = 0xFFFF (See Notes 3, 5, and 6)	
NPDD – 0 - 21. Default = 0 (See Notes 3 and 7)	
NPDS – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = no digits (See Notes 3, 7, and 16)	
NSDD – 0 - 21. Default = 0 (See Notes 3 and 7)	
NSDS – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = no digits (See Notes 3, 7, and 16)	

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC	XLAT=DISC, XLAT=UDTS
NGTI – 2, 4. Default = not applicable (See Notes 3, 5, 6, and 11)	
MRNSET – MRN set ID from the `rtrv-mrn` output (See Note 9)	
MAPSET – MAP set ID from the `rtrv-map` output (See Note 13)	
LOOPSET – Loopset name from the `rtrv-loopset` output (See Note 17)	
CGGTMOD – yes, no. Default = no (See Note 18)	

Notes:

1. The `pc/pca/pci/pcn/pcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes as the translated point code. The `cgpc/cgpca/cgpci/cgpcn/cgpcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes as the CGPC parameter values.
   - `pc/pca` and `cgpc/cgpca` = ANSI point code
   - `pci` and `cgpci` = ITU-I or ITU-I spare point code
   - `pcn` and `cgpcn` = 14-bit ITU-N or 14-bit ITU-N spare point code
   - `pcn24` and `cgpcn24` = 24-bit ITU-N point code.
2. The domain (ANSI or ITU) of the point code and GTT set must be the same, unless the ANSI-ITU-China SCCP Conversion feature is enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, a GTA may contain an ANSI point code and an ITUGTT set, or an ITU point code and an ANSIGTT set. The GTT sets can be specified with the `gttsn` or `cgssnsn` parameters. The CROSSGTT set, a GTT set containing the `NETDOM` value `CROSS`, cannot be specified for the `gttsn` parameter value in this procedure.
3. The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, and `nsds` parameters can be specified only if the Advanced GT Modification feature is enabled. The `ngti` parameter can be specified only if the Advanced GT Modification feature is enabled and if the ANSI-ITU-China SCCP Conversion feature is enabled.
4. If the `xlat` parameter value is `dpcngt`, the `ntt` parameter must be specified. The `ntt` parameter value can be specified with the `xlat=dpc` parameter only if the ANSI-ITU-China SCCP Conversion feature is enabled.
5. The `ngti=2` parameter can be specified only with an ANSI point code, and not with the `nnp` and `nnai` parameters.
6. The `ngti=4` parameter can be specified only with an ITU point code, and the `nnp` and `nnai` parameters must also be specified for the GTA.

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC	XLAT=DISC, XLAT=UDTS
7. The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified in the `ent-gta` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters. **8.** If the point code is the EAGLE 5 ISS's point code, then the `xlat` parameter value must be `dpcssn` and the `ri` parameter value must be `ssn`. **9.** The `mrnset` parameter can be specified only, and must be specified, if the Flexible GTTLoad Sharing feature is enabled. The `mrnset` parameter can be specified only if the `ri` parameter value is `gt`. **10.** If the point code is the EAGLE 5 ISS's point code, then the value of the `ccgt` parameter must be set to `no`. **11.** Either `ccgt` or `ngti` parameters can be specified with the `ent-gta` command, but both parameters cannot be specified together with the `ent-gta` command. **12.** The `force` parameter can be specified only if the `ri` parameter is `ssn` and the `xlat` parameter value is `dpc`. If the `pc/pca/pci/pcn/pcn24` parameter value is not shown in the `rtrv-map` output, the `force=yes` parameter must be specified with the `ent-gta` command. **13.** The `mapset` parameter can be specified only, and must be specified, if the Flexible GTTLoad Sharing feature is enabled. The `mapset` parameter can be specified only if the `ri` parameter value is `ssn`. **14.** If the `ri` parameter value is `gt`, the `xlat` parameter value can be `dpcngt`, `dpcssn`, or `dpc`. If the `ri` parameter value is `ssn`, the `xlat` parameter value can be `dpcssn` or `dpc`. **15.** The `ssn` parameter can be specified, and must be specified, only if the `xlat` parameter is `dpcssn`. **16.** Hexadecimal digits (0-9, a-f, A-F) can be specified for the `gta`, `egta`, `npds`, or `nsds` parameters only if the Hex Digit support for GTT feature is enabled. **17.** The `loopset` parameter can be specified only if the SCCP Loop Detection feature is enabled. **18.** The `cggtmod` parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled.	

Table 49: GTTSN = OPC GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC	XLAT=DISC, XLAT=UDTS
Mandatory Parameters	
GTTSN– The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `OPC` in the `SETTYPE` column.	GTTSN– The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `OPC` in the `SETTYPE` column.
RI = GT, SSN (See Notes 8 and 14)	OPC/OPCA/OPCI/OPCN/OPCN24 (See Notes 1, 2, 8, and 10)

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC	XLAT=DISC, XLAT=UDTS
PC/PCA/PCI/PCN/PCN24 (See Notes 1, 2, 8, and 10)	
OPC/OPCA/OPCI/OPCN/OPCN24 (See Notes 1, 2, 8, and 10)	
Optional Parameters	
SSN – 0 - 255. Default = no **SSN** value specified. (See Note 15)	
NTT – 0 - 255. Default = no **NTT** value specified. (See Note 4)	
CGSSNSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGSSN` in the `SETTYPE` column.	
FORCE – yes, no. Default = no (See Note 12)	
CCGT – yes, no. Default = no (See Notes 10 and 11)	
NNP – 0 - 15. Default = 0xFFFF (See Notes 3, 5, and 6)	
NNAI – 0 - 127. Default = 0xFFFF (See Notes 3, 5, and 6)	
NPDD – 0 - 21. Default = 0 (See Notes 3 and 7)	
NPDS – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = no digits (See Notes 3, 7, and 16)	
NSDD – 0 - 21. Default = 0 (See Notes 3 and 7)	
NSDS – 1 - 21 digits or 1 - 21 hexadecimal digits. Default = no digits (See Notes 3, 7, and 16)	
NGTI – 2, 4. Default = not applicable (See Notes 3, 5, 6, and 11)	

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC	XLAT=DISC, XLAT=UDTS
MRNSET – MRN set ID from the `rtrv-mrn` output (See Note 9)	
MAPSET – MAP set ID from the `rtrv-map` output (See Note 13)	
LOOPSET – Loopset name from the `rtrv-loopset` output (See Note 17)	
CGGTMOD – yes, no. Default = no (See Note 18)	

Notes:

1. The `pc/pca/pci/pcn/pcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes as the translated point code. The `opc/opca/opci/opcn/opcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes as the OPC parameter values.
   - `pc/pca` and `opc/opca` = ANSI point code
   - `pci` and `opci` = ITU-I or ITU-I spare point code
   - `pcn` and `opcn` = 14-bit ITU-N or 14-bit ITU-N spare point code
   - `pcn24` and `opcn24` = 24-bit ITU-N point code.
2. The domain (ANSI or ITU) of the point code and GTT set must be the same, unless the ANSI-ITU-China SCCP Conversion feature is enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, a GTA may contain an ANSI point code and an ITUGTT set, or an ITU point code and an ANSIGTT set. The GTT sets can be specified with the `gttsn` or `cgssnsn` parameters. The CROSSGTT set, a GTT set containing the `NETDOM` value `CROSS`, cannot be specified for the `gttsn` parameter value in this procedure.
3. The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, and `nsds` parameters can be specified only if the Advanced GT Modification feature is enabled. The `ngti` parameter can be specified only if the Advanced GT Modification feature is enabled and if the ANSI-ITU-China SCCP Conversion feature is enabled.
4. If the `xlat` parameter value is `dpcngt`, the `ntt` parameter must be specified. The `ntt` parameter value can be specified with the `xlat=dpc` parameter only if the ANSI-ITU-China SCCP Conversion feature is enabled.
5. The `ngti=2` parameter can be specified only with an ANSI point code, and not with the `nnp` and `nnai` parameters.
6. The `ngti=4` parameter can be specified only with an ITU point code, and the `nnp` and `nnai` parameters must also be specified for the GTA.
7. The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified in the `ent-gta` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters.

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC	XLAT=DISC, XLAT=UDTS

8. If the point code is the EAGLE 5 ISS's point code, then the `xlat` parameter value must be `dpcssn` and the `ri` parameter value must be `ssn`.
9. The `mrnset` parameter can be specified only, and must be specified, if the Flexible GTTLoad Sharing feature is enabled. The `mrnset` parameter can be specified only if the `ri` parameter value is `gt`.
10. If the point code is the EAGLE 5 ISS's point code, then the value of the `ccgt` parameter must be set to `no`.
11. Either `ccgt` or `ngti` parameters can be specified with the `ent-gta` command, but both parameters cannot be specified together with the `ent-gta` command.
12. The `force` parameter can be specified only if the `ri` parameter is `ssn` and the `xlat` parameter value is `dpc`. If the `pc/pca/pci/pcn/pcn24` parameter value is not shown in the `rtrv-map` output, the `force=yes` parameter must be specified with the `ent-gta` command.
13. The `mapset` parameter can be specified only, and must be specified, if the Flexible GTTLoad Sharing feature is enabled. The `mapset` parameter can be specified only if the `ri` parameter value is `ssn`.
14. If the `ri` parameter value is `gt`, the `xlat` parameter value can be `dpcngt`, `dpcssn`, or `dpc`. If the `ri` parameter value is `ssn`, the `xlat` parameter value can be `dpcssn` or `dpc`.
15. The `ssn` parameter can be specified, and must be specified, only if the `xlat` parameter is `dpcssn`.
16. Hexadecimal digits (0-9, a-f, A-F) can be specified for the `gta`, `egta`, `npds`, or `nsds` parameters only if the Hex Digit support for GTT feature is enabled.
17. The `loopset` parameter can be specified only if the SCCP Loop Detection feature is enabled.
18. The `cggtmod` parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled.

1. Display the existing GTT sets in the database using the `rtrv-gttset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:27:31 GMT EAGLE5 36.0.0
GTTSN     NETDOM  NDGT
abcd1234  itu     12
imsi      itu     15
lidb      ansi    10
t800      ansi    10
si000     itu     15
```

   If the Origin-Based SCCP Routing feature is enabled, the `SETTYPE` column is shown in the `rtrv-gttset` output as shown in the following example.

```
rlghncxa03w 06-10-07 00:29:31 GMT EAGLE5 36.0.0

GTTSN      NETDOM  SETTYPE  NDGT
abcd1234   itu     CGGTA    12
imsi       itu     CDGTA    15
lidb       ansi    CDGTA    10
t800       ansi    CGGTA    6
```

```
s1000      itu     CDGTA    15
s2000      itu     CGPC     -
```

If the desired GTT set name is shown in the `rtrv-gttset` output, continue the procedure with *Step 2* on page 643.

If the desired GTT set name is not shown in the `rtrv-gttset` output, perform the *Adding a GTT Set* on page 570 procedure to add the required GTT set. After the GTT set has been added, continue the procedure with *Step 3* on page 644.

If the Origin-Based SCCP Routing feature is not enabled and you wish to use the `cggtasn`, `cgpcsn`, `cgssnsn`, `opcsn`, `cgssn`, `ecgssn`, `cgpc/cgpca/cgpci/ cgpcn/cgpcn24`, `opc/opca/opci/opcn/opcn24`, `selid`, `xlat=udts`, and `xlat=disc` parameters, make sure the Origin-Based SCCP Routing feature is enabled when adding the GTT set.

2. Display the global title address information for the GTT set that the global title address information will be added to using the `rtrv-gta` command with the `gttsn` parameter value shown in the output of *Step 1* on page 642.

   If the `num` parameter is specified with the `rtrv-gta` command, and the value of the `num` parameter is greater than 1000, the `force=yes` parameter must be specified with the `rtrv-gta` command. For this example, enter this command.

   ```
   rtrv-gta:gttsn=t800
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 08-10-07 00:27:31 GMT EAGLE5 39.2.0

   GTTSN     NETDOM  NDGT
   t800      ansi    10
   GTA TABLE IS   1 % FULL  (17 of 269999)

   START GTA  END GTA    XLAT   RI     PC
   8005550000 8005551999 DPCSSN SSN    001-254-255
        SSN=255 CCGT=no  NTT=---
   8005552000 8005553999 DPC    GT     001-254-255
        SSN=255 CCGT=no  NTT=---
   8005554000 8005555999 DPCNGT GT     001-254-255
        SSN=255 CCGT=no  NTT=123
   8005556000 8005557999 DPCSSN SSN    001-254-255
        SSN=255 CCGT=no  NTT=---
   8005558000 8005559999 DPCSSN SSN    001-254-255
        SSN=255 CCGT=yes NTT=---
   9195551212 9195551212 DPCSSN SSN    008-001-001
        SSN=222 CCGT=no  NTT=---
   9762428487 9762428487 DPCSSN SSN    001-254-255
        SSN=222 CCGT=no  NTT=---
   9766423277 9766423277 DPCSSN SSN    001-254-255
        SSN=222 CCGT=no  NTT=---
   9769388928 9769388928 DPCSSN SSN    001-254-255
        SSN=222 CCGT=no  NTT=---

   Command Retrieved 9 Entries
   ```

   If the Origin-Based SCCP Routing feature is enabled, this is an example of the possible output.

   ```
   rlghncxa03w 08-10-07 00:27:31 GMT EAGLE5 39.2.0

   GTTSN     NETDOM  SETTYPE  NDGT
   t800      ansi    CDGTA    10
   GTA TABLE IS   1 % FULL  (17 of 269999)
   ```

```
START GTA  END GTA    XLAT   RI     PC
8005550000 8005551999 DPCSSN SSN    001-254-255
     SSN=255 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=gttset7   SELID=----- OPCSN=---------
8005552000 8005553999 DPC    GT     001-254-255
     SSN=255 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=gttset7   SELID=----- OPCSN=---------
8005554000 8005555999 DPCNGT GT     001-254-255
     SSN=255 CCGT=no  NTT=123
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset12
8005556000 8005557999 DPCSSN SSN    001-254-255
     SSN=255 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset6
8005558000 8005559999 DPCSSN SSN    001-254-255
     SSN=255 CCGT=yes NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset12
9195551212 9195551212 DPCSSN SSN    008-001-001
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset12
9762428487 9762428487 DPCSSN SSN    001-254-255
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
9766423277 9766423277 DPCSSN SSN    001-254-255
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
9769388928 9769388928 DPCSSN SSN    001-254-255
     SSN=222 CCGT=no  NTT=---
     CGGTASN=gttset9   CGPCSN=--------- SELID=----- OPCSN=---------

Command Retrieved 9 Entries
```

3. The global title address entry cannot be added to the database if the database contains the maximum number of global title addresses the EAGLE 5 ISS is allowed to have. The maximum number of global title addresses is shown in the `rtrv-gta` output in *Step 2* on page 643 or the `rtrv-ctrl-feat` output.

   If *Step 2* on page 643 was not performed, enter the `rtrv-ctrl-feat` command to verify the maximum number of global title addresses that are allowed in the database.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 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  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
HC-MIM SLK Capacity       893012707  on      64

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: If the entry `XGTT Table Expansion` is not shown in the `rtrv-ctrl-feat` output, the maximum number of global title addresses that the database can contain is 269,999.

If the maximum number of global title translations is 1,000,000, continue the procedure with *Step 4* on page 645 .

If the maximum number of global title translations is 400,000, and the global title translation being added increases the number beyond 400,000, perform the *Enabling the XGTT Table Expansion Feature* on page 762 procedure to enable XGTT Table Expansion feature for 1,000,000 global title translations. After the maximum number of global title translations has been increased, continue the procedure with *Step 4* on page 645 .

If the maximum number of global title translations is 269,999, and the global title translations being added increases the number beyond 269,999, perform the *Enabling the XGTT Table Expansion Feature* on page 762 procedure to enable XGTT Table Expansion feature for 400,000 global title translations. After the maximum number of global title translations has been increased, continue the procedure with *Step 4* on page 645 .

If the maximum number of global title translations is either 269,999 or 400,000, and the global title translation being added will not increase the number beyond the maximum number of global title translations, continue the procedure with *Step 4* on page 645 .

Note: If the `xlat` parameter value `disc` or `udts` will be assigned to the GTA entry in this procedure, continue the procedure with *Step 20* on page 657.

Note: If the `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, `nsds`, or `cggtmod` parameters will not be specified in this procedure, continue the procedure with *Step 5* on page 646 .

4. To specify the `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, `nsds`, or `cggtmod` parameters in this procedure, the Advanced GT Modification feature must be enabled.

   If the Advanced GT Modification feature is enabled, one of these entries is shown in the `rtrv-ctrl-feat` output.

   - AMGTT
   - AMGTT CdPA Only
   - AMGTT CgPA Upgrade

   Note: If the entry `AMGTT CdPA Only` is shown in the `rtrv-ctrl-feat` output, the `cggtmod` parameter cannot be specified in this procedure. To specify the `cggtmode` parameter, either the `AMGTT` or `AMGTT CgPA Upgrade` entry must be shown in the `rtrv-ctrl-feat` output.

   If the `rtrv-ctrl-feat` command was performed in *Step 3* on page 644, and the appropriate Advanced GT Modification entry is shown in the `rtrv-ctrl-feat` output, continue the procedure with *Step 5* on page 646.

   If the `rtrv-ctrl-feat` command was not performed in *Step 3* on page 644, enter the `rtrv-ctrl-feat` command to verify the status of the Advanced GT Modification feature.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 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  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
HC-MIM SLK Capacity       893012707  on      64

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 appropriate Advanced GT Modification feature is not shown in the `rtrv-ctrl-feat` output in this step or in *Step 3* on page 644, perform the *Activating the Advanced GT Modification Feature* on page 846 procedure to enable the appropriate Advanced GT Modification feature. After the Advanced GT Modification feature has been enabled, continue the procedure with *Step 5* on page 646.

5. Hexadecimal digits (0-9, a-f, A-F) can be specified as values for the `gta`, `egta`, `npds`, or `nsds` parameters only if the Hex Digit Support for GTT feature is enabled. Verify the status of the Hex Digit Support for GTT feature by entering the `rtrv-ctrl-feat` command with the Hex Digit Support for GTT feature part number.

   Note: If hexadecimal digits are shown in the `rtrv-gta` output in *Step 2* on page 643, or if hexadecimal digits will not be specified for the `gta`, `egta`, `npds`, or `nsds` parameters in this procedure, continue the procedure with *Step 6* on page 647 .

   Enter this command.

   ```
   rtrv-ctrl-feat:partnum=893018501
   ```

   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
   Hex Digit Support for GTT 893018501  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 Hex Digit Support for GTT feature has not been enabled, go to the *Activating the Hex Digit Support for GTT Feature* on page 806 procedure to enable this feature. After the Hex Digit Support for GTT feature is enabled, continue the procedure with *Step 6* on page 647 .

   Note: If the domain (ANSI or ITU) of the point code and the GTT set assigned to the GTA will be different, the ANSI-ITU-China SCCP Conversion feature (SCCP Conversion) must be enabled. If the ANSI-ITU-China SCCP Conversion feature is not being used, or if the `rtrv-ctrl-feat` output in *Step 3* on page 644 shows that the ANSI-ITU-China SCCP Conversion feature is enabled, continue the procedure with Step 11.

Note: If you do not wish to specify the `loopset` parameter with the `ent-gta` command, continue the procedure with *Step 8* on page 648.

6. If the `loopset` field appears in the output shown in *Step 2* on page 643, the SCCP Loop Detection feature is enabled. Continue the procedure with *Step 7* on page 647.

   If the `loopset` field does not appear in the output shown in *Step 2* on page 643, the SCCP Loop Detection feature is not enabled. Perform the *Activating the SCCP Loop Detection Feature* on page 830 procedure to enable the SCCP Loop Detection feature. After the SCCP Loop Detection Feature has been enabled, perform the *Adding a Loopset* on page 442 procedure to add the required loopset. After the loopset has been added, continue the procedure with *Step 8* on page 648.

7. Display all the loopsets in the database by entering this command.

   ```
   rtrv-loopset:num=1000:force=yes
   ```

   This is an example of the possible output.

```
LoopSet    Mode     Point Codes
================================================================================
cary2      notify     005-015-005       007-007-007      (ANSI)
                      033-004-003       033-007-003
                      005-027-005       007-004-007

cary4      notify     005-012-005       007-026-007      (ANSI)
                      003-049-003       033-002-003
                      005-008-055       007-014-007

apex3      discard    005-017-008       007-017-009      (ANSI)
                      033-005-043       005-014-005
                      005-017-005       007-014-007
                      033-002-043       005-038-005
                      007-009-027       033-003-043
                      005-012-005       007-002-027

apex4      discard    005-007-008       027-007-009      (ANSI)
                      033-005-003       005-004-055
                      027-001-007       033-008-003
                      033-007-003       005-003-055
                      027-008-007

ral5       notify     005-005-005       007-007-007      (ANSI)
                      003-004-003       003-001-003
                      005-007-005       007-004-007
                      003-002-003       005-008-005
                      007-009-007       003-003-003
                      005-002-005       007-002-007

ral6       notify     005-007-008       007-007-009      (ANSI)
                      003-005-003       003-007-003
                      005-007-005

dunn1      discard    005-002-055       007-051-007      (ANSI)
                      003-008-033

rtp9       discard    005-002-005       007-001-007      (ANSI)
                      003-008-003       003-007-003
                      005-003-005       007-008-007
                      005-004-005

rtp5       discard    005-007-008       007-007-009      (ANSI)
                      003-005-003
```

```
rtp1      discard    005-005-005       007-007-007      (ANSI)
                     003-004-003       003-007-003
                     005-007-005       007-004-007
                     005-004-005

rtp2      notify     005-007-008       007-007-009      (ANSI)
                     003-005-003

rlghncxa03w 07-03-07 08:50:15 GMT Rel 35.6.0
LOOPSET table is (11 of 1000) 1% full
RTRV-LOOPSET: MASP A - COMPLTD
```

Note: If the `rtrv-loopset` command is entered with no other parameters specified, a maximum of 50 entries are displayed. To display more than 50 entries, the `force=yes` parameter must be specified with the `rtrv-loopset` command and the `num` parameter value must be greater than 50. Since there can be a maximum of 1000 loopsets in the database, to display all the loopsets in the database, the `force=yes` and `num=1000` parameters must be specified with the `rtrv-loopset` command.

If the required loopset is shown in the `rtrv-loopset` output, continue the procedure with *Step 8* on page 648.

If the required loopset is not shown in the `rtrv-loopset` output, perform the *Adding a Loopset* on page 442 procedure to add the required loopset. After the loopset has been added, continue the procedure with *Step 8* on page 648.

Note: If the domain (ANSI or ITU) of the point code and the GTT set assigned to the GTA will be different, the ANSI-ITU-China SCCP Conversion feature (SCCP Conversion) must be enabled. If the ANSI-ITU-China SCCP Conversion feature is not being used, or if the `rtrv-ctrl-feat` output in *Step 3* on page 644 shows that the ANSI-ITU-China SCCP Conversion feature is enabled, continue the procedure with Step 11.

8. Verify that the ANSI-ITU-China SCCP Conversion feature is enabled by entering the `rtrv-ctrl-feat:partnum=893012001` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
SCCP Conversion           893012001  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 ANSI-ITU-China SCCP Conversion feature is not enabled, perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure to enable the ANSI-ITU-China SCCP Conversion feature.

Note: If the EAGLE 5 ISS' true point code and the EAGLE 5 ISS's subsystem number, along with the `ri=ssn` and `xlat=dpcssn` parameters, are being specified with the `ent-gta` command, continue the procedure with *Step 12* on page 650.

9. Display the destination point codes in the database by entering the `rtrv-dstn` command. This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
   001-207-000   ----------- no  ---   -------      -----------    SS7
   001-001-001   ----------- no  ---   -------      -----------    SS7
   001-001-002   ----------- no  ---   -------      -----------    SS7
   001-005-000   ----------- no  ---   -------      -----------    SS7
   001-007-000   ----------- no  ---   -------      -----------    SS7
   008-012-003   ----------- no  ---   -------      -----------    SS7
   003-002-004   ----------- no  ---   -------      -----------    SS7
   009-002-003   ----------- no  ---   -------      -----------    SS7
   010-020-005   ----------- no  ---   -------      -----------    SS7

   DPCI          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
   1-207-0       ----------- no  ---   -------      -----------    SS7
   0-015-0       ----------- no  ---   -------      -----------    SS7
   0-017-0       ----------- no  ---   -------      -----------    SS7
   1-011-1       ----------- no  ---   -------      -----------    SS7
   1-011-2       ----------- no  ---   -------      -----------    SS7

   DPCN          CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

   DPCN24        CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the required point code is not shown in the `rtrv-dstn` output, perform the "Adding a Destination Point Code" procedure in the *Database Administration Manual - SS7* to add the required point code. A proxy point code cannot be assigned to the point code.

After the new point code has been added, perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database. After the route has been added, continue the procedure with *Step 12* on page 650.

10. Display the point code that will be assigned to the mated application by using the `rtrv-dstn` command and specifying the point code. For this example, enter this command.

```
rtrv-dstn:dpca=010-020-005
```

This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
   010-020-005   ----------- no  ---   -------      -----------    SS7

   PPC           NCAI           PRX
   009-002-003   ----           no

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

A proxy point code (a point code value is shown in the `PPC` column) cannot be assigned to the point code. If a proxy point code is shown in this step, choose another point code from the `rtrv-dstn` output in the previous step and repeat this step.

After the new point code has been added, perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database. After the route has been added, continue the procedure with *Step 12* on page 650.

11. The point code specified with the `ent-gta` command must be the DPC of a route, unless the point code is the EAGLE 5 ISS's point code. Enter the `rtrv-rte` command with the `dpc` parameter specifying the point code to be used with the `ent-gta` command to verify whether or not the point code is the DPC of a route. For this example, enter these commands.

`rtrv-rte:dpca=001-255-100`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   001-255-100 ---------- --------------   ls03       10    001-255-100
                                           ls02       30    150-150-150
                                           lsa2       50    200-200-200
                                               RTX:No  CLLI=ls03clli
```

`rtrv-rte:dpca=001-255-252`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   001-255-252 ---------- --------------   ls07       10    001-255-252
                                           ls08       30    025-025-150
                                           lsa5       50    066-030-100
                                               RTX:No  CLLI=ls07clli
```

`rtrv-rte:dpca=001-255-001`

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   001-255-001 ---------- --------------   ls05       10    001-255-001
                                           ls15       30    089-047-123
                                           lsa8       50    077-056-000
                                               RTX:No  CLLI=ls05clli
```

If the point code is not shown in the `rtrv-rte` output, perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database.

12. To use either the `mrnset` parameter (if the routing indicator value for the global title translation is GT) or `mapset` parameter (if the routing indicator value for the global title translation is SSN), the Flexible GTT Load Sharing feature must be enabled.

If the Flexible GTT Load Sharing feature is enabled, either the `mrnset` or `mapset` parameters, depending on the routing indicator value for the global title translation being added in this procedure, must be specified with the `ent-gta` command.

Verify that the Flexible GTT Load Sharing feature is enabled by entering the `rtrv-ctrl-feat:partnum=893015401` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:
```

```
Feature Name              Partnum    Status  Quantity
Zero entries found.

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 Flexible GTT Load Sharing feature is enabled, the following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Flexible GTT Load Sharing 893015401 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 routing indicator for the global title translation being added is GT, there are three actions that can be taken:

- If the Flexible GTT Load Sharing feature is not enabled, and you do not wish to specify the `mrnset` parameter with the `ent-gta` command, continue the procedure with *Step 20* on page 657.
- If the Flexible GTT Load Sharing feature is not enabled, and you do wish to specify the `mrnset` parameter with the `ent-gta` command, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure to enable the Flexible GTT Load Sharing feature.

  After enabling the Flexible GTT Load Sharing feature, continue the procedure with *Step 13* on page 652.
- If the Flexible GTT Load Sharing feature is enabled, continue the procedure with *Step 13* on page 652.

If the routing indicator for the global title translation being added is SSN, there are three actions that can be taken:

- If the Flexible GTT Load Sharing feature is not enabled, and you do not wish to specify the `mapset` parameter with the `ent-gta` command, continue the procedure with one of these steps.
  - If the point code value is the EAGLE 5 ISS's point code, continue the procedure with *Step 17* on page 655.
  - If the point code value is a value other than the EAGLE 5 ISS's point code, the `ri` parameter value will be `ssn`, and the `xlat` parameter value will be `dpc`, continue the procedure with *Step 19* on page 656.

- If the point code value is a value other than the EAGLE 5 ISS's point code, the `ri` parameter value will be `ssn`, and the `xlat` parameter value will be `dpcssn` when this procedure is completed, continue the procedure with *Step 14* on page 653 .

- If the Flexible GTT Load Sharing feature is not enabled, and you do wish to specify the `mapset` parameter for the global title translation, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure to enable the Flexible GTT Load Sharing feature. After enabling the Flexible GTT Load Sharing feature, continue the procedure with one of these steps:
  - If the point code value is the EAGLE 5 ISS's point code continue the procedure with *Step 17* on page 655.
  - If the point code value is a value other than the EAGLE 5 ISS's point code, or the `xlat` parameter value will be `dpc`, continue the procedure with *Step 19* on page 656.

- If the Flexible GTT Load Sharing feature is enabled, perform one of these steps.
  - If the point code value is the EAGLE 5 ISS's point code continue the procedure with *Step 17* on page 655.
  - If the point code value is a value other than the EAGLE 5 ISS's point code, or the `xlat` parameter value will be `dpc`, continue the procedure with *Step 17* on page 655.

13. The point code and MRN set ID specified for the global title translation must be shown in the `rtrv-mrn` command output. The point code must be assigned to the MRN set that will be specified with the `ent-gta` command.

    Enter the `rtrv-mrn` command to verify that the required MRN set is configured in the database, and that the required point code is assigned to the MRN set. The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0

MRNSET   PC             RC
DFLT     001-001-001    10
         001-001-002    20
         001-001-003    30
         001-254-255    40

MRNSET   PC             RC
110      001-001-001    10
         001-001-005    20
         001-001-006    30
         001-001-003    40
         001-001-008    50

MRNSET   PC             RC
111      001-001-001    30
         001-001-005    30
         001-001-006    30
         001-001-003    30
         001-001-008    30

MRNSET   PC             RC
112      001-003-001    10
         001-003-002    10
         001-003-003    30
         001-003-004    30
         001-003-006    60
```

```
         001-003-007    60
         001-003-008    80
         001-003-009    80

MRNSET   PCN               RC
113      s-1-1-1-0123-aa   1
         s-1-1-1-0235-aa   2
         s-1-1-1-0235-aa   3
```

Note: If the Weighted GTTLoad Sharing feature is enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-mrn` output

If the required MRN set is not shown in the `rtrv-mrn` output, or if the required point code is not assigned to the required MRN set, provision the required MRN set by performing the *Provisioning MRN Entries* on page 310 procedure. After provisioning the required MRN set, continue the procedure with *Step 20* on page 657.

If the required MRN set is shown in the `rtrv-mrn` output, or if the required point code is assigned to the required MRN set, continue the procedure with *Step 20* on page 657.

14. Display the destination point codes in the database by entering the `rtrv-dstn` command. This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN          DOMAIN
   001-207-000   ----------- no  ---   -------      ----------      SS7
   001-001-001   ----------- no  ---   -------      ----------      SS7
   001-001-002   ----------- no  ---   -------      ----------      SS7
   001-005-000   ----------- no  ---   -------      ----------      SS7
   001-007-000   ----------- no  ---   -------      ----------      SS7
   008-012-003   ----------- no  ---   -------      ----------      SS7
   003-002-004   ----------- no  ---   -------      ----------      SS7
   009-002-003   ----------- no  ---   -------      ----------      SS7
   010-020-005   ----------- no  ---   -------      ----------      SS7

   DPCI          CLLI        BEI ELEI  ALIASI       ALIASN          DOMAIN
   1-207-0       ----------- no  ---   -------      ----------      SS7
   0-015-0       ----------- no  ---   -------      ----------      SS7
   0-017-0       ----------- no  ---   -------      ----------      SS7
   1-011-1       ----------- no  ---   -------      ----------      SS7
   1-011-2       ----------- no  ---   -------      ----------      SS7

   DPCN          CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

   DPCN24        CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the required point code is not shown in the `rtrv-dstn` output, perform the "Adding a Destination Point Code" procedure in the *Database Administration Manual - SS7* to add the required point code. A proxy point code cannot be assigned to the point code.

After the new point code has been added, perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database. After the route has been added, continue the procedure with *Step 19* on page 656.

15. Display the point code that will be assigned to the mated application by using the `rtrv-dstn` command and specifying the point code. For this example, enter this command.

```
rtrv-dstn:dpca=010-020-005
```

This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
   010-020-005   ----------- no  ---   -------      -----------    SS7

   PPC           NCAI           PRX
   009-002-003   ----           no

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

A proxy point code (a point code value is shown in the PPC column) cannot be assigned to the point code. If a proxy point code is shown in this step, choose another point code from the `rtrv-dstn` output in the previous step and repeat this step.

After the new point code has been added, perform one of the Adding a Route procedures in the Database *Administration Manual - SS7* and add the required route to the database. After the route has been added, continue the procedure with *Step 19* on page 656.

16. The point code specified with the `ent-gta` command must be the DPC of a route, unless the point code is the EAGLE 5 ISS's point code. Enter the `rtrv-rte` command with the `dpc` parameter specifying the point code to be used with the `ent-gta` command to verify whether or not the point code is the DPC of a route. For this example, enter these commands.

    `rtrv-rte:dpca=001-255-100`

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   001-255-100 ---------- --------------   ls03       10    001-255-100
                                           ls02       30    150-150-150
                                           lsa2       50    200-200-200
                                               RTX:No  CLLI=ls03clli
```

    `rtrv-rte:dpca=001-255-252`

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   001-255-252 ---------- --------------   ls07       10    001-255-252
                                           ls08       30    025-025-150
                                           lsa5       50    066-030-100
                                               RTX:No  CLLI=ls07clli
```

    `rtrv-rte:dpca=001-255-001`

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   001-255-001 ---------- --------------   ls05       10    001-255-001
                                           ls15       30    089-047-123
```

```
                                                lsa8       50    077-056-000
                                                    RTX:No  CLLI=ls05clli
```

If the point code is not shown in the `rtrv-rte` output, perform one of the Adding a Route procedures in the Database *Administration Manual - SS7* and add the required route to the database.

17. If the `ri=ssn` and `xlat=dpcssn` parameters are specified with the `ent-gta` command, and you wish to use the EAGLE 5 ISS's point code for the value of the `pc` parameter of the `ent-gta` command, the point code value must be in the EAGLE 5 ISS's self ID table. Display the EAGLE 5 ISS self-identification, using the `rtrv-sid` command.

    Note: If the EAGLE 5 ISS's point code will not be specified with the `ent-gta` command, continue the procedure with *Step 19* on page 656.

    This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 36.0.0
   PCA             PCI          PCN                CLLI              PCTYPE
   010-020-030     1-023-1      12-0-14-1          rlghncxa03w       OTHER
                 s-1-023-1    s-12-0-14-1

   CPCA
   002-002-002       002-002-003       002-002-004       002-002-005
   002-002-006       002-002-007       002-002-008       002-002-009
   004-002-001       004-003-003       050-060-070

   CPCI
   1-001-1           1-001-2           1-001-3           1-001-4
   1-002-1           1-002-2           1-002-3           1-002-4
   2-001-1           7-222-7

   CPCN
   2-0-10-3          2-0-11-0          2-0-11-2           2-0-12-1
   2-2-3-3           2-2-4-0           10-14-10-1
```

18. Enter the `rtrv-ss-appl` command to verify that either the LNP, EIR, V-Flex , ATINPQ, or INP subsystem number (depending on which feature is on) is in the subsystem application table.

    This is an example of the possible output.

```
rlghncxa03w 08-09-28 14:42:38 GMT EAGLE5 39.2.0
APPL       SSN       STAT
LNP        254       ONLINE

SS-APPL table is 20% FULL (1 of 5)
```

    If the subsystem number is shown in the `rtrv-ss-appl` output, continue the procedure with *Step 19* on page 656. If no subsystem number is shown in the `rtrv-ss-appl` output, or if the `rtrv-ss-appl` command is rejected, go to one of these manuals, depending on the type of subsystem you wish to use, to enable and turn on the feature as necessary, and add the subsystem to the subsystem application table.

    - EIR subsystem – go to the *Feature Manual - EIR*.
    - INP subsystem – go to the *Feature Manual - INP/AINPQ*.
    - LNP subsystem – go to the *LNP Feature Activation Guide*.
    - V-Flex subsystem – go to the *Feature Manual - V-Flex*.
    - ATINPQ subsystem – go to the *Feature Manual - ATINP*.

Note: If the Flexible GTT Load Sharing feature is enabled, shown in *Step 12* on page 650, a MAP set ID must be specified for the final global title translation. The point code and SSN specified for the final global title translation being added in this procedure must be assigned to the MAP set ID that will be assigned to the final global title translation. Perform *Step 19* on page 656 to verify that the required MAP set is configured in the database.

Note: If the Flexible GTT Load Sharing feature is not enabled, and the `ri=ssn` and `xlat=dpc` parameters are not being specified with the `ent-gta` command, or if the EAGLE 5 ISS's true point code and the EAGLE 5 ISS's subsystem number, along with the `ri=ssn` and `xlat=dpcssn` parameters, are not being specified with the `ent-gta` command, continue the procedure with *Step 20* on page 657.

19. Enter the `rtrv-map` command with the `pc` parameter specifying the required point code to verify that the required data is in the mated application table.

For this example enter this command.

```
rtrv-map:pca=001-255-001
```

If the Flexible GTT Load Sharing feature is not enabled, this is an example of the possible output.

```
rlghncxa03w 06-10-25 09:42:31  GMT  EAGLE5 36.0.0

MAP TABLE IS   1 % FULL    (11 of 1024)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
001-255-001               250 10  SOL --- --- GRP01    ON
```

If the Flexible GTT Load Sharing feature is enabled, this is an example of the possible output.

```
rlghncxa03w 06-10-25 09:42:31  GMT  EAGLE5 36.0.0

MAP TABLE IS   1 % FULL (12 of 36000)

PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
MAPSET ID=DFLT
001-255-001                55  5  DOM YES YES -------- OFF
             001-001-002   15 15  DOM YES YES -------- ON
             001-001-003   25 20  DOM YES YES -------- ON
             001-001-002   40 35  DOM YES YES -------- OFF
MAPSET ID=1
001-255-001                50  5  DOM YES YES -------- OFF
             001-001-002   10 15  DOM YES YES -------- ON
             001-001-003   20 20  DOM YES YES -------- ON
             001-001-002   40 35  DOM YES YES -------- OFF
MAPSET ID=2
001-255-001                 5 10  SOL --- --- -------- OFF
```

Note: If the Weighted GTTLoad Sharing feature is enabled, the `WT`, `%WT`, and `THR` columns are shown in the `rtrv-map` output

If the `ri=ssn` and `xlat=dpc` parameters are being specified with the `ent-gta` command, the point code must be in the mated application table. If the point code is not in the mated application table when the `ent-gta` command is executed, the `force=yes` parameter must be specified with the `ent-gta` command.

If the EAGLE 5 ISS's true point code and the EAGLE 5 ISS's subsystem number, along with the `ri=ssn` and `xlat=dpcssn` parameters are being specified with the `ent-gta` command,

the EAGLE 5 ISS's true point code and the EAGLE 5 ISS's subsystem number must be in the mated application table.

If the required point code, subsystem number, or MAP set ID is not shown in the `rtrv-map` output, perform one of these procedures to add the required information to the mated application table:

- *Provisioning a Solitary Mated Application* on page 112
- *Provisioning a Dominant Mated Application* on page 142
- *Provisioning a Load Shared Mated Application* on page 189
- *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223

20. Add the global title address to a GTT set using the `ent-gta` command. The parameters and values that can be used with the `ent-gta` command depend on:

- Whether or not the Origin-Based SCCP Routing feature is enabled.
- If the Origin-Based SCCP Routing feature is enabled, what type of GTT set will be specified for the `gttsn` parameter.
- The `xlat` parameter value.

The parameter combinations and values that can be used with the `ent-gta` command are shown in these tables:

- *Table 44: GTA Parameter Combinations - Origin-Based SCCP Routing Feature Not Enabled* on page 624 – if the Origin-Based SCCP Routing feature is not enabled.
- *Table 45: GTTSN = CDGTA GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 627 – if the Origin-Based SCCP Routing feature is enabled and a CDGTA GTT set will be specified for the `gttsn` parameter value.
- *Table 46: GTTSN = CGGTA GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 631 – if the Origin-Based SCCP Routing feature is enabled and a CGGTA GTT set will be specified for the `gttsn` parameter value.
- *Table 47: GTTSN = CGSSN GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 634 – if the Origin-Based SCCP Routing feature is enabled and a CGSSN GTT set will be specified for the `gttsn` parameter value.
- *Table 48: GTTSN = CGPC GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 636 – if the Origin-Based SCCP Routing feature is enabled and a CGPC GTT set will be specified for the `gttsn` parameter value.
- *Table 49: GTTSN = OPC GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 639 – if the Origin-Based SCCP Routing feature is enabled and an OPC GTT set will be specified for the `gttsn` parameter value.

Note: The command line on the terminal can contain up to 150 characters. If the parameters and values specified with the `ent-gta` command are too long to fit on the `ent-gta` command line, perform the *Changing Global Title Address Information* on page 681 procedure to complete adding the GTA entry.

For this example, enter these commands:

```
ent-gta:gttsn=t800:gta=9194605555:xlat=dpcngt:ri=gt
:pc=001-255-100:nnp=3:nnai=120:npdd=2:npds=34:mrnset=114
:opcsn=gttset12:cggtmod=yes
```

```
ent-gta:gttsn=t800:gta=9194610000:egta=9194689999:xlat=dpcssn
:ri=ssn:pc=001-255-252:ssn=254:mapset=3:opcsn=gttset12 :selid=12
```

```
ent-gta:gttsn=t800:gta=3365840000:egta=3365849999:xlat=dpc
:ri=ssn:pc=001-255-001:mapset=1:cggtasn=gttset3
```

When each of these commands has successfully completed, this message appears.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 36.0.0
ENT-GTA: MASP A - COMPLTD
```

21. Verify the changes to the GTT set using the `rtrv-gta` command with the `gttsn` parameter value specified in *Step 20* on page 657 and one of the following parameters and values specified in *Step 20* on page 657, depending on what type of GTT set was specified in *Step 20* on page 657.

- The `gta` parameter and value – if the Origin-Based SCCP Routing feature is not enabled.
- The `gta` parameter and value – if the Origin-Based SCCP Routing feature is enabled and either a CDGTA or CGGTA GTT set was specified for the `gttsn` parameter value.
- The `cgssn` parameter and value – if the Origin-Based SCCP Routing feature is enabled and a CGSSN GTT set was specified for the `gttsn` parameter value.
- The `cgpc/cgpca/cgpci/cgpcn/cgpcn24` parameter and value – if the Origin-Based SCCP Routing feature is enabled and a CGPC GTT set was specified for the `gttsn` parameter value.
- The `opc/opca/opci/opcn/opcn24` parameter and value – if the Origin-Based SCCP Routing feature is enabled and an OPC GTT set was specified for the `gttsn` parameter value.

If the `num` parameter is specified with the `rtrv-gta` command, and the value of the `num` parameter is greater than 1000, the `force=yes` parameter must be specified with the `rtrv-gta` command. For this example, enter these commands.

```
rtrv-gta:gttsn=t800:gta=9194605555
```

This is an example of the possible output.

```
rlghncxa03w 08-10-07 00:27:31 GMT EAGLE5 39.2.0
GTTSN     NETDOM  NDGT
t800      ansi    10
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
9194605555 9194605555 dpcngt gt     001-255-100
     MRNSET=114 SSN=--- CCGT=no NTT=75 CGGTMOD=YES
     NNP=3 NNAI=120 NPDD=2 NPDS=34
     NGTI=
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset12

Command Retrieved 1 Entries
```

```
rtrv-gta:gttsn=t800:gta=9194610000
```

This is an example of the possible output.

```
rlghncxa03w 08-10-07 00:27:31 GMT EAGLE5 39.2.0
GTTSN     NETDOM  NDGT
t800      ansi    10
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
9194610000 9194689999 dpcssn ssn    001-255-252
     MAPSET=3     SSN=254 CCGT=no  NTT=--- CGGTMOD=NO
     CGGTASN=--------- CGPCSN=--------- SELID=12    OPCSN=gttset12
```

```
Command Retrieved 1 Entries
```

`rtrv-gta:gttsn=t800:gta=3365840000`

This is an example of the possible output.

```
rlghncxa03w 08-10-07 00:27:31 GMT EAGLE5 39.2.0
GTTSN     NETDOM  NDGT
t800      ansi    10
GTA TABLE IS   1 % FULL  (17 of 269999)

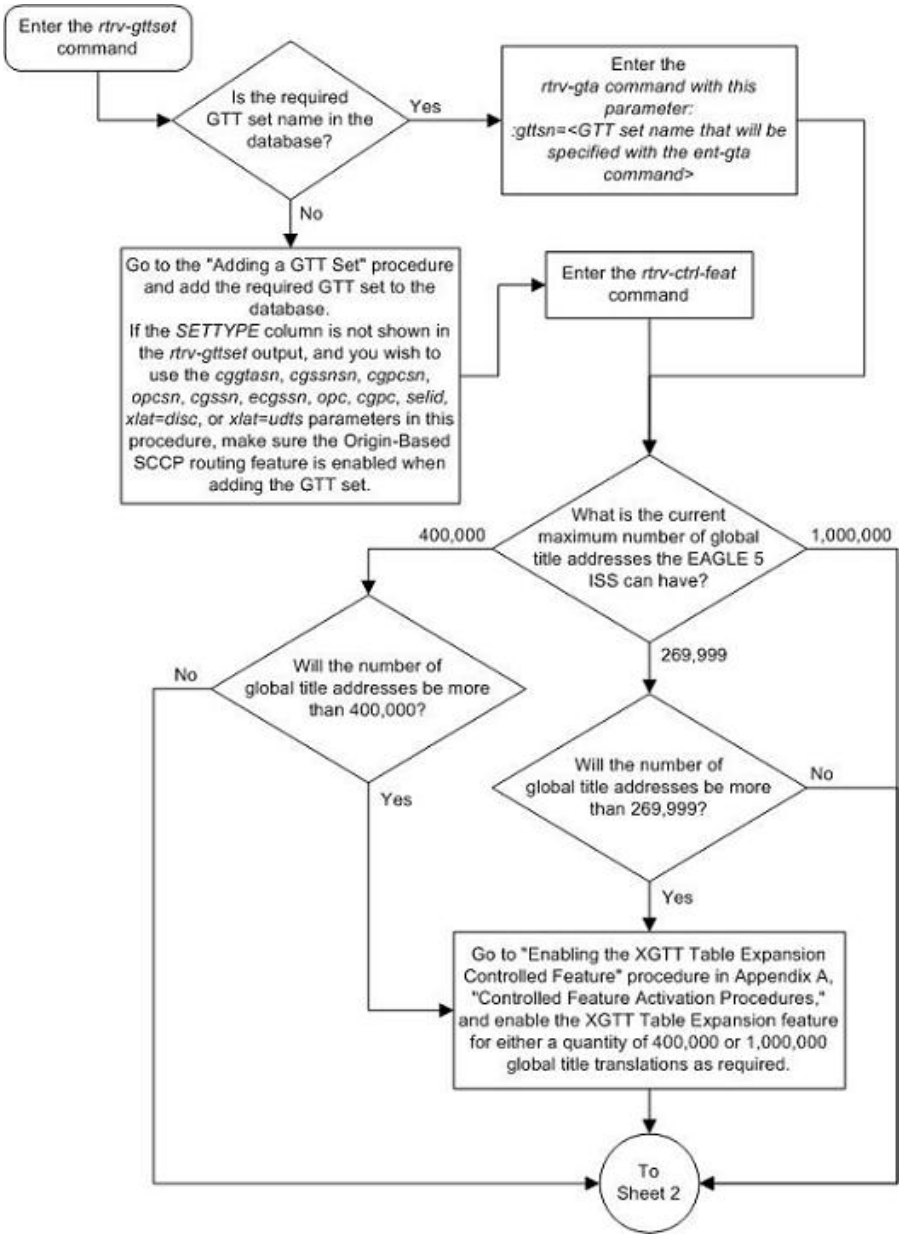
START GTA  END GTA    XLAT   RI     PC
3365840000 3365849999 dpc    ssn    001-255-001
     MAPSET=1     SSN=0   CCGT=no  NTT=--- CGGTMOD=NO
     CGGTASN=gttset3   CGPCSN=--------- SELID=----- OPCSN=---------

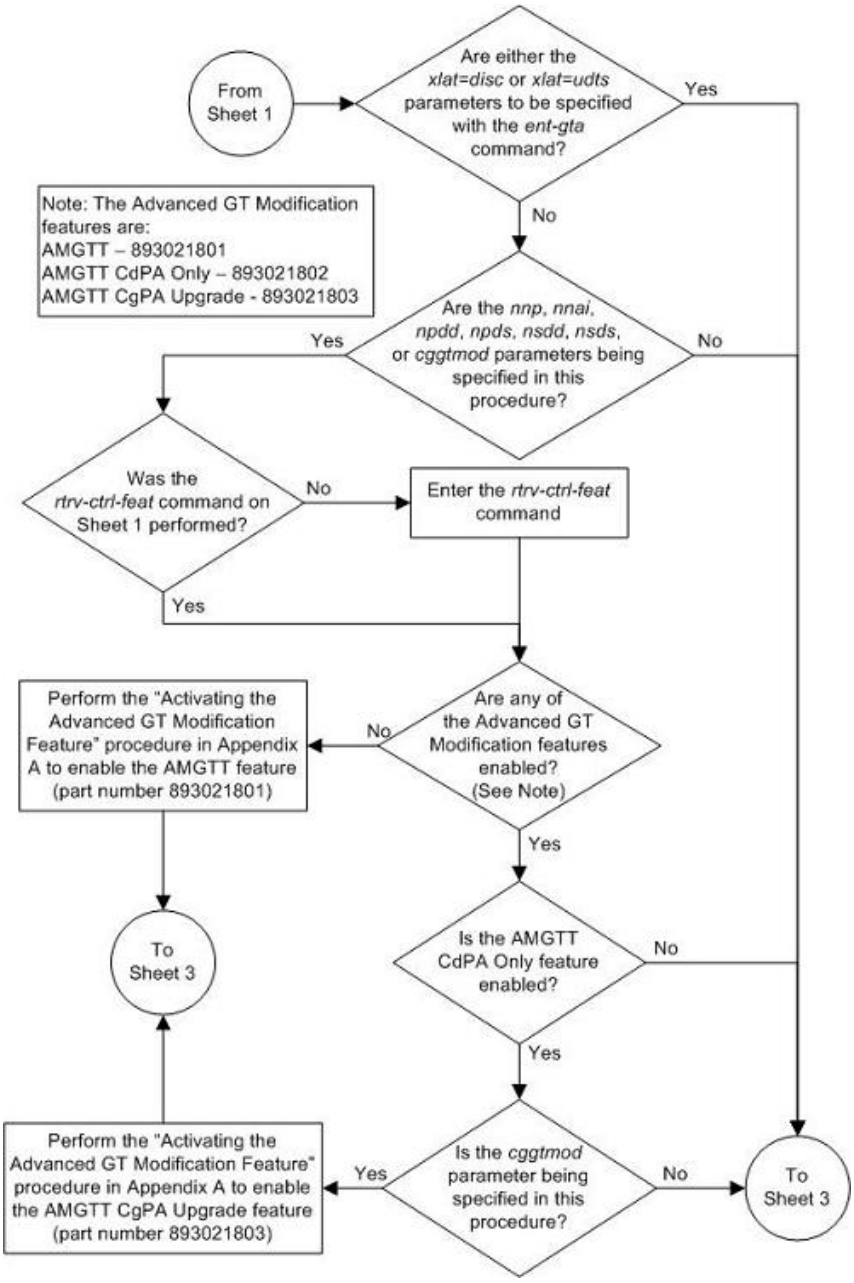
Command Retrieved 1 Entries
```

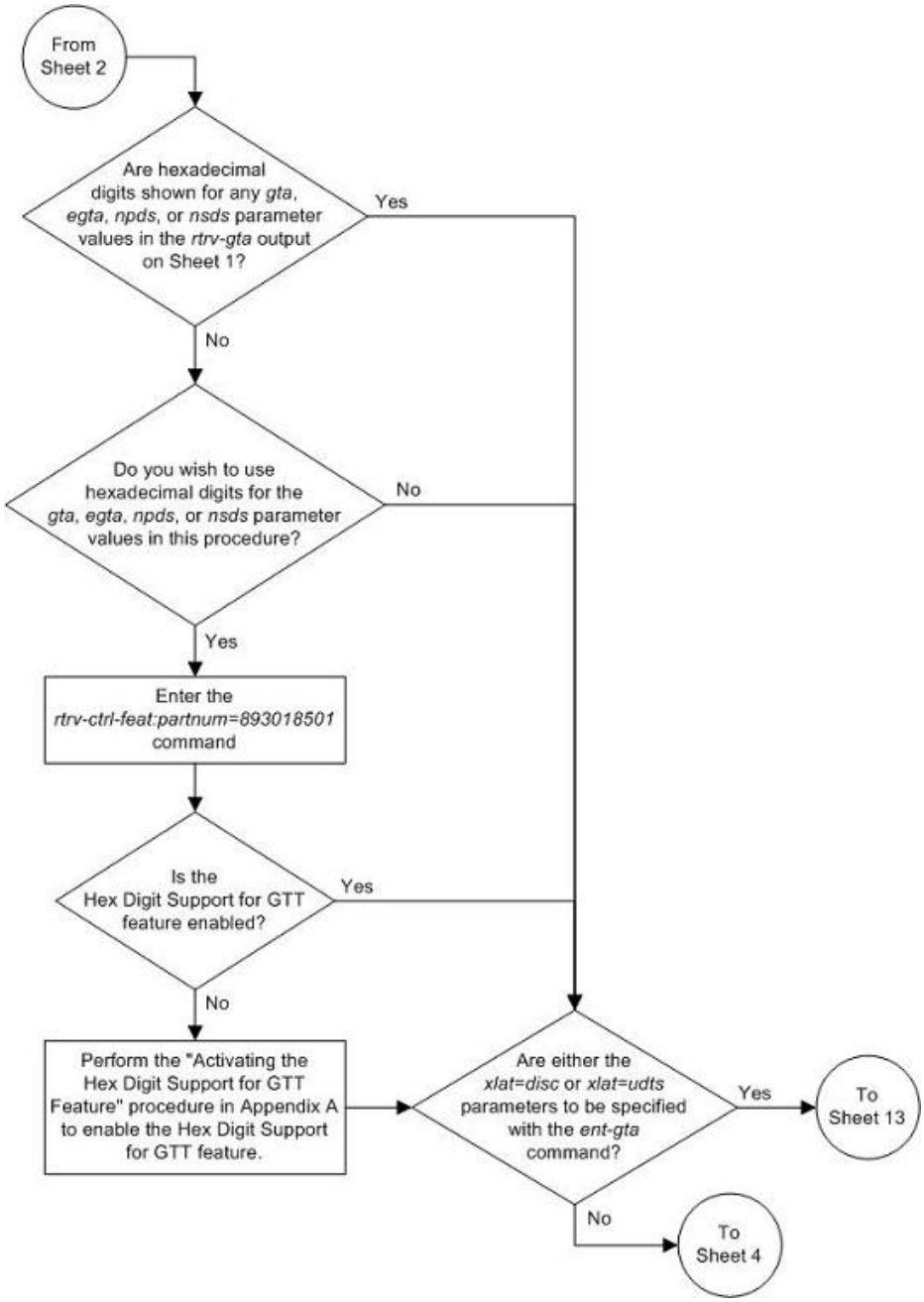
22. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

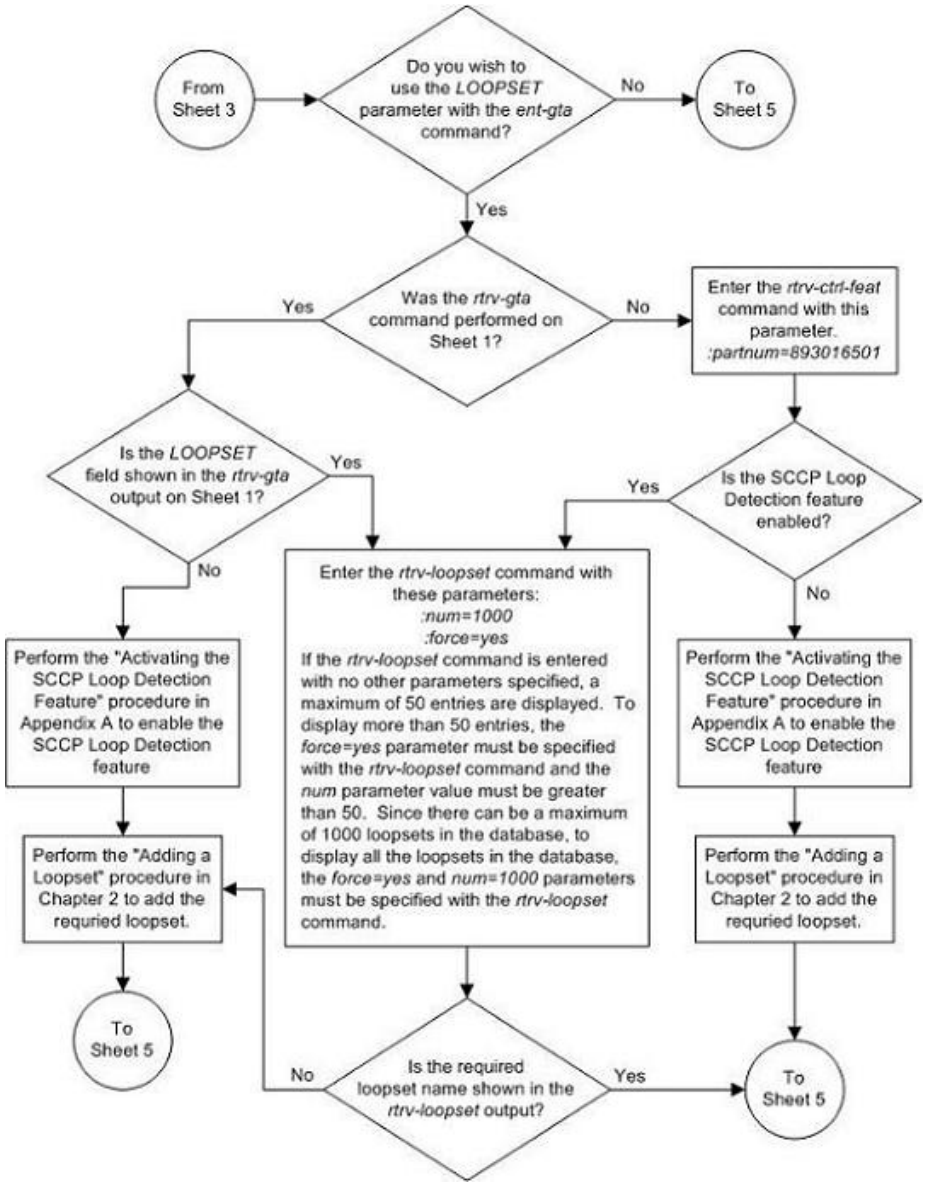
```
BACKUP (FIXED): MASP A - Backup starts on active MASP.
BACKUP (FIXED): MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED): MASP A - Backup starts on standby MASP.
BACKUP (FIXED): MASP A - Backup on standby MASP to fixed disk complete.
```

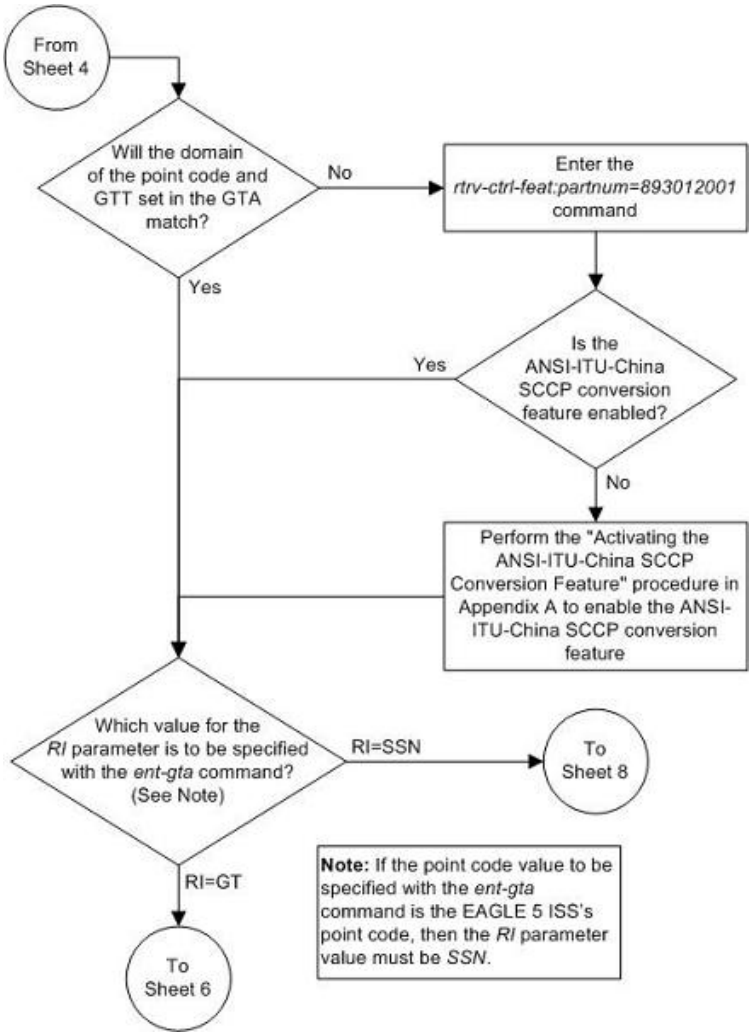
Figure 52: Adding Global Title Address Information to the Database

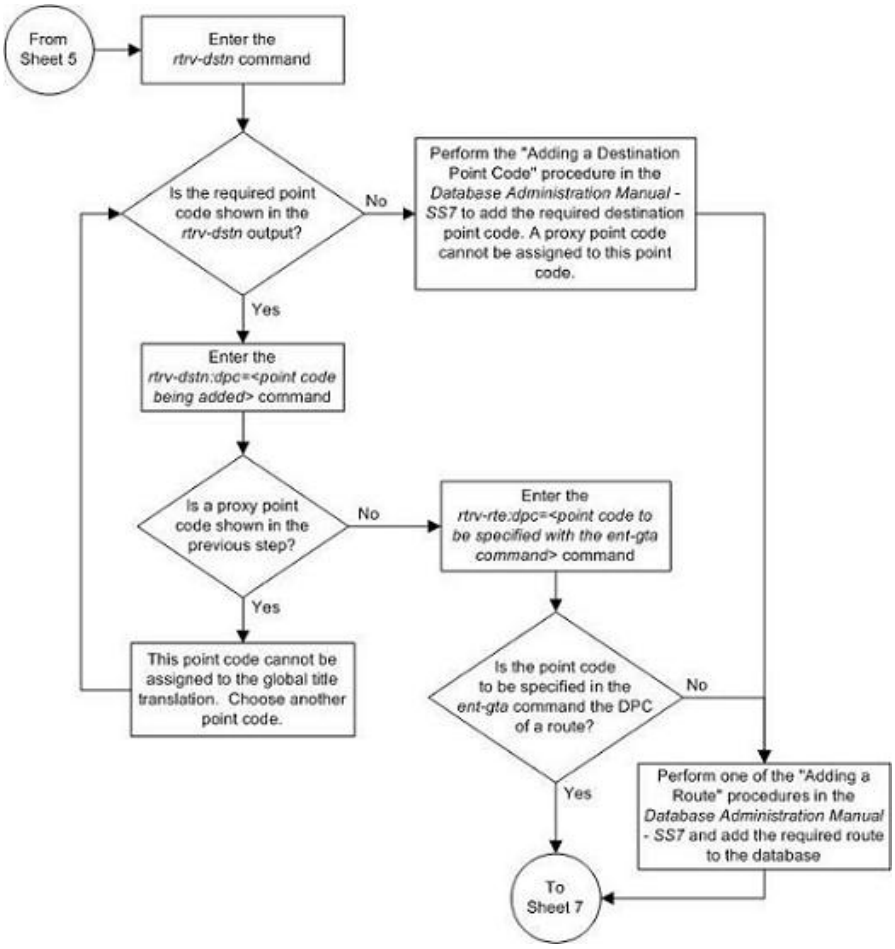

Enter the *rtrv-gttset* command
Is the required GTT set name in the database?
Yes
No
Enter the *rtrv-gta command with this parameter: :gttsn=<GTT set name that will be specified with the ent-gta command>*
Go to the "Adding a GTT Set" procedure and add the required GTT set to the database.
If the *SETTYPE* column is not shown in the *rtrv-gttset* output, and you wish to use the *cggtasn, cgssnsn, cgpcsn, opcsn, cgssn, ecgssn, opc, cgpc, selid, xlat=disc*, or *xlat=udts* parameters in this procedure, make sure the Origin-Based SCCP routing feature is enabled when adding the GTT set.
Enter the *rtrv-ctrl-feat* command
What is the current maximum number of global title addresses the EAGLE 5 ISS can have?
400,000
1,000,000
269,999
Will the number of global title addresses be more than 400,000?
No
Yes
Will the number of global title addresses be more than 269,999?
No
Yes
Go to "Enabling the XGTT Table Expansion Controlled Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," and enable the XGTT Table Expansion feature for either a quantity of 400,000 or 1,000,000 global title translations as required.
To Sheet 2

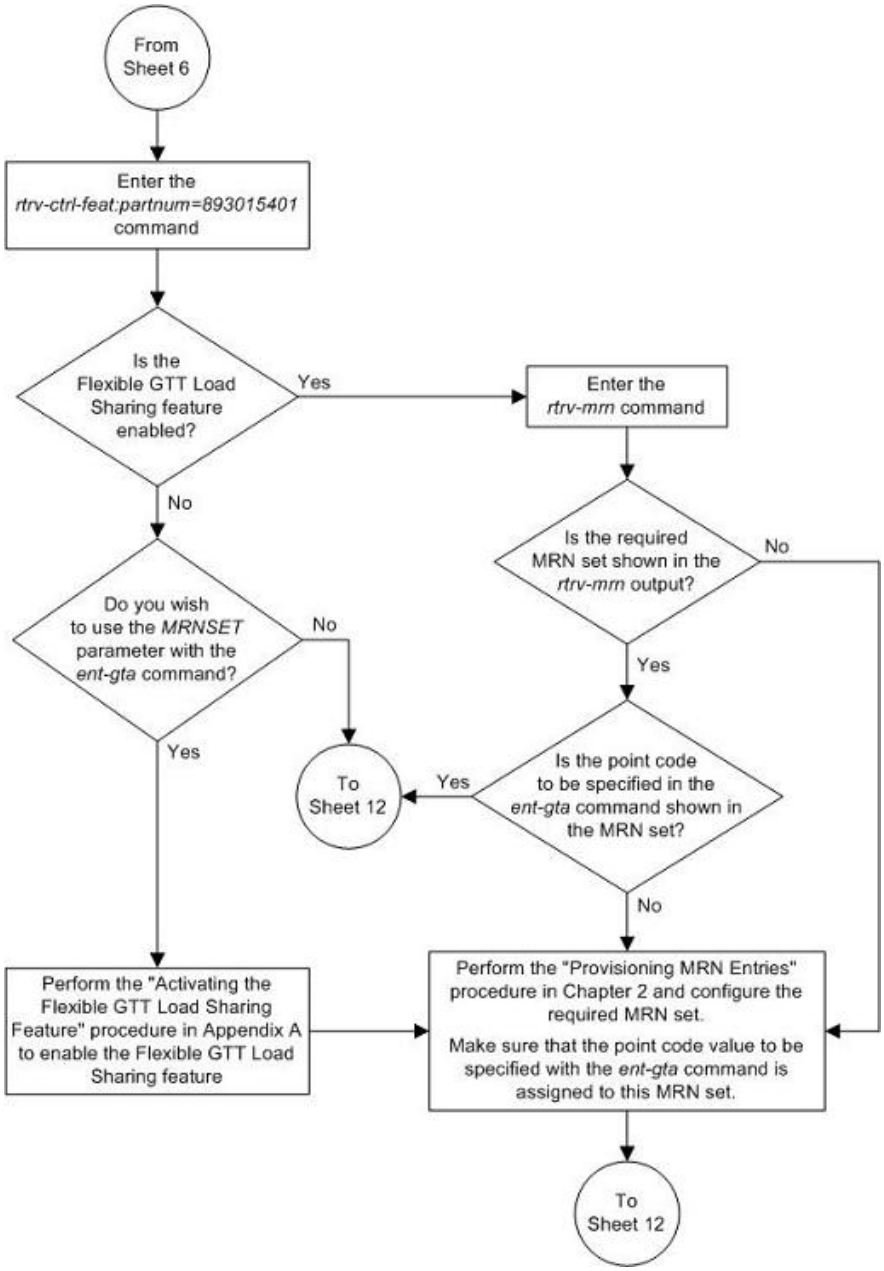

From Sheet 1
Are either the xlat=disc or xlat=udts parameters to be specified with the ent-gta command?
Yes
No
Note: The Advanced GT Modification features are:
AMGTT – 893021801
AMGTT CdPA Only – 893021802
AMGTT CgPA Upgrade - 893021803
Are the nnp, nnai, npdd, npds, nsdd, nsds, or cggtmod parameters being specified in this procedure?
Yes
No
Was the rtrv-ctrl-feat command on Sheet 1 performed?
No
Enter the rtrv-ctrl-feat command
Yes
Are any of the Advanced GT Modification features enabled? (See Note)
No
Perform the "Activating the Advanced GT Modification Feature" procedure in Appendix A to enable the AMGTT feature (part number 893021801)
Yes
Is the AMGTT CdPA Only feature enabled?
No
Yes
To Sheet 3
Is the cggtmod parameter being specified in this procedure?
Yes
No
Perform the "Activating the Advanced GT Modification Feature" procedure in Appendix A to enable the AMGTT CgPA Upgrade feature (part number 893021803)
To Sheet 3

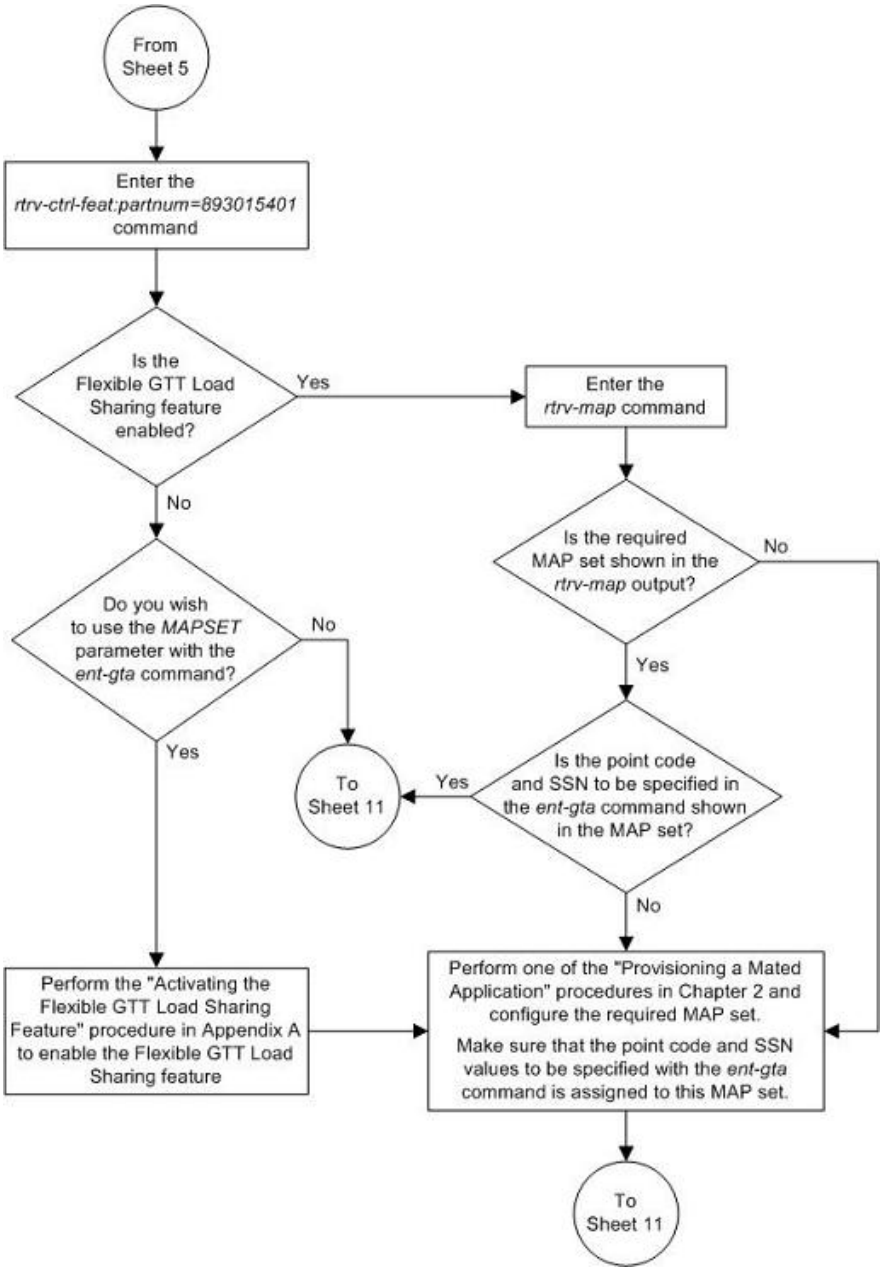

From Sheet 2
Are hexadecimal digits shown for any gta, egta, npds, or nsds parameter values in the rtrv-gta output on Sheet 1?
Yes
No
Do you wish to use hexadecimal digits for the gta, egta, npds, or nsds parameter values in this procedure?
No
Yes
Enter the rtrv-ctrl-feat:partnum=893018501 command
Is the Hex Digit Support for GTT feature enabled?
Yes
No
Perform the "Activating the Hex Digit Support for GTT Feature" procedure in Appendix A to enable the Hex Digit Support for GTT feature.
Are either the xlat=disc or xlat=udts parameters to be specified with the ent-gta command?
Yes
To Sheet 13
No
To Sheet 4

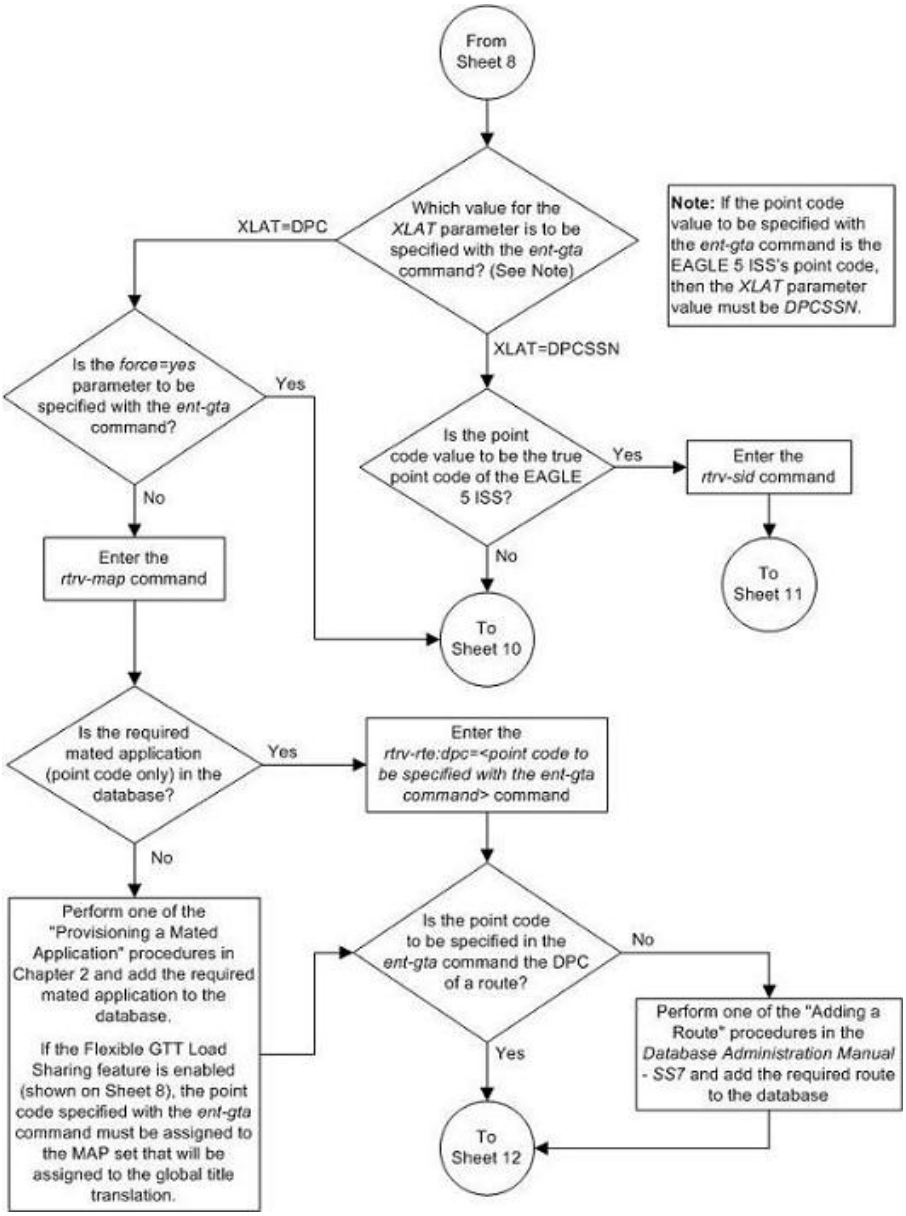

From Sheet 3
Do you wish to use the LOOPSET parameter with the ent-gta command?
No
To Sheet 5
Yes
Was the rtrv-gta command performed on Sheet 1?
Yes
No
Enter the rtrv-ctrl-feat command with this parameter. :partnum=893016501
Is the LOOPSET field shown in the rtrv-gta output on Sheet 1?
Yes
No
Is the SCCP Loop Detection feature enabled?
Yes
No
Enter the rtrv-loopset command with these parameters: :num=1000 :force=yes
If the rtrv-loopset command is entered with no other parameters specified, a maximum of 50 entries are displayed. To display more than 50 entries, the force=yes parameter must be specified with the rtrv-loopset command and the num parameter value must be greater than 50. Since there can be a maximum of 1000 loopsets in the database, to display all the loopsets in the database, the force=yes and num=1000 parameters must be specified with the rtrv-loopset command.
Perform the "Activating the SCCP Loop Detection Feature" procedure in Appendix A to enable the SCCP Loop Detection feature
Perform the "Activating the SCCP Loop Detection Feature" procedure in Appendix A to enable the SCCP Loop Detection feature
Perform the "Adding a Loopset" procedure in Chapter 2 to add the requried loopset.
Perform the "Adding a Loopset" procedure in Chapter 2 to add the requried loopset.
To Sheet 5
Is the required loopset name shown in the rtrv-loopset output?
No
Yes
To Sheet 5

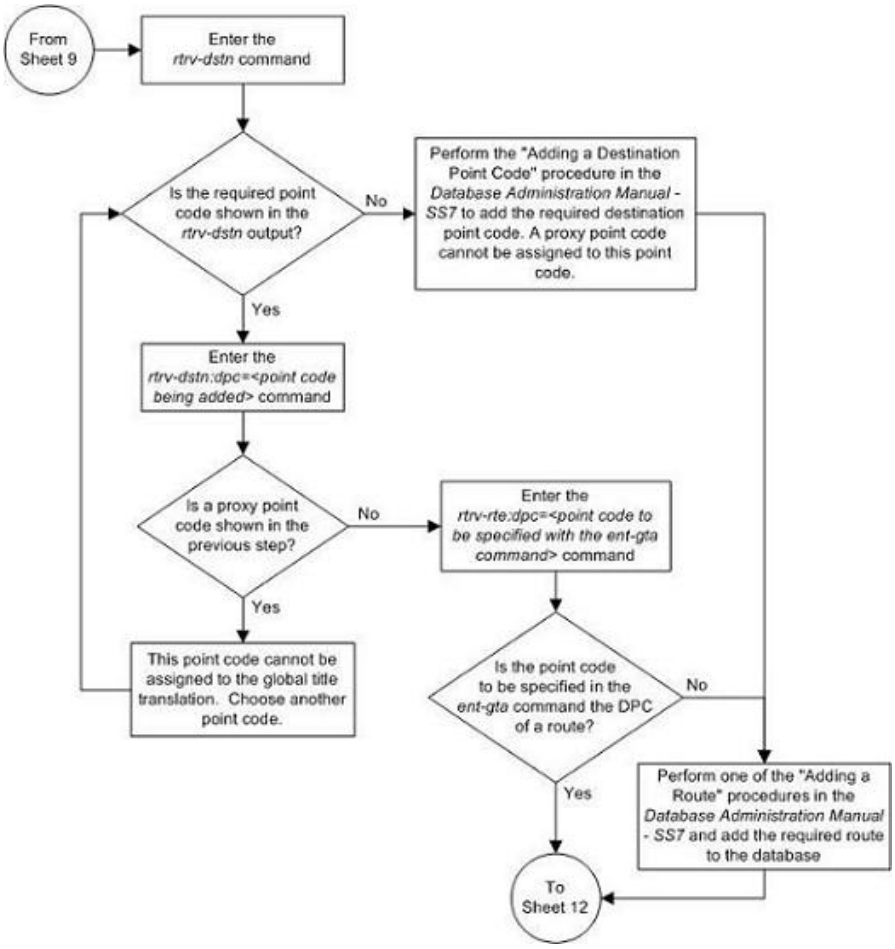

From Sheet 4
Will the domain of the point code and GTT set in the GTA match?
No
Enter the rtrv-ctrl-feat:partnum=893012001 command
Yes
Is the ANSI-ITU-China SCCP conversion feature enabled?
Yes
No
Perform the "Activating the ANSI-ITU-China SCCP Conversion Feature" procedure in Appendix A to enable the ANSI-ITU-China SCCP conversion feature
Which value for the RI parameter is to be specified with the ent-gta command? (See Note)
RI=SSN
To Sheet 8
RI=GT
To Sheet 6
Note: If the point code value to be specified with the ent-gta command is the EAGLE 5 ISS's point code, then the RI parameter value must be SSN.

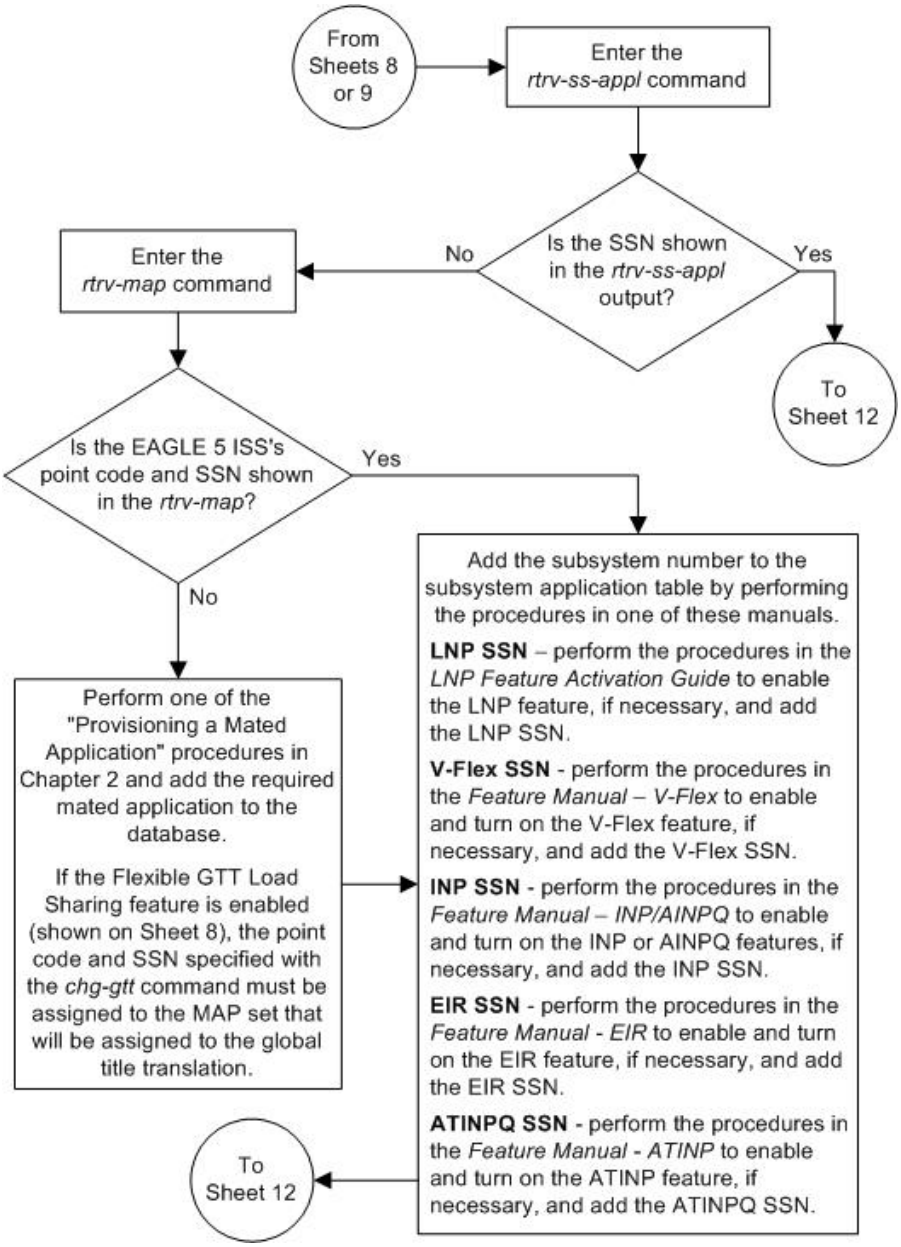

From Sheet 5
Enter the rtrv-dstn command
Is the required point code shown in the rtrv-dstn output?
No
Perform the "Adding a Destination Point Code" procedure in the Database Administration Manual - SS7 to add the required destination point code. A proxy point code cannot be assigned to this point code.
Yes
Enter the rtrv-dstn:dpc=<point code being added> command
Is a proxy point code shown in the previous step?
No
Enter the rtrv-rte:dpc=<point code to be specified with the ent-gta command> command
Yes
This point code cannot be assigned to the global title translation. Choose another point code.
Is the point code to be specified in the ent-gta command the DPC of a route?
No
Yes
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 and add the required route to the database
To Sheet 7

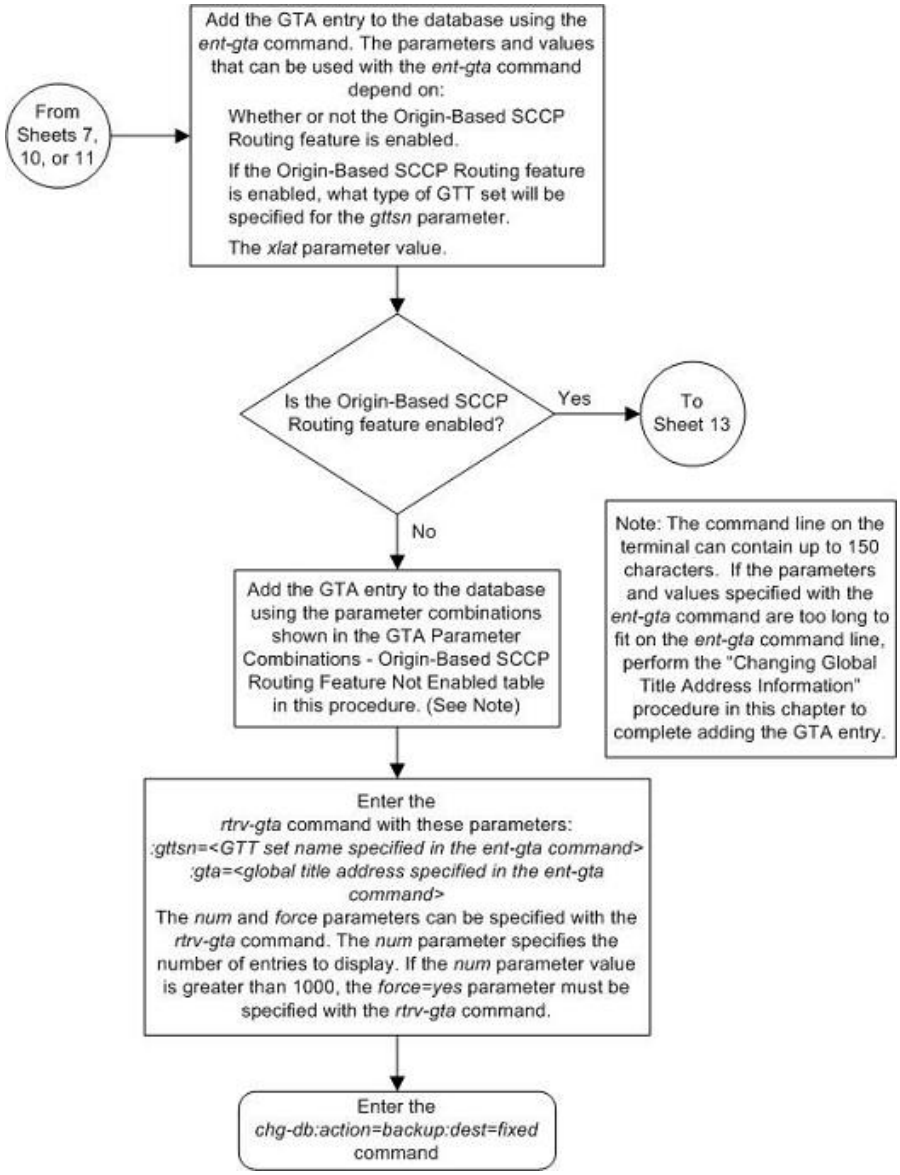

From Sheet 6
Enter the rtrv-ctrl-feat:partnum=893015401 command
Is the Flexible GTT Load Sharing feature enabled?
Yes
No
Enter the rtrv-mrn command
Is the required MRN set shown in the rtrv-mrn output?
No
Yes
Do you wish to use the MRNSET parameter with the ent-gta command?
No
Yes
To Sheet 12
Yes
Is the point code to be specified in the ent-gta command shown in the MRN set?
No
Perform the "Activating the Flexible GTT Load Sharing Feature" procedure in Appendix A to enable the Flexible GTT Load Sharing feature
Perform the "Provisioning MRN Entries" procedure in Chapter 2 and configure the required MRN set.
Make sure that the point code value to be specified with the ent-gta command is assigned to this MRN set.
To Sheet 12

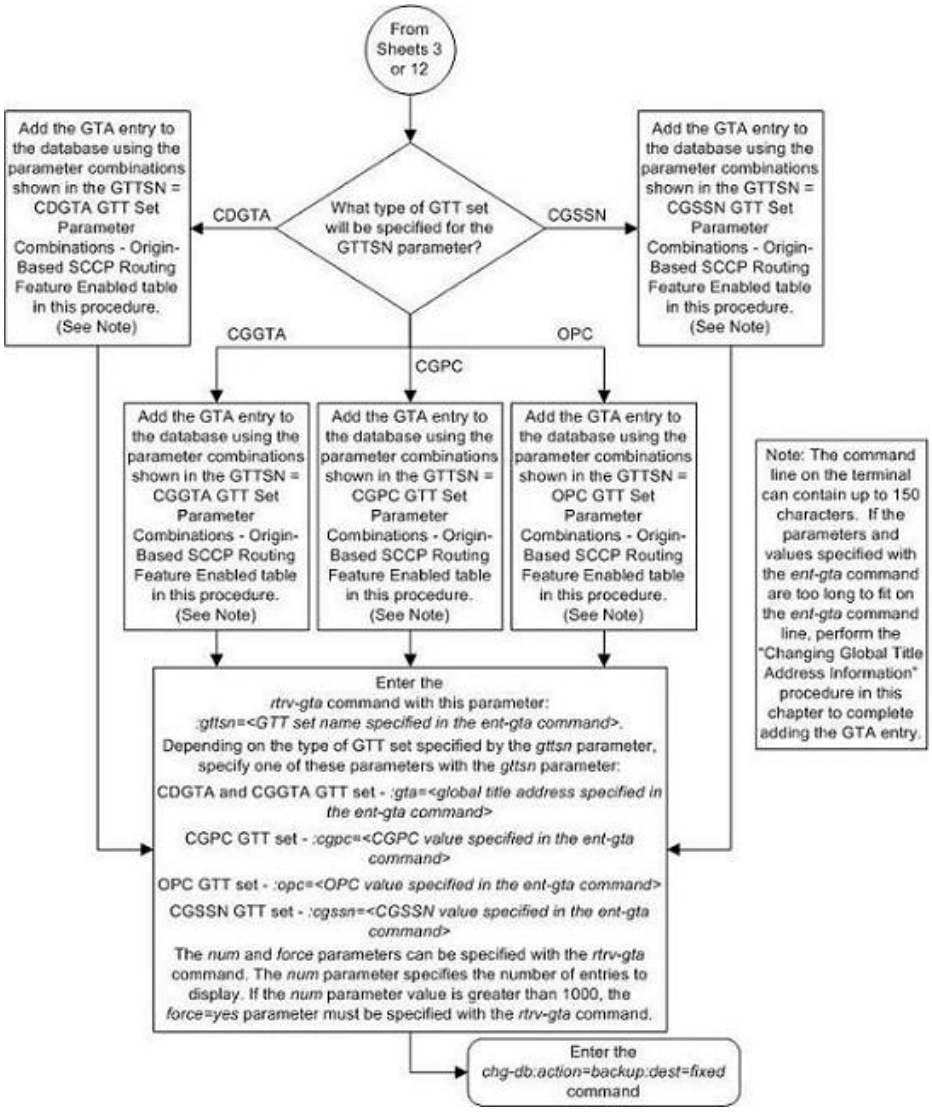

From Sheet 5
Enter the rtrv-ctrl-feat:partnum=893015401 command
Is the Flexible GTT Load Sharing feature enabled?
Yes
No
Enter the rtrv-map command
Is the required MAP set shown in the rtrv-map output?
No
Yes
Do you wish to use the MAPSET parameter with the ent-gta command?
No
Yes
Is the point code and SSN to be specified in the ent-gta command shown in the MAP set?
Yes
To Sheet 11
No
Perform the "Activating the Flexible GTT Load Sharing Feature" procedure in Appendix A to enable the Flexible GTT Load Sharing feature
Perform one of the "Provisioning a Mated Application" procedures in Chapter 2 and configure the required MAP set.
Make sure that the point code and SSN values to be specified with the ent-gta command is assigned to this MAP set.
To Sheet 11


From Sheet 8
Which value for the XLAT parameter is to be specified with the ent-gta command? (See Note)
XLAT=DPC
XLAT=DPCSSN
Note: If the point code value to be specified with the ent-gta command is the EAGLE 5 ISS's point code, then the XLAT parameter value must be DPCSSN.
Is the force=yes parameter to be specified with the ent-gta command?
Yes
No
Is the point code value to be the true point code of the EAGLE 5 ISS?
Yes
No
Enter the rtrv-sid command
To Sheet 11
Enter the rtrv-map command
To Sheet 10
Is the required mated application (point code only) in the database?
Yes
No
Enter the rtrv-rte:dpc=<point code to be specified with the ent-gta command> command
Perform one of the "Provisioning a Mated Application" procedures in Chapter 2 and add the required mated application to the database.
If the Flexible GTT Load Sharing feature is enabled (shown on Sheet 8), the point code specified with the ent-gta command must be assigned to the MAP set that will be assigned to the global title translation.
Is the point code to be specified in the ent-gta command the DPC of a route?
No
Yes
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 and add the required route to the database
To Sheet 12


From Sheet 9
Enter the rtrv-dstn command
Is the required point code shown in the rtrv-dstn output?
No
Perform the "Adding a Destination Point Code" procedure in the Database Administration Manual - SS7 to add the required destination point code. A proxy point code cannot be assigned to this point code.
Yes
Enter the rtrv-dstn:dpc=<point code being added> command
Is a proxy point code shown in the previous step?
No
Enter the rtrv-rte:dpc=<point code to be specified with the ent-gta command> command
Yes
This point code cannot be assigned to the global title translation. Choose another point code.
Is the point code to be specified in the ent-gta command the DPC of a route?
No
Yes
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 and add the required route to the database
To Sheet 12


From Sheets 8 or 9
Enter the rtrv-ss-appl command
Is the SSN shown in the rtrv-ss-appl output?
No
Yes
Enter the rtrv-map command
To Sheet 12
Is the EAGLE 5 ISS's point code and SSN shown in the rtrv-map?
Yes
No
Add the subsystem number to the subsystem application table by performing the procedures in one of these manuals.
LNP SSN – perform the procedures in the LNP Feature Activation Guide to enable the LNP feature, if necessary, and add the LNP SSN.
V-Flex SSN - perform the procedures in the Feature Manual – V-Flex to enable and turn on the V-Flex feature, if necessary, and add the V-Flex SSN.
INP SSN - perform the procedures in the Feature Manual – INP/AINPQ to enable and turn on the INP or AINPQ features, if necessary, and add the INP SSN.
EIR SSN - perform the procedures in the Feature Manual - EIR to enable and turn on the EIR feature, if necessary, and add the EIR SSN.
ATINPQ SSN - perform the procedures in the Feature Manual - ATINP to enable and turn on the ATINP feature, if necessary, and add the ATINPQ SSN.
Perform one of the "Provisioning a Mated Application" procedures in Chapter 2 and add the required mated application to the database.
If the Flexible GTT Load Sharing feature is enabled (shown on Sheet 8), the point code and SSN specified with the chg-gtt command must be assigned to the MAP set that will be assigned to the global title translation.
To Sheet 12


From Sheets 7, 10, or 11
Add the GTA entry to the database using the ent-gta command. The parameters and values that can be used with the ent-gta command depend on:
Whether or not the Origin-Based SCCP Routing feature is enabled.
If the Origin-Based SCCP Routing feature is enabled, what type of GTT set will be specified for the gttsn parameter.
The xlat parameter value.
Is the Origin-Based SCCP Routing feature enabled?
Yes
To Sheet 13
No
Add the GTA entry to the database using the parameter combinations shown in the GTA Parameter Combinations - Origin-Based SCCP Routing Feature Not Enabled table in this procedure. (See Note)
Note: The command line on the terminal can contain up to 150 characters. If the parameters and values specified with the ent-gta command are too long to fit on the ent-gta command line, perform the "Changing Global Title Address Information" procedure in this chapter to complete adding the GTA entry.
Enter the rtrv-gta command with these parameters:
:gttsn=<GTT set name specified in the ent-gta command>
:gta=<global title address specified in the ent-gta command>
The num and force parameters can be specified with the rtrv-gta command. The num parameter specifies the number of entries to display. If the num parameter value is greater than 1000, the force=yes parameter must be specified with the rtrv-gta command.
Enter the chg-db:action=backup:dest=fixed command



Removing Global Title Address Information

This procedure is used to remove an existing global title address information in the database using the `dlt-gta` command.

The `dlt-gta` command uses these parameters:

`:gttsn` – The GTT set name

`:gta` – The global title address or the beginning value of a range of global title addresses

`:egta` – The end value of a range of global title address.

`:cgssn` – The CGPA subsystem number or the beginning value of a range of CGPA subsystem numbers

:ecgssn – The end value of a range of CGPA subsystem numbers

:cgpc/cgpca/cgpci/cgpcn/cgpcn24 – The CGPA point code value

:opc/opca/opci/opcn/opcn24 – The originating point code value

The cgssn, ecgssn, cgpc/cgpca/cgpci/cgpcn/cgpcn24, and opc/opca/opci/opcn/opcn24 parameters can be specified only if the START SSN, END SSN, CGPC, or OPC columns are shown in the rtrv-gta output. If these columns are shown, the Origin-Based SCCP Routing feature is enabled. *Table 50: DLT-GTA Parameter Combinations* on page 674 shows the parameter combinations that can be used in this procedure.

The GTT set name (gttsn) must be specified and match that of an existing GTT set name. Use the rtrv-gttset command to view the GTT set names. The destination point code (DPC) must be a full point code and cannot be out of range.

If the end of the global title address (egta) parameter is specified, the GTA and EGTA must have the same number of digits, but the EGTA must be larger than the GTA. The range, as specified by the start and end global title addresses, must be in the database for the specified translation type. Each range may be contained completely within a previously defined range, in which case splitting is performed. However, if the ranges overlap, splitting cannot occur, and the dlt-gta command is rejected with this message.

```
E2401 Cmd Rej:GTA range overlaps a current range
```

Along with error message 2401, a list of the overlapped global title addresses is displayed as shown in the following example.

```
rlghncxa03w 06-10-24 08:29:15 GMT EAGLE5 36.0.0
The following GTA ranges overlap the input GTA range

START GTA               END GTA
8005550000              8005551999
8005552000              8005553999
8005554000              8005555999

DLT-GTA: MASP A - Command Aborted
```

For a range of global title addresses or CGPA SSNs to be split, the new entry created by the split cannot increase the number of entries in the GTT table beyond the quantity shown in the rtrv-gta output.

The length of the global title addresses specified by the gta or egta parameters must match the length of any existing global title addresses assigned to the specific GTT set name. The lengths are shown in the START GTA and END GTA fields of the rtrv-gta command output, or in the NDGT field of the rtrv-gttset command output. If the length of the global title address does not match one of the lengths already assigned to the GTT set name, the dlt-gta command is rejected with this message.

```
E2961 Cmd Rej: The GTA length is not defined for the specified GTTSET
```

If the Variable-length Global Title Translation Feature (VGTT) is on, the NDGT field of the rtrv-gttset command can show different lengths of global title addresses assigned to a GTT set name, as shown in the following example.

```
rlghncxa03w 06-10-07 00:30:31 GMT EAGLE5 36.0.0
GTTSN     NETDOM  NDGT
lidb      ansi    3, 7, 10
t800      ansi    6
```

```
si000     itu     15
imsi      itu     15
abcd1234  itu     12
```

In this example of the `rtrv-gttset` command output, the GTT set `lidb` contains three different length global title addresses; global title addresses containing three digits, seven digits, and 10 digits.

When the VGTT feature is on, and the last global title address of a particular length is deleted for the specified GTT set name, then that length is no longer supported. That length is not displayed in the `NDGT` field of the `rtrv-gttset` command output. For example, if the last 7-digit global title address is deleted from GTT set `lidb` (from the previous example), the `NDGT` field of the `rtrv-gttset` command shows only the numbers three and 10 in the `NDGT` field indicating that GTT set `lidb` contains only 3- and 10-digit global title addresses.

Canceling the `RTRV-GTA` Command

Because the `rtrv-gta` command used in this procedure can output information for a long period of time, the `rtrv-gta` command can be canceled and the output to the terminal stopped. There are three ways that the `rtrv-gta` command can be canceled.

- Press the `F9` function key on the keyboard at the terminal where the `rtrv-gta` command was entered.
- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rtrv-gta` command was entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rtrv-gta` command was entered, from another terminal other that the terminal where the `rtrv-gta` 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*.

Table 50: DLT-GTA Parameter Combinations

Origin-Based SCCP Routing Not Enabled	GTT Set Type CDGTA	GTT Set Type CGGTA	GTT Set Type CGSSN	GTT Set Type CGPC	GTT Set Type OPC
Mandatory Parameters					
GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gta` output.	GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CDGTA`	GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGGTA`	GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGSSN`	GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGPC` in	GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `OPC` in

Origin-Based SCCP Routing Not Enabled	GTT Set Type CDGTA	GTT Set Type CGGTA	GTT Set Type CGSSN	GTT Set Type CGPC	GTT Set Type OPC
	in the SETTYPE column.	in the SETTYPE column.	in the SETTYPE column.	the SETTYPE column.	the SETTYPE column.
GTA – The GTA value from the GTA column of the rtrv-gta output. (See Notes 1, 3, and 4)	GTA – The GTA value from the GTA column of the rtrv-gta output. (See Notes 1, 3, and 4)	GTA – The GTA value from the GTA column of the rtrv-gta output. (See Notes 1, 3, and 4)	CGSSN – The CGSSN value from the CGSSN column of the rtrv-gta output output. (See Notes 5 and 7)	CGPC/CGPCA/ CGPCI/CGPCN/ CGPCN24 – The CGPC value from the CGPC column of the rtrv-gta output	OPC/OPCA/ OPCI/OPCN/ OPCN24 – The OPC value from the OPC column of the rtrv-gta output
Optional Parameters					
EGTA – The EGTA value from the EGTA column of the rtrv-gta output. (See Notes 1 and 2)	EGTA – The EGTA value from the EGTA column of the rtrv-gta output. output. (See Notes 1 and 2)	EGTA – The EGTA value from the EGTA column of the rtrv-gta output. (See Notes 1 and 2)	ECGSSN – The ECGSSN value from the ECGSSN column of the rtrv-gta output. (See Notes 5 and 6)	No optional parameters.	No optional parameters.

Notes:

1. To remove an entry containing a range of GTAs, the gta and egta parameters must be specified with the values for each parameter that are shown in the rtrv-gta output.

2. The egta parameter does not need to be specified if the GTA entry contains an egta parameter value that is equal to the gta parameter value.

3. If a range of GTAs is assigned to the GTA entry, and only the gta parameter is specified, for example, 336337 - 3400000, and only the gta=336337 parameter is specified, the entry is still in the database. The range of GTAs becomes 336338 - 3400000.

4. The range of GTAs can be split by specifying a gta parameter value in between the existing gta and egta parameter values. For example, the GTA range is 336337 - 3400000 and only the gta=370000 parameter is specified. Two entries are created, one with the range of 336338 - 336999, and the other with the range of 337001 - 3400000.

5. To remove an entry containing a range of CGSSNs, the cgssn and ecgssn parameters must be specified with the values for each parameter that are shown in the rtrv-gta output.

6. The ecgssn parameter does not need to be specified if the GTA entry contains an ecgssn parameter value that is equal to the cgssn parameter value.

Origin-Based SCCP Routing Not Enabled	GTT Set Type CDGTA	GTT Set Type CGGTA	GTT Set Type CGSSN	GTT Set Type CGPC	GTT Set Type OPC
7. If a range of CGSSNs is assigned to the GTA entry, and only the `cgssn` parameter is specified, for example, 25 - 75, and only the `cgssn=25` parameter is specified, the entry is still in the database. The range of CGSSNs becomes 26 - 75. 8. The range of CGSSNs can be split by specifying a `cgssn` parameter value in between the existing `cgssn` and `ecgssn` parameter values. For example, the CGSSN range is 25 - 75 and only the `cgssn=50` parameter is specified. Two entries are created, one with the range of , 25 - 49, and the other with the range of 51 - 75.					

1. Display the existing GTT sets in the database using the `rtrv-gttset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:27:31 GMT EAGLE5 36.0.0
GTTSN     NETDOM  NDGT
abcd1234  itu     12
imsi      itu     15
lidb      ansi    10
t800      ansi    10
si000     itu     15
```

   If the Origin-Based SCCP Routing feature is enabled, the `SETTYPE` column is shown in the `rtrv-gttset` output as shown in the following example.

```
rlghncxa03w 06-10-07 00:29:31 GMT EAGLE5 36.0.0
GTTSN      NETDOM  SETTYPE  NDGT
abcd1234   itu     CGGTA    12
gttset3    ansi    CGGTA    10
gttset6    ansi    OPC      -
gttset7    ansi    CGPC     -
gttset12   ansi    OPC      -
imsi       itu     CDGTA    15
lidb       ansi    CDGTA    10
t800       ansi    CDGTA    10
s1000      itu     CDGTA    15
s2000      itu     CGPC     -
```

2. Display the global title address (GTA) information for the GTT set that contains the GTA information to be removed.

   Use the `rtrv-gta` command with the `gttsn` parameter value shown in the output of step 1. If the `num` parameter is specified with the `rtrv-gta` command, and the value of the `num` parameter is greater than 1000, the `force=yes` parameter must be specified with the `rtrv-gta` command. For this example, enter this command.

```
rtrv-gta:gttsn=t800
```

   This is an example of the possible output.

```
rlghncxa03w 08-10-07 00:27:31 GMT EAGLE5 39.2.0
GTTSN     NETDOM  NDGT
t800      ansi    10
GTA TABLE IS   1 % FULL  (17 of 269999)
```

```
START GTA  END GTA    XLAT   RI     PC
3365840000 3365849999 DPC    SSN    001-255-001
     SSN=0   CCGT=no  NTT=---
8005550000 8005551999 DPCSSN SSN    001-254-255
     SSN=255 CCGT=no  NTT=---
8005552000 8005553999 DPC    GT     001-254-255
     SSN=255 CCGT=no  NTT=---
8005554000 8005555999 DPCNGT GT     001-254-255
     SSN=255 CCGT=no  NTT=123
8005556000 8005557999 DPCSSN SSN    001-254-255
     SSN=255 CCGT=no  NTT=---
8005558000 8005559999 DPCSSN SSN    001-254-255
     SSN=255 CCGT=yes NTT=---
9194605555 9194605555 DPCNGT GT     001-255-100
     SSN=0   CCGT=no  NTT=75
     NNP=3 NNAI=120 NPDD=2 NPDS=34
     NGTI=
9194610000 9194689999 DPCSSN SSN    001-255-252
     SSN=254 CCGT=no  NTT=---
9195551212 9195551212 DPCSSN SSN    008-001-001
     SSN=222 CCGT=no  NTT=---
9762428487 9762428487 DPCSSN SSN    001-254-255
     SSN=222 CCGT=no  NTT=---
9766423277 9766423277 DPCSSN SSN    001-254-255
     SSN=222 CCGT=no  NTT=---
9769388928 9769388928 DPCSSN SSN    001-254-255
     SSN=222 CCGT=no  NTT=---

Command Retrieved 12 Entries
```

If the Origin-Based SCCP Routing feature is enabled, this is an example of the possible output.

```
rlghncxa03w 08-10-07 00:27:31 GMT EAGLE5 39.2.0

GTTSN     NETDOM  SETTYPE  NDGT
t800      ansi    CDGTA    10
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
3365840000 3365849999 DPC    SSN    001-255-001
     SSN=0   CCGT=no  NTT=---
     CGGTASN=gttset3   CGPCSN=--------- SELID=----- OPCSN=---------
8005550000 8005551999 DPCSSN SSN    001-254-255
     SSN=255 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=gttset7   SELID=----- OPCSN=---------
8005552000 8005553999 DPC    GT     001-254-255
     SSN=255 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=gttset7   SELID=----- OPCSN=---------
8005554000 8005555999 DPCNGT GT     001-254-255
     SSN=255 CCGT=no  NTT=123
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset12
8005556000 8005557999 DPCSSN SSN    001-254-255
     SSN=255 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset6
8005558000 8005559999 DPCSSN SSN    001-254-255
     SSN=255 CCGT=yes NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset12
9194605555 9194605555 DPCNGT GT     001-255-100
     SSN=0   CCGT=no  NTT=75
     NNP=3 NNAI=120 NPDD=2 NPDS=34
     NGTI=
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset12
9194610000 9194689999 DPCSSN SSN    001-255-252
     SSN=254 CCGT=no  NTT=---
```

```
     CGGTASN=--------- CGPCSN=--------- SELID=12    OPCSN=gttset12
9195551212 9195551212 DPCSSN SSN    008-001-001
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset12
9762428487 9762428487 DPCSSN SSN    001-254-255
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
9766423277 9766423277 DPCSSN SSN    001-254-255
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
9769388928 9769388928 DPCSSN SSN    001-254-255
     SSN=222 CCGT=no  NTT=---
     CGGTASN=gttset9   CGPCSN=--------- SELID=----- OPCSN=---------

Command Retrieved 12 Entries
```

Note:

If the range of GTAs or CGPA SSNs will not be split in this procedure, skip step 3 and go to step 4.

3. If the `rtrv-gta` output in step 2 shows that the maximum number of global title addresses is 1,000,000, do not perform this step. Go to step 4.

   If the `rtrv-gta` output in step 2 shows that the maximum number of global title addresses is either 269,999 or 400,000, and the number of global title addresses will not increase the number beyond the quantity shown in the `rtrv-gta` output in step 2 when the range of GTAs or CGPA SSNs is split, do not perform this step. Go to step 4.

   If the `rtrv-gta` output in step 2 shows that the maximum number of global title addresses is either 269,999 or 400,000, and the number of global title addresses will be more than the maximum number of global title addresses when the range of GTAs or CGPA SSNs is split, perform the *Enabling the XGTT Table Expansion Feature* on page 762 procedure and enable XGTT Table Expansion controlled feature for either 400,000 or 1,000,000 global title addresses as required. Then go to step 4.

4. Remove the GTA information using the `dlt-gta` command.

   Table 50: DLT-GTA Parameter Combinations on page 674 shows the parameter combinations that can be used with the `dlt-gta` command. For this example, enter this command.

   ```
   dlt-gta:gttsn=t800:gta=3365840000:egta=3365849999
   ```

   When this command has successfully completed, this message appears.

   ```
   rlghncxa03w 06-10-07 00:29:31 GMT EAGLE5 36.0.0
   DLT-GTA: MASP A - COMPLTD
   ```

5. Verify the changes to the GTT set using the `rtrv-gta` command with the `gttsn` parameter value specified in step 4.

   If the `num` parameter is specified with the `rtrv-gta` command, and the value of the `num` parameter is greater than 1000, the `force=yes` parameter must be specified with the `rtrv-gta` command. For this example, enter this command.

   ```
   rtrv-gta:gttsn=t800
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 08-10-07 00:27:31 GMT EAGLE5 39.2.0
   GTTSN     NETDOM  NDGT
   ```

```
t800      ansi    10
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
8005550000 8005551999 dpcssn ssn    001-254-255
     SSN=255 CCGT=no  NTT=---
8005552000 8005553999 dpc    gt     001-254-255
     SSN=0   CCGT=no  NTT=---
8005554000 8005555999 dpcngt gt     001-254-255
     SSN=--- CCGT=no  NTT=123
8005556000 8005557999 dpcssn ssn    001-254-255
     SSN=255 CCGT=no  NTT=---
8005558000 8005559999 dpcssn ssn    001-254-255
     SSN=255 CCGT=yes  NTT=---
9194605555 9194605555 dpcngt gt     001-255-100
     SSN=0   CCGT=no  NTT=75
     NNP=3 NNAI=120 NPDD=2 NPDS=34
     NGTI=
9195551212 9195551212 dpcssn ssn    008-001-001
     SSN=222 CCGT=no  NTT=---
9762428487 9762428487 dpcssn ssn    001-254-255
     SSN=222 CCGT=no  NTT=---
9766423277 9766423277 dpcssn ssn    001-254-255
     SSN=222 CCGT=no  NTT=---
9769388928 9769388928 dpcssn ssn    001-254-255
     SSN=222 CCGT=no  NTT=---

Command Retrieved 10 Entries
```

If the Origin-Based SCCP Routing feature is enabled, this is an example of the possible output.

```
rlghncxa03w 08-10-07 00:27:31 GMT EAGLE5 39.2.0
GTTSN     NETDOM  SETTYPE  NDGT
t800      ansi    CDGTA    10
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
8005550000 8005551999 DPCSSN SSN    001-254-255
     SSN=255 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=gttset7   SELID=----- OPCSN=---------
8005552000 8005553999 DPC    GT     001-254-255
     SSN=255 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=gttset7   SELID=----- OPCSN=---------
8005554000 8005555999 DPCNGT GT     001-254-255
     SSN=255 CCGT=no  NTT=123
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset12
8005556000 8005557999 DPCSSN SSN    001-254-255
     SSN=255 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset6
8005558000 8005559999 DPCSSN SSN    001-254-255
     SSN=255 CCGT=yes NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset12
9194605555 9194605555 DPCNGT GT     001-255-100
     SSN=0   CCGT=no  NTT=75
     NNP=3 NNAI=120 NPDD=2 NPDS=34
     NGTI=
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset12
9194610000 9194689999 DPCSSN SSN    001-255-252
     SSN=254 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=12    OPCSN=gttset12
9195551212 9195551212 DPCSSN SSN    008-001-001
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=gttset12
9762428487 9762428487 DPCSSN SSN    001-254-255
```

```
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
9766423277 9766423277 DPCSSN SSN    001-254-255
     SSN=222 CCGT=no  NTT=---
     CGGTASN=--------- CGPCSN=--------- SELID=----- OPCSN=---------
9769388928 9769388928 DPCSSN SSN    001-254-255
     SSN=222 CCGT=no  NTT=---
     CGGTASN=gttset9   CGPCSN=--------- SELID=----- OPCSN=---------

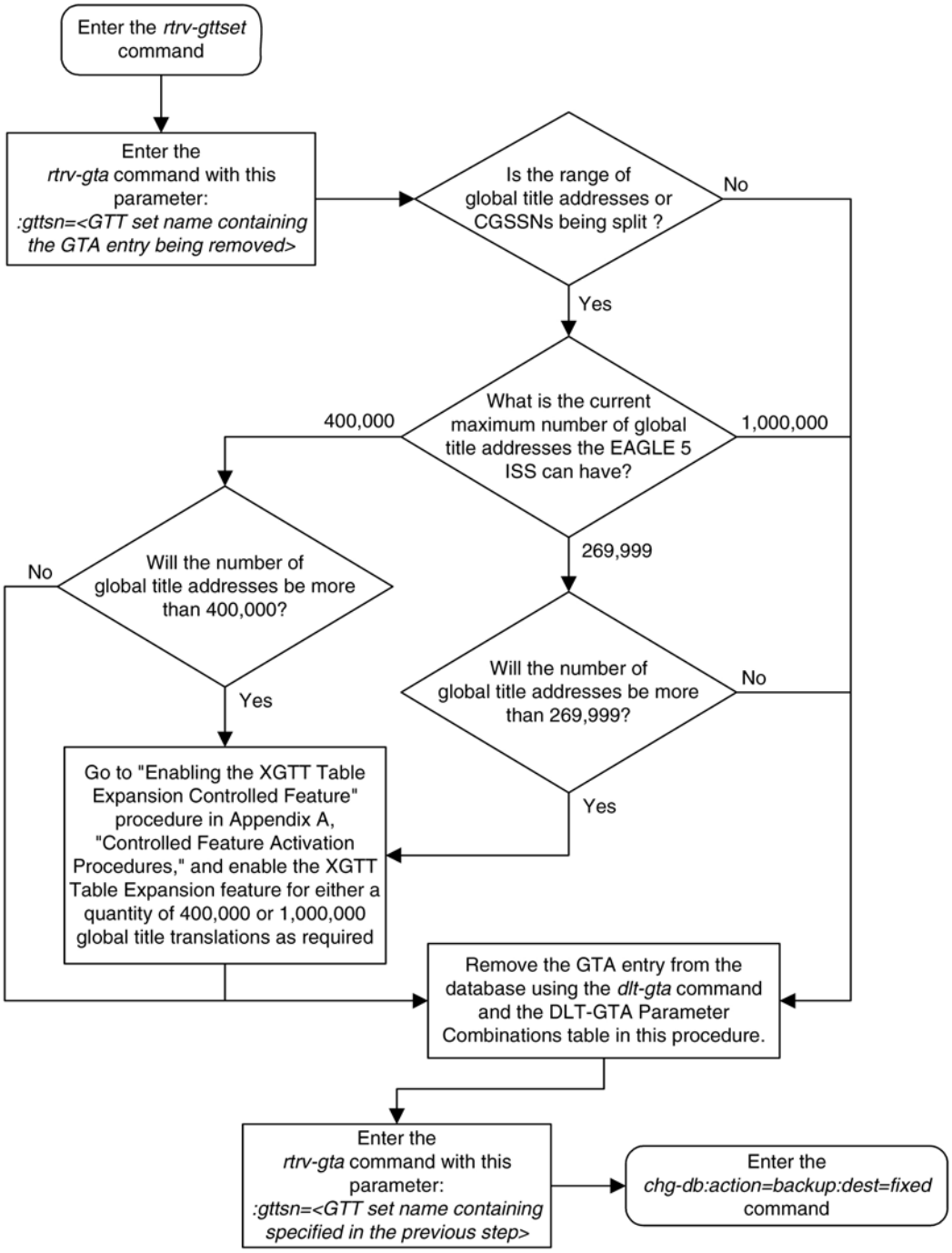
Command Retrieved 11 Entries
```

6. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

   These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 53: Removing GTA Information from the Database



Changing Global Title Address Information

This procedure is used to change existing global title address (GTA) information in the database using the `chg-gta` command.

The chg-gta command uses these parameters:

:gttsn – The GTT set name.

:gta – The start of global title address.

:egta – The end of global title address.

:pc/pca/pci/pcn/pcn24 – The translated point code.

:ssn – The translated subsystem number.

:ri – The routing indicator.

:xlat – The translate indicator.

:ntt – The new translation type.

:ccgt – The cancel called global title indicator.

:force – The check mated application override.

:nnp – The new numbering plan

:nnai – The new nature of address indicator

:npdd – The number of digits to be deleted from the beginning of the Global Title Address digits (the prefix digits).

:npds – The digits that are being substituted for the prefix digits.

:nsdd – The number of digits to be deleted from the end of the Global Title Address digits (the suffix digits)

:nsds – The digits that are being substituted for the suffix digits

:rmgtt - This parameter resets all GT Modification fields to their default values.

:mrnset – The MRN set ID, shown in the rtrv-mrn command. The mrnset parameter can be specified only if the Flexible GTT Load Sharing feature is enabled. If the Flexible GTT Load Sharing feature is enabled and the ri parameter value will be ri=gt when this procedure is completed, and the original global title translation being changed in this procedure did not have an MRN set ID assigned to it, the mrnset parameter must be specified with the chg-gta command. The MRN set ID assigned to the global title translation in this step must contain the point code value that will be assigned to the global title translation being changed in this step.

:mapset – The MRN set ID, shown in the rtrv-mrn command. The mapset parameter can be specified only if the Flexible GTT Load Sharing feature is enabled. If the Flexible GTT Load Sharing feature is enabled and the ri parameter value will be ri=ssn when this procedure is completed, and the original global title translation being changed in this procedure did not have a MAP set ID assigned to it, the mapset parameter must be specified with the chg-gta command. The MAP set ID assigned to the global title translation in this step must contain the point code and SSN values that will be assigned to the global title translation being changed in this step.

The status of the Flexible GTT Load Sharing feature is shown in the rtrv-ctrl-feat output. To enable the Flexible GTT Load Sharing feature, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure .

:cggtasn – The CGGTA GTT set name shown in the rtrv-gttset output.

:cgpcsn – The CGPC GTT set name shown in the rtrv-gttset output.

:cgssnsn – The CGSSN GTT set name shown in the rtrv-gttset output.

`:opcsn` – The OPC GTT set name shown in the `rtrv-gttset` output.

`:cgssn` – The CGPA subsystem number or the beginning value of a range of CGPA subsystem numbers

`:ecgssn` – The end value of a range of CGPA subsystem numbers

`:cgpc/cgpca/cgpci/cgpcn/cgpcn24` – The CGPA point code

`:opc/opca/opci/opcn/opcn24` – The originating point code

`:selid` – The selector ID

The `cggtasn`, `cgpcsn`, `cgssnsn`, `opcsn`, `cgssn`, `ecgssn`, `cgpc/cgpca/cgpci/cgpcn/cgpcn24`, `opc/opca/opci/opcn/opcn24`, `selid`, `xlat=udts`, and `xlat=disc` parameters can be specified only if the Origin-Based SCCP Routing feature is enabled. The status of the Origin-Based SCCP Routing feature is shown in the `rtrv-ctrl-feat` output. If the `SETTYPE` column is shown in the `rtrv-gttset` output, or if the `CGGTASN`, `CGPCSN`, `CGSSNSN`, `OPCSN`, `START SSN`, `END SSN`, `CGPC`, `OPC`, or `SELID` columns are shown in the `rtrv-gta` output, the Origin-Based SCCP Routing feature is enabled. To enable the Origin-Based SCCP Routing feature, perform the *Activating the Origin-Based SCCP Routing Feature* on page 797 procedure.

`:loopset` - The value of this parameter is the name of the `loopset` that is assigned to the GTA. This parameter can be specified only if the SCCP Loop Detection feature is enabled. Enter the `rtrv-loopset` command to verify that the SCCP Loop Detection feature is enabled. Perform the *Activating the SCCP Loop Detection Feature* on page 830 procedure, if necessary.

`:cggtmod` - The calling party GT modification indicator. This parameter specifies whether or not calling party global title modification is required. The values for this parameter are `yes` (calling party global title modification is required) or `no` (calling party global title modification is not required). This parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled. Enter the `rtrv-ctrl-feat` command to verify that either the AMGTT or AMGTT CgPA Upgrade feature is enabled. If the AMGTT or AMGTT CgPA Upgrade feature is not enabled, perform the *Activating the Advanced GT Modification Feature* on page 846 procedure to enable the required feature.

`:split` – Split or change the range of global title addresses. If the `split=yes` parameter is specified, the existing range of global title addresses is split based on the values of the `gta` and `egta` parameters. New entries are created in the global title translation table for each new range created by the `split` parameter. The attributes of each new entry, other than the range of global title addresses, are the same as the original global title translation entry, if these values are not changed when the `chg-gta` command is executed. If other attributes are changed when the `chg-gta` command is executed, the changed values are in each new entry created by the `split` parameter.

If the `split=no` parameter is specified, the range of global title addresses is replaced with the new range of global title addresses specified by the `gta` and `egta` parameters.

The default value for the `split` parameter is `yes`.



CAUTION: Changes to the range of global title addresses occur only if the both the `gta` and `egta` parameters are specified and the values for either of these parameters, or both parameters are different from the original values in the global title translation. If the `gta` and `egta` parameters are specified for the global title translation being changed, and you do not wish to change either of these values, make sure the `gta` and `egta` values shown in the `rtrv-gtt` output for the global title translation being changed are specified in the `chg-gta` command.

The following examples illustrate how the `split` parameter works and ranges of global title addresses can be changed.

A global title translation entry in the database contains this range of global title addresses, 5556000 - 5558000.

```
rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 35.6.0
GTTSN     NETDOM  NDGT
tst1      ansi    7
GTA TABLE IS     (17 of 269999)  1 % FULL
START GTA  END GTA    XLAT   RI     PC
5556000    5558000    dpcssn ssn    001-255-252
     MAPSET=1     SSN=254 CCGT=no  NTT=---
```

The global title translation is changed with a new range of global title addresses, 5556800 - 5559000, and with the `split=no` parameter.

```
chg-gta:ttn=tst1:gta=5556800:egta=5559000:split=no
```

The range of global title addresses is changed to 5556800 - 5559000.

```
rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 36.0.0
GTTSN     NETDOM  NDGT
tst1      ansi    7
GTA TABLE IS     (17 of 269999)  1 % FULL
START GTA  END GTA    XLAT   RI     PC
5556800    5559000    dpcssn ssn    001-255-252
     MAPSET=1     SSN=254 CCGT=no  NTT=---
```

In this example, the range of global title addresses is made smaller by specifying the range of global title addresses 5556500 - 5557500, and with the `split=no` parameter.

```
chg-gta:ttn=tst1:gta=5556500:egta=5557500:split=no
```

```
rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 36.0.0
GTTSN     NETDOM  NDGT
tst1      ansi    7
GTA TABLE IS   1 % FULL  (17 of 269999)
START GTA  END GTA    XLAT   RI     PC
5556500    5557500    dpcssn ssn    001-255-252
     MAPSET=1     SSN=254 CCGT=no  NTT=---
```

In this next example, the range of global title addresses is split with the `gta=5556900` and `egta=5557000` defining where the splits occur.

```
chg-gta:ttn=tst1:gta=5556900:egta=5557000
```

Since the default value for the `split` parameter is `yes`, the `split=yes` parameter does not have to be specified to split the range of global title addresses. When the `chg-gta` command is entered, three new global title translation entries with the new global title address ranges are created, and the original global title translation entry is removed from the database. Since the `gta` and `egta` parameter values specified in this example are within the original range of global title addresses, the original range of global title addresses is split into three new ranges. The `START GTA` value of the first new range is the original `START GTA` value and the `END GTA` value is the `gta` parameter value minus one. The `START GTA` value of the second new range is the `gta` parameter value and the `END GTA` value is the `egta` parameter value. The `START GTA` value of the third new range is the `egta` parameter value plus 1 and the `END GTA` value is the original `END GTA` value.

```
rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 35.6.0
GTTSN     NETDOM  NDGT
```

```
tst1      ansi    7
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
5556000    5556899    dpcssn ssn    001-255-252
     MAPSET=1     SSN=254 CCGT=no  NTT=---

rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 35.6.0
GTTSN     NETDOM  NDGT
tst1      ansi    7
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
5556900    5557000    dpcssn ssn    001-255-252
     MAPSET=1     SSN=254 CCGT=no  NTT=---

rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 35.6.0
GTTSN     NETDOM  NDGT
tst1      ansi    7
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
5557001    5558000    dpcssn ssn    001-255-252
     MAPSET=1     SSN=254 CCGT=no  NTT=---
```

In this next example, the global title translation containing the range of global title addresses 5557001 - 5558000 is split into two new ranges with the `gta=5557501` and `egta=5558000` defining where the split occurs.

```
chg-gta:ttn=tst1:gta=5557501:egta=5558000:split=yes
```

When the `chg-gta` command is entered, two new global title translation entries with the new global title address ranges are created, and the original global title translation entry is removed from the database. The `START GTA` value of the first new range is the original `START GTA` value and the `END GTA` value is the `gta` parameter value minus one. The `START GTA` value of the second new range is the `gta` parameter value and the `END GTA` value is the `egta` parameter value. In this example, the `egta` parameter is also the original `END GTA` value.

```
rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 35.6.0
GTTSN     NETDOM  NDGT
tst1      ansi    7
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
5557001    5557500    dpcssn ssn    001-255-252
     MAPSET=1     SSN=254 CCGT=no  NTT=---

rlghncxa03w 06-10-07 00:28:31 GMT EAGLE5 35.6.0
GTTSN     NETDOM  NDGT
tst1      ansi    7
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
5557501    5558000    dpcssn ssn    001-255-252
     MAPSET=1     SSN=254 CCGT=no  NTT=---
```

The range of global title addresses can be changed so long as the new range of global title addresses does not overlap an existing range of global title addresses.

For example, using the range of global title addresses from the previous examples, 5556000 - 5558000, you wish to extend the range of global title addresses to 5556000 - 5559000. The range of global title addresses can be extended to 5559000 by specifying the `egta=5559000` and `split=no`

parameters with the chg-gta command. However, if another range of global title addresses begins with the value 5558500, the egta=5559000 parameter cannot be specified with the chg-gta command as the new range created with the egta=5559000 parameter would overlap the range of global title addresses beginning with the value 5558500. In this situation, the maximum value for the egta parameter would be 5558499.

Note: The command line on the terminal can contain up to 150 characters. If the parameters and values specified with the chg-gta command are too long to fit on the chg-gta command line, perform the chg-gta command as many times as necessary to complete the GTA entry.

The global title address cannot contain alphabetic characters

The GTT set name (gttsn) must be specified and match that of an existing GTT set name. Use the rtrv-gttset command to view the GTT set names. If the specified GTT set is an ANSI set, the pc or pca value must be a valid ANSI point code. If the specified GTT set is an ITU set, the pci, pcn, or pcn24 value must be a valid ITU point code. The point code (PC) must be a full point code and cannot be out of range. If the ANSI-ITU-China SCCP Conversion feature is enabled, the domain (ANSI or ITU) of the GTT set name and point code do not have to be the same.

Note: See Chapter 2, Configuring Destination Tables in the Database *Administration Manual - SS7* for a definition of the point code types that are used on the EAGLE 5 ISS and for a definition of the different formats that can be used for ITU national point codes.

If the Variable-Length Global Title Translation (VGTT) feature is off, shown the entry VGTT = off, the global title address length must be equal to the number of digits specified by the given GTT set name. The length of the global title address can be verified with the rtrv-gttset command.

If the Variable-Length Global Title Translation (VGTT) feature is on, shown the entry VGTT = on, and the GTT set name has 10 different length global title addresses assigned to it, the length of the new global title address must be the same as one of the 10 lengths already assigned to the translation type. If the length of the global title address does not match one of the 10 lengths already assigned to the GTT set name, the chg-gta command is rejected with this message.

```
E2961 Cmd Rej: The GTA length is not defined for the specified GTTSET
```

If the translation type has less than 10 different length global title addresses assigned to it, the length of the global title address can be from one to 21 digits and does not have to match the length of the other global title addresses assigned to the translation type.

If the Variable-Length Global Title Translation (VGTT) feature is on, the ndgt parameter of the ent-gttset command has no effect on the length of the global title address. As global title addresses of different lengths are assigned to a specific translation type, these lengths are displayed in the NDGT field of the rtrv-gttset command output, as shown in the following example.

```
rlghncxa03w 06-10-07 00:30:31 GMT EAGLE5 35.6.0
GTTSN     NETDOM  NDGT
lidb      ansi    3, 7, 10
t800      ansi    6
si000     itu     15
imsi      itu     15
abcd1234  itu     12
```

In this example of the rtrv-gttset command output, the GTT set lidb contains three different length global title addresses; global title addresses containing three digits, seven digits, and 10 digits.

Go to the *Variable-length Global Title Translation Feature* on page 20 section for more information about this feature.

If the end of the global title address (EGTA) parameter is specified, GTA and EGTA must have the same number of digits, but EGTA must be larger than GTA. The range, as specified by the start and end global title addresses, must be in the database for the specified translation type. Each range may be contained completely within a previously defined range, in which case splitting is performed. However, if the ranges overlap, splitting cannot occur, and the chg-gta command is rejected with this message.

```
E2401 Cmd Rej:GTA range overlaps a current range
```

Along with error message 2401, a list of the overlapped global title addresses is displayed as shown in the following example.

```
rlghncxa03w 06-10-24 08:29:15 GMT EAGLE5 35.6.0
The following GTA ranges overlap the input GTA range

START GTA               END GTA
8005550000              8005551999
8005552000              8005553999
8005554000              8005555999

CHG-GTA: MASP A - Command Aborted
```

The translate indicator (xlat) must be set to dpcssn if the ssn parameter is specified. If the translate indicator is set to dpcngt, the ri value must be set to gt. If the translate indicator is set to dpcngt, the new translation type (ntt) must be specified and ntt value must be set to dpcngt.

The translation type (tt) must match that of an existing ANSI GTT Selector which is assigned to a GTT Set and may not be defined as an alias.

If a point code is the STP's True PC, then the value of the XLAT parameter must be set to DPCSSN and the value of the RI parameter must be set to SSN. If the SSN parameter is specified and a point code is the STP's True PC, then the subsystem number specified must exist in the SS-APPL table. This can be verified with the rtrv-ss-appl command. To execute the rtrv-ss-appl command, either the LNP or ATINP features must be enabled, or the EIR, INP, V-Flex, or ANSI-41 INP Query features must be enabled and turned on. If the LNP feature is enabled, the entry LNP TNs with a quantity greater than zero is shown in the rtrv-ctrl-feat command output. If the EIR feature is enabled and turned on, the entry EIR is shown in the rtrv-ctrl-feat command output as being permanently or temporarily enabled and with the status set to on. If the INP feature is enabled and turned on, the entry INP is shown in the rtrv-ctrl-feat command output with the status set to on. If the ANSI-41 INP Query feature is enabled and turned on, the entry ANSI-41 INP Query is shown in the rtrv-ctrl-feat command output with the status set to on. If the V-Flex feature is enabled and turned on, the entry VFLEX is shown in the rtrv-ctrl-feat command output with the status set to on. If the ATINP feature is enabled and turned on, the entry ATINP is shown in the rtrv-ctrl-feat command output with the status set to on.

Note: The Local Number Portability (LNP), Equipment Identity Register (EIR), INAP Number Portability (INP), V-Flex, ATINP, or ANSI-41 INP Query features must be purchased before you can enable the LNPor ATINP features, or enable and turn on the EIR, V-Flex, INP, or ANSI-41 INP Query features. If you are not sure whether you have purchased the LNP, EIR, V-Flex, ATINP, or INP, or ANSI-41 INP Query feature, contact your Tekelec Sales Representative or Account Representative.

Once the LNP or ATINP feature is enabled with the `enable-ctrl-feat` command, or the EIR, INP, V-Flex, and ANSI-41 INP Query features are turned on with the `chg-ctrl-feat` command, they cannot be turned off or disabled.

A point code must exist as a destination in the route table or reside in a cluster that exists as a destination in the route table (for global title routing) unless the point code is the STP's True PC.

If a final GTT is specified (`ri=ssn`) with the `xlat=dpc` parameter, and the value of the `force` parameter is `no`, the point code must be in the Remote Point Code/Mated Application table. Verify this by entering the `rtrv-map` command. If this point code and subsystem number is not defined as a mated application, perform one of these procedures to add the point code and subsystem number to the database as a mated application:

- *Provisioning a Solitary Mated Application* on page 112
- *Provisioning a Dominant Mated Application* on page 142
- *Provisioning a Load Shared Mated Application* on page 189
- *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223

The point code and subsystem number do not have to be in the mated application table when the `chg-gta` command is executed when these parameters are specified with the `chg-gta` command.

- `ri=gt`
- `xlat=dpcssn` and `ri=ssn` (provided the point code value is not the STP's true point code)

If the point code and subsystem are not in the mated application table when either of these parameters are specified with the `chg-gta` command, the EAGLE 5 ISS creates a solitary mated application in the mated application table using the point code and subsystem values specified in the `chg-gta` command.

If the `xlat=udts` parameter is specified for a global title translation, messages containing the CdPA GTA, or range of GTAs, the CgPA GTA, or range of GTAs, the CgPA point code, CgPA subsystem number, or OPC is discarded. UIM 1192 "SCCP translation found: XLAT=UDTS" is generated, and a UDTS (or XUDTS for XUDT) with Return Cause = 1 "No translation for address" is also generated regardless of Message Handling value in the MSU.

If the `xlat=disc` parameter is specified for a global title translation, messages containing the CdPA GTA, or range of GTAs, the CgPA GTA, or range of GTAs, the CgPA point code, CgPA subsystem number, or OPC will be discarded. UIM 1193 "SCCP translation found: XLAT=DISCARD" is generated.

For more information on these UIMs, see the *Unsolicited Alarm and Information Messages Manual* . The following tables show the valid parameter combinations that can be used with the `xlat=udts` and `xlat-disc` parameters.

- *Table 52: CHG-GTA GTTSN = CDGTA GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 693
- *Table 53: CHG-GTA GTTSN = CGGTA GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 697
- *Table 54: CHG-GTA GTTSN = CGSSN GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 701
- *Table 55: CHG-GTA GTTSN = CGPC GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 704
- *Table 56: CHG-GTA GTTSN = OPC GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 707

If the `ccgt=yes` parameter is specified, then the `ri` value must be set to `ssn`.

If the point code is the EAGLE 5 ISS's point code, then the `ccgt` parameter must be set to `no`.

The GTT table may not be full.

The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, and `nsds` parameters are used by the Advanced GT Modification feature to modify the numbering plan, nature of address indicator, and the prefix or suffix digits in the called party address portion of outbound MSUs in addition to the translation type when the MSU requires further global title translation and the translation type is to be replaced.

Being able to change the numbering plan, nature of address indicator, and either the prefix or suffix digits in the called party address portion of outbound MSUs makes the MSU more compatible with the network that the MSU is being sent to and to ensure that the MSU is routed correctly. These changes are made after the global title translation process, but before the MSU is routed to its destination.

The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, `nsds` , and `rmgtt` parameters can be specified only when the Advanced GT Modification feature is enabled This can be verified by entering the `rtrv-ctrl-feat` command. For more information on the Advanced GT Modification feature, refer to the *Advanced GT Modification Feature* on page 22 section.

The values specified for the `gta`, `egta`, `npds`,and `nsds` parameters can be decimal digits (0-9) or hexadecimal digits (0-9, a-f, A-F). Hexadecimal digits can be specified only if the Hex Digit Support for GTT feature is enabled. Verify the status of the Hex Digit Support for GTT feature with the `rtrv-ctrl-feat` command. See the *Hex Digit Support for GTT* on page 39 section for more information on this feature. If the Hex Digit Support for GTT feature is not enabled, perform the *Activating the Hex Digit Support for GTT Feature* on page 806 procedure to enable the Hex Digit Support for GTT feature.

The `ngti=2` parameter can be specified only with an ANSI point code and not with the `nnp` and `nai` parameters.

The `ngti=4` parameter can be specified only with an ITU point code. The `nnp` and `nai` parameters must be specified with the `ngti=4` parameter.

The `ngti` parameter can be specified only if the domain (ANSI or ITU) of the translation type and point code of the global title translation are not the same(the translation type is ANSI and the point code is ITU or the translation type is ITU and the point code is ANSI), or if the domain of the translation type and point code is ITU. The Advanced GT Modification feature must be enabled and the ANSI-ITU-China SCCP Conversion feature must be enabled before the `ngti` parameter can be specified with the global title translation.

Either `ccgt` or `ngti` parameters can be specified with the `chg-gta` command, but both parameters cannot be specified together with the `chg-gta` command.

The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified with the `chg-gta` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters.

Canceling the `RTRV-GTA` Command

Because the `rtrv-gta` command used in this procedure can output information for a long period of time, the `rtrv-gta` command can be canceled and the output to the terminal stopped. There are three ways that the `rtrv-gta` command can be canceled.

- Press the `F9` function key on the keyboard at the terminal where the `rtrv-gta` command was entered.

- Enter the `canc-cmd` without the `trm` parameter at the terminal where the `rtrv-gta` command was entered.
- Enter the `canc-cmd:trm=<xx>`, where `<xx>` is the terminal where the `rtrv-gta` command was entered, from another terminal other that the terminal where the `rtrv-gta` 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*.

Table 51: CHG-GTA Parameter Combinations - Origin-Based SCCP Routing Feature Not Enabled

RI = GT XLAT=DPCNGT	RI = GT XLAT=DPCSSN	RI = GT XLAT=DPC	RI = SSN XLAT=DPCSSN	RI = SSN XLAT=DPC
Mandatory Parameters				
GTTSN	GTTSN	GTTSN	GTTSN	GTTSN
GTA (See Notes 3, 4, 5, and 21)	GTA (See Notes 3, 4, 5, and 21)	GTA (See Notes 3, 4, 5, and 21)	GTA (See Notes 3, 4, 5, and 21)	GTA (See Notes 3, 4, 5, and 21)
Optional Parameters (See Note 20)				
PC/PCA/PCI/ PCN/PCN24 (See Notes 1, 2, and 11)	PC/PCA/PCI/ PCN/PCN24 (See Notes 1, 2, and 11)	PC/PCA/PCI/ PCN/PCN24 (See Notes 1, 2, and 11)	PC/PCA/PCI/ PCN/PCN24 (See Notes 1, 2, 11, and 13)	PC/PCA/PCI/ PCN/PCN24 (See Notes 1, 2, and 11)
EGTA (See Note 22)	EGTA (See Note 22)	EGTA (See Note 22)	EGTA (See Note 22)	EGTA (See Note 22)
NNP (See Notes 6, 8, and 9)	NNP (See Notes 6, 8, and 9)	NNP (See Notes 6, 8, and 9)	NNP (See Notes 6, 8, and 9)	NNP (See Notes 6, 8, and 9)
NNAI (See Notes 6, 8, and 9)	NNAI (See Notes 6, 8, and 9)	NNAI (See Notes 6, 8, and 9)	NNAI (See Notes 6, 8, and 9)	NNAI (See Notes 6, 8, and 9)
NPDD (See Notes 6 and 10)	NPDD (See Notes 6 and 10)	NPDD (See Notes 6 and 10)	NPDD (See Notes 6 and 10)	NPDD (See Notes 6 and 10)
NPDS (See Notes 6, 10, and 21)	NPDS (See Notes 6, 10, and 21)	NPDS (See Notes 6, 10, and 21)	NPDS (See Notes 6, 10, and 21)	NPDS (See Notes 6, 10, and 21)

RI = GT XLAT=DPCNGT	RI = GT XLAT=DPCSSN	RI = GT XLAT=DPC	RI = SSN XLAT=DPCSSN	RI = SSN XLAT=DPC
NSDD (See Notes 6 and 10)	NSDD (See Notes 6 and 10)	NSDD (See Notes 6 and 10)	NSDD (See Notes 6 and 10)	NSDD (See Notes 6 and 10)
NSDS (See Notes 6, 10, and 21)	NSDS (See Notes 6, 10, and 21)	NSDS (See Notes 6, 10, and 21)	NSDS (See Notes 6, 10, and 21)	NSDS (See Notes 6, 10, and 21)
NGTI (See Notes 6, 8, and 9)	NGTI (See Notes 6, 8, and 9)	NGTI (See Notes 6, 8, and 9)	NGTI (See Notes 6, 8, 9, and 15)	NGTI (See Notes 6, 8, 9, and 15)
MRNSET (See Notes 12 and 13)	MRNSET (See Notes 12 and 13)	MRNSET (See Notes 12 and 13)	MAPSET (See Notes 17 and 18)	MAPSET (See Notes 17 and 18)
SPLIT (See Note 19)	SPLIT (See Note 19)	SPLIT (See Note 19)	SPLIT (See Note 19)	SPLIT (See Note 19)
RMGTT (See Note 6)	RMGTT (See Note 6)	RMGTT (See Note 6)	RMGTT (See Note 6)	RMGTT (See Note 6)
LOOPSET (See Note 22)	LOOPSET (See Note 22)	LOOPSET (See Note 22)	LOOPSET (See Note 22)	LOOPSET (See Note 22)
CGGTMOD (See Note 23)	CGGTMOD (See Note 23)	CGGTMOD (See Note 23)	CGGTMOD (See Note 23)	CGGTMOD (See Note 23)
NTT	SSN	NTT (See Note 7)	SSN	FORCE (See Note 16)
			CCGT (See Notes 14 and 15)	CCGT (See Note 15)

Parameter Values:

GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output.

GTA – 1 - 21 decimal digits or 1 - 21 hexadecimal digits. The GTA value shown in the `GTA` column of the `rtrv-gta` output

PC / **PCA** / **PCI** / **PCN** / **PCN24** – See Note 1

SSN – 0 - 255

NTT – 0 - 255

EGTA – 1 - 21 decimal digits or 1 - 21 hexadecimal digits

NPDD – 0 - 21

NNP – 0 - 15

NNAI – 0 - 127

NPDD – 0 - 21

NPDS – 1 - 21 decimal digits or 1 - 21 hexadecimal digits

NSDD – 0 - 21

NSDS – 1 - 21 decimal digits or 1 - 21 hexadecimal digits

NGTI – 2, 4

RI = GT XLAT=DPCNGT	RI = GT XLAT=DPCSSN	RI = GT XLAT=DPC	RI = SSN XLAT=DPCSSN	RI = SSN XLAT=DPC
CCGT – yes, no **FORCE** – yes, no. Default = no **RMGTT** - yes, no. Default = no **NNP** – 0 - 15 **NNAI** – 0 - 127 **CGTTMOD** - yes, no. Default = no			**MRNSET** – MRN set ID from the `rtrv-mrn` output, or the value `none` **MAPSET** – MAP set ID from the `rtrv-map` output or the value `none` **SPLIT** - yes, no. Default = yes **LOOPSET** - Loopset name from the `rtrv-loopset` output	

Notes:

1. The `pc/pca/pci/pcn/pcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes to the global title address (GTA).

- `pc/pca` = ANSI point code
- `pci` = ITU-I or ITU-I spare point code
- `pcn` = 14-bit ITU-N or 14-bit ITU-N spare point code
- `pcn24` = 24-bit ITU-N point code.

2. The domain (ANSI or ITU) of the point code and GTT set must be the same, unless the ANSI-ITU-China SCCP Conversion feature is enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, a GTA may contain an ANSI point code and an ITU GTT set, or an ITU point code and an ANSI GTT set.

3. If the VGTT feature is on, shown by the `VGTT = on` entry in the `rtrv-feat` output, and the GTT set name contains 10 different length GTAs, the length of the GTA must match any existing GTA assigned to the GTT set name .

4. If the GTT set name contains less than 10 different length GTAs, the length of the GTA can be from 1 to 21 digits.

5. If the VGTT feature is off, the length of the GTA must contain the number of digits defined by the `NDGT` field of the `rtrv-gttset` output.

6. The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, `nsds`, and `rmgtt` parameters can be specified only if the Advanced GT Modification feature is enabled. The `ngti` parameter can be specified only if the Advanced GT Modification feature is enabled on and if the ANSI-ITU-China SCCP Conversion feature is enabled.

7. The `xlat=dpc` parameter can be specified with the `ntt` parameter only if the ANSI-ITU-China SCCP Conversion feature is enabled.

8. The `ngti=2` parameter can be specified only with an ANSI point code, and not with the `nnp` and `nnai` parameters.

9. The `ngti=4` parameter can be specified only with an ITU point code, and the `nnp` and `nnai` parameters must also be specified for the GTA.

10. The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified in the `chg-gta` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters.

RI = GT XLAT=DPCNGT	RI = GT XLAT=DPCSSN	RI = GT XLAT=DPC	RI = SSN XLAT=DPCSSN	RI = SSN XLAT=DPC
11. If the point code is the EAGLE 5 ISS's point code, then the `xlat` parameter value must be `dpcssn` and the `ri` parameter value must be `ssn`. 12. The `mrnset` parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled. 13. Specifying the `mrnset=none` parameter removes the MRN set ID assignment from the GTA entry. 14. If the point code is the EAGLE 5 ISS's point code, then the value of the `ccgt` parameter must be set to `no`. 15. Either the `ccgt` or `ngti` parameters can be specified with the `chg-gta` command, but both parameters cannot be specified together with the `chg-gta` command. 16. If the `pc/pca/pci/pcn/pcn24` parameter value is not shown in the `rtrv-map` output, the `force=yes` parameter must be specified with the `chg-gta` command. 17. The `mapset` parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled. 18. Specifying the `mapset=none` parameter removes the MAP set ID assignment from the GTA entry. 19. The range of global title addresses assigned to a global title translation can be extended, reduced, or split to create a new range of global title addresses. See the `split` parameter description section in this procedure for information on changing the range of global title addresses. 20. Unless a default value is shown in this table, the value of any optional parameter that is not specified in this procedure is not changed. 21. Hexadecimal digits (0-9, a-f, A-F) can be specified for the gta, egta, npds, or nsds parameters only if the Hex Digit Support for GTT feature is enabled. 22. The `loopset` parameter can be specified only if the SCCP Loop Detection feature is enabled. 23. The `cggtmod` parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled.				

Table 52: CHG-GTA GTTSN = CDGTA GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 23)	XLAT=DISC, XLAT=UDTS (See Notes 23 and 24)
Mandatory Parameters	
GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CDGTA` in the `SETTYPE` column.	GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CDGTA` in the `SETTYPE` column.

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 23)	XLAT=DISC, XLAT=UDTS (See Notes 23 and 24)
GTA – 1 - 21decimal digits or 1 - 21 hexadecimal digits (See Notes 3, 4, 5, and 26)	GTA – 1 - 21decimal digits or 1 - 21 hexadecimal digits (See Notes 3, 4, 5, and 26)
Optional Parameters (See Note 25)	
PC/PCA/PCI/PCN/PCN24 (See Notes 1, 2, 11, and 14)	
RI = GT, SSN (See Notes 11 and 17)	
SSN – 0 - 255 (See Note 20)	
NTT – 0 - 255 (See Note 7)	
EGTA – 1 - 21decimal digits or 1 - 21 hexadecimal digits. (See Note 26)	
FORCE – yes, no. Default = no (See Note 16)	
CCGT – yes, no (See Notes 14 and 15)	
RMGTT – yes, no. Default = no (See Note 6)	
NNP – 0 - 15 (See Notes 6, 8, and 9)	
NNAI – 0 - 127 (See Notes 6, 8, and 9)	
NPDD – 0 - 21 (See Notes 6 and 10)	
NPDS – 1 - 21 decimal digits or 1 - 21 hexadecimal digits (See Notes 6, 10, and 26)	
NSDD – 0 - 21 (See Notes 6 and 10)	
NSDS – 1 - 21 decimal digits or 1 - 21 hexadecimal digits (See Notes 6, 10, and 26)	
NGTI – 2, 4 (See Notes 6, 8, 9, and 15)	
MRNSET – MRN set ID from the `rtrv-mrn` output or the value `none` (See Notes 12 and 13)	

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 23)	XLAT=DISC, XLAT=UDTS (See Notes 23 and 24)
MAPSET – MAP set ID from the `rtrv-map` output or the value `none` (See Notes 17 and 18)	
SPLIT – yes, no. Default = yes (See Note 19)	
CGGTASN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGGTA` in the `SETTYPE` column or the value `none`. (See Notes 21 and 22)	
CGPCSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGPC` in the `SETTYPE` column or the value `none`. (See Notes 21 and 22)	
OPCSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `OPC` in the `SETTYPE` column or the value none. (See Notes 21 and 22)	
SELID – 0 - 65534 or the value none. (See Notes 21 and 22)	
LOOPSET - Loopset name from the `rtrv-loopset` output (See Note 27)	
CGGTMOD - yes, no. Default =no (See Note 28)	

Notes:

1. The `pc/pca/pci/pcn/pcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes to the global title address (GTA):

- `pc/pca` = ANSI point code
- `pci` = ITU-I or ITU-I spare point code
- `pcn` = 14-bit ITU-N or 14-bit ITU-N spare point code
- `pcn24` = 24-bit ITU-N point code.

2. The domain (ANSI or ITU) of the point code and GTT set must be the same, unless the ANSI-ITU-China SCCP Conversion feature is enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, a GTA may contain an ANSI point code and an ITU GTT set, or an ITU point code and an ANSI GTT set.

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 23)	XLAT=DISC, XLAT=UDTS (See Notes 23 and 24)

3. If the VGTT feature is on, shown by the `VGTT = on` entry in the `rtrv-feat` output, and the GTT set name contains 10 different length GTAs, the length of the GTA must match any existing GTA assigned to the GTT set name .

4. If the GTT set name contains less than 10 different length GTAs, the length of the GTA can be from 1 to 21 digits.

5. If the VGTT feature is off, the length of the GTA must contain the number of digits defined by the `NDGT` field of the `rtrv-gttset` output.

6. The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, `nsds`, and `rmgtt` parameters can be specified only if the Advanced GT Modification feature is enabled. The `ngti` parameter can be specified only if the Advanced GT Modification feature is enabled on and if the ANSI-ITU-China SCCP Conversion feature is enabled.

7. If the `ntt` parameter can be specified only with the `ri=gt` parameter and either the `xlat=dpcngt` or `xlat=dpc` parameters. The `xlat=dpc` parameter can be specified with the `ntt` parameter only if the ANSI-ITU-China SCCP Conversion feature is enabled.

8. The `ngti=2` parameter can be specified only with an ANSI point code, and not with the `nnp` and `nnai` parameters.

9. The `ngti=4` parameter can be specified only with an ITU point code, and the `nnp` and `nnai` parameters must also be specified for the GTA.

10. The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified in the `chg-gta` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters.

11. If the point code is the EAGLE 5 ISS's point code, then the `xlat` parameter value must be `dpcssn` and the `ri` parameter value must be `ssn`.

12. The `mrnset` parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled. The `mrnset` parameter can be specified only if the `ri` parameter value is `gt`.

13. Specifying the `mrnset=none` parameter removes the MRN set ID assignment from the GTA entry.

14. If the point code is the EAGLE 5 ISS's point code, then the value of the `ccgt` parameter must be set to `no`.

15. Either the `ccgt` or `ngti` parameters can be specified with the `chg-gta` command, but both parameters cannot be specified together with the `chg-gta` command.

16. If the `pc/pca/pci/pcn/pcn24` parameter value is not shown in the `rtrv-map` output, and the resulting `xlat` parameter value is `dpc`, and the resulting `ri` parameter value is `ssn`, the `force=yes` parameter must be specified with the `chg-gta` command.

17. The `mapset` parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled. The `mapset` parameter can be specified only if the `ri` parameter value is `ssn`.

18. Specifying the `mapset=none` parameter removes the MAP set ID assignment from the GTA entry.

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 23)	XLAT=DISC, XLAT=UDTS (See Notes 23 and 24)
19. The range of global title addresses assigned to a global title translation can be extended, reduced, or split to create a new range of global title addresses. See the `split` parameter description section in this procedure for information on changing the range of global title addresses. 20. The `ssn` parameter can be specified only if the `xlat` parameter is `dpcssn`. If the `xlat` parameter value is being changed to `dpcssn`, the `ssn` parameter must be specified. 21. The following combinations of the `cggtasn`, `cgpcsn`, `opcsn`, and `selid` parameters can be specified with the `chg-gta` command: • `cggtasn` • `cgpcsn` • `opcsn` • `selid` • `cggtasn` and `opcsn` • `cgpcsn` and `opcsn` • `opcsn` and `selid`. 22. The value `none` removes the current `cggtasn`, `cgpcsn`, `opcsn`, or `selid` parameter values. 23. When changing the `xlat` parameter value, the GTA entry can contain only the parameters and values specified in the column for the new `xlat` parameter value. 24. When the `xlat=disc` or `xlat=udts` parameters are specified, the GTA entry can contain only the `gttsn` and `gta` parameters and values. No other parameters can be specified. When the `xlat` parameter value is changed from `dpc`, `dpcssn`, or `dpcngt` to either `disc` or `udts`, all parameter values other than `gttsn` and `gta` values are removed from the GTA entry. 25. Unless a default value is shown in this table, the value of any optional parameter that is not specified in this procedure is not changed. 26. Hexadecimal digits (0-9, a-f, A-F) can be specified for the gta, egta, npds, or nsds parameters only if the Hex Digit Support for GTT feature is enabled. 27. The `loopset` parameter can be specified only if the SCCP Loop Detection feature is enabled. 28. The `cggtmod` parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled.	

Table 53: CHG-GTA GTTSN = CGGTA GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 22)	XLAT=DISC, XLAT=UDTS (See Notes 22 and 23)
Mandatory Parameters	

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 22)	XLAT=DISC, XLAT=UDTS (See Notes 22 and 23)
GTTSN – The GTT set name from the GTTSN column of the rtrv-gttset output containing the value CGGTA in the SETTYPE column	GTTSN – The GTT set name from the GTTSN column of the rtrv-gttset output containing the value CGGTA in the SETTYPE column
GTA– The GTA value shown in the GTA column of the rtrv-gta output (See Notes 3, 4, 5, and 25)	GTA– The GTA value shown in the GTA column of the rtrv-gta output (See Notes 3, 4, 5, and 25)
Optional Parameters (See Note 24)	
PC/PCA/PCI/PCN/PCN24 (See Notes 1, 2, 11, and 14)	
RI = GT, SSN (See Notes 11 and 17)	
SSN – 0 - 255 (See Note 20)	
NTT – 0 - 255 (See Note 7	
EGTA – 1 - 21 decimal digits or 1 - 21 hexadecimal digits. (See Note 25)	
FORCE – yes, no. Default = no (See Note 16)	
CCGT – yes, no (See Notes 14 and 15)	
RMGTT – yes, no. Default = no (See Note 6)	
NNP – 0 - 15 (See Notes 6, 8, and 9)	
NNAI – 0 - 127 (See Notes 6, 8, and 9)	
NPDD – 0 - 21 (See Notes 6 and 10)	
NPDS – 1 - 21 decimal digits or 1 - 21 hexadecimal digits (See Notes 6, 10, and 25)	
NSDD – 0 - 21 (See Notes 6 and 10)	
NSDS – 1 - 21 decimal digits or 1 - 21 hexadecimal digits (See Notes 6, 10, and 25)	

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 22)	XLAT=DISC, XLAT=UDTS (See Notes 22 and 23)
NGTI – 2, 4 (See Notes 6, 8, 9, and 15)	
MRNSET – MRN set ID from the `rtrv-mrn` output or the value `none` (See Notes 12 and 13)	
MAPSET – MAP set ID from the `rtrv-map` output or the value `none` (See Notes 17 and 18)	
SPLIT – yes, no. Default = yes (See Note 19)	
CGSSNSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGSSN` in the `SETTYPE` column or the value `none`. (See Note 21)	
LOOPSET - Loopset name from `rtrv-loopset` output (See Note 26)	
CGGTMOD - yes, no. Default =no (See Note 27)	

Notes:

1. The `pc/pca/pci/pcn/pcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes to the global title address (GTA):

- `pc/pca` = ANSI point code
- `pci` = ITU-I or ITU-I spare point code
- `pcn` = 14-bit ITU-N or 14-bit ITU-N spare point code
- `pcn24` = 24-bit ITU-N point code.

2. The domain (ANSI or ITU) of the point code and GTT set must be the same, unless the ANSI-ITU-China SCCP Conversion feature is enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, a GTA may contain an ANSI point code and an ITU GTT set, or an ITU point code and an ANSI GTT set.

3. If the VGTT feature is on, shown by the `VGTT = on` entry in the `rtrv-feat` output, and the GTT set name contains 10 different length GTAs, the length of the GTA must match any existing GTA assigned to the GTT set name .

4. If the GTT set name contains less than 10 different length GTAs, the length of the GTA can be from 1 to 21 digits.

5. If the VGTT feature is off, the length of the GTA must contain the number of digits defined by the `NDGT` field of the `rtrv-gttset` output.

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 22)	XLAT=DISC, XLAT=UDTS (See Notes 22 and 23)

6. The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, `nsds`, and `rmgtt` parameters can be specified only if the Advanced GT Modification feature is enabled. The `ngti` parameter can be specified only if the Advanced GT Modification feature is enabled on and if the ANSI-ITU-China SCCP Conversion feature is enabled.

7. If the `ntt` parameter can be specified only with the `ri=gt` parameter and either the `xlat=dpcngt` or `xlat=dpc` parameters. The `xlat=dpc` parameter can be specified with the `ntt` parameter only if the ANSI-ITU-China SCCP Conversion feature is enabled.

8. The `ngti=2` parameter can be specified only with an ANSI point code, and not with the `nnp` and `nnai` parameters.

9. The `ngti=4` parameter can be specified only with an ITU point code, and the `nnp` and `nnai` parameters must also be specified for the GTA.

10. The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified in the `chg-gta` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters.

11. If the point code is the EAGLE 5 ISS's point code, then the `xlat` parameter value must be `dpcssn` and the `ri` parameter value must be `ssn`.

12. The `mrnset` parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled.

13. Specifying the `mrnset=none` parameter removes the MRN set ID assignment from the GTA entry.

14. If the point code is the EAGLE 5 ISS's point code, then the value of the `ccgt` parameter must be set to `no`.

15. Either the `ccgt` or `ngti` parameters can be specified with the `chg-gta` command, but both parameters cannot be specified together with the `chg-gta` command.

16. If the `pc/pca/pci/pcn/pcn24` parameter value is not shown in the `rtrv-map` output, the `force=yes` parameter must be specified with the `chg-gta` command.

17. The `mapset` parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled.

18. Specifying the `mapset=none` parameter removes the MAP set ID assignment from the GTA entry.

19. The range of global title addresses assigned to a global title translation can be extended, reduced, or split to create a new range of global title addresses. See the `split` parameter description section in this procedure for information on changing the range of global title addresses.

20. The `ssn` parameter can be specified only if the `xlat` parameter is `dpcssn`. If the `xlat` parameter value is being changed to `dpcssn`, the `ssn` parameter must be specified.

21. The value `none` removes the current `cgssnsn` parameter value.

22. When changing the `xlat` parameter value, the GTA entry can contain only the parameters and values specified in the column for the new `xlat` parameter value.

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 22)	XLAT=DISC, XLAT=UDTS (See Notes 22 and 23)
23. When the `xlat=disc` or `xlat=udts` parameters are specified, the GTA entry can contain only the `gttsn` and `gta` parameters and values. No other parameters can be specified. When the `xlat` parameter value is changed from `dpc`, `dpcssn`, or `dpcngt` to either `disc` or `udts`, all parameter values other than `gttsn` and `gta` are removed from the GTA entry. 24. Unless a default value is shown in this table, the value of any optional parameter that is not specified in this procedure is not changed. 25. Hexadecimal digits (0-9, a-f, A-F) can be specified for the gta, egta, npds, or nsds parameters only if the Hex Digit Support for GTT feature is enabled. 26. The loopset parameter can be specified only if the SCCP Loop Detection feature is enabled. 27. The `cggtmod` parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled.	

Table 54: CHG-GTA GTTSN = CGSSN GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 18)	XLAT=DISC, XLAT=UDTS (See Notes 18 and 19)
Mandatory Parameters	
GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGSSN` in the `SETTYPE` column	GTTSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGSSN` in the `SETTYPE` column
CGSSN – 0 - 255	CGSSN – 0 - 255
Optional Parameters (See Note 20)	
PC/PCA/PCI/PCN/PCN24 (See Notes 1, 2, 8, and 13)	
RI = GT, SSN (See Notes 8 and 17)	
SSN – 0 - 255 (See Note 17)	
NTT – 0 - 255 (See Note 4)	
FORCE – yes, no. Default = no (See Note 13)	
CCGT – yes, no (See Notes 11 and 12)	

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 18)	XLAT=DISC, XLAT=UDTS (See Notes 18 and 19)
RMGTT – yes, no. Default = no (See Note 3)	
NNP – 0 - 15 (See Notes 3, 5, and 6)	
NNAI – 0 - 127 (See Notes 3, 5, and 6)	
NPDD – 0 - 21 (See Notes 3 and 7)	
NPDS – 1 - 21 decimal digits or 1 - 21 hexadecimal digits (See Notes 3, 7, and 21)	
NSDD – 0 - 21 (See Notes 3 and 7)	
NSDS – 1 - 21 decimal digits or 1 - 21 hexadecimal digits (See Notes 3, 7, and 21)	
NGTI – 2, 4 (See Notes 3, 5, 6, and 12)	
MRNSET – MRN set ID from the `rtrv-mrn` output or the value `none` (See Notes 9 and 10)	
MAPSET – MAP set ID from the `rtrv-map` output or the value `none` (See Notes 14 and 15)	
SPLIT – yes, no. Default = yes (See Note 16)	
ECGSSN – 0 - 255 (See Note 16)	
LOOPSET Loopset name from `rtrv-loopset` output (See Note 22)	
CGGTMOD - yes, no. Default =no (See Note 23)	

Notes:

1. The `pc/pca/pci/pcn/pcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes to the global title address (GTA):

- `pc/pca` = ANSI point code
- `pci` = ITU-I or ITU-I spare point code
- `pcn` = 14-bit ITU-N or 14-bit ITU-N spare point code
- `pcn24` = 24-bit ITU-N point code.

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 18)	XLAT=DISC, XLAT=UDTS (See Notes 18 and 19)

2. The domain (ANSI or ITU) of the point code and GTT set must be the same, unless the ANSI-ITU-China SCCP Conversion feature is enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, a GTA may contain an ANSI point code and an ITU GTT set, or an ITU point code and an ANSI GTT set.

3. The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, `nsds`, and `rmgtt` parameters can be specified only if the Advanced GT Modification feature is enabled. The `ngti` parameter can be specified only if the Advanced GT Modification feature is enabled on and if the ANSI-ITU-China SCCP Conversion feature is enabled.

4. If the `ntt` parameter can be specified only with the `ri=gt` parameter and either the `xlat=dpcngt` or `xlat=dpc` parameters. The `xlat=dpc` parameter can be specified with the `ntt` parameter only if the ANSI-ITU-China SCCP Conversion feature is enabled.

5. The `ngti=2` parameter can be specified only with an ANSI point code, and not with the `nnp` and `nnai` parameters.

6. The `ngti=4` parameter can be specified only with an ITU point code, and the `nnp` and `nnai` parameters must also be specified for the GTA.

7. The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified in the `chg-gta` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters.

8. If the point code is the EAGLE 5 ISS's point code, then the `xlat` parameter value must be `dpcssn` and the `ri` parameter value must be `ssn`.

9. The `mrnset` parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled.

10. Specifying the `mrnset=none` parameter removes the MRN set ID assignment from the GTA entry.

11. If the point code is the EAGLE 5 ISS's point code, then the value of the `ccgt` parameter must be set to `no`.

12. Either the `ccgt` or `ngti` parameters can be specified with the `chg-gta` command, but both parameters cannot be specified together with the `chg-gta` command.

13. If the `pc/pca/pci/pcn/pcn24` parameter value is not shown in the `rtrv-map` output, the `force=yes` parameter must be specified with the `chg-gta` command.

14. The `mapset` parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled.

15. Specifying the `mapset=none` parameter removes the MAP set ID assignment from the GTA entry.

16. The range of CGSSNs assigned to a global title translation can be extended, reduced, or split to create a new range of CGSSNs. See the `split` parameter description section in this procedure for information on changing the range of CGSSNs. The CGSSN range can be split by specifying the `cgssn` and `ecgssn` parameters with the new `ecgssn` parameter value less than the current `ecgssn` parameter value.

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 18)	XLAT=DISC, XLAT=UDTS (See Notes 18 and 19)
17. The ssn parameter can be specified only if the xlat parameter is dpcssn. If the xlat parameter value is being changed to dpcssn, the ssn parameter must be specified. 18. When changing the xlat parameter value, the GTA entry can contain only the parameters and values specified in the column for the new xlat parameter value. 19. When the xlat=disc or xlat=udts parameters are specified, the GTA entry can contain only the gttsn and cgssn parameters and values. No other parameters can be specified. When the xlat parameter value is changed from dpc, dpcssn, or dpcngt to either disc or udts, all parameter values other than gttsn and cgssn are removed from the GTA entry. 20. Unless a default value is shown in this table, the value of any optional parameter that is not specified in this procedure is not changed. 21. Hexadecimal digits (0-9, a-f, A-F) can be specified for the npds or nsds parameters only if the Hex Digit Support for GTT feature is enabled. 22. The loopset parameter can be specified only if the SCCP Loop Detection feature is enabled. 23. The cggtmod parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled.	

Table 55: CHG-GTA GTTSN = CGPC GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 18)	XLAT=DISC, XLAT=UDTS (See Notes 18 and 19)
Mandatory Parameters	
GTTSN – The GTT set name from the GTTSN column of the rtrv-gttset output containing the value CGPC in the SETTYPE column.	GTTSN – The GTT set name from the GTTSN column of the rtrv-gttset output containing the value CGPC in the SETTYPE column.
CGPC/CGPCA/CGPCI/CGPCN/CGPCN24 (See Notes 1, 2, 5, and 7)	CGPC/CGPCA/CGPCI/CGPCN/CGPCN24 (See Notes 1, 2, 5, and 7)
Optional Parameters (See Note 20)	
PC/PCA/PCI/PCN/PCN24 (See Notes 1, 2, 8, and 11)	
RI = GT, SSN (See Notes 8 and 16)	
SSN – 0 - 255 (See Note 16)	
NTT – 0 - 255 (See Note 4)	

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 18)	XLAT=DISC, XLAT=UDTS (See Notes 18 and 19)
FORCE – yes, no. Default = no (See Note 13)	
CCGT – yes, no (See Notes 11 and 12)	
RMGTT – yes, no (See Note 3)	
NNP – 0 - 15 (See Notes 3, 5, and 6)	
NNAI – 0 - 127 (See Notes 3, 5, and 6)	
NPDD – 0 - 21 (See Notes 3 and 7)	
NPDS – 1 - 21 decimal digits or 1 - 21 hexadecimal digits (See Notes 3, 7, and 21)	
NSDD – 0 - 21 (See Notes 3 and 7)	
NSDS – 1 - 21 decimal digits or 1 - 21 hexadecimal digits (See Notes 3, 7, and 21)	
NGTI – 2, 4 (See Notes 3, 5,6, and 11)	
MRNSET – MRN set ID from the `rtrv-mrn` output or the value `none` (See Notes 9 and 10)	
MAPSET – MAP set ID from the `rtrv-map` output or the value `none` (See Notes 14 and 15)	
CGSSNSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGSSN` in the `SETTYPE` column or the value `none`. (See Note 17)	
LOOPSET - Loopset name from the `rtrv-loopset` output. (See Note 22)	
CGGTMOD - yes, no. Default =no (See Note 23)	
Notes:	

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 18)	XLAT=DISC, XLAT=UDTS (See Notes 18 and 19)

1. The `pc/pca/pci/pcn/pcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes as the translated point code. The `cgpc/cgpca/cgpci/cgpcn/cgpcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes as the CGPC parameter values.

- `pc/pca` and `cgpc/cgpca` = ANSI point code
- `pci` and `cgpci` = ITU-I or ITU-I spare point code
- `pcn` and `cgpcn` = 14-bit ITU-N or 14-bit ITU-N spare point code
- `pcn24` and `cgpcn24` = 24-bit ITU-N point code.

2. The domain (ANSI or ITU) of the point code and GTT set must be the same, unless the ANSI-ITU-China SCCP Conversion feature is enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, a GTA may contain an ANSI point code and an ITU GTT set, or an ITU point code and an ANSI GTT set.

3. The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, `nsds`, and `rmgtt` parameters can be specified only if the Advanced GT Modification feature is enabled. The `ngti` parameter can be specified only if the Advanced GT Modification feature is enabled on and if the ANSI-ITU-China SCCP Conversion feature is enabled.

4. If the `ntt` parameter can be specified only with the `ri=gt` parameter and either the `xlat=dpcngt` or `xlat=dpc` parameters. The `xlat=dpc` parameter can be specified with the `ntt` parameter only if the ANSI-ITU-China SCCP Conversion feature is enabled.

5. The `ngti=2` parameter can be specified only with an ANSI point code, and not with the `nnp` and `nnai` parameters.

6. The `ngti=4` parameter can be specified only with an ITU point code, and the `nnp` and `nnai` parameters must also be specified for the GTA.

7. The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified in the `chg-gta` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters.

8. If the point code is the EAGLE 5 ISS's point code, then the `xlat` parameter value must be `dpcssn` and the `ri` parameter value must be `ssn`.

9. The `mrnset` parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled.

10. Specifying the `mrnset=none` parameter removes the MRN set ID assignment from the GTA entry.

11. If the point code is the EAGLE 5 ISS's point code, then the value of the `ccgt` parameter must be set to `no`.

12. Either the `ccgt` or `ngti` parameters can be specified with the `chg-gta` command, but both parameters cannot be specified together with the `chg-gta` command.

13. If the `pc/pca/pci/pcn/pcn24` parameter value is not shown in the `rtrv-map` output, the `force=yes` parameter must be specified with the `chg-gta` command.

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 18)	XLAT=DISC, XLAT=UDTS (See Notes 18 and 19)
14. The `mapset` parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled. 15. Specifying the `mapset=none` parameter removes the MAP set ID assignment from the GTA entry. 16. The `ssn` parameter can be specified only if the `xlat` parameter is `dpcssn`. If the `xlat` parameter value is being changed to `dpcssn`, the `ssn` parameter must be specified. 17. The value `none` removes the current `cgssnsn` parameter value. 18. When changing the `xlat` parameter value, the GTA entry can contain only the parameters and values specified in the column for the new `xlat` parameter value. 19. When the `xlat=disc` or `xlat=udts` parameters are specified, the GTA entry can contain only the `gttsn` and `cgpc/cgpca/cgpci/cgpcn/cgpcn24` parameters and values. No other parameters can be specified. When the `xlat` parameter value is changed from `dpc`, `dpcssn`, or `dpcngt` to either `disc` or `udts`, all parameter values other than `gttsn` and `cgpc/cgpca/cgpci/cgpcn/cgpcn24` are removed from the GTA entry. 20. Unless a default value is shown in this table, the value of any optional parameter that is not specified in this procedure is not changed. 21. Hexadecimal digits (0-9, a-f, A-F) can be specified for the npds or nsds parameters only if the Hex Digit Support for GTT feature is enabled. 22. The loopset parameter can be specified only if the SCCP Loop Detection feature is enabled. 23. The `cggtmod` parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled.	

Table 56: CHG-GTA GTTSN = OPC GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 18)	XLAT=DISC, XLAT=UDTS (See Notes 18 and 19)
Mandatory Parameters	
GTTSN– The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `OPC` in the `SETTYPE` column.	GTTSN– The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `OPC` in the `SETTYPE` column.
OPC/OPCA/OPCI/OPCN/OPCN24 (See Notes 1 and 2)	OPC/OPCA/OPCI/OPCN/OPCN24 (See Notes 1 and 2)
Optional Parameters (See Note 20)	

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 18)	XLAT=DISC, XLAT=UDTS (See Notes 18 and 19)
PC/PCA/PCI/PCN/PCN24 (See Notes 1, 2, 8, and 11)	
RI = GT, SSN (See Notes 8 and 16)	
SSN – 0 - 255 (See Note 16)	
NTT – 0 - 255 (See Note 4)	
FORCE – yes, no. Default = no (See Note 13)	
CCGT – yes, no (See Notes 11 and 12)	
RMGTT – yes, no (See Note 3)	
NNP – 0 - 15 (See Notes 3, 5, and 6)	
NNAI – 0 - 127 (See Notes 3, 5, and 6)	
NPDD – 0 - 21 (See Notes 3 and 7)	
NPDS – 1 - 21 digits decimal digits or 1 - 21 hexadecimal digits (See Notes 3, 7, and 21)	
NSDD – 0 - 21 (See Notes 3 and 7)	
NSDS – 1 - 21 decimal digits or 1 - 21 hexadecimal digits (See Notes 3, 7, and 21)	
NGTI – 2, 4 (See Notes 3, 5, 6, and 11)	
MRNSET – MRN set ID from the `rtrv-mrn` output or the value `none` (See Notes 9 and 10)	
MAPSET – MAP set ID from the `rtrv-map` output or the value `none` (See Notes 14 and 15)	
CGSSNSN – The GTT set name from the `GTTSN` column of the `rtrv-gttset` output containing the value `CGSSN` in the `SETTYPE` column or the value `none`. (See Note 17)	

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 18)	XLAT=DISC, XLAT=UDTS (See Notes 18 and 19)
LOOPSET - Loopset name from the `rtrv-loopset` output. (See Note 22)	
CGGTMOD - yes, no. Default =no (See Note 23)	

Notes:

1. The `pc/pca/pci/pcn/pcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes as the translated point code. The `opc/opca/opci/opcn/opcn24` parameters are used to assign either ANSI, ITU-I, ITU-I spare, 14-bit ITU-N, 14-bit ITU-N spare, or 24-bit ITU-N point codes as the OPC parameter values.

- `pc/pca` and `opc/opca` = ANSI point code
- `pci` and `opci` = ITU-I or ITU-I spare point code
- `pcn` and `opcn` = 14-bit ITU-N or 14-bit ITU-N spare point code
- `pcn24` and `opcn24` = 24-bit ITU-N point code.

2. The domain (ANSI or ITU) of the point code and GTT set must be the same, unless the ANSI-ITU-China SCCP Conversion feature is enabled. If the ANSI-ITU-China SCCP Conversion feature is enabled, a GTA may contain an ANSI point code and an ITU GTT set, or an ITU point code and an ANSI GTT set.

3. The `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, `nsds`, and `rmgtt` parameters can be specified only if the Advanced GT Modification feature is enabled. The `ngti` parameter can be specified only if the Advanced GT Modification feature is enabled on and if the ANSI-ITU-China SCCP Conversion feature is enabled.

4. If the `ntt` parameter can be specified only with the `ri=gt` parameter and either the `xlat=dpcngt` or `xlat=dpc` parameters. The `xlat=dpc` parameter can be specified with the `ntt` parameter only if the ANSI-ITU-China SCCP Conversion feature is enabled.

5. The `ngti=2` parameter can be specified only with an ANSI point code, and not with the `nnp` and `nnai` parameters.

6. The `ngti=4` parameter can be specified only with an ITU point code, and the `nnp` and `nnai` parameters must also be specified for the GTA.

7. The prefix parameters (`npdd` and `npds`) and the suffix parameters (`nsdd` and `nsds`) cannot be specified in the `chg-gta` command at the same time. If you wish to specify these parameters, you must specify either the `npdd` and `npds` or the `nsdd` and `nsds` parameters.

8. If the point code is the EAGLE 5 ISS's point code, then the `xlat` parameter value must be `dpcssn` and the `ri` parameter value must be `ssn`.

9. The `mrnset` parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled.

10. Specifying the `mrnset=none` parameter removes the MRN set ID assignment from the GTA entry.

XLAT=DPCNGT, XLAT=DPCSSN, XLAT=DPC (See Note 18)	XLAT=DISC, XLAT=UDTS (See Notes 18 and 19)

11. If the point code is the EAGLE 5 ISS's point code, then the value of the `ccgt` parameter must be set to `no`.

12. Either the `ccgt` or `ngti` parameters can be specified with the `chg-gta` command, but both parameters cannot be specified together with the `chg-gta` command.

13. If the `pc/pca/pci/pcn/pcn24` parameter value is not shown in the `rtrv-map` output, the `force=yes` parameter must be specified with the `chg-gta` command.

14. The `mapset` parameter can be specified only, and must be specified, if the Flexible GTT Load Sharing feature is enabled.

15. Specifying the `mapset=none` parameter removes the MAP set ID assignment from the GTA entry.

16. The `ssn` parameter can be specified only if the `xlat` parameter is `dpcssn`. If the `xlat` parameter value is being changed to `dpcssn`, the `ssn` parameter must be specified.

17. The value `none` removes the current `cgssnsn` parameter value.

18. When changing the `xlat` parameter value, the GTA entry can contain only the parameters and values specified in the column for the new `xlat` parameter value.

19. When the `xlat=disc` or `xlat=udts` parameters are specified, the GTA entry can contain only the `gttsn` and `opc/opca/opci/`

`opcn/opcn24` parameters and values. No other parameters can be specified. When the `xlat` parameter value is changed from `dpc`, `dpcssn`, or `dpcngt` to either `disc` or `udts`, all parameter values other than `gttsn` and `opc/opca/opci/opcn/opcn24` are removed from the GTA entry.

20. Unless a default value is shown in this table, the value of any optional parameter that is not specified in this procedure is not changed.

21 The loopset parameter can be specified only if the SCCP Loop Detection feature is enabled.

22. Hexadecimal digits (0-9, a-f, A-F) can be specified for the npds or nsds parameters only if the Hex Digit Support for GTT feature is enabled.

23. The `cggtmod` parameter can be specified only if the AMGTT or AMGTT CgPA Upgrade feature is enabled.

1. Display the existing GTT sets in the database using the `rtrv-gttset` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:27:31 GMT EAGLE5 35.6.0
GTTSN     NETDOM  NDGT
abcd1234  itu     12
imsi      itu     15
lidb      ansi    10
```

```
t800      ansi    10
si000     itu     15
```

If the Origin-Based SCCP Routing feature is enabled, the SETTYPE column is shown in the `rtrv-gttset` output as shown in the following example.

```
rlghncxa03w 06-10-07 00:29:31 GMT EAGLE5 35.6.0

GTTSN      NETDOM  SETTYPE  NDGT
abcd1234   itu     CGGTA    12
gttset3    ansi    CGGTA    10
gttset6    ansi    OPC      -
gttset7    ansi    CGPC     -
gttset12   ansi    OPC      -
imsi       itu     CDGTA    15
lidb       ansi    CDGTA    10
t800       ansi    CDGTA    10
s1000      itu     CDGTA    15
s2000      itu     CGPC     -
```

If the SETTYPE column is shown in the `rtrv-gttset` output, the Origin-Based SCCP Routing feature is enabled. If the `cggtasn`, `cgpcsn`, `cgssnsn`, or `opcsn` parameter values are not being changed in this procedure, continue the procedure with *Step 2* on page 711.

If the Origin-Based SCCP Routing feature is enabled, the `cggtasn`, `cgpcsn`, `cgssnsn`, or `opcsn` parameter values are being changed, and the desired GTT set name is shown in the `rtrv-gttset` output, continue the procedure with *Step 2* on page 711.

If the Origin-Based SCCP Routing feature is enabled the `cggtasn`, `cgpcsn`, `cgssnsn`, or `opcsn` parameter values are being changed, and the desired GTT set name is not shown in the `rtrv-gttset` output, perform the *Adding a GTT Set* on page 570 procedure and add the required GTT set. After the new GTT set has been added to the database, continue the procedure with *Step 2* on page 711.

If the Origin-Based SCCP Routing feature is not enabled, continue the procedure with *Step 2* on page 711.

2. Display the global title address (GTA) information for the GTT set that contains the global title address information to be changed. Use the `rtrv-gta` command with the `gttsn` parameter value shown in the output of step 1. If the `num` parameter is specified with the `rtrv-gta` command, and the value of the `num` parameter is greater than 1000, the `force=yes` parameter must be specified with the `rtrv-gta` command. For this example, enter this command.

   ```
   rtrv-gta:gttsn=lidb
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 08-10-07 00:27:31 GMT EAGLE5 39.2.0
   GTTSN     NETDOM  NDGT
   lidb      ansi    10
   GGTA TABLE IS    (17 of 269999)     1 % FULL

   START GTA  END GTA    XLAT   RI     PC
   9195554321 9195554321 dpcngt gt     001-255-253
        SSN=--- CCGT=no  NTT=68

   Command Retrieved 1 Entries
   ```

   If the Origin-Based SCCP Routing feature is enabled, this is an example of the possible output.

   ```
   rlghncxa03w 08-10-07 00:27:31 GMT EAGLE5 39.2.0
   ```

```
GTTSN     NETDOM  SETTYPE  NDGT
lidb      ansi    CDGTA    10
GTA TABLE IS     (17 of 269999)      1 % FULL

START GTA  END GTA    XLAT   RI     PC
9195554321 9195554321 dpcngt gt     001-255-253
     SSN=--- CCGT=no  NTT=68
     CGGTASN=gttset3  CGPCSN=---------- SELID=----- OPCSN=---------

Command Retrieved 1 Entries
```

3. If the `rtrv-gta` output in *Step 2* on page 711 shows that the maximum number of global title addresses is 1,000,000, do not perform this step. Continue the procedure with *Step 5* on page 713 .

   Note: If a range of GTAs is not shown in *Step 2* on page 711, or if the range of GTAs will not be split in this procedure, continue the procedure with *Step 6* on page 713.

   If the `rtrv-gta` output in *Step 2* on page 711 shows that the maximum number of global title addresses is either 269,999 or 400,000, and the number of global title addresses will not increase the number beyond the quantity shown in the `rtrv-gta` output in *Step 2* on page 711when the range of GTAs or CGPA SSNs is split, do not perform this step. Continue the procedure with *Step 5* on page 713 .

   If the `rtrv-gta` output in *Step 2* on page 711 shows that the maximum number of global title addresses is either 269,999 or 400,000, and the number of global title addresses will be more than the maximum number of global title addresses when the range of GTAs or CGPA SSNs is split, perform the *Step 2* on page 711 procedure to enable the XGTTTable Expansion controlled feature for either 400,000 or 1,000,000 global title addresses as required, then continue the procedure with *Step 5* on page 713 .

   Note: If the `xlat` parameter value `disc` or `udts` will be assigned to the GTA entry in this procedure, continue the procedure with *Step 20* on page 723.

4. To specify the `nnp`, `nnai`, `npdd`, `npds`, `nsdd`, `nsds`, `rmgtt`, or `cggtmod` parameters in this procedure, the Advanced GT Modification feature must be enabled.

   If the Advanced GT Modification feature is enabled, one of these entries is shown in the `rtrv-ctrl-feat` output.

   - AMGTT
   - AMGTT CdPA Only
   - AMGTT CgPA Upgrade

   Note: If the entry `AMGTT CdPA Only` is shown in the `rtrv-ctrl-feat` output, the `cggtmod` parameter cannot be specified in this procedure. To specify the `cggtmode` parameter, either the `AMGTT` or `AMGTT CgPA Upgrade` entry must be shown in the `rtrv-ctrl-feat` output.

   Enter the `rtrv-ctrl-feat` command to verify the status of the Advanced GT Modification feature.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 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  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
HC-MIM SLK Capacity       893012707  on      64

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 appropriate Advanced GT Modification feature is not shown in the `rtrv-ctrl-feat` output in this step, perform the *Activating the Advanced GT Modification Feature* on page 846 procedure to enable the appropriate Advanced GT Modification feature. After the Advanced GT Modification feature has been enabled, continue the procedure with *Step 5* on page 713.

5. Hexadecimal digits (0-9, a-f, A-F) can be specified as values for the `gta`, `egta`, `npds`, or `nsds` parameters only if the Hex Digit Support for GTT feature is enabled. Verify the status of the Hex Digit Support for GTT feature by entering the `rtrv-ctrl-feat` command with the Hex Digit Support for GTT feature part number.

   Enter this command.

   `rtrv-ctrl-feat:partnum=893018501`

   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
Hex Digit Support for GTT 893018501      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 Hex Digit Support for GTT feature has not been enabled, go to the *Activating the Hex Digit Support for GTT Feature* on page 806 procedure to enable this feature. After the Hex Digit Support for GTT feature is enabled, continue the procedure with *Step 6* on page 713.

6. Verify that the ANSI-ITU-China SCCP Conversion feature is enabled by entering the `rtrv-ctrl-feat:partnum=893012001` command. The following is an example of the possible output.

   Note: If the domain (ANSI or ITU) of the point code and the GTT set assigned to the GTA will be different, and the `ngti` parameter will be specified with the GTA, the ANSI-ITU-China SCCP Conversion feature (SCCP Conversion) must be enabled. If the ANSI-ITU-China SCCP Conversion feature is not being used, continue this procedure with *Step 7* on page 714 .

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 35.6.0
The following features have been permanently enabled:
```

```
Feature Name              Partnum    Status  Quantity
SCCP Conversion           893012001  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 ANSI-ITU-China SCCP Conversion feature is not enabled, perform the *Activating the ANSI-ITU-China SCCP Conversion Feature* on page 778 procedure and the ANSI-ITU-China SCCP Conversion feature.

7. If the LOOPSET field appears in the output shown in *Step 2* on page 711, the SCCP Loop Detection feature is enabled. Continue the procedure with *Step 8* on page 714.

   If the LOOPSET field does not appear in the output shown in *Step 2* on page 711, the SCCP Loop Detection feature is not enabled. Perform the *Activating the SCCP Loop Detection Feature* on page 830 procedure to enable the SCCP Loop Detection feature. After the SCCP Loop Detection Feature has been enabled, perform the *Adding a Loopset* on page 442 procedure to add the required loopset. After the loopset has been added, continue the procedure with Step 11.

8. Display all the loopsets in the database by entering this command.`rtrv-loopset:num=1000:force=yes`

   This is an example of the possible output.

```
LoopSet      Mode       Point Codes
=====================================================================
cary2        notify     005-015-005      007-007-007      (ANSI)
                        033-004-003      033-007-003
                        005-027-005      007-004-007

cary4        notify     005-012-005      007-026-007      (ANSI)
                        003-049-003      033-002-003
                        005-008-055      007-014-007

apex3        discard    005-017-008      007-017-009      (ANSI)
                        033-005-043      005-014-005
                        005-017-005      007-014-007
                        033-002-043      005-038-005
                        007-009-027      033-003-043
                        005-012-005      007-002-027

apex4        discard    005-007-008      027-007-009      (ANSI)
                        033-005-003      005-004-055
                        027-001-007      033-008-003
                        033-007-003      005-003-055
                        027-008-007

ral5         notify     005-005-005      007-007-007      (ANSI)
                        003-004-003      003-001-003
                        005-007-005      007-004-007
                        003-002-003      005-008-005
                        007-009-007      003-003-003
                        005-002-005      007-002-007

ral6         notify     005-007-008      007-007-009      (ANSI)
                        003-005-003      003-007-003
                        005-007-005
```

```
dunn1       discard     005-002-055      007-051-007      (ANSI)
                        003-008-033

rtp9        discard     005-002-005      007-001-007      (ANSI)
                        003-008-003      003-007-003
                        005-003-005      007-008-007
                        005-004-005

rtp5        discard     005-007-008      007-007-009      (ANSI)
                        003-005-003

rtp1        discard     005-005-005      007-007-007      (ANSI)
                        003-004-003      003-007-003
                        005-007-005      007-004-007
                        005-004-005

rtp2        notify      005-007-008      007-007-009      (ANSI)
                        003-005-003

rlghncxa03w 07-03-07 08:50:15 GMT Rel 35.6.0
LOOPSET table is (11 of 1000)       1% full
RTRV-LOOPSET: MASP A - COMPLTD
```

Note: If the `rtrv-loopset` command is entered with no other parameters specified, a maximum of 50 entries are displayed. To display more than 50 entries, the `force=yes` parameter must be specified with the `rtrv-loopset` command and the num parameter value must be greater than 50. Since there can be a maximum of 1000 loopsets in the database, to display all the loopsets in the database, the `force=yes` and `num=1000` parameters must be specified with the `rtrv-loopset` command.

If the required loopset is shown in the `rtrv-loopset` output, continue the procedure with Step 11. If the required loopset is not shown in the `rtrv-loopset` output, perform the *Adding a Loopset* on page 442 procedure to add the required loopset. After the loopset has been added, continue the procedure with Step 11 .

9. Display the destination point codes in the database by entering the `rtrv-dstn` command. This is an example of the possible output.

Note: If the point code value will be the EAGLE 5 ISS's point code, the `ri` parameter value will be `ssn`, and the `xlat` parameter value will be `dpcssn` when this procedure is completed, do not perform *Step 16* on page 720. Continue the procedure with *Step 18* on page 722.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN          DOMAIN
   001-207-000   ----------- no  ---   -------      -----------     SS7
   001-001-001   ----------- no  ---   -------      -----------     SS7
   001-001-002   ----------- no  ---   -------      -----------     SS7
   001-005-000   ----------- no  ---   -------      -----------     SS7
   001-007-000   ----------- no  ---   -------      -----------     SS7
   008-012-003   ----------- no  ---   -------      -----------     SS7
   003-002-004   ----------- no  ---   -------      -----------     SS7
   009-002-003   ----------- no  ---   -------      -----------     SS7
   010-020-005   ----------- no  ---   -------      -----------     SS7

   DPCI          CLLI        BEI ELEI  ALIASI       ALIASN          DOMAIN
   1-207-0       ----------- no  ---   -------      -----------     SS7
   0-015-0       ----------- no  ---   -------      -----------     SS7
   0-017-0       ----------- no  ---   -------      -----------     SS7
   1-011-1       ----------- no  ---   -------      -----------     SS7
   1-011-2       ----------- no  ---   -------      -----------     SS7
```

```
   DPCN          CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

   DPCN24        CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the required point code is not shown in the `rtrv-dstn` output, perform the "Adding a Destination Point Code" procedure in the *Database Administration Manual - SS7* to add the required point code. A proxy point code cannot be assigned to the point code.

After the new point code has been added, perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database. After the route has been added, continue the procedure with *Step 12* on page 717.

10. Display the point code that will be assigned to the mated application by using the `rtrv-dstn` command and specifying the point code. For this example, enter this command.

    `rtrv-dstn:dpca=010-020-005`

    This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
   010-020-005   ----------- no  ---   -------      -----------    SS7

   PPC           NCAI           PRX
   009-002-003   ----           no

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

A proxy point code (a point code value is shown in the `PPC` column) cannot be assigned to the point code. If a proxy point code is shown in this step, choose another point code from the `rtrv-dstn` output in the previous step and repeat this step.

After the new point code has been added, perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database. After the route has been added, continue the procedure with *Step 12* on page 717.

11. The point code specified with the `chg-gta` command must be the DPC of a route, unless the point code is the EAGLE 5 ISS's point code.

    Note: If the point code value will be the EAGLE 5 ISS's point code, the `ri` parameter value will be `ssn`, and the `xlat` parameter value will be `dpcssn` when this procedure is completed, do not perform *Step 16* on page 720. Continue the procedure with *Step 18* on page 722.

    Enter the `rtrv-rte` command with the `dpc` parameter specifying the point code to be used with the `chg-gta` command to verify whether or not the point code is the DPC of a route. For this example, enter this command.

    `rtrv-rte:dpca=001-255-252`

    This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 35.6.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
```

```
   001-255-252 ---------- --------------   ls07       10    001-255-252
                                           ls08       30    025-025-150
                                           lsa5       50    066-030-100
                                               RTX:No  CLLI=ls07clli
```

If the point code is not shown in the `rtrv-rte` output, perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database.

12. To use either the `mrnset` parameter (if the routing indicator value for the global title translation is GT when this procedure is completed) or `mapset` parameter (if the routing indicator value for the global title translation is SSN when this procedure is completed), the Flexible GTT Load Sharing feature must be enabled.

    If the Flexible GTT Load Sharing feature is enabled, either the `mrnset` or `mapset` parameters, depending on the routing indicator value for the global title translation when this procedure is completed, must be specified with the `chg-gta` command.

    Verify that the Flexible GTT Load Sharing feature is enabled by entering the `rtrv-ctrl-feat:partnum=893015401` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 35.6.0
The following features have been permanently enabled:
Feature Name              Partnum    Status  Quantity
Zero entries found.

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 Flexible GTT Load Sharing feature is enabled, the following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 35.6.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Flexible GTT Load Sharing 893015401 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 routing indicator for the global title translation will be GT when this procedure is completed, there are three actions that can be taken:

    - If the Flexible GTT Load Sharing feature is not enabled, and you do not wish to specify the `mrnset` parameter with the `chg-gta` command, continue the procedure with *Step 20* on page 723.
    - If the Flexible GTT Load Sharing feature is not enabled, and you do wish to specify the `mrnset` parameter with the `chg-gta` command, perform the *Activating the Flexible GTT*

Load Sharing Feature on page 786 procedure to enable the Flexible GTT Load Sharing feature. After enabling the Flexible GTT Load Sharing feature, continue the procedure with *Step 13* on page 719.

- If the Flexible GTT Load Sharing feature is enabled, continue the procedure with *Step 13* on page 719.

If the routing indicator for the global title translation will be SSN when this procedure is completed, there are three actions that can be taken:

- If the Flexible GTT Load Sharing feature is not enabled, and you do not wish to specify the `mapset` parameter for the global title translation, continue the procedure with one of these steps.
  - If the point code value is being changed to the EAGLE 5 ISS's point code, continue the procedure with *Step 18* on page 722.
  - If the point code value is being changed to a point code other than the EAGLE 5 ISS's point code, and the `ri` parameter value will be `ssn`, and the `xlat` parameter value will be `dpc` when this procedure is completed, continue the procedure with *Step 17* on page 721.
  - If the point code value is being changed to a point code other than the EAGLE 5 ISS's point code, and the `ri` parameter value will be `ssn`, and the `xlat` parameter value will be `dpcssn` when this procedure is completed, continue the procedure with *Step 14* on page 719 .
  - If the point code value is not being changed, continue the procedure with *Step 20* on page 723.
- If the Flexible GTT Load Sharing feature is not enabled, and you do wish to specify the `mapset` parameter for the global title translation, perform the *Activating the Flexible GTT Load Sharing Feature* on page 786 procedure to enable the Flexible GTT Load Sharing feature. After enabling the Flexible GTT Load Sharing feature, continue the procedure with one of these steps:
  - If the point code value is being changed to the EAGLE 5 ISS's point code, continue the procedure with *Step 18* on page 722.
  - If the point code value is being changed to a point code other than the EAGLE 5 ISS's point code, or the `xlat` parameter value is being changed to `dpc`, continue the procedure with *Step 17* on page 721.
  - If the point code value is not being changed, continue the procedure with *Step 17* on page 721 to verify that the required MAP set is provisioned in the database.
- If the Flexible GTT Load Sharing feature is enabled, perform one of these steps:
  - If the point code value is being changed to the EAGLE 5 ISS's point code, continue the procedure with *Step 18* on page 722.
  - If the point code value is being changed to a point code other than the EAGLE 5 ISS's point code, the `mapset` parameter value is being changed, or the `xlat` parameter value is being changed to `dpc`, continue the procedure with *Step 17* on page 721.
  - If the point code and the `mapset` parameter values are not being changed, continue the procedure with *Step 20* on page 723.

13. The point code and MRN set ID specified with the `chg-gta` command must be shown in the `rtrv-mrn` command output. The point code must be assigned to the MRN set that will be specified with the `chg-gta` command.

    Enter the `rtrv-mrn` command to verify that the required MRN set is configured in the database, and that the required point code is assigned to the MRN set. The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 35.6.0

MRNSET   PC             RC
DFLT     001-001-001    10
         001-001-002    20
         001-001-003    30
         001-254-255    40

MRNSET   PC             RC
110      001-001-001    10
         001-001-005    20
         001-001-006    30
         001-001-003    40
         001-001-008    50

MRNSET   PC             RC
111      001-001-001    30
         001-001-005    30
         001-001-006    30
         001-001-003    30
         001-001-008    30

MRNSET   PC             RC
112      001-003-001    10
         001-003-002    10
         001-003-003    30
         001-003-004    30
         001-003-006    60
         001-003-007    60
         001-003-008    80
         001-003-009    80

MRNSET   PCN               RC
113      s-1-1-1-0123-aa   1
         s-1-1-1-0235-aa   2
         s-1-1-1-0235-aa   3
```

    Note: If the Weighted GTT Load Sharing feature is enabled, the WT, %WT, and THR columns are shown in the `rtrv-map` output.

    If the required MRN set is not shown in the `rtrv-mrn` output, or if the required point code is not assigned to the required MRN set, provision the required MRN set by performing the *Provisioning MRN Entries* on page 310 procedure. After provisioning the required MRN set, continue the procedure with *Step 20* on page 723.

    If the required MRN set is shown in the `rtrv-mrn` output, or if the required point code is assigned to the required MRN set, continue the procedure with *Step 20* on page 723.

14. Display the destination point codes in the database by entering the `rtrv-dstn` command. This is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

   DPCA          CLLI        BEI ELEI  ALIASI       ALIASN          DOMAIN
   001-207-000   ----------- no  ---   -------      -----------     SS7
```

```
   001-001-001   ----------- no  ---   -------      -----------    SS7
   001-001-002   ----------- no  ---   -------      -----------    SS7
   001-005-000   ----------- no  ---   -------      -----------    SS7
   001-007-000   ----------- no  ---   -------      -----------    SS7
   008-012-003   ----------- no  ---   -------      -----------    SS7
   003-002-004   ----------- no  ---   -------      -----------    SS7
   009-002-003   ----------- no  ---   -------      -----------    SS7
   010-020-005   ----------- no  ---   -------      -----------    SS7

   DPCI          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
   1-207-0       ----------- no  ---   -------      -----------    SS7
   0-015-0       ----------- no  ---   -------      -----------    SS7
   0-017-0       ----------- no  ---   -------      -----------    SS7
   1-011-1       ----------- no  ---   -------      -----------    SS7
   1-011-2       ----------- no  ---   -------      -----------    SS7

   DPCN          CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

   DPCN24        CLLI        BEI ELEI   ALIASA          ALIASI        DOMAIN

Destination table is (14 of 2000) 1% full
Alias table is (0 of 12000) 0% full
PPC table is (1 of 20) 5% full
```

If the required point code is not shown in the `rtrv-dstn` output, perform the "Adding a Destination Point Code" procedure in the *Database Administration Manual - SS7* to add the required point code. A proxy point code cannot be assigned to the point code.

After the new point code has been added, perform one of the Adding a Route procedures in the Database *Administration Manual - SS7* and add the required route to the database. After the route has been added, continue the procedure with *Step 16* on page 720.

15. Display the point code that will be assigned to the mated application by using the `rtrv-dstn` command and specifying the point code. For this example, enter this command.

    ```
    rtrv-dstn:dpca=010-020-005
    ```

    This is an example of the possible output.

    ```
    rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 37.5.0

       DPCA          CLLI        BEI ELEI  ALIASI       ALIASN         DOMAIN
       010-020-005   ----------- no  ---   -------      -----------    SS7

       PPC           NCAI           PRX
       009-002-003   ----           no

    Destination table is (14 of 2000) 1% full
    Alias table is (0 of 12000) 0% full
    PPC table is (1 of 20) 5% full
    ```

    A proxy point code (a point code value is shown in the `PPC` column) cannot be assigned to the point code. If a proxy point code is shown in this step, choose another point code from the `rtrv-dstn` output in the previous step and repeat this step.

    After the new point code has been added, perform one of the Adding a Route procedures in the Database *Administration Manual - SS7* and add the required route to the database. After the route has been added, continue the procedure with *Step 16* on page 720.

16. The point code specified with the `chg-gta` command must be the DPC of a route, unless the point code is the EAGLE 5 ISS's point code.

Note: If the point code value will be the EAGLE 5 ISS's point code, the `ri` parameter value will be `ssn`, and the `xlat` parameter value will be `dpcssn` when this procedure is completed, do not perform *Step 16* on page 720. Continue the procedure with *Step 18* on page 722.

Enter the `rtrv-rte` command with the `dpc` parameter specifying the point code to be used with the `chg-gta` command to verify whether or not the point code is the DPC of a route. For this example, enter this command.

```
rtrv-rte:dpca=001-255-252
```

This is an example of the possible output.

```
rlghncxa03w 06-10-07 11:43:04 GMT  EAGLE5 35.6.0
   DPCA           ALIASI     ALIASN/N24    LSN        RC    APCA
   001-255-252 ---------- --------------   ls07       10    001-255-252
                                           ls08       30    025-025-150
                                           lsa5       50    066-030-100
                                               RTX:No  CLLI=ls07clli
```

If the point code is not shown in the `rtrv-rte` output, perform one of the Adding a Route procedures in the Database *Administration Manual* - SS7 and add the required route to the database.

17. Enter the `rtrv-map` command with the `pc` parameter specifying the required point code to verify that the required data is in the mated application table. For this example enter this command.

    Note: If the `ri` parameter value will be `gt` when this procedure is completed, continue the procedure with *Step 20* on page 723.

    Note: If the Flexible GTT Load Sharing feature is enabled, shown in *Step 12* on page 717, a MAP set ID must be specified for the final global title translation. The point code and SSN specified for the final global title translation being changed in this procedure must be assigned to the MAP set ID that will be assigned to the final global title translation. Perform *Step 17* on page 721 to verify that the required MAP set is configured in the database.

    Note: If the Flexible GTT Load Sharing feature is not enabled, and the `ri` parameter value will be `ssn`, the `xlat` parameter value will be `dpcssn`, the point code value will not be the EAGLE 5 ISS's point code, and the SSN parameter value will not be the EAGLE 5 ISS's subsystem number when this procedure is completed, continue the procedure with *Step 20* on page 723.

    ```
    rtrv-map:pca=001-255-252
    ```

    If the Flexible GTT Load Sharing feature is not enabled, this is an example of the possible output.

    ```
    rlghncxa03w 06-10-25 09:42:31  GMT  EAGLE5 35.6.0

    MAP TABLE IS      (11 of 1024)    1 % FULL

    PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
    001-255-252               254 10  SOL --- --- GRP01    ON
    ```

    If the Flexible GTT Load Sharing feature is enabled, this is an example of the possible output.

    ```
    rlghncxa03w 06-10-25 09:42:31  GMT  EAGLE5 35.6.0

    MAP TABLE IS    (12 of 36000)   1 % FULL

    PCA          Mate PCA     SSN RC MULT SRM MRC GRP NAME SSO
    ```

```
MAPSET ID=DFLT
001-255-252                55  5  DOM YES YES -------- OFF
             001-001-002   15 15  DOM YES YES -------- ON
             001-001-003   25 20  DOM YES YES -------- ON
             001-001-002   40 35  DOM YES YES -------- OFF
MAPSET ID=1
001-255-252               254  5  DOM YES YES -------- OFF
             001-001-002   10 15  DOM YES YES -------- ON
             001-001-003   20 20  DOM YES YES -------- ON
             001-001-002   40 35  DOM YES YES -------- OFF
MAPSET ID=2
001-255-252                 5 10  SOL --- --- -------- OFF
```

Note: If the Weighted GTT Load Sharing feature is enabled, the WT, %WT, and THR columns are shown in the `rtrv-map` output.

If the parameter values for the `ri` and `xlat` parameters will be `ri=ssn` and `xlat=dpc` when this procedure is completed, the point code value must be in the mated application table. If the point code is not in the mated application table when the `chg-gta` command is executed, the `force=yes` parameter must be specified with the `chg-gta` command.

If the parameter values for the `ri` and `xlat` parameters will be `ri=ssn` and `xlat=dpcssn`, and the point code and subsystem number values will be the EAGLE 5 ISS's true point code and the EAGLE 5 ISS's subsystem number when this procedure is completed, the EAGLE 5 ISS's true point code and the EAGLE 5 ISS's subsystem number must be in the mated application table.

If the required point code, subsystem number, or MAP set ID is not shown in the `rtrv-map` output, perform one of these procedures to add the required information to the mated application table:

- *Provisioning a Solitary Mated Application* on page 112
- *Provisioning a Dominant Mated Application* on page 142
- *Provisioning a Load Shared Mated Application* on page 189
- *Provisioning a Combined Dominant/Load Shared Mated Application* on page 223

18. If the `ri=ssn` and `xlat=dpcssn` parameters are specified with the `chg-gta` command, and you wish to use the EAGLE 5 ISS's point code for the value of the `pc` parameter of the `chg-gta` command, the point code value must be in the EAGLE 5 ISS's self ID table. Display the EAGLE 5 ISS self-identification, using the `rtrv-sid` command. This is an example of the possible output.

    Note: If the `ri` parameter value will be `ssn`, and the `xlat` parameter value will be `dpc` when this procedure is completed, continue the procedure with *Step 20* on page 723.

    Note: If the point code value is not being changed in this procedure to the EAGLE 5 ISS's point code, continue the procedure with *Step 20* on page 723.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 35.6.0
   PCA             PCI          PCN                CLLI              PCTYPE
   010-020-030     1-023-1      12-0-14-1          rlghncxa03w       OTHER
                 s-1-023-1    s-12-0-14-1

   CPCA
   002-002-002       002-002-003       002-002-004       002-002-005
   002-002-006       002-002-007       002-002-008       002-002-009
   004-002-001       004-003-003       050-060-070
```

```
   CPCI
   1-001-1          1-001-2          1-001-3          1-001-4
   1-002-1          1-002-2          1-002-3          1-002-4
   2-001-1          7-222-7

   CPCN
   2-0-10-3         2-0-11-0         2-0-11-2          2-0-12-1
   2-2-3-3          2-2-4-0          10-14-10-1
```

19. Enter the `rtrv-ss-appl` command to verify that either the LNP, EIR, V-Flex, ATINPQ, or INP subsystem number (depending on which feature is on) is in the subsystem application table.

    This is an example of the possible output.

```
rlghncxa03w 08-09-28 14:42:38 GMT EAGLE5 39.2.0
APPL       SSN       STAT
LNP        254       ONLINE

SS-APPL table is 20% FULL (1 of 5)
```

    If the subsystem number is shown in the `rtrv-ss-appl` output, continue the procedure with *Step 20* on page 723.

    If no subsystem number is shown in the `rtrv-ss-appl` output, or if the `rtrv-ss-appl` command is rejected, go to one of these manuals, depending on the type of subsystem you wish to use, to enable and turn on the feature as necessary, and add the subsystem to the subsystem application table.

    - EIR subsystem – go to the *Feature Manual - EIR*.
    - INP subsystem – go to the *Feature Manual - INP/AINPQ*.
    - LNP subsystem – go to the *LNP Feature Activation Guide*.
    - V-Flex subsystem – go to the *Feature Manual - V-Flex*.
    - ATINPQ subsystem – go to the *Feature Manual - ATINP*.

20. Change the global title address for GTT set `LIDB` using the `chg-gta` command. The parameters and values that can be used with the `chg-gta` command depend on:

    - Whether or not the Origin-Based SCCP Routing feature is enabled.
    - If the Origin-Based SCCP Routing feature is enabled, what type of GTT set will be specified for the `gttsn` parameter.
    - The `xlat` parameter value.

    The parameter combinations and values that can be used with the `chg-gta` command are shown in these tables:

    - *Table 51: CHG-GTA Parameter Combinations - Origin-Based SCCP Routing Feature Not Enabled* on page 690 – if the Origin-Based SCCP Routing feature is not enabled.
    - *Table 52: CHG-GTA GTTSN = CDGTA GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 693 – if the Origin-Based SCCP Routing feature is enabled and a CDGTA GTT set will be specified for the `gttsn` parameter value.
    - *Table 53: CHG-GTA GTTSN = CGGTA GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 697 – if the Origin-Based SCCP Routing feature is enabled and a CGGTA GTT set will be specified for the `gttsn` parameter value.

- *Table 54: CHG-GTA GTTSN = CGSSN GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 701 – if the Origin-Based SCCP Routing feature is enabled and a CGSSN GTT set will be specified for the `gttsn` parameter value.
- *Table 55: CHG-GTA GTTSN = CGPC GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 704 – if the Origin-Based SCCP Routing feature is enabled and a CGPC GTT set will be specified for the `gttsn` parameter value.
- *Table 56: CHG-GTA GTTSN = OPC GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled* on page 707 – if the Origin-Based SCCP Routing feature is enabled and an OPC GTT set will be specified for the `gttsn` parameter value.

Notes:

1. If the GTA entry does not contain `npdd`, `npds`, `nsdd`, or `nsds` parameter values, perform this step once and without the `npdd`, `npds`, `nsdd`, `nsds`, or `rmgtt` parameter. After the `chg-gta` command has been performed, continue the procedure with *Step 20* on page 723.
2. If the GTA entry does contain `npdd`, `npds`, `nsdd`, or `nsds` parameter values, and these values are not being changed or removed, perform this step once without the `npdd`, `npds`, `nsdd`, `nsds`, or `rmgtt` parameters. After the `chg-gta` command has been performed, continue the procedure with *Step 20* on page 723.
3. If the GTA entry contains `npdd`, `npds`, `nsdd`, or `nsds` parameter values, and these values are being changed or removed, perform step with the `rmgtt=yes` parameter. After the `chg-gta` command has been performed the second time, continue the procedure with *Step 20* on page 723.
4. The command line on the terminal can contain up to 150 characters. If the parameters and values specified with the `chg-gta` command are too long to fit on the `chg-gta` command line, perform the `chg-gta` command as many times as necessary to complete the GTA entry.

For this example, enter this command:

```
chg-gta:gttsn=lidb:gta=9195554321:xlat=dpcssn:ri=ssn:pc=001-255-252:ssn=254
:mapset=1:opcsn=gttset12:loopset=rtp2
```

When the command has successfully completed, this message appears:

```
rlghncxa03w 06-10-07 00:27:31 GMT EAGLE5 35.6.0
CHG-GTA: MASP A - COMPLTD
```

21. Verify the changes to the GTT set using the `rtrv-gta` command with the `gttsn` parameter value and one of the following parameters and values specified in *Step 20* on page 723, depending on what type of GTT set was specified in *Step 20* on page 723.

- The `gta` parameter and value – if the Origin-Based SCCP Routing feature is not enabled.
- The `gta` parameter and value – if the Origin-Based SCCP Routing feature is enabled and either a CDGTA or CGGTA GTT set was specified for the `gttsn` parameter value.
- The `cgssn` parameter and value – if the Origin-Based SCCP Routing feature is enabled and a CGSSN GTT set was specified for the `gttsn` parameter value.
- The `cgpc/cgpca/cgpci/cgpcn/cgpcn24` parameter and value – if the Origin-Based SCCP Routing feature is enabled and a CGPC GTT set was specified for the `gttsn` parameter value.
- The `opc/opca/opci/opcn/opcn24` parameter and value – if the Origin-Based SCCP Routing feature is enabled and an OPC GTT set was specified for the `gttsn` parameter value.

If the num parameter is specified with the rtrv-gta command, and the value of the num parameter is greater than 1000, the force=yes parameter must be specified with the rtrv-gta command. For this example, enter this command.

```
rtrv-gta:gttsn=lidb:gta=9195554321
```

This is an example of the possible output.

```
rlghncxa03w 08-10-07 00:28:31 GMT EAGLE5 39.2.0
GTTSN     NETDOM  NDGT
lidb      ansi    10
GTA TABLE IS   1 % FULL  (17 of 269999)

START GTA  END GTA    XLAT   RI     PC
9195554321 9195554321 dpcssn ssn    001-255-252
     MAPSET=1     SSN=254 CCGT=no  NTT=---
     LOOPSET = rtp2
     CGGTASN=gttset3  CGPCSN=--------- SELID=----- OPCSN=gttset12

Command Retrieved 1 Entries
```

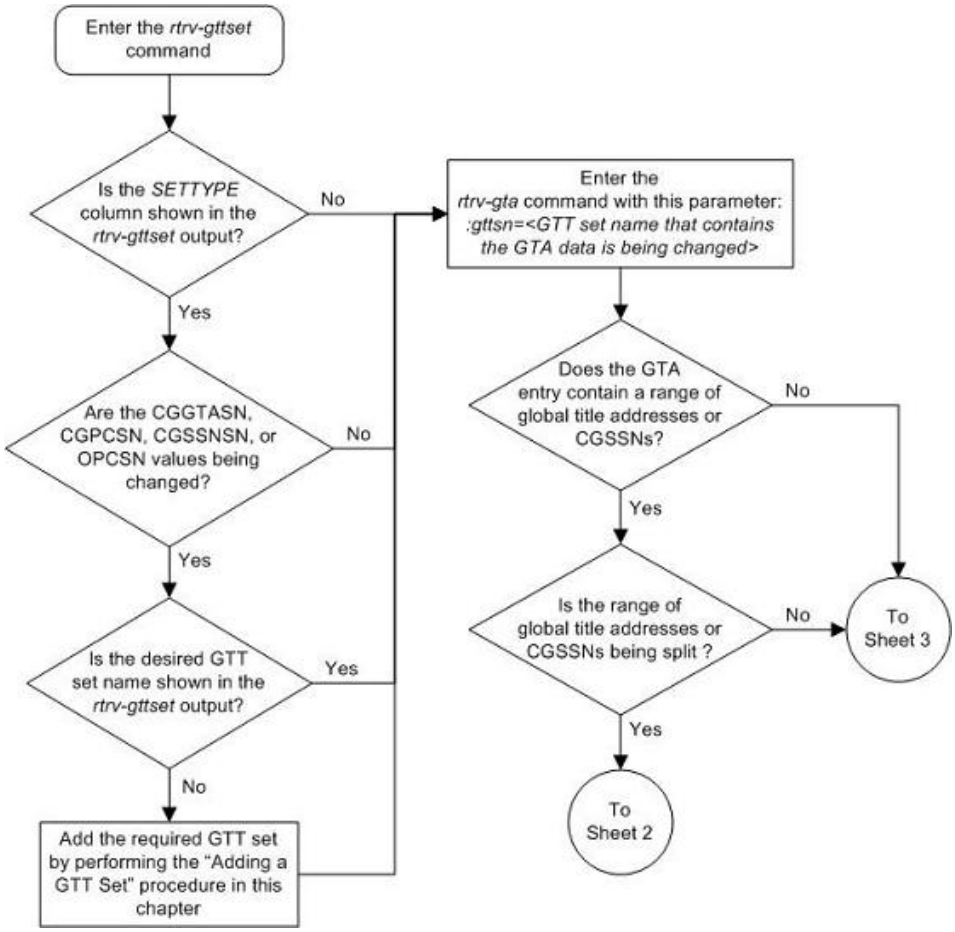
Note: If the the rmgtt=yes parameter was specified in *Step 20* on page 723, and new prefix or suffix values will be assigned to the GTA entry, perform *Step 20* on page 723 again with the npdd, npds, nsdd, or nsds parameters. After the chg-gta command has been performed, perform *Step 20* on page 723 again.

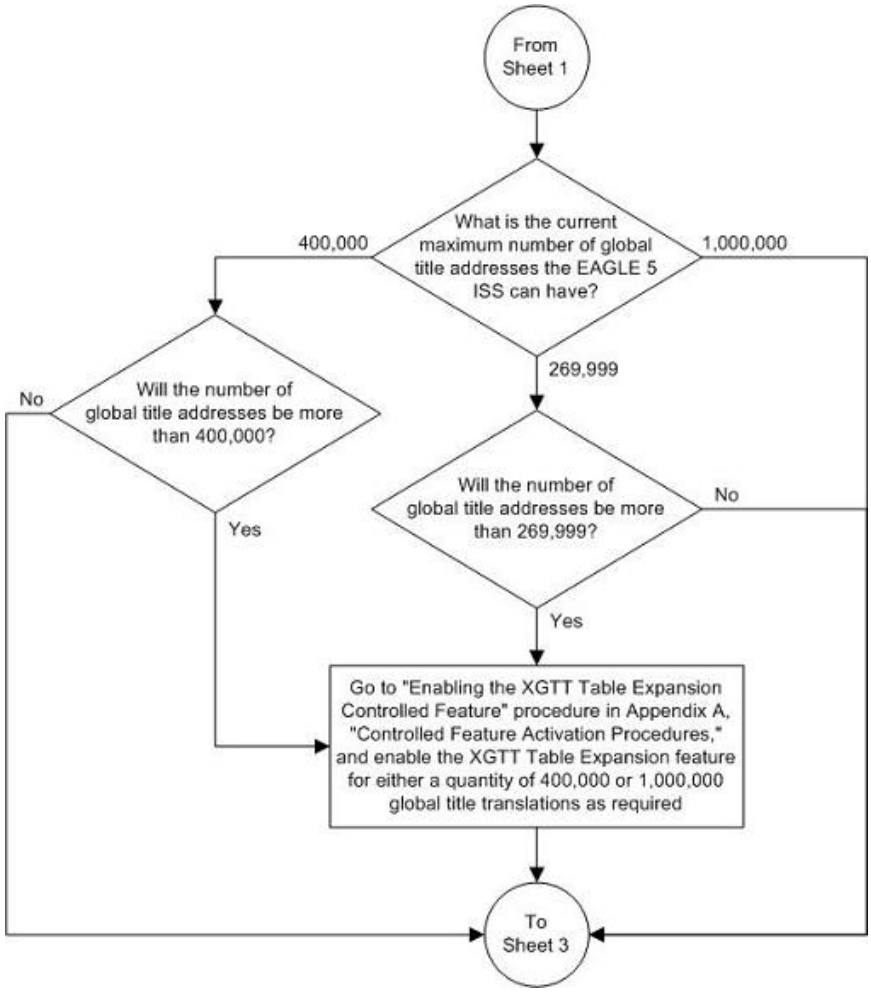
22. Backup the new changes using the chg-db:action=backup:dest=fixed command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

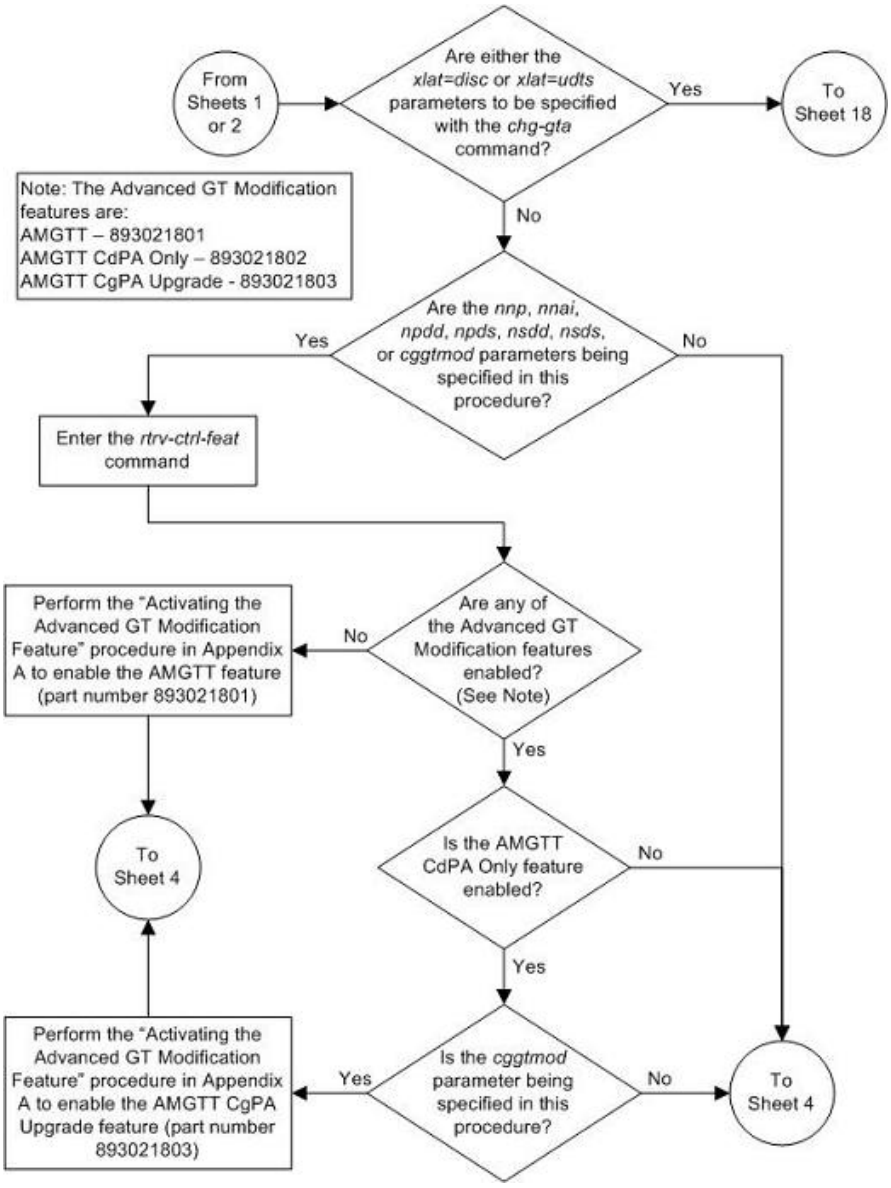
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

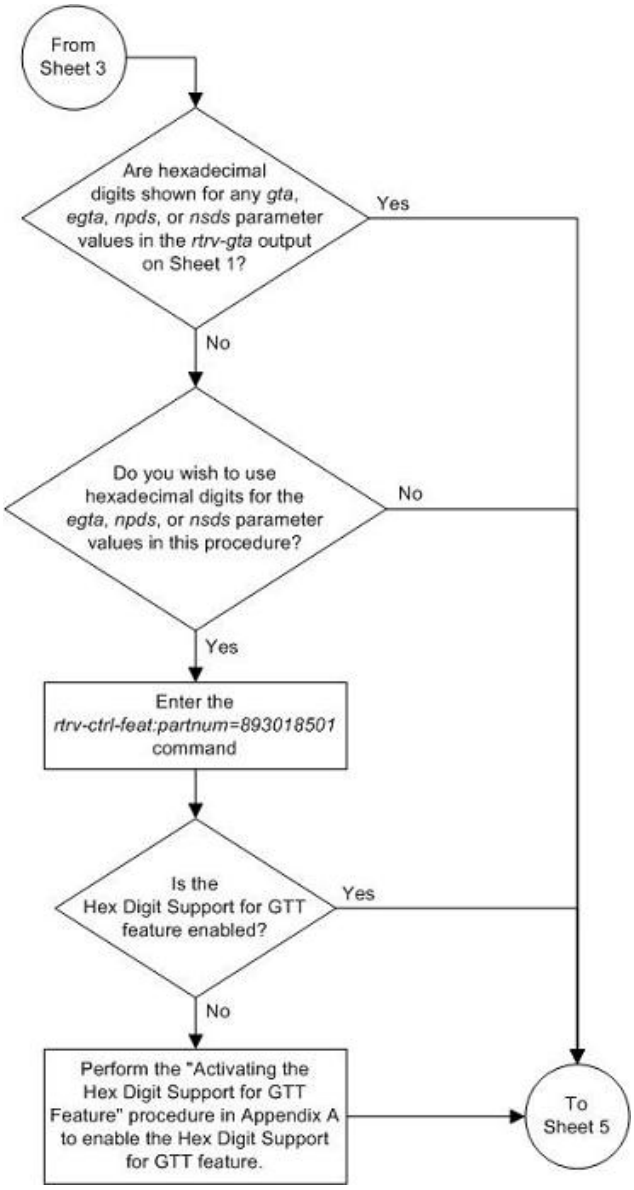
Note: Before performing this procedure, make sure you have purchased the Global Title Translation (GTT) featureand the Enhanced Global Title Translation (EGTT) feature. If you are not sure whether you have purchased these features, contact your Tekelec Sales Representative or Account Representative.

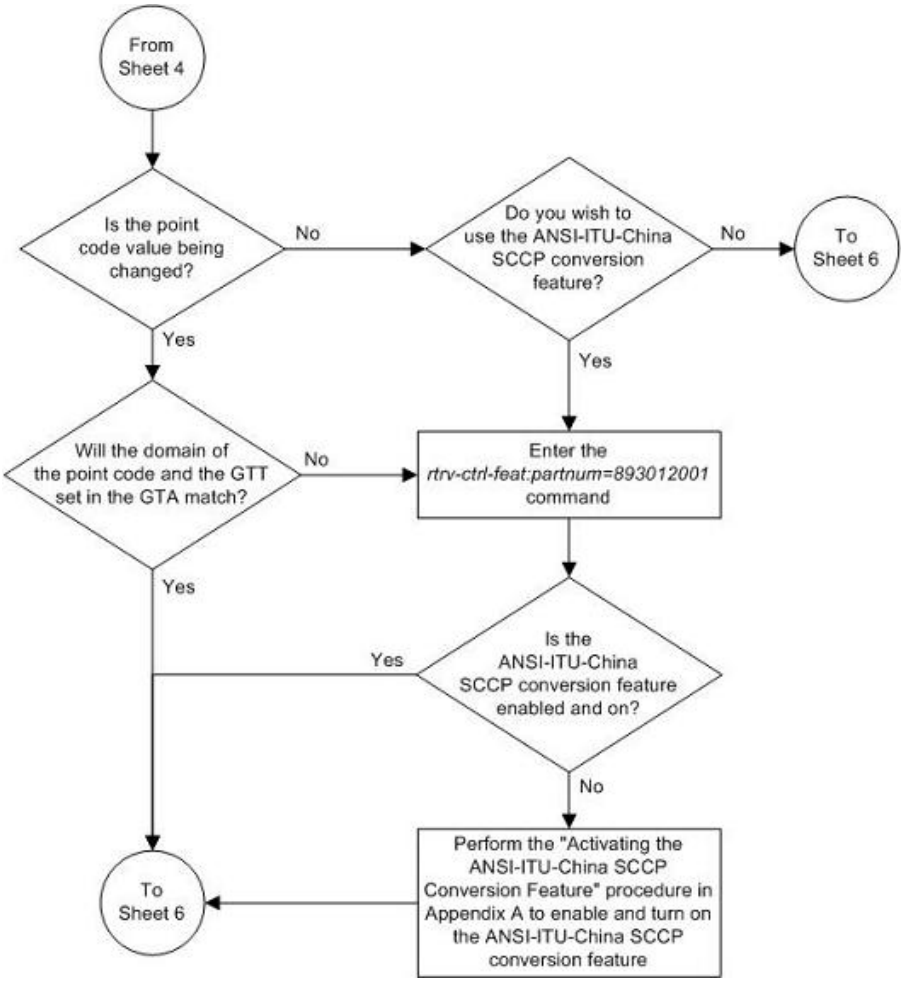
Figure 54: Changing Global Title Address Information

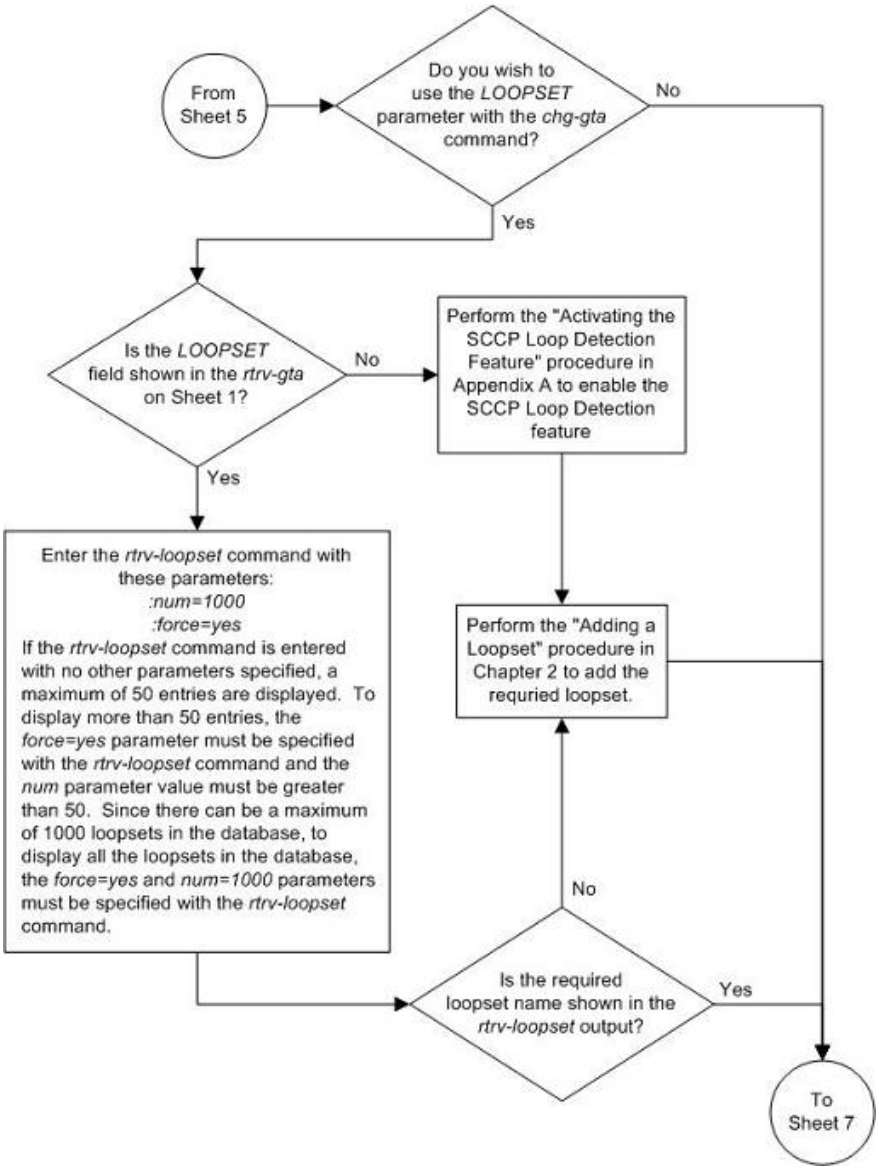

Enter the rtrv-gttset command
Is the SETTYPE column shown in the rtrv-gttset output?
No
Yes
Are the CGGTASN, CGPCSN, CGSSNSN, or OPCSN values being changed?
No
Yes
Is the desired GTT set name shown in the rtrv-gttset output?
Yes
No
Add the required GTT set by performing the "Adding a GTT Set" procedure in this chapter
Enter the rtrv-gta command with this parameter: :gttsn=<GTT set name that contains the GTA data is being changed>
Does the GTA entry contain a range of global title addresses or CGSSNs?
No
Yes
Is the range of global title addresses or CGSSNs being split ?
No
To Sheet 3
Yes
To Sheet 2

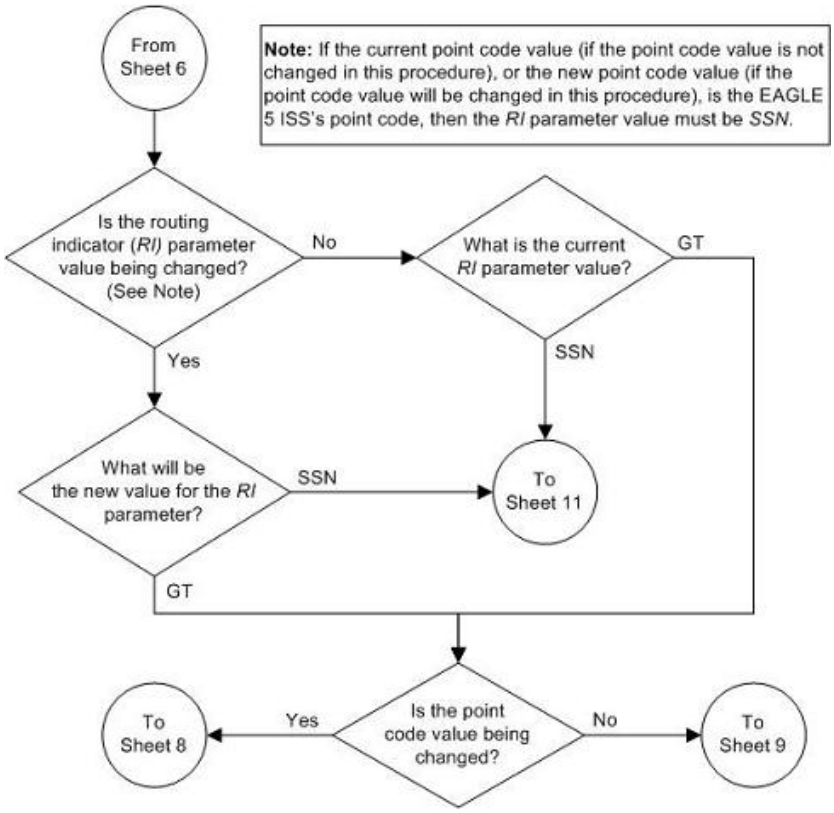

From Sheet 1
What is the current maximum number of global title addresses the EAGLE 5 ISS can have?
400,000
1,000,000
269,999
Will the number of global title addresses be more than 400,000?
No
Yes
Will the number of global title addresses be more than 269,999?
No
Yes
Go to "Enabling the XGTT Table Expansion Controlled Feature" procedure in Appendix A, "Controlled Feature Activation Procedures," and enable the XGTT Table Expansion feature for either a quantity of 400,000 or 1,000,000 global title translations as required
To Sheet 3

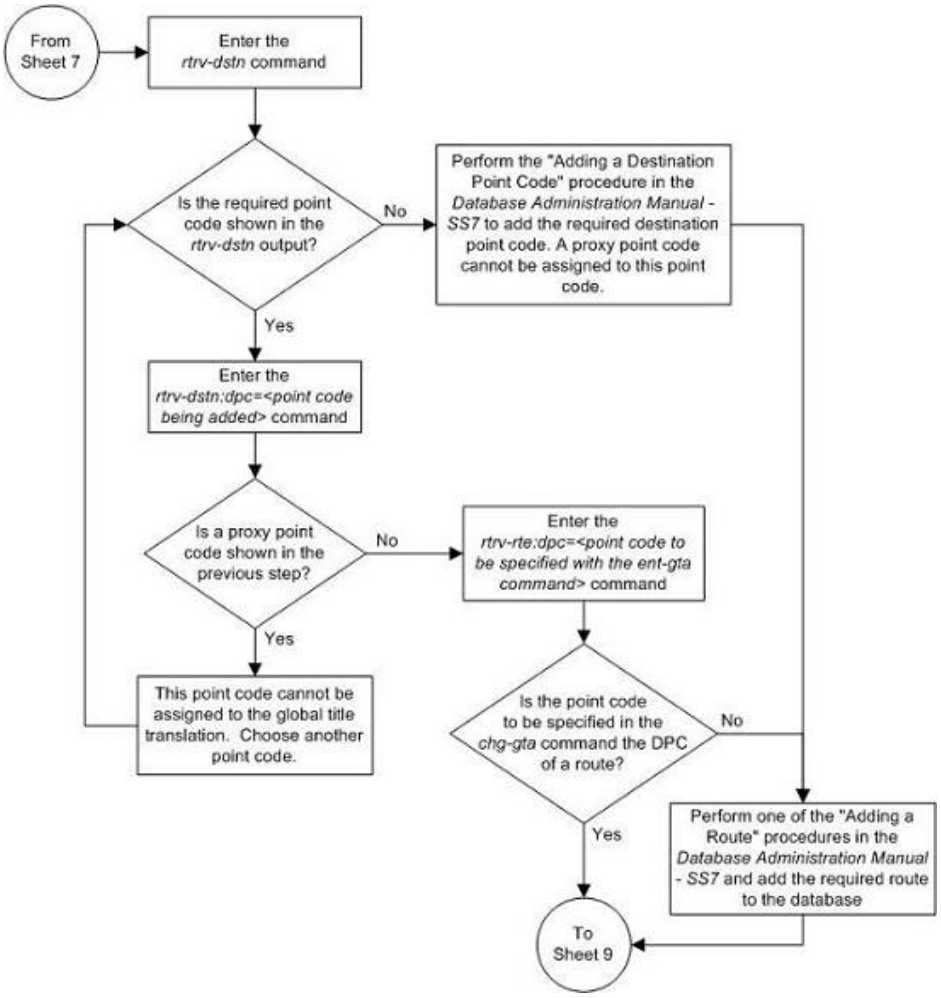

From Sheets 1 or 2
Are either the xlat=disc or xlat=udts parameters to be specified with the chg-gta command?
Yes
To Sheet 18
No
Note: The Advanced GT Modification features are:
AMGTT – 893021801
AMGTT CdPA Only – 893021802
AMGTT CgPA Upgrade - 893021803
Are the nnp, nnai, npdd, npds, nsdd, nsds, or cggtmod parameters being specified in this procedure?
Yes
No
Enter the rtrv-ctrl-feat command
Are any of the Advanced GT Modification features enabled? (See Note)
No
Perform the "Activating the Advanced GT Modification Feature" procedure in Appendix A to enable the AMGTT feature (part number 893021801)
Yes
Is the AMGTT CdPA Only feature enabled?
No
Yes
To Sheet 4
Is the cggtmod parameter being specified in this procedure?
Yes
No
Perform the "Activating the Advanced GT Modification Feature" procedure in Appendix A to enable the AMGTT CgPA Upgrade feature (part number 893021803)
To Sheet 4

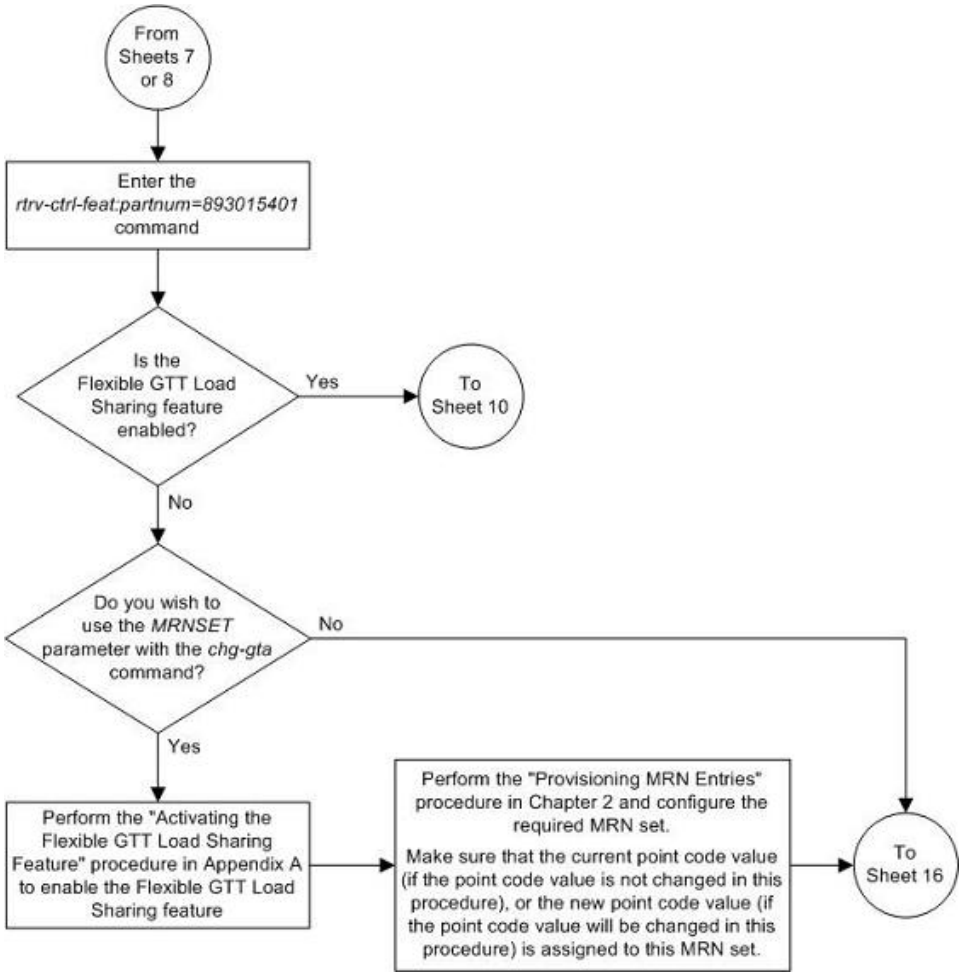

From Sheet 3
Are hexadecimal digits shown for any gta, egta, npds, or nsds parameter values in the rtrv-gta output on Sheet 1?
Yes
No
Do you wish to use hexadecimal digits for the egta, npds, or nsds parameter values in this procedure?
No
Yes
Enter the rtrv-ctrl-feat:partnum=893018501 command
Is the Hex Digit Support for GTT feature enabled?
Yes
No
Perform the "Activating the Hex Digit Support for GTT Feature" procedure in Appendix A to enable the Hex Digit Support for GTT feature.
To Sheet 5

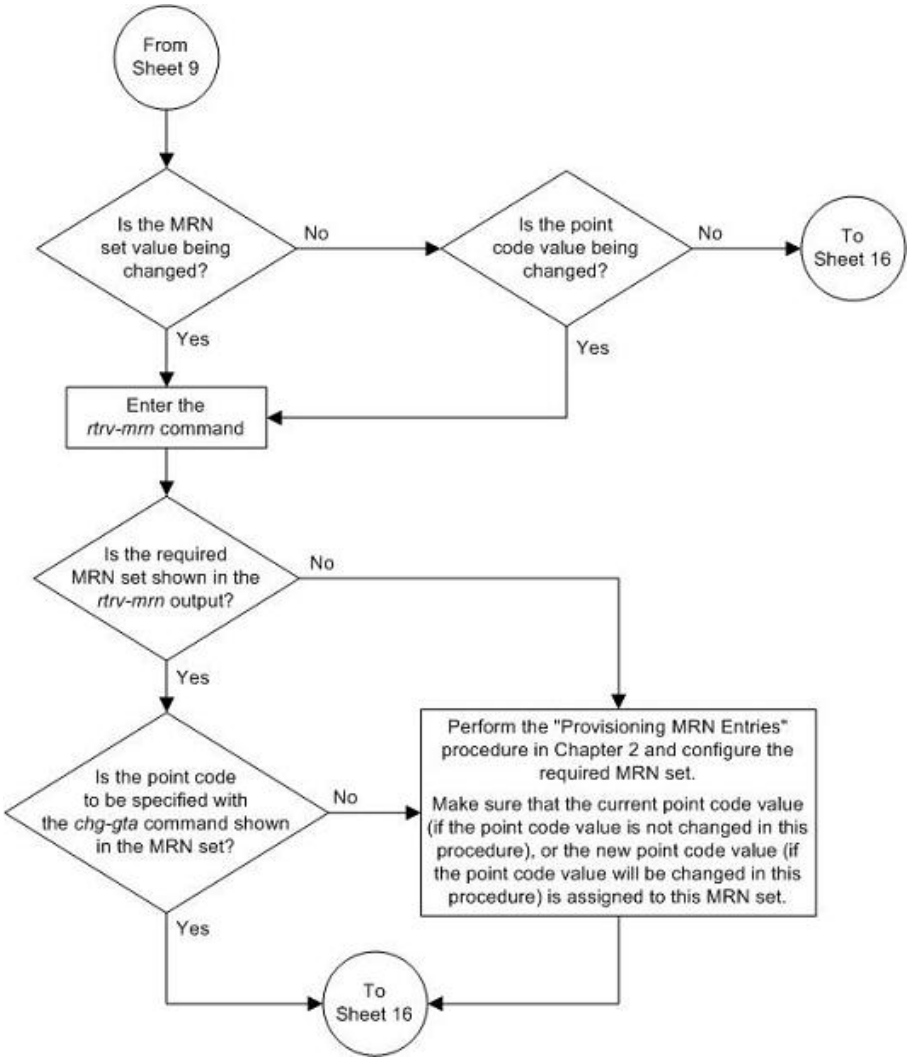

From Sheet 4
Is the point code value being changed?
No
Do you wish to use the ANSI-ITU-China SCCP conversion feature?
No
To Sheet 6
Yes
Yes
Will the domain of the point code and the GTT set in the GTA match?
No
Enter the rtrv-ctrl-feat:partnum=893012001 command
Yes
Yes
Is the ANSI-ITU-China SCCP conversion feature enabled and on?
No
To Sheet 6
Perform the "Activating the ANSI-ITU-China SCCP Conversion Feature" procedure in Appendix A to enable and turn on the ANSI-ITU-China SCCP conversion feature

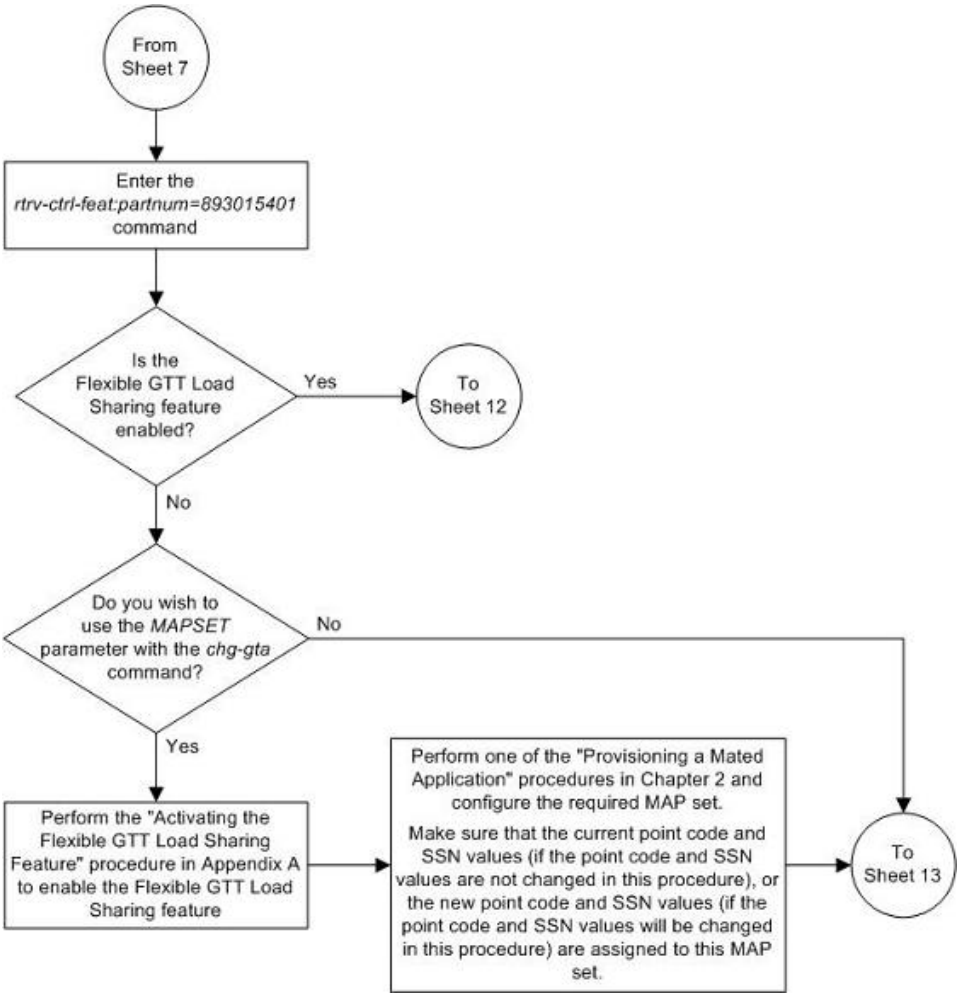

From Sheet 5
Do you wish to use the LOOPSET parameter with the chg-gta command?
No
Yes
Is the LOOPSET field shown in the rtrv-gta on Sheet 1?
No
Perform the "Activating the SCCP Loop Detection Feature" procedure in Appendix A to enable the SCCP Loop Detection feature
Yes
Enter the rtrv-loopset command with these parameters:
:num=1000
:force=yes
If the rtrv-loopset command is entered with no other parameters specified, a maximum of 50 entries are displayed. To display more than 50 entries, the force=yes parameter must be specified with the rtrv-loopset command and the num parameter value must be greater than 50. Since there can be a maximum of 1000 loopsets in the database, to display all the loopsets in the database, the force=yes and num=1000 parameters must be specified with the rtrv-loopset command.
Perform the "Adding a Loopset" procedure in Chapter 2 to add the requried loopset.
No
Is the required loopset name shown in the rtrv-loopset output?
Yes
To Sheet 7

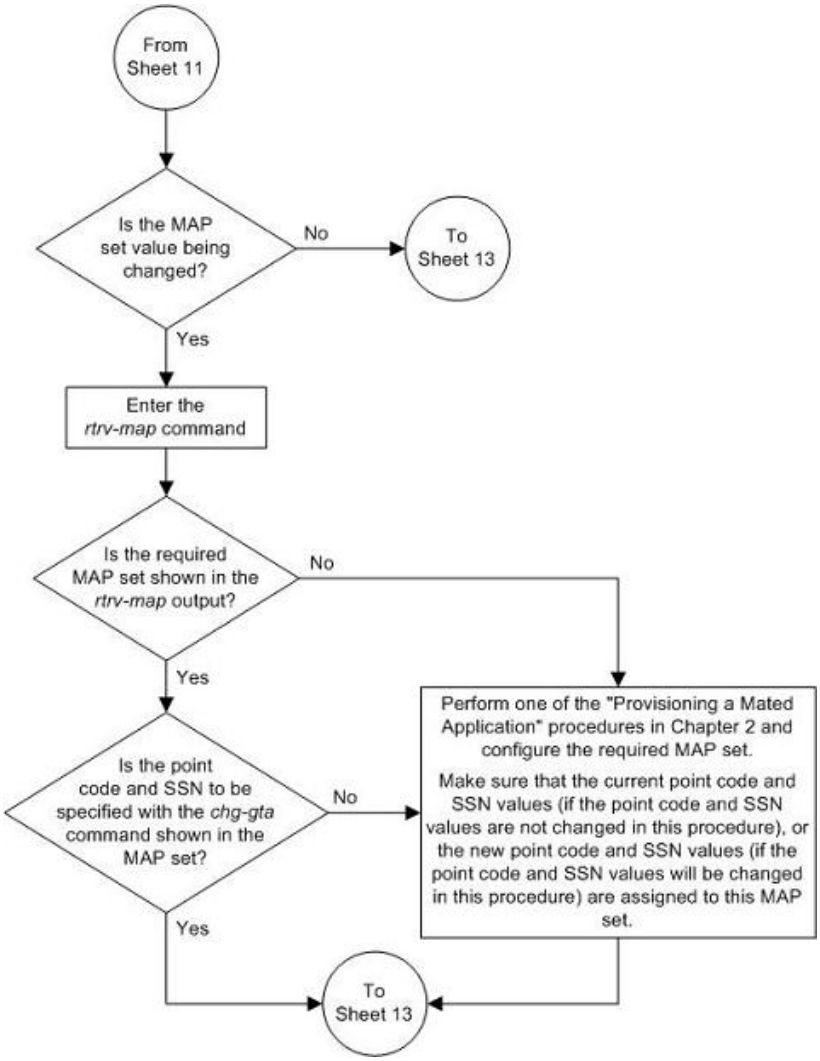

From Sheet 6
Note: If the current point code value (if the point code value is not changed in this procedure), or the new point code value (if the point code value will be changed in this procedure), is the EAGLE 5 ISS's point code, then the RI parameter value must be SSN.
Is the routing indicator (RI) parameter value being changed? (See Note)
No
What is the current RI parameter value?
GT
SSN
Yes
What will be the new value for the RI parameter?
SSN
To Sheet 11
GT
Is the point code value being changed?
Yes
To Sheet 8
No
To Sheet 9

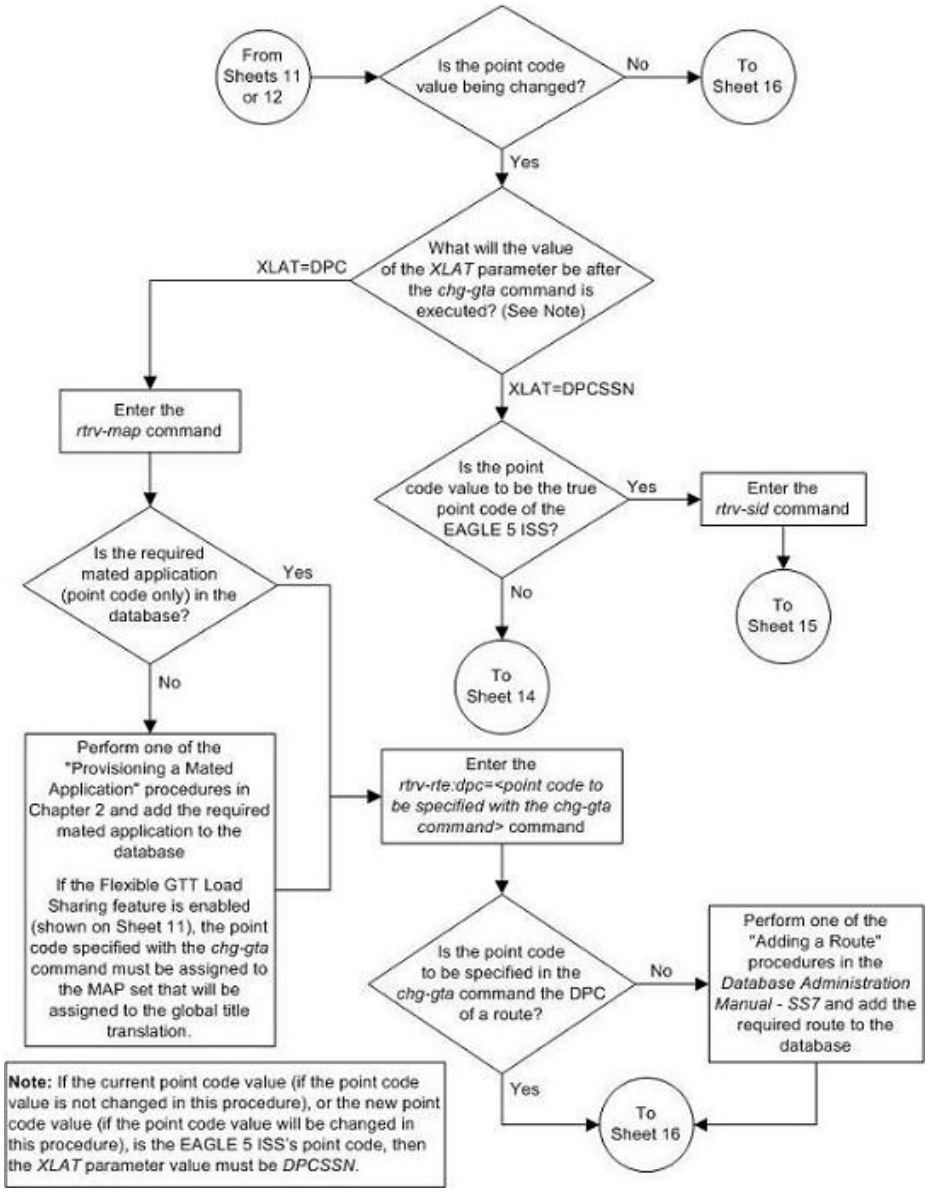

From Sheet 7
Enter the rtrv-dstn command
Is the required point code shown in the rtrv-dstn output?
No
Perform the "Adding a Destination Point Code" procedure in the Database Administration Manual - SS7 to add the required destination point code. A proxy point code cannot be assigned to this point code.
Yes
Enter the rtrv-dstn:dpc=<point code being added> command
Is a proxy point code shown in the previous step?
No
Enter the rtrv-rte:dpc=<point code to be specified with the ent-gta command> command
Yes
This point code cannot be assigned to the global title translation. Choose another point code.
Is the point code to be specified in the chg-gta command the DPC of a route?
No
Yes
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 and add the required route to the database
To Sheet 9

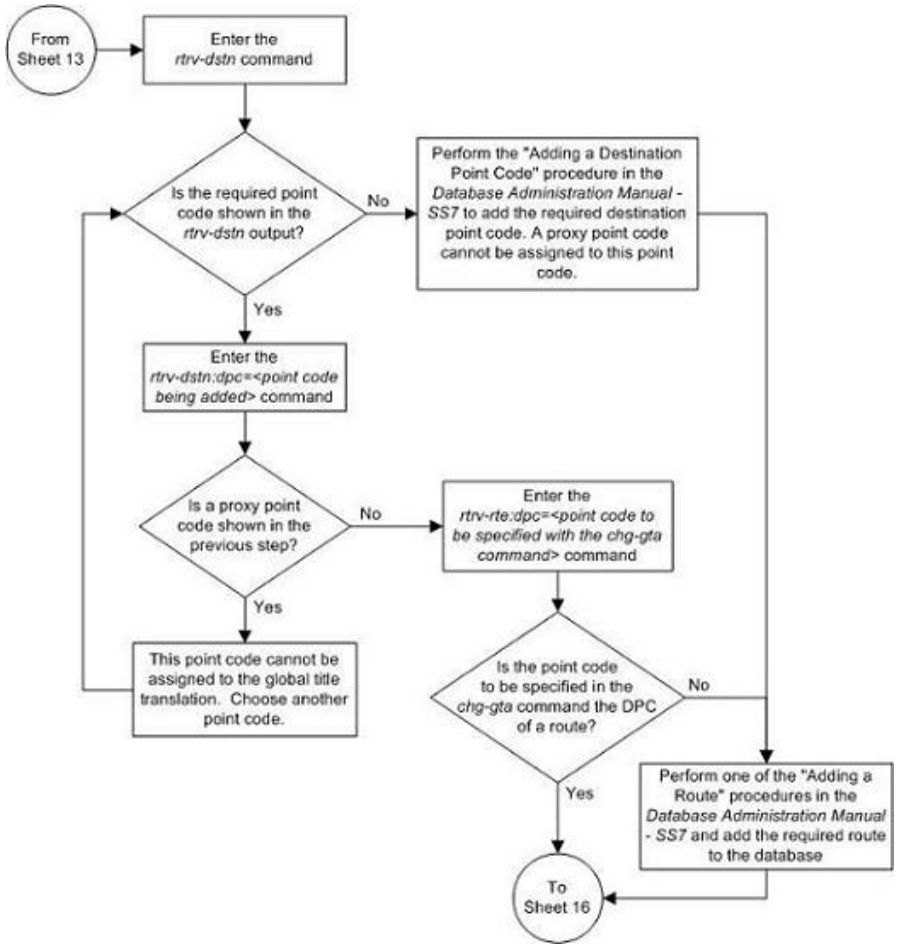

From Sheets 7 or 8
Enter the rtrv-ctrl-feat:partnum=893015401 command
Is the Flexible GTT Load Sharing feature enabled?
Yes
To Sheet 10
No
Do you wish to use the MRNSET parameter with the chg-gta command?
No
Yes
Perform the "Activating the Flexible GTT Load Sharing Feature" procedure in Appendix A to enable the Flexible GTT Load Sharing feature
Perform the "Provisioning MRN Entries" procedure in Chapter 2 and configure the required MRN set.
Make sure that the current point code value (if the point code value is not changed in this procedure), or the new point code value (if the point code value will be changed in this procedure) is assigned to this MRN set.
To Sheet 16

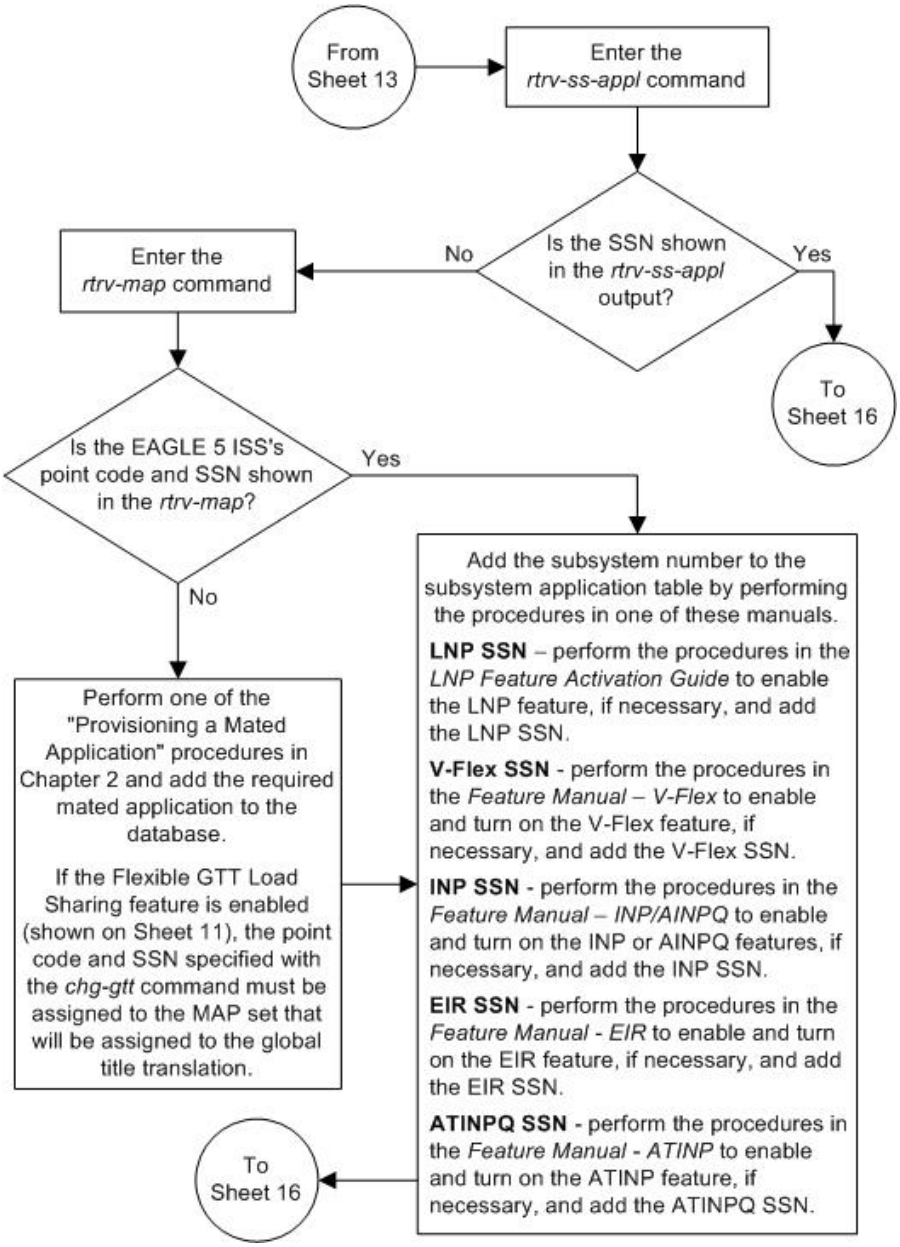

From Sheet 9
Is the MRN set value being changed?
No
Is the point code value being changed?
No
To Sheet 16
Yes
Yes
Enter the *rtrv-mrn* command
Is the required MRN set shown in the *rtrv-mrn* output?
No
Yes
Perform the "Provisioning MRN Entries" procedure in Chapter 2 and configure the required MRN set.
Make sure that the current point code value (if the point code value is not changed in this procedure), or the new point code value (if the point code value will be changed in this procedure) is assigned to this MRN set.
Is the point code to be specified with the *chg-gta* command shown in the MRN set?
No
Yes
To Sheet 16

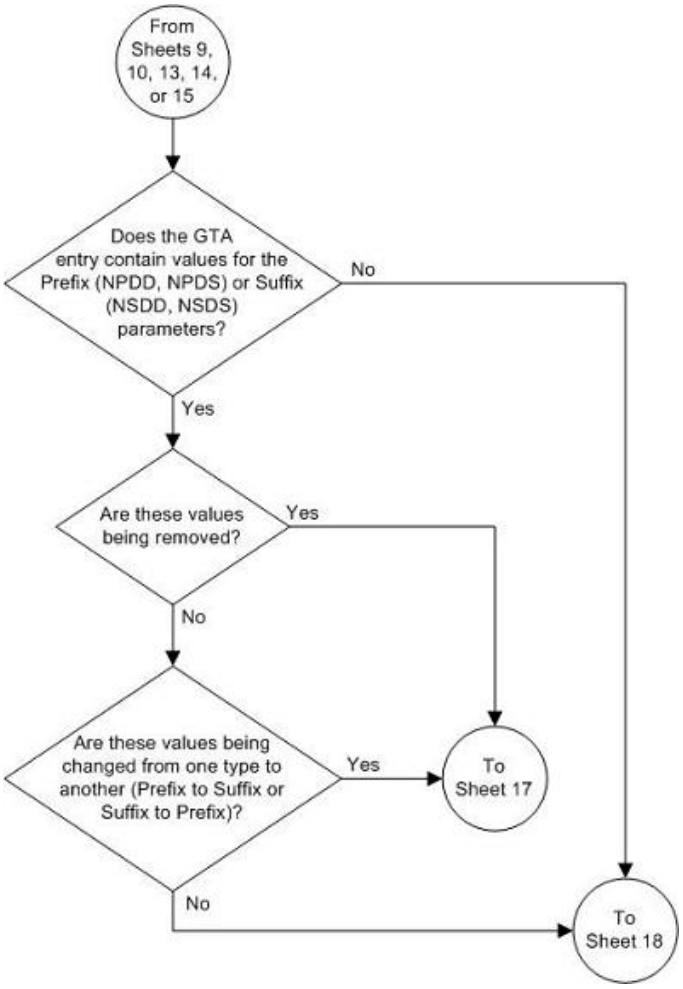

From Sheet 7
Enter the rtrv-ctrl-feat:partnum=893015401 command
Is the Flexible GTT Load Sharing feature enabled?
Yes
To Sheet 12
No
Do you wish to use the MAPSET parameter with the chg-gta command?
No
Yes
Perform the "Activating the Flexible GTT Load Sharing Feature" procedure in Appendix A to enable the Flexible GTT Load Sharing feature
Perform one of the "Provisioning a Mated Application" procedures in Chapter 2 and configure the required MAP set.
Make sure that the current point code and SSN values (if the point code and SSN values are not changed in this procedure), or the new point code and SSN values (if the point code and SSN values will be changed in this procedure) are assigned to this MAP set.
To Sheet 13

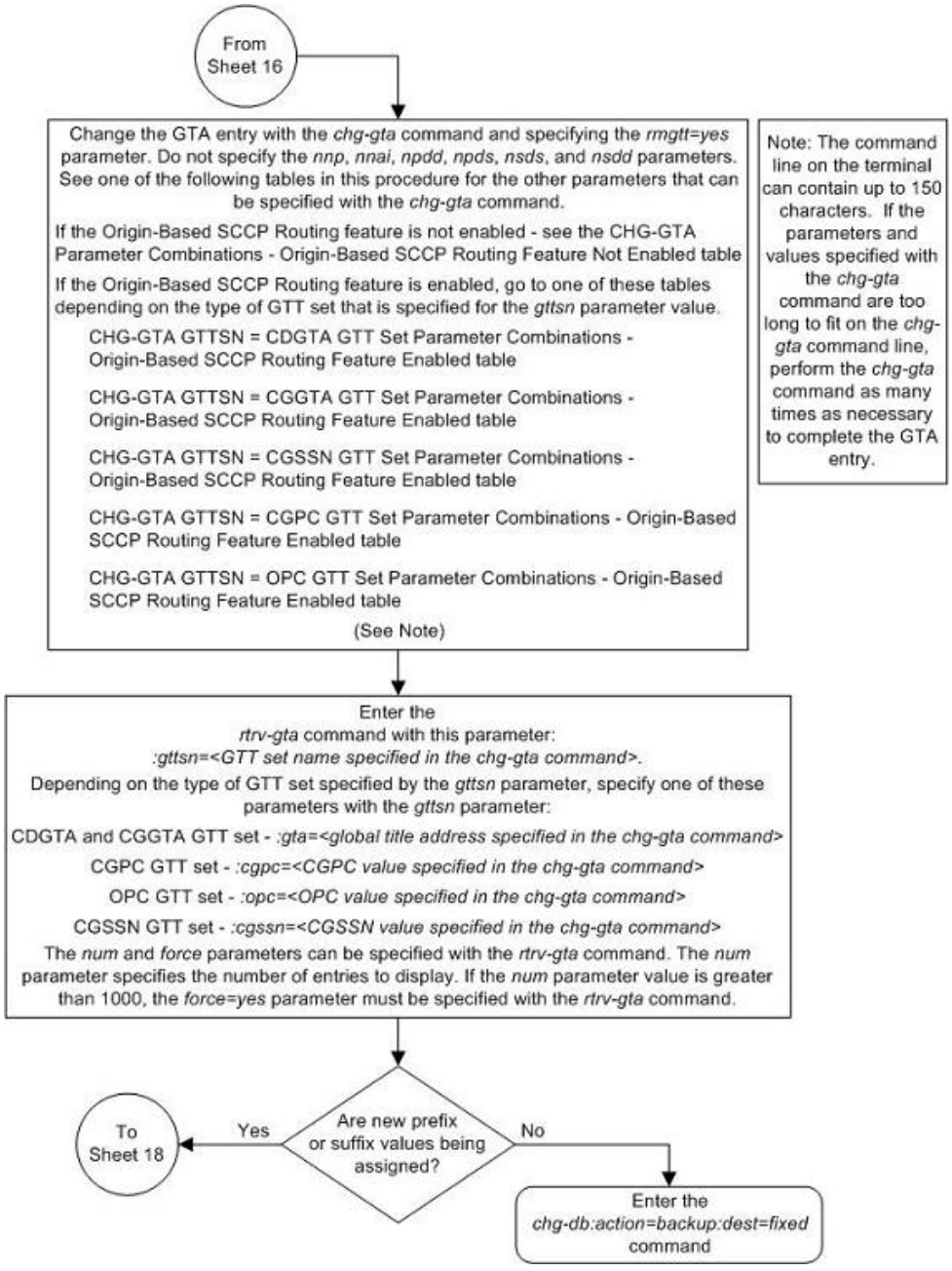

From Sheet 11
Is the MAP set value being changed?
No
To Sheet 13
Yes
Enter the rtrv-map command
Is the required MAP set shown in the rtrv-map output?
No
Yes
Perform one of the "Provisioning a Mated Application" procedures in Chapter 2 and configure the required MAP set.
Make sure that the current point code and SSN values (if the point code and SSN values are not changed in this procedure), or the new point code and SSN values (if the point code and SSN values will be changed in this procedure) are assigned to this MAP set.
Is the point code and SSN to be specified with the chg-gta command shown in the MAP set?
No
Yes
To Sheet 13

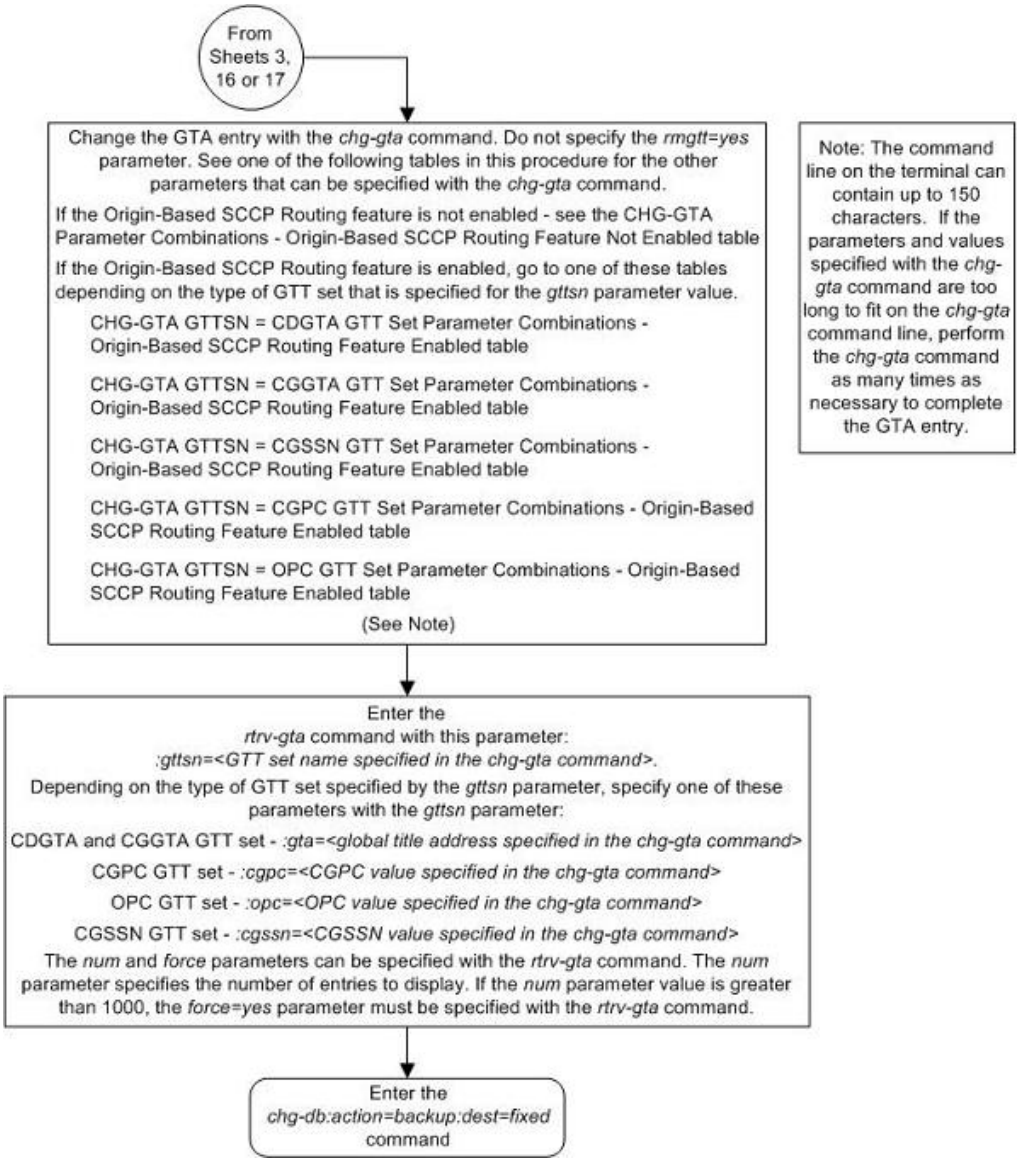

From Sheets 11 or 12
Is the point code value being changed?
No
To Sheet 16
Yes
What will the value of the XLAT parameter be after the chg-gta command is executed? (See Note)
XLAT=DPC
XLAT=DPCSSN
Enter the rtrv-map command
Is the point code value to be the true point code of the EAGLE 5 ISS?
Yes
Enter the rtrv-sid command
To Sheet 15
No
To Sheet 14
Is the required mated application (point code only) in the database?
Yes
No
Perform one of the "Provisioning a Mated Application" procedures in Chapter 2 and add the required mated application to the database
If the Flexible GTT Load Sharing feature is enabled (shown on Sheet 11), the point code specified with the chg-gta command must be assigned to the MAP set that will be assigned to the global title translation.
Enter the rtrv-rte:dpc=<point code to be specified with the chg-gta command> command
Is the point code to be specified in the chg-gta command the DPC of a route?
No
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 and add the required route to the database
Yes
To Sheet 16
Note: If the current point code value (if the point code value is not changed in this procedure), or the new point code value (if the point code value will be changed in this procedure), is the EAGLE 5 ISS's point code, then the XLAT parameter value must be DPCSSN.


From Sheet 13
Enter the rtrv-dstn command
Is the required point code shown in the rtrv-dstn output?
No
Perform the "Adding a Destination Point Code" procedure in the Database Administration Manual - SS7 to add the required destination point code. A proxy point code cannot be assigned to this point code.
Yes
Enter the rtrv-dstn:dpc=<point code being added> command
Is a proxy point code shown in the previous step?
No
Enter the rtrv-rte:dpc=<point code to be specified with the chg-gta command> command
Yes
This point code cannot be assigned to the global title translation. Choose another point code.
Is the point code to be specified in the chg-gta command the DPC of a route?
No
Yes
Perform one of the "Adding a Route" procedures in the Database Administration Manual - SS7 and add the required route to the database
To Sheet 16


From Sheet 13
Enter the rtrv-ss-appl command
Is the SSN shown in the rtrv-ss-appl output?
No
Yes
Enter the rtrv-map command
To Sheet 16
Is the EAGLE 5 ISS's point code and SSN shown in the rtrv-map?
Yes
No
Add the subsystem number to the subsystem application table by performing the procedures in one of these manuals.
LNP SSN – perform the procedures in the LNP Feature Activation Guide to enable the LNP feature, if necessary, and add the LNP SSN.
V-Flex SSN - perform the procedures in the Feature Manual – V-Flex to enable and turn on the V-Flex feature, if necessary, and add the V-Flex SSN.
INP SSN - perform the procedures in the Feature Manual – INP/AINPQ to enable and turn on the INP or AINPQ features, if necessary, and add the INP SSN.
EIR SSN - perform the procedures in the Feature Manual - EIR to enable and turn on the EIR feature, if necessary, and add the EIR SSN.
ATINPQ SSN - perform the procedures in the Feature Manual - ATINP to enable and turn on the ATINP feature, if necessary, and add the ATINPQ SSN.
Perform one of the "Provisioning a Mated Application" procedures in Chapter 2 and add the required mated application to the database.
If the Flexible GTT Load Sharing feature is enabled (shown on Sheet 11), the point code and SSN specified with the chg-gtt command must be assigned to the MAP set that will be assigned to the global title translation.
To Sheet 16


From Sheets 9, 10, 13, 14, or 15
Does the GTA entry contain values for the Prefix (NPDD, NPDS) or Suffix (NSDD, NSDS) parameters?
No
Yes
Are these values being removed?
Yes
No
Are these values being changed from one type to another (Prefix to Suffix or Suffix to Prefix)?
Yes
To Sheet 17
No
To Sheet 18


From Sheet 16
Change the GTA entry with the chg-gta command and specifying the rmgtt=yes parameter. Do not specify the nnp, nnai, npdd, npds, nsds, and nsdd parameters. See one of the following tables in this procedure for the other parameters that can be specified with the chg-gta command.
If the Origin-Based SCCP Routing feature is not enabled - see the CHG-GTA Parameter Combinations - Origin-Based SCCP Routing Feature Not Enabled table
If the Origin-Based SCCP Routing feature is enabled, go to one of these tables depending on the type of GTT set that is specified for the gttsn parameter value.
CHG-GTA GTTSN = CDGTA GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled table
CHG-GTA GTTSN = CGGTA GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled table
CHG-GTA GTTSN = CGSSN GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled table
CHG-GTA GTTSN = CGPC GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled table
CHG-GTA GTTSN = OPC GTT Set Parameter Combinations - Origin-Based SCCP Routing Feature Enabled table
(See Note)
Note: The command line on the terminal can contain up to 150 characters. If the parameters and values specified with the chg-gta command are too long to fit on the chg-gta command line, perform the chg-gta command as many times as necessary to complete the GTA entry.
Enter the rtrv-gta command with this parameter:
:gttsn=<GTT set name specified in the chg-gta command>.
Depending on the type of GTT set specified by the gttsn parameter, specify one of these parameters with the gttsn parameter:
CDGTA and CGGTA GTT set - :gta=<global title address specified in the chg-gta command>
CGPC GTT set - :cgpc=<CGPC value specified in the chg-gta command>
OPC GTT set - :opc=<OPC value specified in the chg-gta command>
CGSSN GTT set - :cgssn=<CGSSN value specified in the chg-gta command>
The num and force parameters can be specified with the rtrv-gta command. The num parameter specifies the number of entries to display. If the num parameter value is greater than 1000, the force=yes parameter must be specified with the rtrv-gta command.
Are new prefix or suffix values being assigned?
Yes
To Sheet 18
No
Enter the chg-db:action=backup:dest=fixed command



Changing the Default GTT Mode Options

This procedure is used to change the default GTT mode options using the `chg-sccpopts` command with these parameters:

`:dfltgttmode` – the system default of the GTT mode hierarchy for the EAGLE 5 ISS to follow when performing global title translation. The values for this parameter are shown in the following list.

- `cd` - CdPA GTT only
- `cg` - CgPA GTT only
- `acdcd` - Advanced CdPA GTT, CdPA GTT

- acdcgcd - Advanced CdPA GTT, CgPA GTT, CdPA GTT
- acdcdcg - Advanced CdPA GTT, CdPA GTT, CgPA GTT
- cgacdcd - CgPA GTT, Advanced CdPA GTT, CdPA GTT
- cgcd - CgPA GTT, CdPA GTT
- cdcg - CdPA GTT, CgPA GTT

:dfltcgpcasn – the default ANSI CGPC GTT set name or the value none. This parameter determines the ANSI CGPC GTT set name to be used when GTI value is 0.

:dfltcgpcisn – the default ITU CGPC GTT set name or the value none. This parameter determines the ITU CGPC GTT set name to be used when GTI value is 0.

This procedure can be performed only if the Origin-Based SCCP Routing feature is enabled.

If a CGPC GTT set name is assigned to either the dfltcgpcasn or dfltcgpcisn parameters, this value can be removed by specifying the value none for the dfltcgpcasn or dfltcgpcisn parameters.

The CGPC GTT set name specified for the dfltcgpcasn or dfltcgpcisn parameters must be shown in the rtrv-gttset output with the value **CGPC** in the **SETTYPE** column.

For more information on the dfltgttmode, dfltcgpcasn or dfltcgpcisn parameters, see the *Origin-Based SCCP Routing* on page 33 section.

1. Display the existing default GTT mode values by entering the rtrv-sccpopts command.

   If the Origin-Based SCCP Routing feature is not enabled, this is an example of the possible output.

```
rlghncxa03w 06-10-17 16:02:05 GMT  EAGLE5 36.0.0

SCCP OPTIONS
-------------------------------
CLASS1SEQ                   off
DFLTGTTMODE                CdPA
```

   If the Origin-Based SCCP Routing feature is enabled, this is an example of the possible output.

```
rlghncxa03w 06-10-17 16:02:05 GMT  EAGLE5 36.0.0

SCCP OPTIONS
-------------------------------
CLASS1SEQ                   off
DFLTGTTMODE                CdPA
DFLTCGPCASN           ---------
DFLTCGPCISN           ---------
```

   This procedure cannot be performed if the Origin-Based SCCP Routing feature is not enabled. Perform the *Activating the Origin-Based SCCP Routing Feature* on page 797 procedure to enable the Origin-Based SCCP Routing feature.

   Note: If the dfltcgpcisn parameter values are not being changed in this procedure, skip step 2, and go to step 3.

2. Display the GTT sets in the database using the rtrv-gttset command.

This is an example of the possible output.

```
rlghncxa03w 06-10-07 00:29:31 GMT EAGLE5 36.0.0

GTTSN      NETDOM  SETTYPE  NDGT
abcd1234   itu     CGGTA    12
gttset3    ansi    CGGTA    10
gttset6    ansi    OPC      -
gttset7    ansi    CGPC     -
gttset12   ansi    OPC      -
imsi       itu     CDGTA    15
lidb       ansi    CDGTA    10
t800       ansi    CDGTA    10
s1000      itu     CDGTA    15
s2000      itu     CGPC     -
```

The SETTYPE value of the GTT set name specified for the dfltcgpcasn or dfltcgpcisn parameters must be CGPC. If the dfltcgpcasn parameter is specified, the NETDOM value of the CGPC GTT set must be ANSI. If the dfltcgpcisn parameter is specified, the NETDOM value of the CGPC GTT set must be ITU. If the required GTT set name is not shown in the rtrv-gttset output, perform the *Adding a GTT Set* on page 570 procedure and add the required GTT set. After the new GTT set has been added to the database, go to step 3.

3. Change the default GTT mode values using the chg-sccpopts command and with at least one of these parameters and values.

   - dfltgttmode parameter with one of these values:
     - cd - CdPA GTT only
     - cg - CgPA GTT only
     - acdcd - Advanced CdPA GTT, CdPA GTT
     - acdcgcd - Advanced CdPA GTT, CgPA GTT, CdPA GTT
     - acdcdcg - Advanced CdPA GTT, CdPA GTT, CgPA GTT
     - cgacdcd - CgPA GTT, Advanced CdPA GTT, CdPA GTT
     - cgcd - CgPA GTT, CdPA GTT
     - cdcg - CdPA GTT, CgPA GTT
   - dfltcgpcasn = <ANSI CGPC GTT set name from step 2> or the value none if the Default ANSI CGPC GTT set name is being removed.
   - dfltcgpcisn = <ITU CGPC GTT set name from step 2> or the value none if the Default ITU CGPC GTT set name is being removed.

   For this example, enter this command.

   chg-sccpopts:dfltgttmode=acdcd:dfltcgpcasn=gttset7 :dfltcgpcisn=s2000

   When the chg-sccpopts command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-07 00:22:57 GMT  EAGLE5 36.0.0
CHG-STPOPTS: MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-sccpopts` command. This is an example of the possible output.

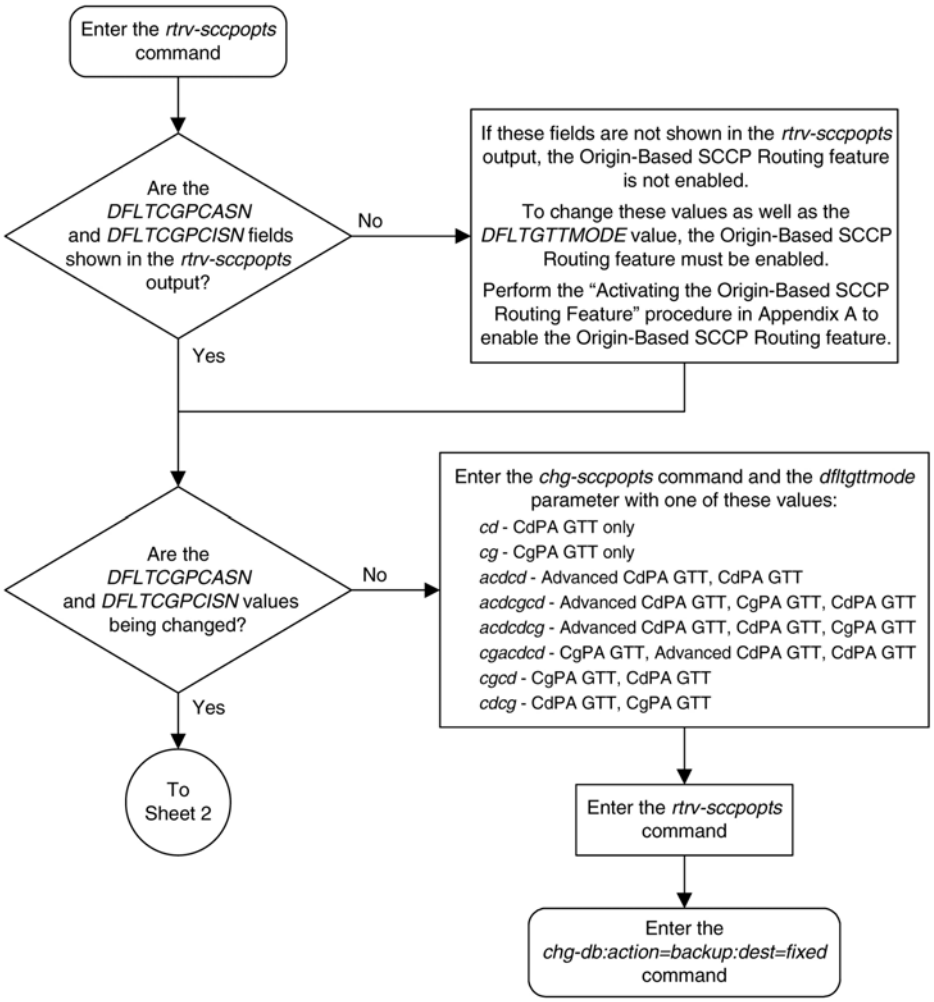
```
rlghncxa03w 06-10-17 16:02:05 GMT  EAGLE5 36.0.0

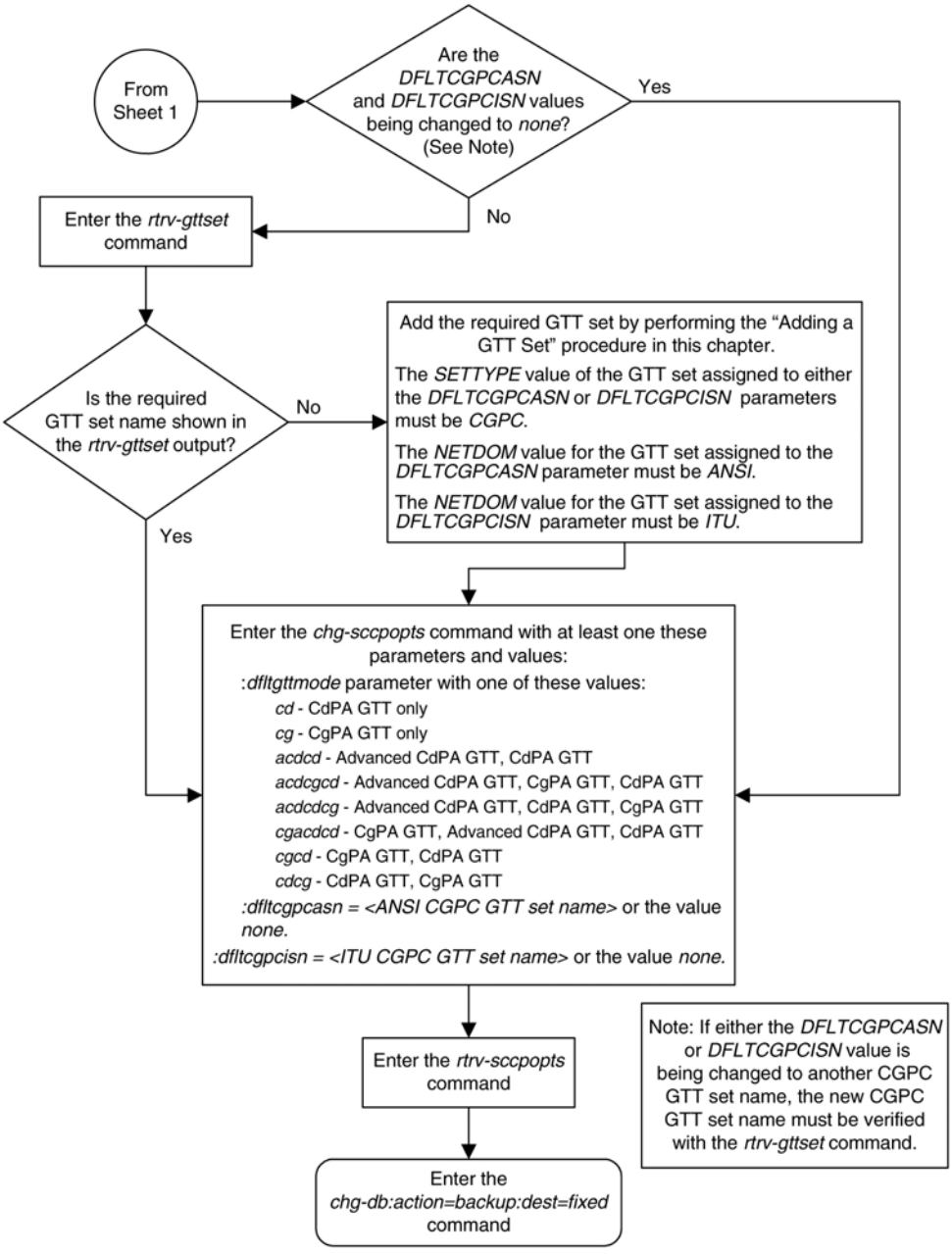
SCCP OPTIONS
-----------------------------
CLASS1SEQ                   off
DFLTGTTMODE         AdvCdPA,CdPA
DFLTCGPCASN              gttset7
DFLTCGPCISN                s2000
```

5. Back up the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 55: Changing the Default GTT Mode Options




From Sheet 1
Are the DFLTCGPCASN and DFLTCGPCISN values being changed to none? (See Note)
Yes
No
Enter the rtrv-gttset command
Is the required GTT set name shown in the rtrv-gttset output?
No
Yes
Add the required GTT set by performing the "Adding a GTT Set" procedure in this chapter.
The SETTYPE value of the GTT set assigned to either the DFLTCGPCASN or DFLTCGPCISN parameters must be CGPC.
The NETDOM value for the GTT set assigned to the DFLTCGPCASN parameter must be ANSI.
The NETDOM value for the GTT set assigned to the DFLTCGPCISN parameter must be ITU.
Enter the chg-sccpopts command with at least one these parameters and values:
:dfltgttmode parameter with one of these values:
cd - CdPA GTT only
cg - CgPA GTT only
acdcd - Advanced CdPA GTT, CdPA GTT
acdcgcd - Advanced CdPA GTT, CgPA GTT, CdPA GTT
acdcdcg - Advanced CdPA GTT, CdPA GTT, CgPA GTT
cgacdcd - CgPA GTT, Advanced CdPA GTT, CdPA GTT
cgcd - CgPA GTT, CdPA GTT
cdcg - CdPA GTT, CgPA GTT
:dfltcgpcasn = <ANSI CGPC GTT set name> or the value none.
:dfltcgpcisn = <ITU CGPC GTT set name> or the value none.
Enter the rtrv-sccpopts command
Enter the chg-db:action=backup:dest=fixed command
Note: If either the DFLTCGPCASN or DFLTCGPCISN value is being changed to another CGPC GTT set name, the new CGPC GTT set name must be verified with the rtrv-gttset command.

Appendix A

Controlled Feature Activation Procedures

Topics:

- *Introduction Page 750*
- *Activating the IGTTLS feature Page 750*
- *Clearing a Temporary FAK Alarm Page 758*
- *Turning the IGTTLS Feature Off Page 760*
- *Enabling the XGTT Table Expansion Feature Page 762*
- *Enabling the XMAP Table Expansion Feature Page 771*
- *Activating the ANSI-ITU-China SCCP Conversion Feature Page 778*
- *Activating the Flexible GTT Load Sharing Feature Page 786*
- *Turning the Flexible GTT Load Sharing Feature Off Page 795*
- *Activating the Origin-Based SCCP Routing Feature Page 797*
- *Activating the Hex Digit Support for GTT Feature Page 806*
- *Activating the Weighted GTT Load Sharing Feature Page 813*
- *Activating the Transaction-Based GTT Load Sharing Feature Page 821*
- *Activating the SCCP Loop Detection Feature Page 830*
- *Activating the E5-SM4G Throughput Capacity Feature Page 839*
- *Activating the Advanced GT Modification Feature Page 846*

Appendix A, Controlled Feature Activation Procedures, describes the procedures necessary to activate and deactivate features (features that require a feature access key to be activated) contained in this manual.

Introduction

Controlled features are features that are activated using a feature access key. These features can either be on or off, or features that operate at a particular performance level. Only the controlled features that are used in this manual are covered in this appendix.

The feature access key allows the user to enable and activate a controlled feature in the EAGLE 5 ISS by entering either a permanent feature access key or a temporary feature access key. By requiring a feature access key to enable and activate a controlled feature, unauthorized enabling and activation of a controlled feature can be prevented. The feature access key is supplied by Tekelec.

Features enabled with a permanent feature access key remain enabled for as long as the EAGLE 5 ISS remains in service. Once features are permanently enabled, they cannot be disabled.

Features enabled with a temporary feature access key are enabled for only 30 days. On the twenty-third day, seven days before the temporary key expires, a major alarm (UAM 0367) is generated to inform the user that the one or more temporary feature access keys will expire soon.

```
0367.0181  ** SYSTEM      Temp Key(s) expiring soon.
```

If a temporary feature access key expires, the controlled feature is disabled and a critical alarm (UAM 0368) is generated.

```
0368.0181  *C SYSTEM      Temp Key(s) have expired.
```

Any attempts to enable the controlled feature with the temporary feature access key are rejected. The controlled feature can be enabled only by entering the permanent feature access key for the controlled feature.

To clear the critical alarm (UAM 0368), the user can either enter the `chg-ctrl-feat` command with the `alarm=clear` parameter, or permanently enable the controlled feature by entering the permanent feature access key for the controlled feature.

If the critical alarm is cleared with the `chg-ctrl-feat` command, the controlled feature is disabled and cannot be enabled with the temporary feature access key. The feature can be enabled only by entering the permanent feature access key for the controlled feature.

Activating the IGTTLS feature

This procedure is used to enable and activate the Intermediate GTT Load Sharing 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 Intermediate GTT Load Sharing feature by inputting the feature's access key and the 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 of the Intermediate GTT Load Sharing feature, 893006901.

If the 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 feature has been enabled, the feature must be activated with the `chg-ctrl-feat` command. The `chg-ctrl-feat` command uses these parameters:

`:partnum` – The Tekelec-issued part number of the Intermediate GTT Load Sharing feature, 893006901.

`:status=on` – used to activate the 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 examples in this procedure are used to enable and activate the Intermediate GTT Load Sharing feature.

1. Display the status of the Intermediate GTT Load Sharing feature by entering the `rtrv-ctrl-feat` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  off     ----
XGTT Table Expansion      893006101  off     ----
XMAP Table Expansion      893007710  on      3000
Large System # Links      893005910  on      2000
Routesets                 893006401  on      6000
HC-MIM SLK Capacity       893012707  on      64

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 feature is permanently enabled, and its status is `on`, no further action is necessary.

If the feature is permanently enabled, and its status is `off`, skip steps 2 through 6, and go to step 7.

If the 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 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 feature is to remain temporarily enabled, and its status is `on`, no further action is necessary.

Note: If the `rtrv-ctrl-feat` output in step 1 shows any controlled features, skip steps 2 through 5, and go to step 6. If the `rtrv-ctrl-feat` output shows the HC-MIMSLK Capacity feature with a quantity of 64, steps 2 through 5 must be performed.

2. Display the serial number in the database with the `rtrv-serial-num` command. This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

Note: If the serial number is correct and locked, skip steps 3, 4, and 5, and go to step 6. If the serial number is correct but not locked, skip steps 3 and 4, and go to step 5. If the serial number is not correct, but is locked, this feature cannot be enabled and the remainder of this procedure cannot be performed. Contact the Customer Care Center to get an incorrect and locked serial number changed. Refer to *Customer Care Center* on page 4 for the contact information. The serial number can be found on a label affixed to the control shelf (shelf 1100).

3. Enter the correct serial number into the database using the `ent-serial-num` command with the `serial` parameter.

   For this example, enter this command.

   `ent-serial-num:serial=<EAGLE 5 ISS's correct serial number>`

   When this command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-28 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231
```

```
System serial number is not locked.

rlghncxa03w 06-10-28 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

6. Enable the Intermediate GTT Load Sharing 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=893006901:fak=<IGTTLS 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 Intermediate GTT Load Sharing feature, contact your Tekelec Sales Representative or Account Representative.

   When the `enable-crtl-feat` command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-28 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 6, and the status of the temporarily enabled feature was on, skip step 7 and go to step 8.

7. Display the cards in the EAGLE 5 ISS using the `rtrv-card` command. The IGTTLS features requires that service modules are in the database. This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:58:31 GMT EAGLE5 36.0.0
CARD   TYPE      APPL      LSET NAME     PORT SLC LSET NAME     PORT SLC
1102   TSM       GLS
1113   GPSM      EOAM
1114   TDM-A
1115   GPSM      EOAM
1116   TDM-B
1117   MDAL
1118   RESERVED
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
1308   LIMDS0    SS7ANSI   sp6           A    1   sp7           B    0
```

```
1314   LIMDS0    SS7ANSI   sp7          A    1   sp5          B    1
1317   ACMENET   STPLAN
```

Service modules are shown by the entries SCCP or VSCCP in APPL column. If the `rtrv-card` output shows no service modules, or that the type of service modules required to support the IGTTLS feature is not in the database, go to the *Adding a Service Module* on page 76 procedure and make sure that the proper hardware is in place to support the IGTTLS feature.

8. The Intermediate GTT Load Sharing feature enabled in step 6 must be turned on using the `chg-ctrl-feat` command, specifying the Intermediate GTT Load Sharing feature part number used in step 6 and the `status=on` parameter. For this example, enter this command.

   `chg-ctrl-feat:partnum=893006901:status=on`

   When this command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
CHG-CTRL-FEAT: MASP B - COMPLTD
```

9. Verify the changes by entering the `rtrv-ctrl-feat`command. The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
XGTT Table Expansion      893006101  off     ----
XMAP Table Expansion      893007710  on      3000
Large System # Links      893005910  on      2000
Routesets                 893006401  on      6000
HC-MIM SLK Capacity       893012707  on      64

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:

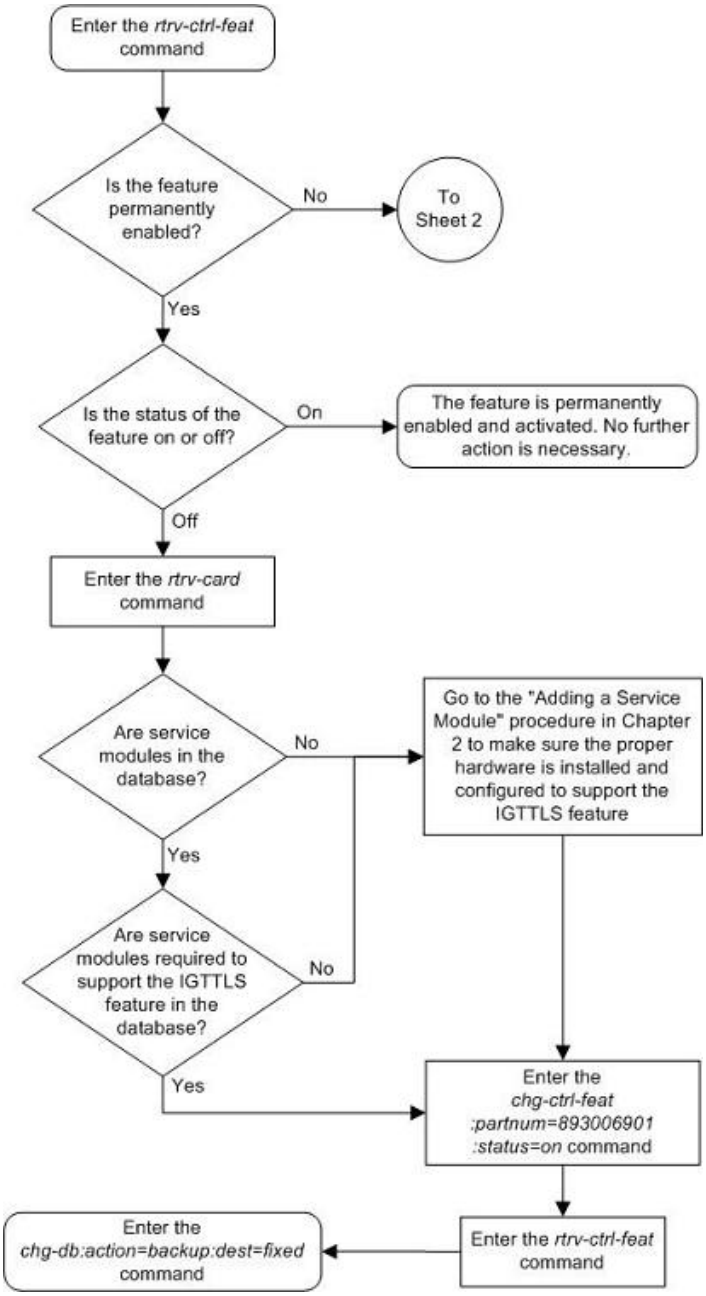
Feature Name              Partnum
Zero entries found.
```

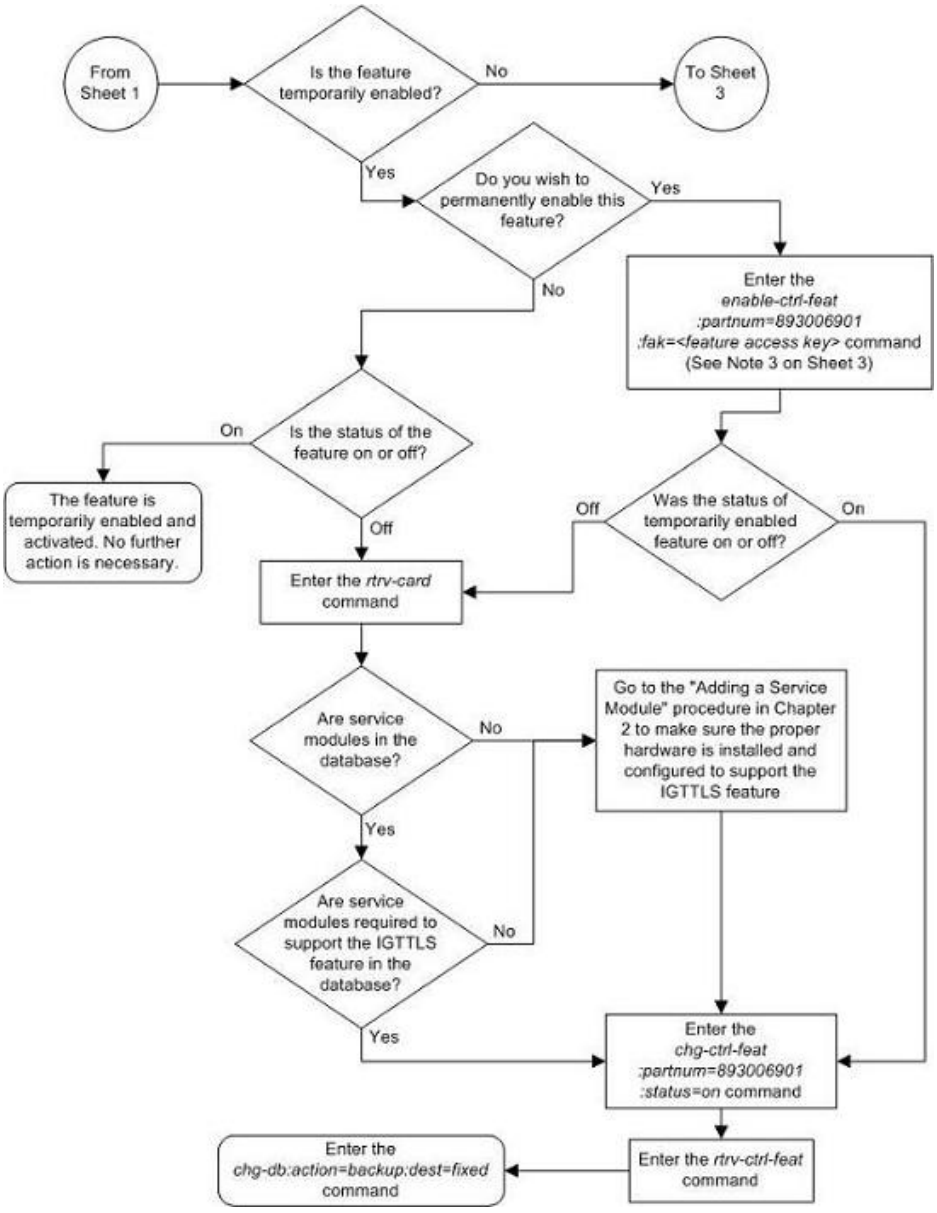
10. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

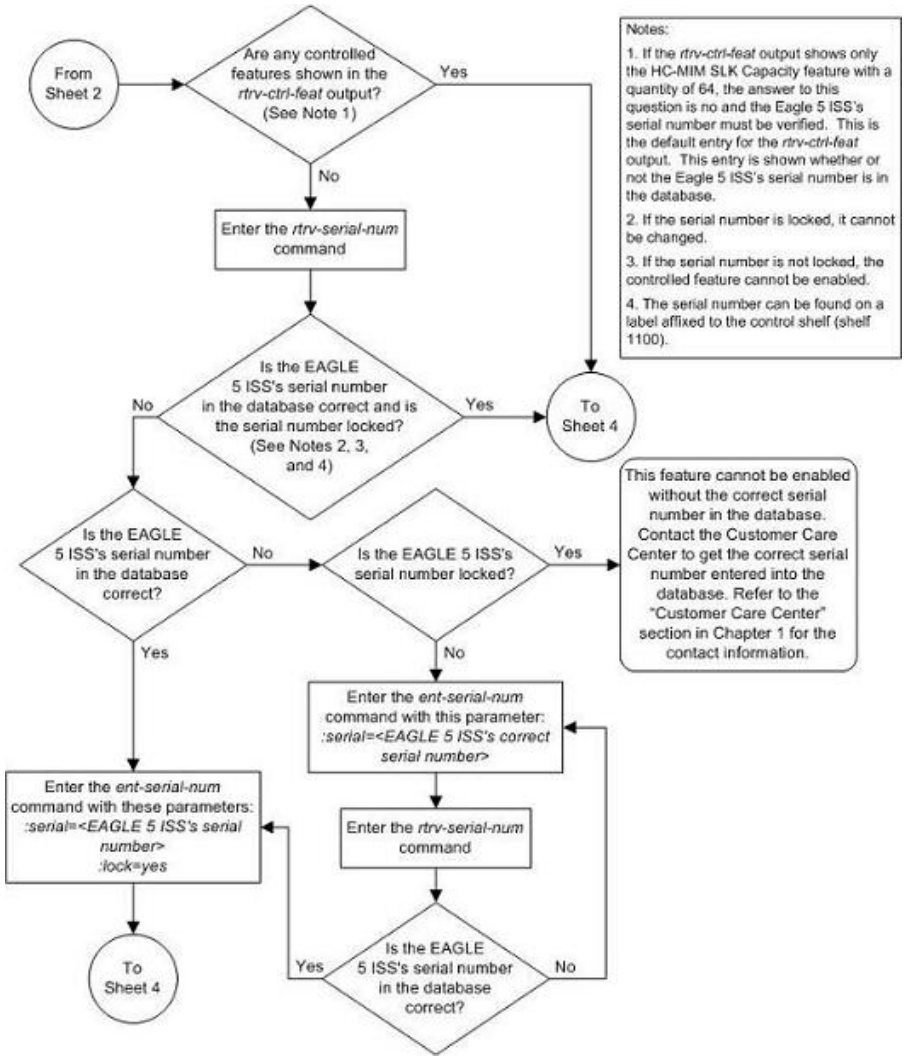
    These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

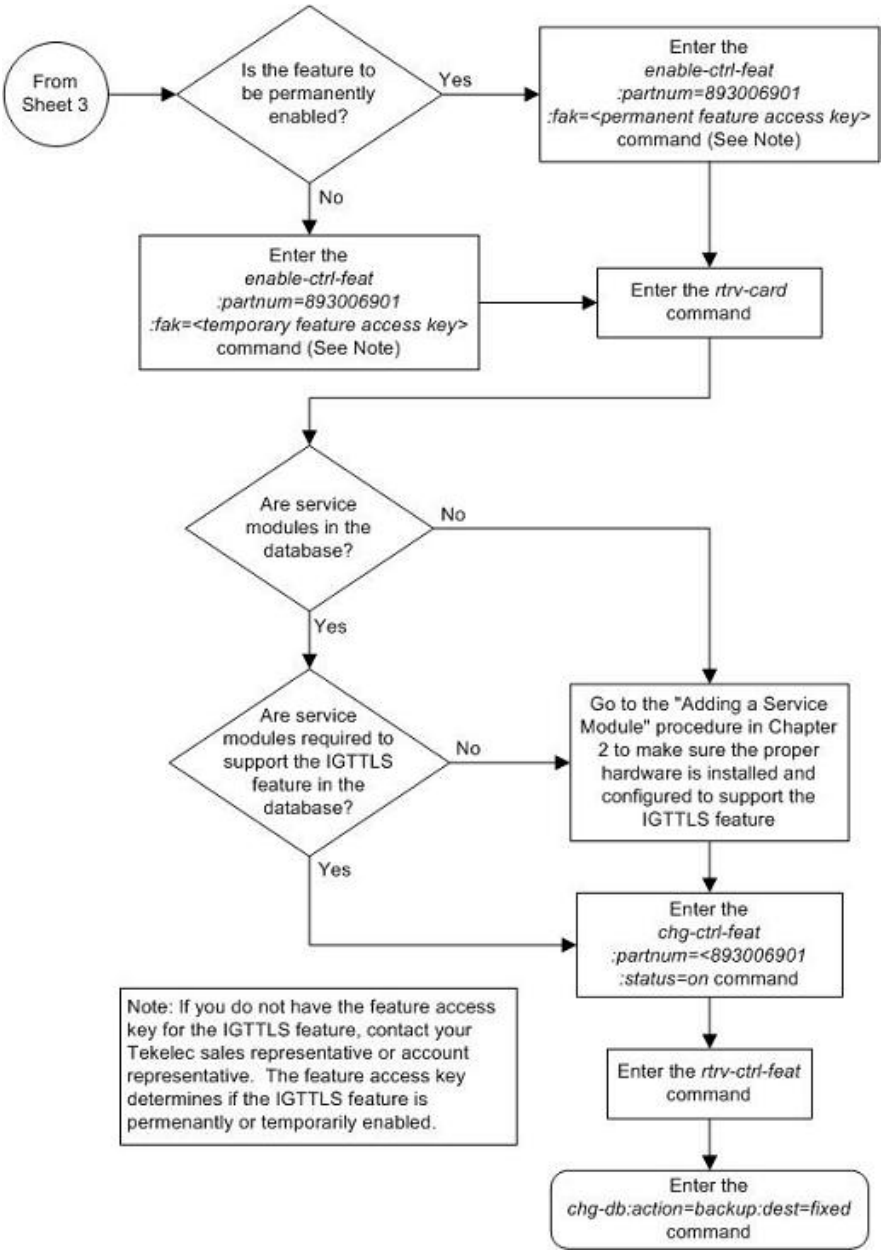
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

Figure 56: Activating the IGTTLS feature


Enter the *rtrv-ctrl-feat* command
Is the feature permanently enabled?
No
To Sheet 2
Yes
Is the status of the feature on or off?
On
The feature is permanently enabled and activated. No further action is necessary.
Off
Enter the *rtrv-card* command
Are service modules in the database?
No
Go to the "Adding a Service Module" procedure in Chapter 2 to make sure the proper hardware is installed and configured to support the IGTTLS feature
Yes
Are service modules required to support the IGTTLS feature in the database?
No
Yes
Enter the *chg-ctrl-feat :partnum=893006901 :status=on* command
Enter the *rtrv-ctrl-feat* command
Enter the *chg-db:action=backup:dest=fixed* command


From Sheet 1
Is the feature temporarily enabled?
No
To Sheet 3
Yes
Do you wish to permanently enable this feature?
Yes
No
Enter the enable-ctrl-feat :partnum=893006901 :fak=<feature access key> command (See Note 3 on Sheet 3)
On
Is the status of the feature on or off?
The feature is temporarily enabled and activated. No further action is necessary.
Off
Off
Was the status of temporarily enabled feature on or off?
On
Enter the rtrv-card command
Are service modules in the database?
No
Go to the "Adding a Service Module" procedure in Chapter 2 to make sure the proper hardware is installed and configured to support the IGTTLS feature
Yes
Are service modules required to support the IGTTLS feature in the database?
No
Yes
Enter the chg-ctrl-feat :partnum=893006901 :status=on command
Enter the chg-db:action=backup:dest=fixed command
Enter the rtrv-ctrl-feat command


From Sheet 2
Are any controlled features shown in the rtrv-ctrl-feat output? (See Note 1)
Yes
No
Notes:
1. If the rtrv-ctrl-feat output shows only the HC-MIM SLK Capacity feature with a quantity of 64, the answer to this question is no and the Eagle 5 ISS's serial number must be verified. This is the default entry for the rtrv-ctrl-feat output. This entry is shown whether or not the Eagle 5 ISS's serial number is in the database.
2. If the serial number is locked, it cannot be changed.
3. If the serial number is not locked, the controlled feature cannot be enabled.
4. The serial number can be found on a label affixed to the control shelf (shelf 1100).
Enter the rtrv-serial-num command
Is the EAGLE 5 ISS's serial number in the database correct and is the serial number locked? (See Notes 2, 3, and 4)
No
Yes
To Sheet 4
Is the EAGLE 5 ISS's serial number in the database correct?
No
Is the EAGLE 5 ISS's serial number locked?
Yes
This feature cannot be enabled without the correct serial number in the database. Contact the Customer Care Center to get the correct serial number entered into the database. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
Yes
No
Enter the ent-serial-num command with this parameter: :serial=<EAGLE 5 ISS's correct serial number>
Enter the ent-serial-num command with these parameters: :serial=<EAGLE 5 ISS's serial number> :lock=yes
Enter the rtrv-serial-num command
To Sheet 4
Is the EAGLE 5 ISS's serial number in the database correct?
Yes
No



Clearing a Temporary FAK Alarm

This procedure is used to clear the critical alarm, UAM 0368, generated when a a temporary feature access key has expired, using the `chg-ctrl-feat` command.

The `chg-ctrl-feat` command uses the following parameters:

`:partnum` - The part number of the controlled feature that was temporarily enabled and is causing the alarm.

:alarm=clear - Clears UAM 0368, Temp Key(s) have expired.

The controlled feature must have been temporarily enabled and is now in danger of expiration or in an *expired* state.

1. Display the controlled feature that has the expired feature access key by entering the rtrv-ctrl-feat:expired=yes command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:17:37 GMT EAGLE5 36.0.0
The following features have expired temporary keys:
Feature Name              Part Num
Intermed GTT Load Sharing 893006901
```

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=893006901:alarm=clear

   When this command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-28 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.

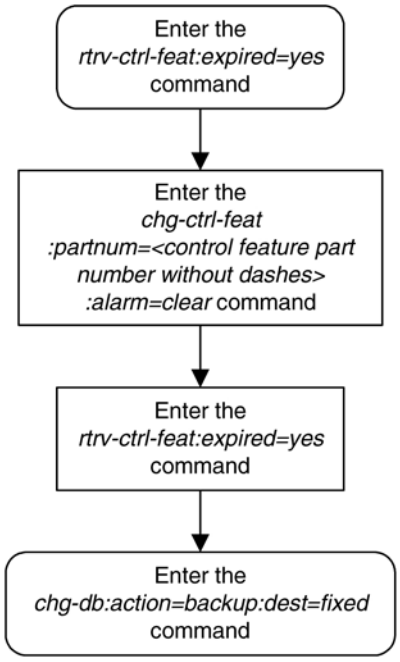
```
rlghncxa03w 06-10-28 21:16:37 GMT EAGLE5 36.0.0
0367.0181  *  SYSTEM      Temp Key(s) expiration alarm cleared.
```

4. Backup the new changes using the chg-db:action=backup:dest=fixed command.

   These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 57: Clearing a Temporary FAK Alarm



Turning the IGTTLS Feature Off

This procedure is used to turn off the IGTTLS feature, using the `chg-ctrl-feat` command.

The `chg-ctrl-feat` command uses the following parameters:

`:partnum` - The part number of the IGTTLS feature, 893006901.

`:status=off` – used to deactivate the IGTTLS feature.

The status of the IGTTLS controlled feature must be `on` and is shown with the `rtrv-ctrl-feat` command.



CAUTION: If the IGTTLS feature is deactivated, the `ent-mrn` and `chg-mrn` commands cannot be executed, and mated relay node groups and point codes cannot be configured in the database. The mated relay node groups and point codes can be displayed with the `rtrv-mrn` command and removed from the database with the `dlt-mrn` command if the IGTTLS feature is deactivated.

1. Display the status of the IGTTLS feature by entering the `rtrv-ctrl-feat:partnum=893006901` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name             Partnum    Status  Quantity
Intermed Gtt Load Sharing 893006901  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 IGTTLS feature is off, or if the IGTTLS feature is not enabled, this procedure cannot be performed.

2. Turn off the IGTTLS feature by entering the `chg-ctrl-feat` command with the `status=off` parameter.

   For example, enter this command.

   ```
   chg-ctrl-feat:partnum=893006901:status=off
   ```

   When this command has successfully completed, the following message should appear.

   ```
   rlghncxa03w 06-10-28 21:16:37 GMT EAGLE5 36.0.0
   CHG-CTRL-FEAT: MASP A - COMPLTD
   ```

3. Verify that the IGTTLS feature has been turned off by using the `rtrv-ctrl-feat:partnum=893006901` command. The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   The following features have been permanently enabled:

   Feature Name              Partnum    Status  Quantity
   Intermed Gtt Load Sharing 893006901  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:

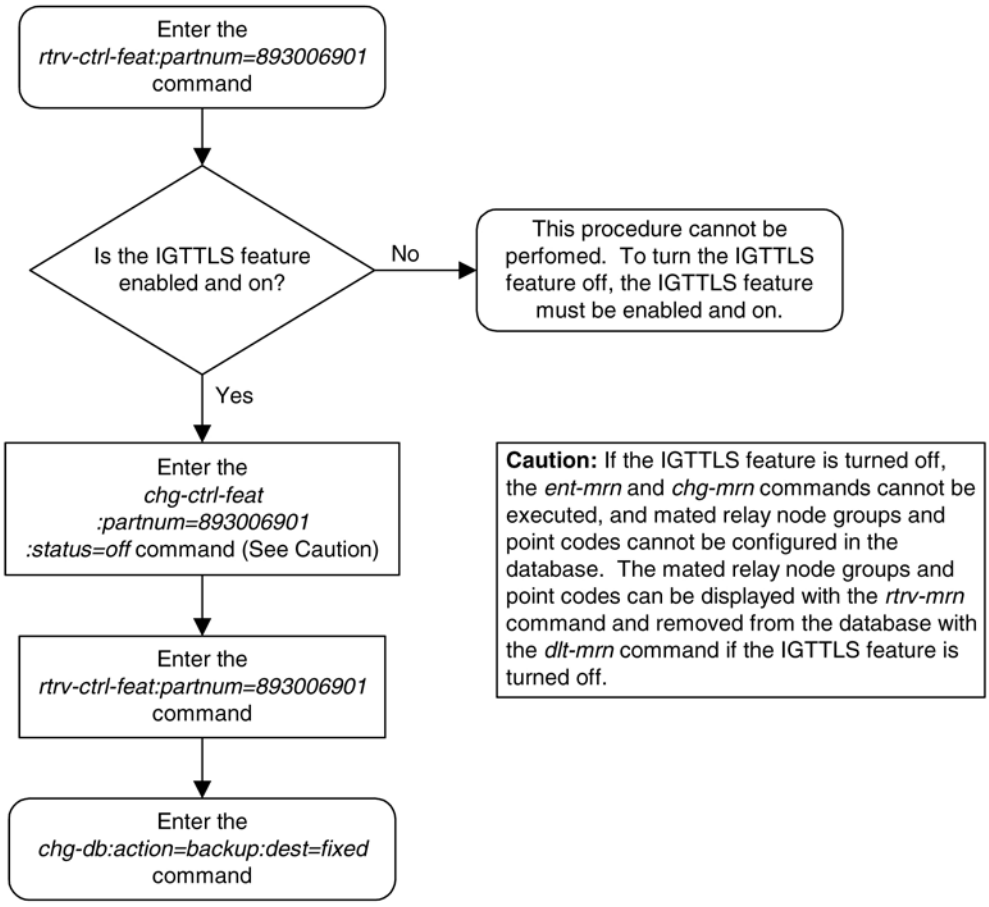
   Feature Name              Partnum
   Zero entries found.
   ```

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.
   ```

Figure 58: Turning the IGTTLS Feature Off



Enabling the XGTT Table Expansion Feature

This procedure is used to enable the XGTT Table Expansion feature using the feature's part number and a feature access key.

The feature access key for the XGTT Table Expansion feature is based on the feature's part number and the serial number of the EAGLE 5 ISS, making the feature access key site-specific.

This feature allows the user to increase the maximum number of entries in the global title translation table from 269,999 entries to either 400,000 or 1,000,000 entries. Each level of increase has its own part number.

- Increase to 400,000 entries – part number 893006101
- Increase to 1,000,000 entries – part number 893006110

This feature requires that the following hardware is installed:

- GPSM-II cards are installed in card locations 1113 and 1115.



CAUTION: Never install or initialize MCAP cards in card locations 1113 and 1115 after GPSM-II cards have been installed and features that require GPSM-II cards have been provisioned. Attempting to initialize MCAP cards with features requiring GPSM-II cards will cause an EAGLE 5 ISS outage. Before replacing an existing GPSM-II card in card locations 1113 or 1115, contact the Customer Care Center. Refer to *Customer Care Center* on page 4 for the contact information.

- For a maximum of 400,000 entries, all service modules in the EAGLE 5 ISS can be either TSMs , DSMs, or E5-SM4G cards.
- For a maximum of 1,000,000 entries, all service modules in the EAGLE 5 ISS must be DSMs or E5-SM4G cards.

The service module requirements are dependent on any other GTT-related features that are enabled. Go to the *Adding a Service Module* on page 76 procedure and make sure that the proper hardware is in place to support the XGTT Table Expansion feature.

The XGTT Table Expansion feature requires that the Global Title Translation (GTT) feature is enabled with the `chg-feat` command using the `gtt=on` parameters.

Note: Once the Global Title Translation feature is turned on with the `chg-feat` command, it cannot be turned off.

The Global Title Translation feature must be purchased before it can be turned on. If you are not sure whether you have purchased the Global Title Translation feature, contact your Tekelec Sales Representative or Account Representative.

The `enable-ctrl-feat` command enables the XGTT Table Expansion 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. The feature access key contains 13 alphanumeric characters and is not case sensitive.

`:partnum` – The Tekelec-issued part number of the XGTT Table Expansion feature, for 400,000 entries – 893006101, for 1,000,000 entries – 893006110

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).

This feature cannot be temporarily enabled (with the temporary feature access key).

Once this feature is enabled with the `enable-ctrl-feat` command (for either 400,000 or 1,000,000 entries), the feature is also activated. This feature cannot be disabled with the `chg-ctrl-feat` command. The `chg-ctrl-feat` command cannot be used with this procedure.

1. Display the status of the XGTT Table Expansion feature by entering the `rtrv-ctrl-feat` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
XGTT Table Expansion      893006101  off     ----
XMAP Table Expansion      893007710  on      3000
Large System # Links      893005910  on      2000
Routesets                 893006401  on      6000
HC-MIM SLK Capacity       893012707  on      64

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 feature is permanently enabled for the desired quantity or for a quantity that is greater than the desired quantity, no further action is necessary. This procedure does not need to be performed.

   If the quantity shown for the XGTT Table Expansion feature is less than the desired quantity, skip steps 2 through 5, and go to step 6.

2. Display the cards in the EAGLE 5 ISS using the `rtrv-card` command.

   The XGTT Table Expansion feature requires that service modules are in the database. This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:58:31 GMT EAGLE5 36.0.0
CARD   TYPE      APPL      LSET NAME     PORT SLC LSET NAME     PORT SLC
1102   TSM       GLS
1113   GPSM      EOAM
1114   TDM-A
1115   GPSM      EOAM
1116   TDM-B
1117   MDAL
1118   RESERVED
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
1308   LIMDS0    SS7ANSI   sp6           A    1   sp7           B    0
```

```
1314   LIMDS0    SS7ANSI   sp7           A    1   sp5           B    1
1317   ACMENET   STPLAN
```

Service modules are shown by the entries SCCP or VSCCP in APPL column. If the rtrv-card output shows no service modules, go to the *Adding a Service Module* on page 76 procedure and add the necessary service modules.

If the rtrv-card output shows that the type of service module required to support the XGTT Table Expansion feature is not in the database, go to the *Adding a Service Module* on page 76 procedure and make sure that the proper service modules are in place to support the XGTT Table Expansion feature.

3. Display the serial number in the database with the rtrv-serial-num command.

   Note: If the rtrv-ctrl-feat output in step 1 shows any controlled features, or if the XGTT Table Expansion feature is enabled for a quantity that is less than the desired quantity, skip steps 3 through 6, and go to step 7. If the rtrv-ctrl-feat output shows only the HC-MIM SLK Capacity feature with a quantity of 64, steps 3 through 6 must be performed.

   This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

4. Enter the correct serial number into the database using the ent-serial-num command with the serial parameter.

   Note: If the serial number is correct and locked, skip steps 4, 5, and 6, and go to step 7. If the serial number is correct but not locked, skip steps 4 and 5, and go to step 6. If the serial number is not correct, but is locked, this feature cannot be enabled and the remainder of this procedure cannot be performed. Contact the Customer Care Center to get an incorrect and locked serial number changed. Refer to *Customer Care Center* on page 4 for the contact information. The serial number can be found on a label affixed to the control shelf (shelf 1100).

   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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

5. Verify that the serial number entered into step 4 was entered correctly using the rtrv-serial-num command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.
```

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

If the serial number was not entered correctly, repeat steps 4 and 5 and re-enter the correct serial number.

6. Lock the serial number in the database by entering the `ent-serial-num` command with the serial number shown in step 3, if the serial number shown in step 3 is correct, or with the serial number shown in step 5, if the serial number was changed in step 4, 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   ENT-SERIAL-NUM:  MASP A - COMPLTD
   ```

7. Enable the XGTT Table Expansion feature for the desired quantity with the `enable-ctrl-feat` command specifying the part number corresponding to the new quantity of entries for the GTT table and the feature access key.

   For this example, enter one of these commands.

   To increase the number of entries in the GTT table to 400,000, enter this command.

   ```
   enable-ctrl-feat:partnum=893006101:fak=<XGTT Table Expansion feature
   access key>
   ```

   To increase the number of entries in the GTT table to 1,000,000, enter this command.

   ```
   enable-ctrl-feat:partnum=893006110:fak=<XGTT Table Expansion feature
   access key>
   ```

   Note: A temporary feature access key cannot be specified to enable this feature.

   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 XGTT Table Expansion feature, contact your Tekelec Sales Representative or Account Representative.

   When the `enable-crtl-feat` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   ENABLE-CTRL-FEAT: MASP B - COMPLTD
   ```

8. Verify the changes by entering the `rtrv-ctrl-feat`command with the part number specified in step 7.

   Enter one of these commands.

   ```
   rtrv-ctrl-feat:partnum=893006101
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   The following features have been permanently enabled:

   Feature Name              Partnum    Status  Quantity
   ```

```
XGTT Table Expansion      893006101  on      400000

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=893006110`

The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0

The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
XGTT Table Expansion      893006110  on      1000000

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:

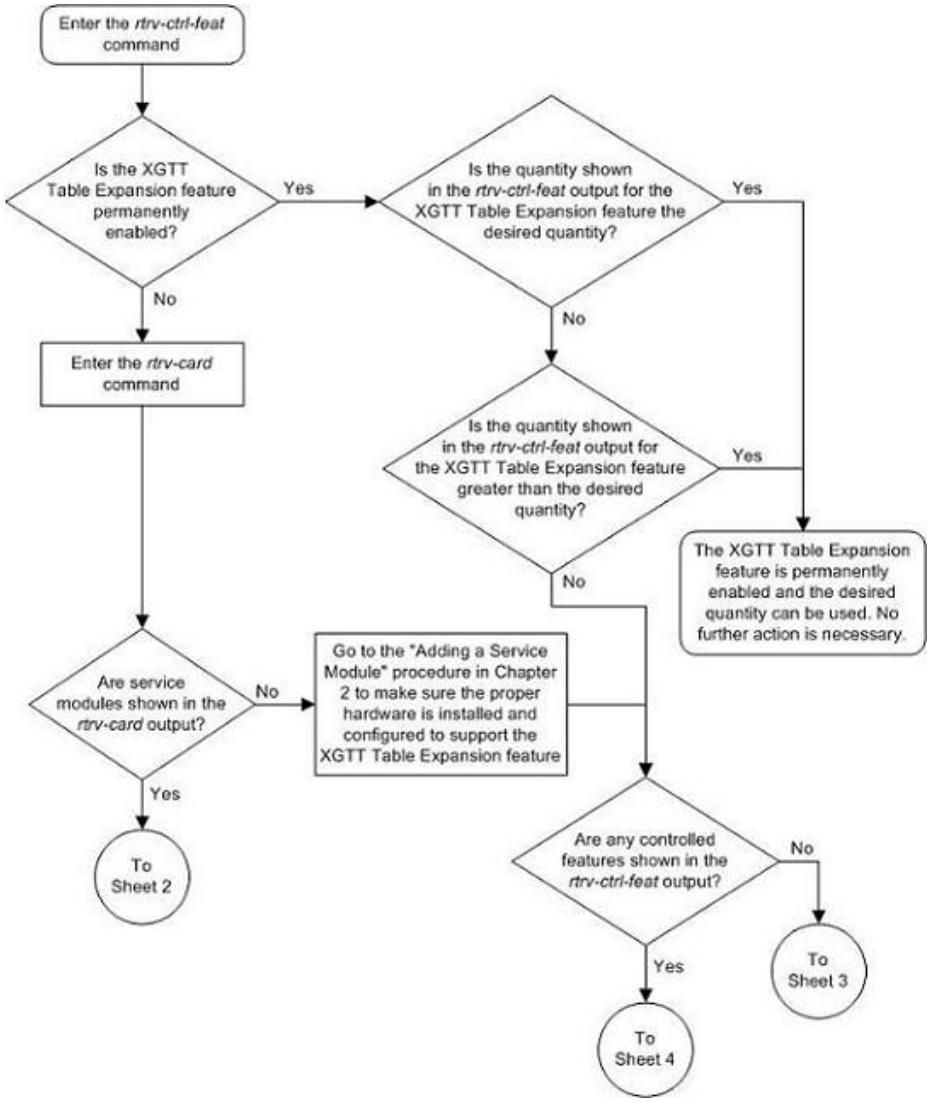
Feature Name              Partnum
Zero entries found.
```

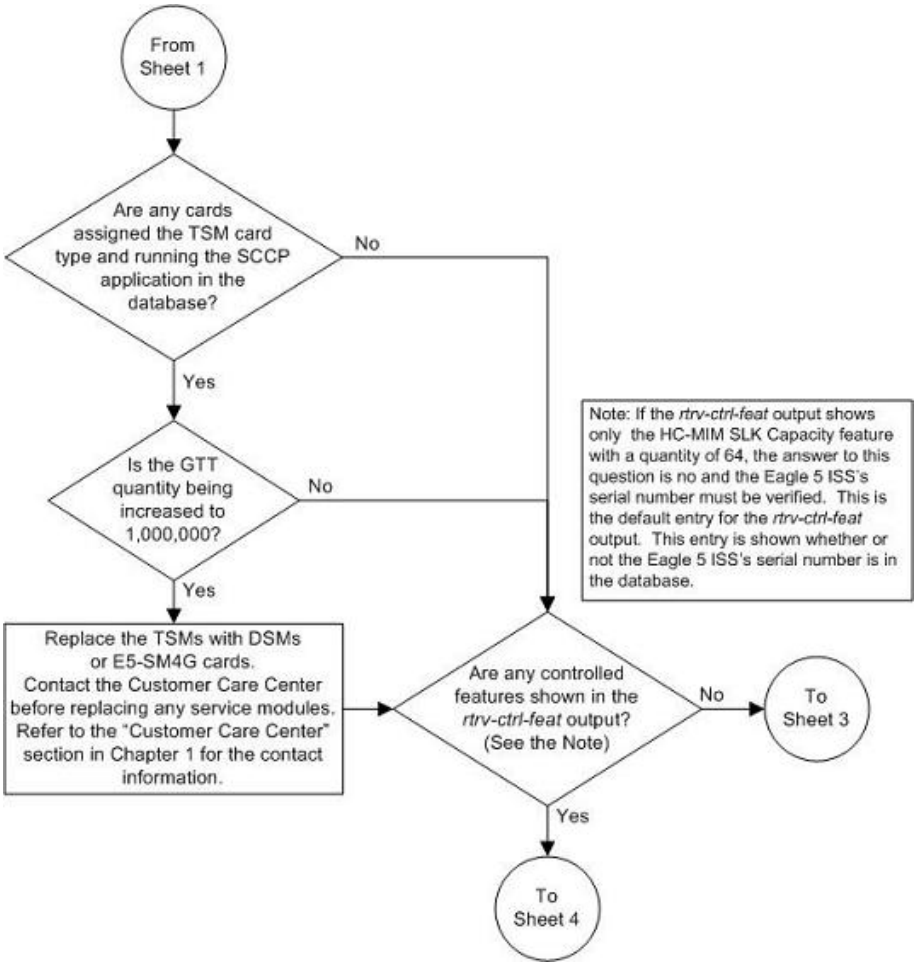
9. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

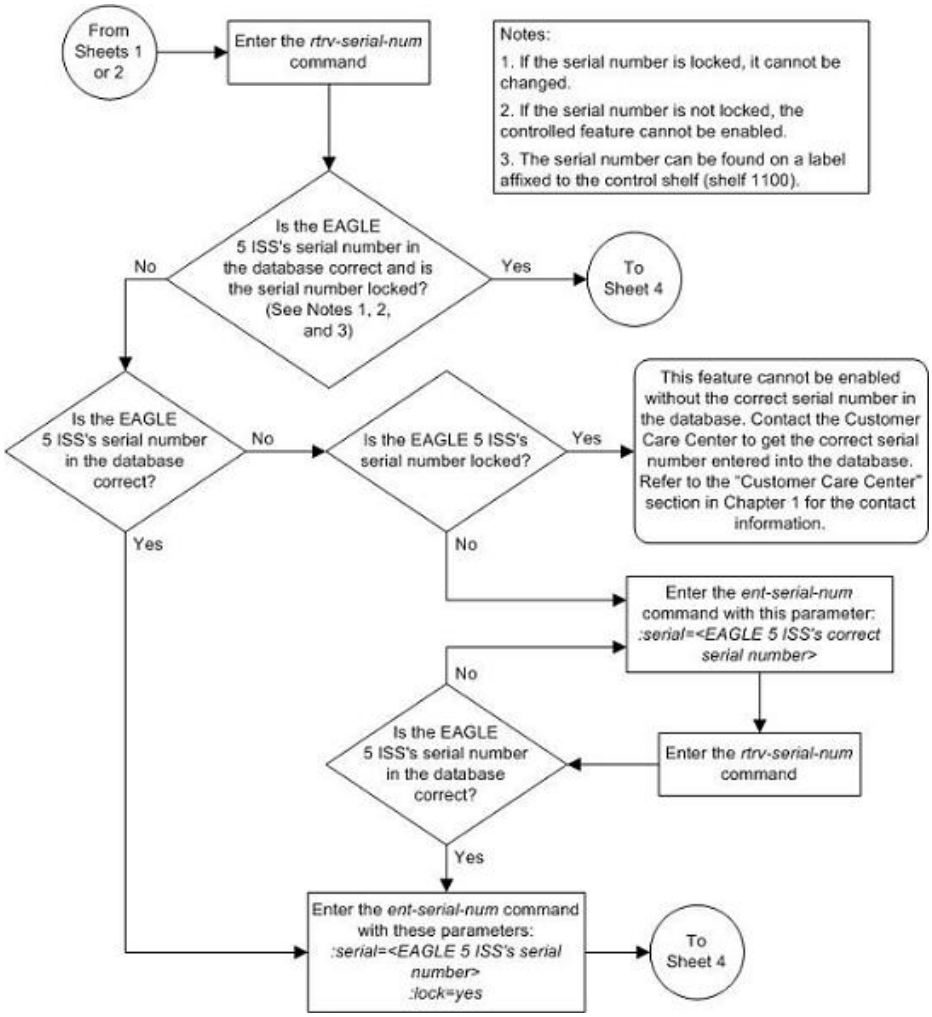
   These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

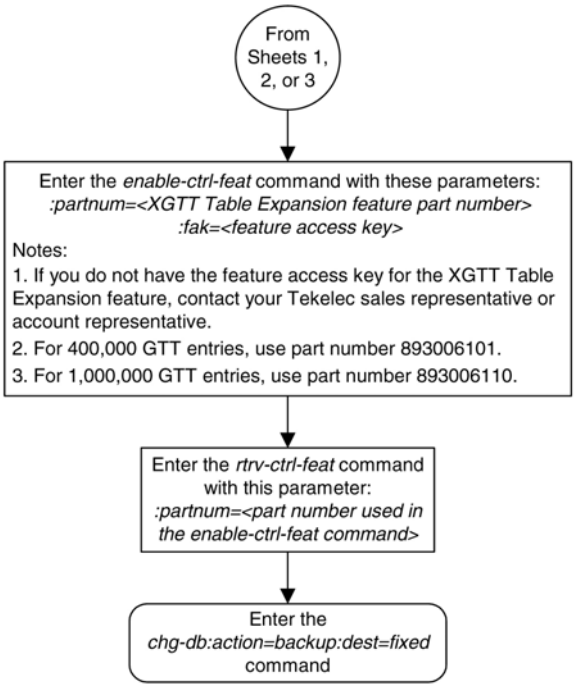
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

Figure 59: Enabling the XGTT Table Expansion Feature


Enter the rtrv-ctrl-feat command
Is the XGTT Table Expansion feature permanently enabled?
Yes
No
Is the quantity shown in the rtrv-ctrl-feat output for the XGTT Table Expansion feature the desired quantity?
Yes
No
Enter the rtrv-card command
Is the quantity shown in the rtrv-ctrl-feat output for the XGTT Table Expansion feature greater than the desired quantity?
Yes
No
The XGTT Table Expansion feature is permanently enabled and the desired quantity can be used. No further action is necessary.
Are service modules shown in the rtrv-card output?
No
Go to the "Adding a Service Module" procedure in Chapter 2 to make sure the proper hardware is installed and configured to support the XGTT Table Expansion feature
Yes
To Sheet 2
Are any controlled features shown in the rtrv-ctrl-feat output?
No
Yes
To Sheet 3
To Sheet 4


From Sheet 1
Are any cards assigned the TSM card type and running the SCCP application in the database?
No
Yes
Is the GTT quantity being increased to 1,000,000?
No
Yes
Note: If the rtrv-ctrl-feat output shows only the HC-MIM SLK Capacity feature with a quantity of 64, the answer to this question is no and the Eagle 5 ISS's serial number must be verified. This is the default entry for the rtrv-ctrl-feat output. This entry is shown whether or not the Eagle 5 ISS's serial number is in the database.
Replace the TSMs with DSMs or E5-SM4G cards. Contact the Customer Care Center before replacing any service modules. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
Are any controlled features shown in the rtrv-ctrl-feat output? (See the Note)
No
To Sheet 3
Yes
To Sheet 4


From Sheets 1 or 2
Enter the rtrv-serial-num command
Notes:
1. If the serial number is locked, it cannot be changed.
2. If the serial number is not locked, the controlled feature cannot be enabled.
3. The serial number can be found on a label affixed to the control shelf (shelf 1100).
Is the EAGLE 5 ISS's serial number in the database correct and is the serial number locked? (See Notes 1, 2, and 3)
No
Yes
To Sheet 4
Is the EAGLE 5 ISS's serial number in the database correct?
No
Is the EAGLE 5 ISS's serial number locked?
Yes
This feature cannot be enabled without the correct serial number in the database. Contact the Customer Care Center to get the correct serial number entered into the database. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
Yes
No
Enter the ent-serial-num command with this parameter: :serial=<EAGLE 5 ISS's correct serial number>
No
Is the EAGLE 5 ISS's serial number in the database correct?
Enter the rtrv-serial-num command
Yes
Enter the ent-serial-num command with these parameters: :serial=<EAGLE 5 ISS's serial number> :lock=yes
To Sheet 4



Enabling the XMAP Table Expansion Feature

This procedure is used to enable the XMAP Table Expansion feature using the feature's part number and a feature access key.

The feature access key for the XMAP Table Expansion feature is based on the feature's part number and the serial number of the EAGLE 5 ISS, making the feature access key site-specific.

This feature allows the user to increase the maximum number of entries in the mated application table from 1024 entries to either 2000 or 3000 entries. Each level of increase has its own part number.

- Increase to 2000 entries – part number 893007701
- Increase to 3000 entries – part number 893007710

This feature requires that the following hardware is installed:

- GPSM-II cards are installed in card locations 1113 and 1115.

  CAUTION

  CAUTION: Never install or initialize MCAP cards in card locations 1113 and 1115 after GPSM-II cards have been installed and features that require GPSM-II cards have been provisioned. Attempting to initialize MCAP cards with features requiring GPSM-II cards will cause an EAGLE 5 ISS outage. Before replacing an existing GPSM-II card in card locations 1113 or 1115, contact the Customer Care Center. Refer to *Customer Care Center* on page 4 for the contact information.

- For a maximum of 2000 or 3000 entries, all service modules in the EAGLE 5 ISS can be either TSMs , DSMs , or E5-SM4G cards.

The service module requirements are dependent on any other GTT-related features that are enabled. Go to the *Adding a Service Module* on page 76 procedure and make sure that the proper hardware is in place to support the XMAP Table Expansion feature.

The XMAP Table Expansion feature requires that the Global Title Translation (GTT) feature is enabled with the `chg-feat` command using the `gtt=on` parameters.

Note: Once the Global Title Translation feature is turned on with the `chg-feat` command, it cannot be turned off.

The Global Title Translation feature must be purchased before it can be turned on. If you are not sure whether you have purchased the Global Title Translation feature, contact your Tekelec Sales Representative or Account Representative.

The `enable-ctrl-feat` command enables the controlled feature by inputting the feature's access key and the 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 of the XMAP Table Expansion feature, for 2,000 entries – 893007701, for 3,000 entries – 893007710

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).

This feature cannot be temporarily enabled (with the temporary feature access key).

Once this feature is enabled with the `enable-ctrl-feat` command (for either 2000 or 3000 entries), the feature is also activated. This feature cannot be disabled with the `chg-ctrl-feat` command. The `chg-ctrl-feat` command cannot be used with this procedure.

1. Display the status of the XMAP Table Expansion feature by entering the `rtrv-ctrl-feat` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
XGTT Table Expansion      893006101  on      400000
```

```
XMAP Table Expansion      893007710  off      ----
Large System # Links      893005910  on       2000
Routesets                 893006401  on       6000
HC-MIM SLK Capacity       893012707  on       64

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 feature is permanently enabled for the desired quantity or for a quantity that is greater than the desired quantity, no further action is necessary. This procedure does not need to be performed.

If the quantity shown for the XMAP Table Expansion feature is less than the desired quantity, skip steps 2 through 7, and go to step 8.

2. Display the cards in the EAGLE 5 ISS using the `rtrv-card` command.

   The XMAP Table Expansion feature requires that service modules are in the database. This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:58:31 GMT EAGLE5 36.0.0
CARD   TYPE      APPL      LSET NAME     PORT SLC LSET NAME     PORT SLC
1102   TSM       GLS
1113   GPSM      EOAM
1114   TDM-A
1115   GPSM      EOAM
1116   TDM-B
1117   MDAL
1118   RESERVED
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
1308   LIMDS0    SS7ANSI   sp6           A    1   sp7           B    0
1314   LIMDS0    SS7ANSI   sp7           A    1   sp5           B    1
1317   ACMENET   STPLAN
```

   Service modules are shown by the entries SCCP or VSCCP in APPL column. If the `rtrv-card` output shows no service modules, go to the *Adding a Service Module* on page 76 procedure and add the necessary service modules.

3. Display the serial number in the database with the `rtrv-serial-num` command.

   Note: If the `rtrv-ctrl-feat` output in *Step 1* on page 772 shows any controlled features, continue the procedure with *Step 7* on page 774. If the `rtrv-ctrl-feat` output shows only the HC-MIM SLK Capacity feature with a quantity of 64, *Step 3* on page 773 through *Step 6* on page 774 must be performed.

   This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231
```

```
System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

4. Enter the correct serial number into the database using the `ent-serial-num` command with the `serial` parameter.

   Note: If the serial number is correct and locked, continue the procedure with *Step 7* on page 774. If the serial number is correct but not locked, continue the procedure with *Step 6* on page 774. If the serial number is not correct, but is locked, this feature cannot be enabled and the remainder of this procedure cannot be performed. Contact the Customer Care Center to get an incorrect and locked serial number changed. Refer to *Customer Care Center* on page 4 for the contact information. The serial number can be found on a label affixed to the control shelf (shelf 1100).

   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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

5. Verify that the serial number entered into step 4 was entered correctly using the `rtrv-serial-num` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

   If the serial number was not entered correctly, repeat steps 4 and 5 and re-enter the correct serial number.

6. Lock the serial number in the database by entering the `ent-serial-num` command with the serial number shown in step 3, if the serial number shown in step 3 is correct, or with the serial number shown in step 5, if the serial number was changed in step 4, 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

7. Enable the XMAP Table Expansion feature for the desired quantity with the `enable-ctrl-feat` command specifying the part number corresponding to the new quantity of entries for the mated application table and the feature access key.

For this example, enter one of these commands.

To increase the number of entries in the mated application table to 2000, enter this command.

```
enable-ctrl-feat:partnum=893007701:fak=<XMAP Table Expansion feature access key>
```

To increase the number of entries in the mated application table to 3000, enter this command.

```
enable-ctrl-feat:partnum=893007710:fak=<XMAP Table Expansion feature access key>
```

Note: A temporary feature access key cannot be specified to enable this feature.

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 XMAP Table Expansion feature, contact your Tekelec Sales Representative or Account Representative.

When the `enable-crtl-feat` command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENABLE-CTRL-FEAT: MASP B - COMPLTD
```

8. Verify the changes by entering the `rtrv-ctrl-feat`command with the part number used in step 7.

   Enter one of these commands.

   ```
   rtrv-ctrl-feat:partnum=893007701
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   The following features have been permanently enabled:

   Feature Name              Partnum    Status  Quantity
   XMAP Table Expansion      893007701  on      2000

   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=893007710
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   The following features have been permanently enabled:

   Feature Name              Partnum    Status  Quantity
   XMAP Table Expansion      893007710  on      3000

   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:

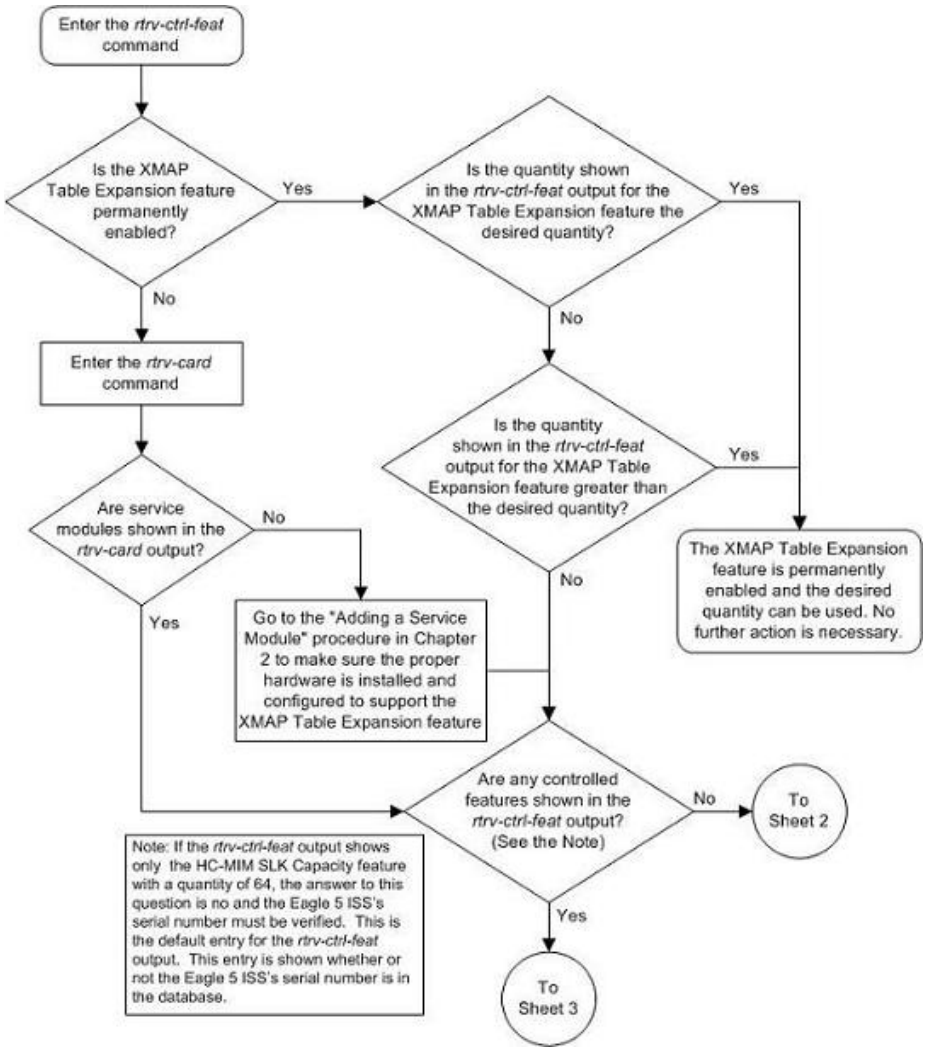
Feature Name              Partnum
Zero entries found.
```

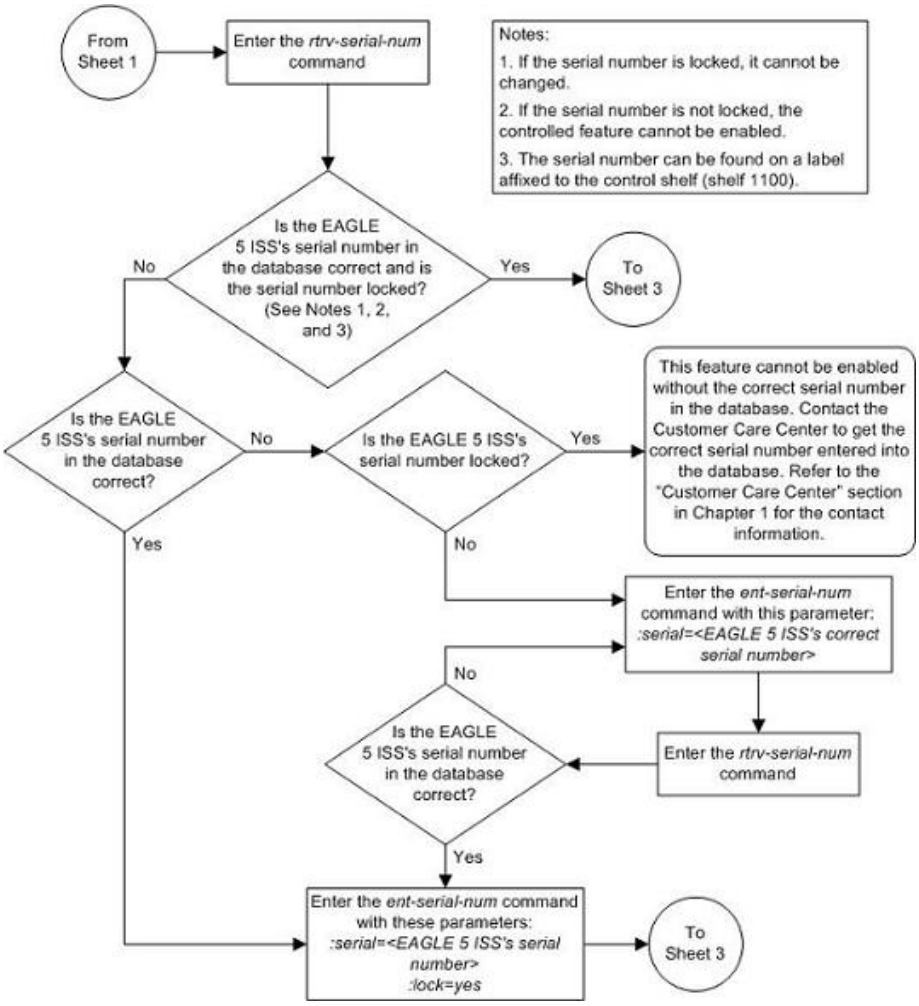
9. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

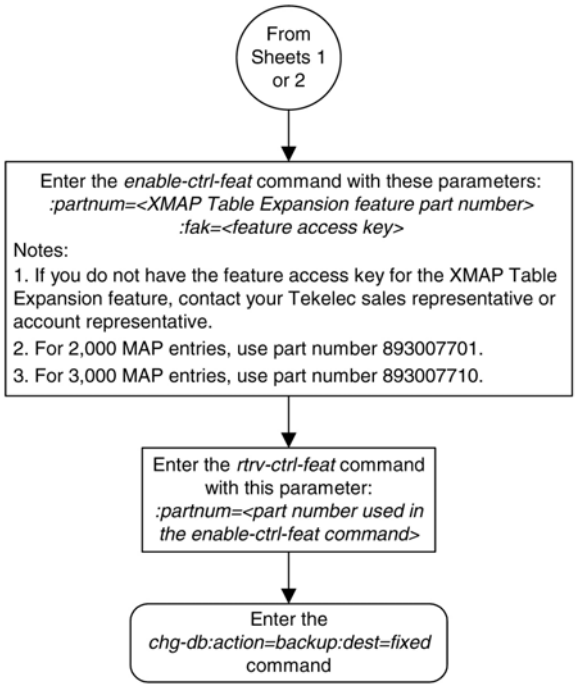
   These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 60: Enabling the XMAP Table Expansion Feature




From Sheet 1
Enter the rtrv-serial-num command
Notes:
1. If the serial number is locked, it cannot be changed.
2. If the serial number is not locked, the controlled feature cannot be enabled.
3. The serial number can be found on a label affixed to the control shelf (shelf 1100).
Is the EAGLE 5 ISS's serial number in the database correct and is the serial number locked? (See Notes 1, 2, and 3)
No
Yes
To Sheet 3
Is the EAGLE 5 ISS's serial number in the database correct?
No
Is the EAGLE 5 ISS's serial number locked?
Yes
This feature cannot be enabled without the correct serial number in the database. Contact the Customer Care Center to get the correct serial number entered into the database. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
Yes
No
Enter the ent-serial-num command with this parameter: :serial=<EAGLE 5 ISS's correct serial number>
No
Is the EAGLE 5 ISS's serial number in the database correct?
Enter the rtrv-serial-num command
Yes
Enter the ent-serial-num command with these parameters: :serial=<EAGLE 5 ISS's serial number> :lock=yes
To Sheet 3



Activating the ANSI-ITU-China SCCP Conversion Feature

This procedure is used to enable and turn on the ANSI-ITU-China SCCP Conversion feature using the feature's part number and a feature access key.

The feature access key for the ANSI-ITU-China SCCP Conversion feature 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. The feature access key contains 13 alphanumeric characters and is not case sensitive.

`:partnum` – The Tekelec-issued part number of the ANSI-ITU-China SCCP Conversion feature, 893012001.

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).

This feature cannot be temporarily enabled (with the temporary feature access key).

Once this feature has been enabled, the feature must be activated with the `chg-ctrl-feat` command. The `chg-ctrl-feat` command uses these parameters:

`:partnum` – The Tekelec-issued part number of the ANSI-ITU-China SCCP Conversion feature, 893012001.

`:status=on` – used to turn the ANSI-ITU-China SCCP Conversion feature on.

Note: Once this feature has been turned on, it cannot be turned off.

The status of the features in the EAGLE 5 ISS is shown with the `rtrv-ctrl-feat` command.

The ANSI-ITU-China SCCP Conversion feature requires that the Global Title Translation (GTT) feature is turned on with the `chg-feat` command using the `gtt=on` parameters.

Note: Once the Global Title Translation feature is turned on with the `chg-feat` command, it cannot be turned off.

The Global Title Translation feature must be purchased before it can be turned on. If you are not sure whether you have purchased the Global Title Translation feature, contact your Tekelec Sales Representative or Account Representative.

The ANSI-ITU-China SCCP Conversion feature requires that service modules are installed and provisioned in the EAGLE 5 ISS. Service modules can be TSMs, DSMs, or E5-SM4G cards. TSMs are shown by the entries `TSM` in the `TYPE` column and `SCCP` in the `APPL` column of the `rtrv-card` output. DSMs and E5-SM4G cards are shown by the entry `DSM` in the `TYPE` column and `VSCCP` in the `APPL` column of the `rtrv-card` output.

The ANSI-ITU-China SCCP Conversion feature cannot be enabled if either the SCCPCNV or TCAPCNV features are on. This can be verified by entering the `rtrv-feat` command. If the SCCPCNV feature is on, the `SCCPCNV` field is set to `on`. If the TCAPCNV feature is on, the `TCAPCNV` field is set to `on`. If either the SCCPCNV or TCAPCNV features are on, the ANSI-ITU-China SCCP Conversion feature cannot be enabled and this procedure cannot be performed. If either of these features are on and you wish to enable the ANSI-ITU-China SCCP Conversion feature, contact the Customer Care Center. Refer to *Customer Care Center* on page 4 for the contact information.

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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
XGTT Table Expansion      893006101  on      400000
XMAP Table Expansion      893007710  off     ----
Large System # Links      893005910  on      2000
Routesets                 893006401  on      6000
HC-MIM SLK Capacity       893012707  on      64
```

```
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 ANSI-ITU-China SCCP Conversion feature (shown in the `rtrv-ctrl-feat` output as SCCP Conversion) is enabled and on, no further action is necessary. This procedure does not need to be performed.

If the ANSI-ITU-China SCCP Conversion feature is enabled and but not on, skip steps 2 through 8 and go to step 9.

2. Verify whether or not the SCCPCNV or TCAPCNV features are on by entering the `rtrv-feat` command.

   If the SCCPCNV feature is on, the `SCCPCNV` field is set to `on`. If the TCAPCNV feature is on, the `TCAPCNV` field is set to `on`.

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

   Note: If either the SCCPCNV or TCAPCNV features are on, the ANSI-ITU-China SCCP Conversion feature cannot be enabled and this procedure cannot be performed. If either of these features are on and you wish to enable the ANSI-ITU-China SCCP Conversion feature, contact the Customer Care Center. Refer to *Customer Care Center* on page 4 for the contact information.

   Note: If the `rtrv-ctrl-feat` output in step 1 or the `rtrv-feat` output in step 2 shows that any of the features shown in *Table 12: Service Module and Feature Combinations* on page 76 are enabled or turned on, skip step 3 and go to step 4.

   Note: If the `rtrv-feat` output in step 2 shows that the GTT feature is not on, perform the *Adding a Service Module* on page 76 procedure to turn the GTT feature on and to add the appropriate service modules, according to *Table 12: Service Module and Feature Combinations* on page 76, to support the GTT and ANSI-ITU-China SCCP Conversion features. Skip step 3 and go to step 4.

3. Display the cards in the EAGLE 5 ISS using the `rtrv-card` command.

   The ANSI-ITU-China SCCP Conversion feature requires that service modules are in the database. This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:58:31 GMT EAGLE5 36.0.0
CARD   TYPE      APPL      LSET NAME     PORT SLC LSET NAME     PORT SLC
1102   TSM       GLS
1113   GPSM      EOAM
1114   TDM-A
1115   GPSM      EOAM
1116   TDM-B
1117   MDAL
1118   RESERVED
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
1308   LIMDS0    SS7ANSI   sp6           A    1   sp7           B    0
1314   LIMDS0    SS7ANSI   sp7           A    1   sp5           B    1
1317   ACMENET   STPLAN
```

TSMs are shown by the entries TSM in the TYPE column and SCCP in the APPL column of the rtrv-card output. DSMsand E5-SM4G cards are shown by the entry DSM in the TYPE column and VSCCP in the APPL column of the rtrv-card output

If the appropriate service modules are in the EAGLE 5 ISS (see *Table 12: Service Module and Feature Combinations* on page 76), go to step 4.

4. Display the serial number in the database with the rtrv-serial-num command.

   Note: If the rtrv-ctrl-feat output in step 1 shows any controlled features, skip steps 4 through 7, and go to step 8. If the rtrv-ctrl-feat output shows only the HC-MIM SLK Capacity feature with a quantity of 64, steps 4 through 7 must be performed.

   This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

5. Enter the correct serial number into the database using the ent-serial-num command with the serial parameter.

   Note: If the serial number is correct and locked, skip steps 5, 6, and 7, and go to step 8. If the serial number is correct but not locked, skip steps 5 and 6, and go to step 7. If the serial number is not correct, but is locked, this feature cannot be enabled and the remainder of this procedure cannot be performed. Contact the Customer Care Center to get an incorrect and locked serial number changed. Refer to *Customer Care Center* on page 4 for the contact information. The serial number can be found on a label affixed to the control shelf (shelf 1100).

   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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

6. Verify that the serial number entered into step 5 was entered correctly using the rtrv-serial-num command. This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.
```

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

If the serial number was not entered correctly, repeat steps 4 and 5 and re-enter the correct serial number.

7. Lock the serial number in the database by entering the `ent-serial-num` command with the serial number shown in step 4, if the serial number shown in step 4 is correct, or with the serial number shown in step 6, if the serial number was changed in step 5, 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   ENT-SERIAL-NUM:  MASP A - COMPLTD
   ```

8. Enable the ANSI-ITU-China SCCP Conversion feature with the `enable-ctrl-feat` command specifying the part number for the ANSI-ITU-China SCCP Conversion and the feature access key. Enter this command.

   ```
   enable-ctrl-feat:partnum=893012001:fak=<ANSI-ITU-China SCCP Conversion
   feature access key>
   ```

   Note: The ANSI-ITU-China SCCP Conversion 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 ANSI-ITU-China SCCP Conversion feature, contact your Tekelec Sales Representative or Account Representative.

   When the `enable-crtl-feat` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   ENABLE-CTRL-FEAT: MASP B - COMPLTD
   ```

9. Turn the ANSI-ITU-China SCCP Conversion feature on with the `chg-ctrl-feat` command specifying the part number for the ANSI-ITU-China SCCP Conversion and the `status=on` parameter. Enter this command.

   ```
   chg-ctrl-feat:partnum=893012001:status=on
   ```

   Note: Once the ANSI-ITU-China SCCP Conversion feature is turned on, it cannot be turned off.

   When the `chg-crtl-feat` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   CHG-CTRL-FEAT: MASP B - COMPLTD
   ```

10. Verify the changes by entering the `rtrv-ctrl-feat`command with the ANSI-ITU-China SCCP Conversion feature part number. Enter this command.

    ```
    rtrv-ctrl-feat:partnum=893012001
    ```

The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
SCCP Conversion           893012001  on      ----

The following features have been temporarily enabled:

Feature Name              Partnum    Status  Quantity     Trial Period Left
Zero entries found.

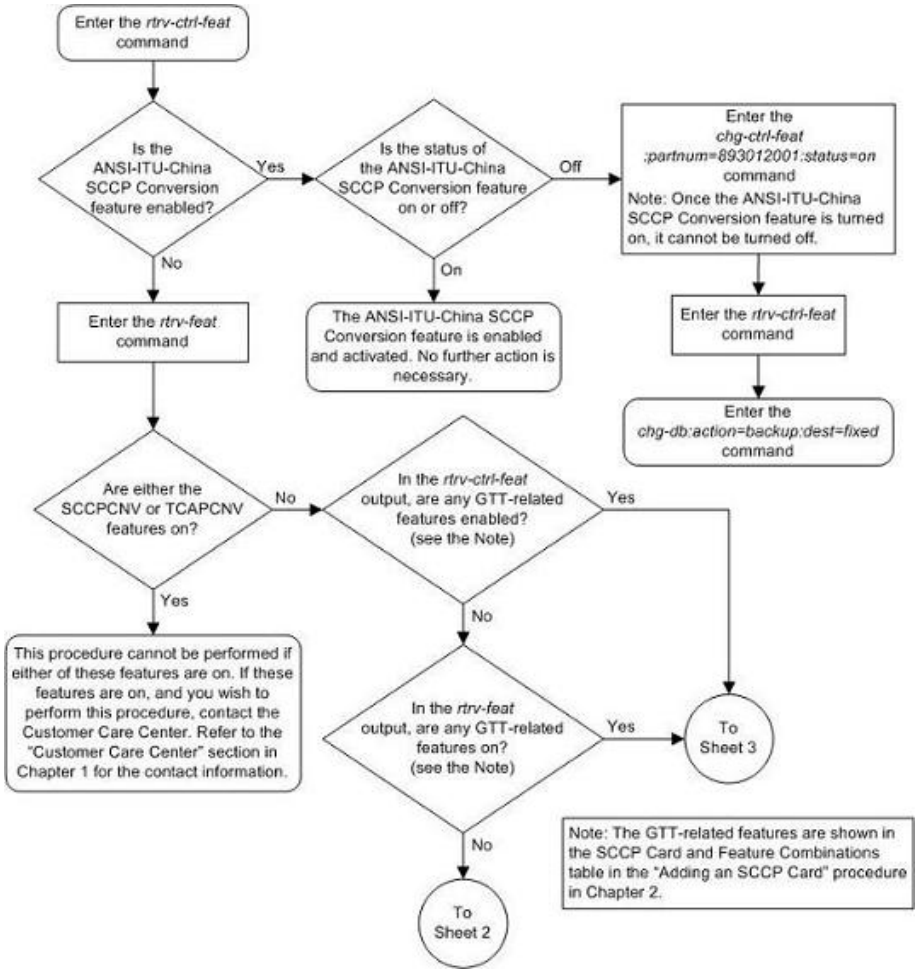
The following features have expired temporary keys:

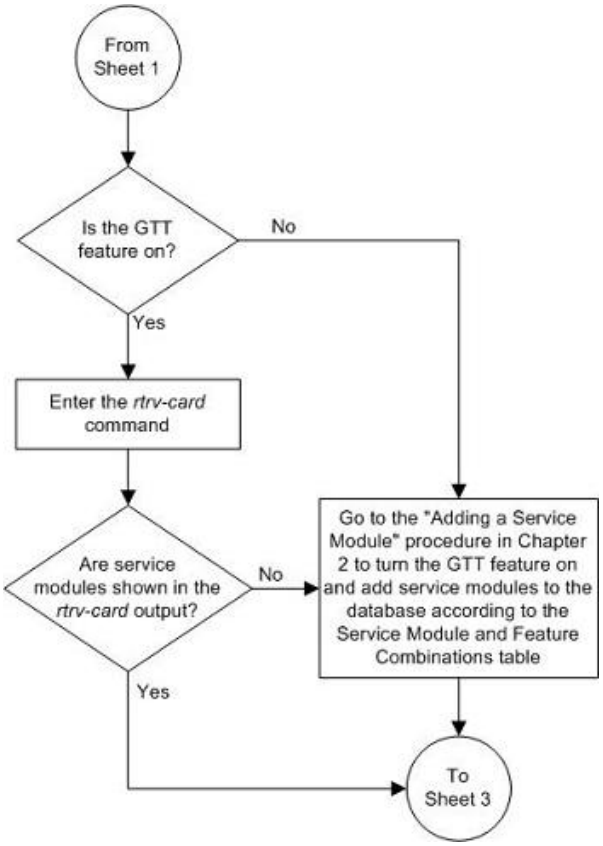
Feature Name              Partnum
Zero entries found.
```

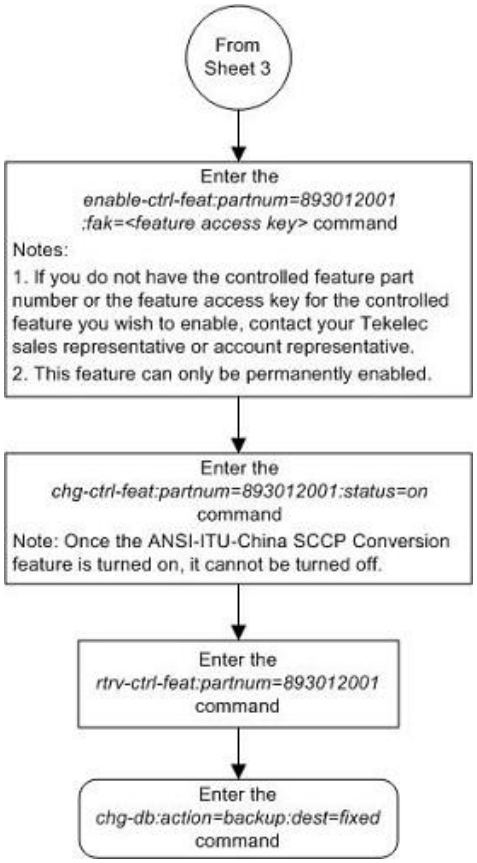
11. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 61: Activating the ANSI-ITU-China SCCP Conversion Feature


Enter the rtrv-ctrl-feat command
Is the ANSI-ITU-China SCCP Conversion feature enabled?
Yes
No
Is the status of the ANSI-ITU-China SCCP Conversion feature on or off?
Off
On
Enter the chg-ctrl-feat :partnum=893012001:status=on command
Note: Once the ANSI-ITU-China SCCP Conversion feature is turned on, it cannot be turned off.
Enter the rtrv-ctrl-feat command
Enter the chg-db:action=backup:dest=fixed command
The ANSI-ITU-China SCCP Conversion feature is enabled and activated. No further action is necessary.
Enter the rtrv-feat command
Are either the SCCPCNV or TCAPCNV features on?
No
Yes
In the rtrv-ctrl-feat output, are any GTT-related features enabled? (see the Note)
Yes
No
This procedure cannot be performed if either of these features are on. If these features are on, and you wish to perform this procedure, contact the Customer Care Center. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
In the rtrv-feat output, are any GTT-related features on? (see the Note)
Yes
To Sheet 3
No
To Sheet 2
Note: The GTT-related features are shown in the SCCP Card and Feature Combinations table in the "Adding an SCCP Card" procedure in Chapter 2.


From Sheet 1
Is the GTT feature on?
No
Yes
Enter the rtrv-card command
Are service modules shown in the rtrv-card output?
No
Go to the "Adding a Service Module" procedure in Chapter 2 to turn the GTT feature on and add service modules to the database according to the Service Module and Feature Combinations table
Yes
To Sheet 3



Activating the Flexible GTT Load Sharing Feature

This procedure is used to enable and turn on the Flexible GTT Load Sharing feature using the feature's part number and a feature access key.

The feature access key for the Flexible GTT Load Sharing feature 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 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 of the Flexible GTT Load Sharing feature, 893015401.

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).

This feature cannot be temporarily enabled (with the temporary feature access key).

Once this feature is enabled, provisioning for this feature can be performed, but the feature will not work until the feature is turned on with the `chg-ctrl-feat` command.

Once this feature has been enabled, the 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 Flexible GTT Load Sharing feature, 893015401.

`:status=on` – used to turn the Flexible GTT Load Sharing feature on.

Once the Flexible GTT Load Sharing feature has been turned on, it be can be turned off. For more information on turning the Flexible GTT Load Sharing feature off, go to the *Turning the Flexible GTT Load Sharing Feature Off* on page 795 procedure.

The status of the features in the EAGLE 5 ISS is shown with the `rtrv-ctrl-feat` command.

The Flexible GTT Load Sharing feature requires that DSMs or E5-SM4G cards are installed and provisioned in the EAGLE 5 ISS. TSMs are shown by the entries `TSM` in the `TYPE` column and `SCCP` in the `APPL` column of the `rtrv-card` output. DSMs and E5-SM4G cards are shown by the entries `DSM` in the `TYPE` column and `VSCCP` in the `APPL` column of the `rtrv-card` output. All TSMs running the SCCP application must be replaced with DSMs or E5-SM4G cards. Contact the Customer Care Center before replacing the TSMs. Refer to *Customer Care Center* on page 4 for the contact information.

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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
XGTT Table Expansion      893006101  on      400000
XMAP Table Expansion      893007710  off     ----
Large System # Links      893005910  on      2000
Routesets                 893006401  on      6000
HC-MIM SLK Capacity       893012707  on      64

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 Flexible GTTLoad Sharing feature is enabled and turned on, no further action is necessary. This procedure does not need to be performed.

If the Flexible GTTLoad Sharing feature is enabled and but not turned on, skip steps 2 through 8 and go to step 9.

If the Flexible GTTLoad Sharing feature is not enabled, go to step 2.

2. Display the cards in the EAGLE 5 ISS using the `rtrv-card` command.

   The Flexible GTT Load Sharing feature requires that DSMs or E5-SM4G cards running the VSCCP application are in the database. This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:58:31 GMT EAGLE5 36.0.0
CARD   TYPE      APPL      LSET NAME     PORT SLC LSET NAME     PORT SLC
1102   TSM       GLS
1113   GPSM      EOAM
1114   TDM-A
1115   GPSM      EOAM
1116   TDM-B
1117   MDAL
1118   RESERVED
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   DSM       VSCCP
1303   DSM       VSCCP
1305   DSM       VSCCP
1308   LIMDS0    SS7ANSI   sp6           A    1   sp7           B    0
1314   LIMDS0    SS7ANSI   sp7           A    1   sp5           B    1
1317   ACMENET   STPLAN
```

   There are three types of service modules, TSMs running the SCCP application and DSMs or E5-SM4G cards running the VSCCP application.

   TSMs are shown by the entries `TSM` in the `TYPE` column and `SCCP` in the `APPL` column. DSMs and E5-SM4G cards are shown by the entries `DSM` in the `TYPE` column and `VSCCP` in the `APPL` column.

   To enable this feature, all TSMs running the SCCP application must be replaced by DSMs or E5-SM4G cards. Contact the Customer Care Center before replacing the TSMs. Refer to *Customer Care Center* on page 4 for the contact information.

   If no service modules are shown in the `rtrv-card` output, perform the *Adding a Service Module* on page 76 procedure to add DSMs or E5-SM4G cards to the EAGLE 5 ISS.

   If DSMs or E5-SM4G cards running the VSCCP application are in the EAGLE 5 ISS, go to step 4.

   Note: If the `rtrv-ctrl-feat` output in step 1 shows any controlled features, skip steps 3 through 6, and go to step 7. If the `rtrv-ctrl-feat` output shows only the HC-MIMSLK Capacity feature with a quantity of 64, steps 3 through 6 must be performed.

3. Display the serial number in the database with the `rtrv-serial-num` command. This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

Note: If the serial number is correct and locked, skip steps 4, 5, and 6, and go to step 7. If the serial number is correct but not locked, skip steps 4 and 5, and go to step 6. If the serial number is not correct, but is locked, this feature cannot be enabled and the remainder of this procedure cannot be performed. Contact the Customer Care Center to get an incorrect and locked serial number changed. Refer to *Customer Care Center* on page 4 for the contact information. The serial number can be found on a label affixed to the control shelf (shelf 1100).

4. 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

5. Verify that the serial number entered into step 4 was entered correctly using the `rtrv-serial-num` command. This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

   If the serial number was not entered correctly, repeat steps 4 and 5 and re-enter the correct serial number.

6. Lock the serial number in the database by entering the `ent-serial-num` command with the serial number shown in step 3, if the serial number shown in step 3 is correct, or with the serial number shown in step 5, if the serial number was changed in step 4, 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

   Note: If the `ri=gt` parameter will not be used for GTT (with the `ent-/chg-gtt` commands) or GTA (with the `ent-/chg-gta` commands) provisioning, or if the `rtrv-ctrl-feat` output

in step 1 shows the Intermediate GTTLoad Sharing feature is enabled and turned on, skip this step and go to step 8.

7. To use the `ri=gt` parameter with the GTT or GTA provisioning when the Flexible GTT Load Sharing feature is enabled, the Intermediate GTT Load Sharing feature must be enabled and turned on.

   Perform the *Activating the IGTTLS feature* on page 750 procedure to enable and turn on the Intermediate GTT Load Sharing feature.

8. Enable the Flexible GTT Load Sharing feature with the `enable-ctrl-feat` command specifying the part number for the Flexible GTT Load Sharing feature and the feature access key. Enter this command.

   ```
   enable-ctrl-feat:partnum=893015401:fak=<Flexible GTT Load Sharing feature access key>
   ```

   Note: The Flexible GTT Load Sharing 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 Flexible GTT Load Sharing feature, contact your Tekelec Sales Representative or Account Representative.

   When the `enable-crtl-feat` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   ENABLE-CTRL-FEAT: MASP B - COMPLTD
   ```

   CAUTION: Once the Flexible GTTLoad Sharing feature is enabled, provisioning for Flexible Intermediate GTTLoad Sharing, using the `ent-mrn`, `dlt-mrn`, `chg-mrn`, and `rtrv-mrn` commands, can be performed, but the EAGLE 5 ISS will not perform Flexible Intermediate GTTLoad Sharing on GTT traffic requiring intermediate global title translation until the Flexible GTTLoad Sharing is turned on in step 9.

   CAUTION: Once the Flexible GTTLoad Sharing feature is enabled, provisioning for Flexible Final GTTLoad Sharing, using the `ent-map`, `dlt-map`, `chg-map`, and `rtrv-map` commands, can be performed, but the EAGLE 5 ISS will not perform Flexible Final GTTLoad Sharing on GTT traffic requiring final global title translation until the Flexible GTTLoad Sharing is turned on in step 9.

9. Turn the Flexible GTT Load Sharing feature on with the `chg-ctrl-feat` command specifying the part number for the Flexible GTT Load Sharing feature and the `status=on` parameter. Enter this command.

   ```
   chg-ctrl-feat:partnum=893015401:status=on
   ```

   When the `chg-crtl-feat` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   CHG-CTRL-FEAT: MASP B - COMPLTD
   ```

10. Verify the changes by entering the `rtrv-ctrl-feat`command with the Flexible GTT Load Sharing feature part number. Enter this command.

`rtrv-ctrl-feat:partnum=893015401`

The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Flexible GTT Load Sharing 893015401  on      ----

The following features have been temporarily enabled:

Feature Name              Partnum    Status  Quantity     Trial Period Left
Zero entries found.

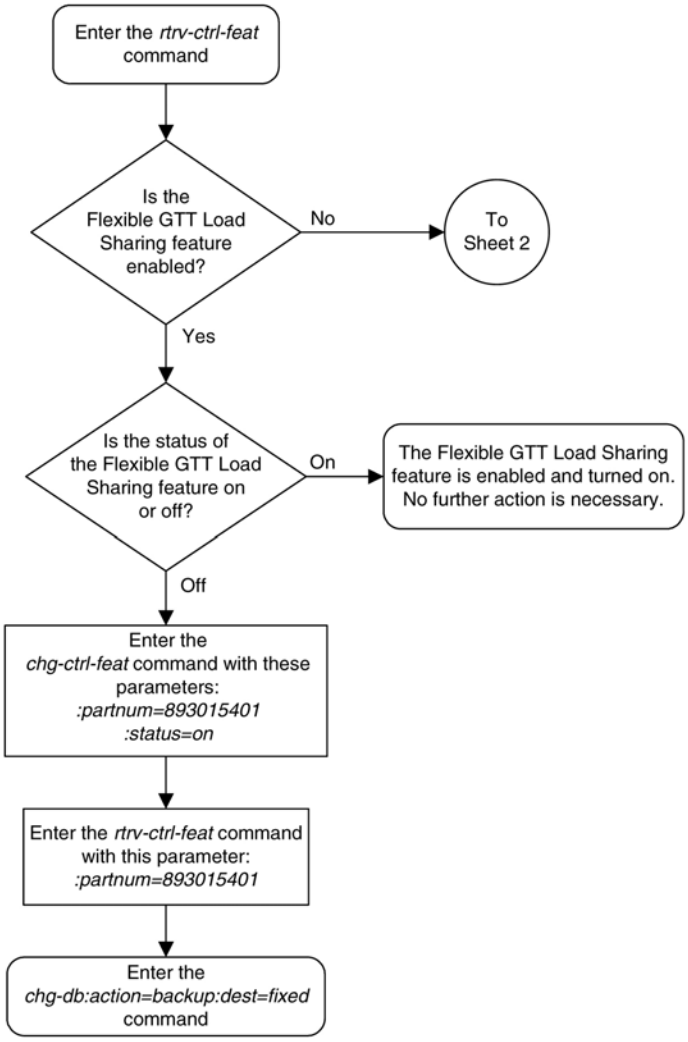
The following features have expired temporary keys:

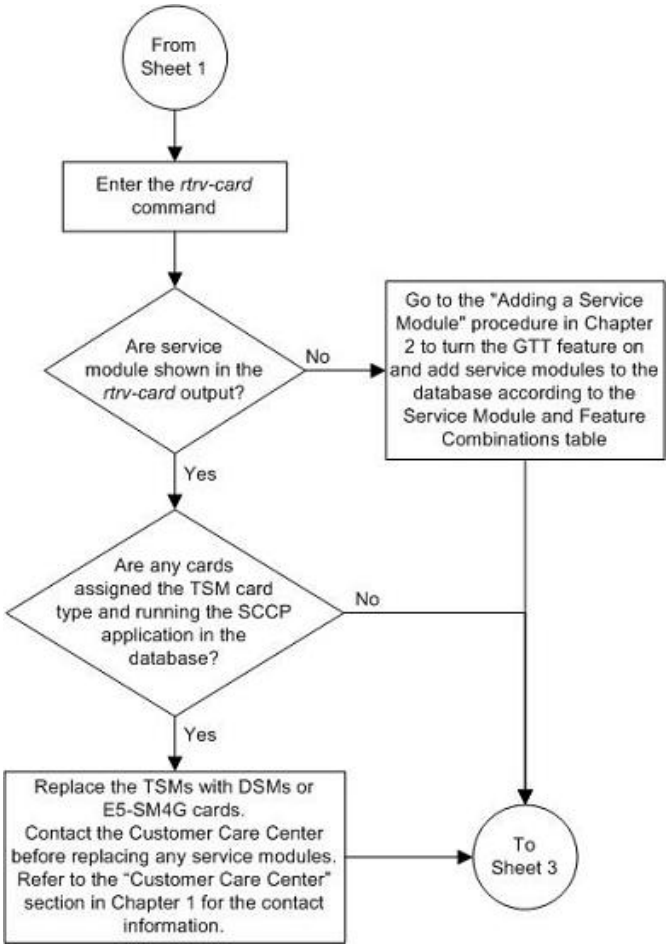
Feature Name              Partnum
Zero entries found.
```

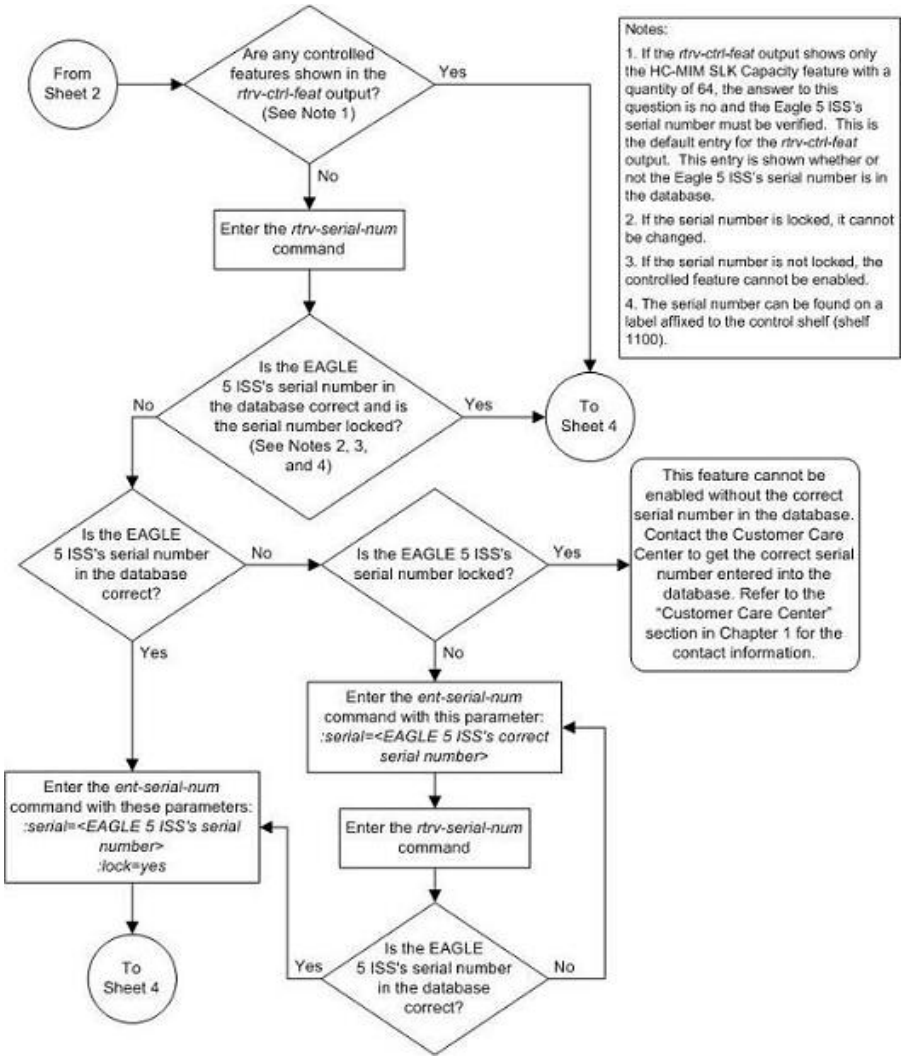
11. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

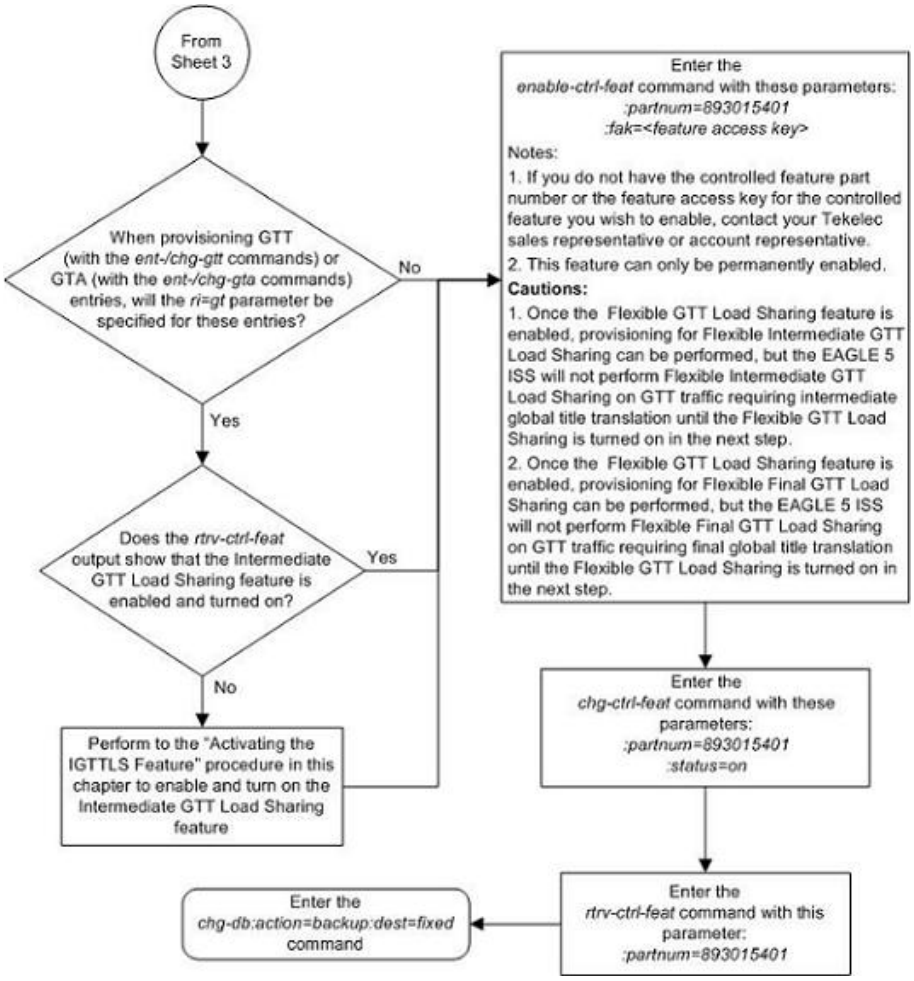
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

Figure 62: Activating the Flexible GTT Load Sharing Feature


Enter the *rtrv-ctrl-feat* command
Is the Flexible GTT Load Sharing feature enabled?
No
To Sheet 2
Yes
Is the status of the Flexible GTT Load Sharing feature on or off?
On
The Flexible GTT Load Sharing feature is enabled and turned on. No further action is necessary.
Off
Enter the *chg-ctrl-feat* command with these parameters: *:partnum=893015401* *:status=on*
Enter the *rtrv-ctrl-feat* command with this parameter: *:partnum=893015401*
Enter the *chg-db:action=backup:dest=fixed* command


From Sheet 1
Enter the rtrv-card command
Are service module shown in the rtrv-card output?
No
Go to the "Adding a Service Module" procedure in Chapter 2 to turn the GTT feature on and add service modules to the database according to the Service Module and Feature Combinations table
Yes
Are any cards assigned the TSM card type and running the SCCP application in the database?
No
Yes
Replace the TSMs with DSMs or E5-SM4G cards.
Contact the Customer Care Center before replacing any service modules. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
To Sheet 3


From Sheet 2
Are any controlled features shown in the rtrv-ctrl-feat output? (See Note 1)
Yes
No
Notes:
1. If the rtrv-ctrl-feat output shows only the HC-MIM SLK Capacity feature with a quantity of 64, the answer to this question is no and the Eagle 5 ISS's serial number must be verified. This is the default entry for the rtrv-ctrl-feat output. This entry is shown whether or not the Eagle 5 ISS's serial number is in the database.
2. If the serial number is locked, it cannot be changed.
3. If the serial number is not locked, the controlled feature cannot be enabled.
4. The serial number can be found on a label affixed to the control shelf (shelf 1100).
Enter the rtrv-serial-num command
Is the EAGLE 5 ISS's serial number in the database correct and is the serial number locked? (See Notes 2, 3, and 4)
No
Yes
To Sheet 4
Is the EAGLE 5 ISS's serial number in the database correct?
No
Is the EAGLE 5 ISS's serial number locked?
Yes
This feature cannot be enabled without the correct serial number in the database. Contact the Customer Care Center to get the correct serial number entered into the database. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
Yes
No
Enter the ent-serial-num command with this parameter: :serial=<EAGLE 5 ISS's correct serial number>
Enter the ent-serial-num command with these parameters: :serial=<EAGLE 5 ISS's serial number> :lock=yes
Enter the rtrv-serial-num command
To Sheet 4
Is the EAGLE 5 ISS's serial number in the database correct?
Yes
No



Turning the Flexible GTT Load Sharing Feature Off

This procedure is used to turn off the Flexible GTT Load Sharing feature, using the `chg-ctrl-feat` command.

The `chg-ctrl-feat` command uses the following parameters:

`:partnum` - The part number of the Flexible GTT Load Sharing feature, 893015401.

`:status=off` – used to turn off the Flexible GTT Load Sharing feature.

The status of the Flexible GTT Load Sharing controlled feature must be `on` and is shown with the `rtrv-ctrl-feat` command.

CAUTION

CAUTION: If the Prepaid SMS Intercept Phase 1 feature is turned off, the screening of incoming messages from an MSC by the EAGLE 5 ISS will not be performed.



CAUTION: If the Flexible GTT Load Sharing feature is turned off, provisioning for Flexible Final GTT Load Sharing can be performed with the `ent-map`, `dlt-map`, `chg-map`, and `rtrv-map` commands. The EAGLE 5 ISS will not perform Flexible Final GTT Load Sharing on GTT traffic requiring final global title translation.

1. Display the status of the Flexible GTT Load Sharing feature by entering the `rtrv-ctrl-feat:partnum=893015401` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Flexible GTT Load Sharing 893015401  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 Flexible GTTLoad Sharing feature is off, or if the Flexible GTTLoad Sharing feature is not enabled, this procedure cannot be performed.

2. Turn off the Flexible GTT Load Sharing feature by entering the `chg-ctrl-feat` command with the `status=off` parameter.

   For example, enter this command.

   `chg-ctrl-feat:partnum=893015401:status=off`

   When this command has successfully completed, the following message should appear.

```
rlghncxa03w 06-10-28 21:16:37 GMT EAGLE5 36.0.0
CHG-CTRL-FEAT: MASP A - COMPLTD
```

3. Verify that the Flexible GTT Load Sharing feature has been turned off by using the `rtrv-ctrl-feat:partnum=893015401` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Flexible GTT Load Sharing 893015401  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:

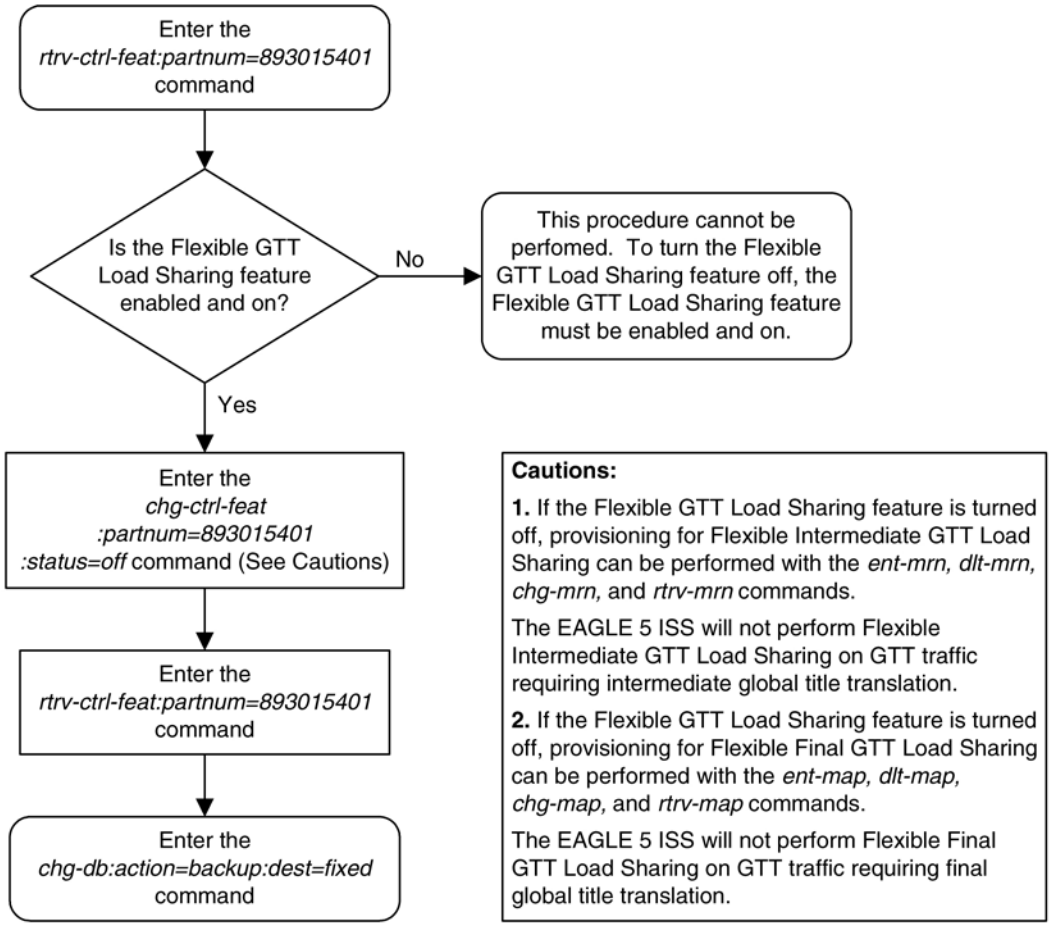
Feature Name              Partnum
Zero entries found.
```

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.
```

Figure 63: Turning the Flexible GTT Load Sharing Feature Off



Activating the Origin-Based SCCP Routing Feature

This procedure is used to enable and turn on the Origin-Based SCCP Routing feature using the feature's part number and a feature access key.

The feature access key for the Origin-Based SCCP Routing feature 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 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 of the Origin-Based SCCP Routing feature, 893014301.

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).

This feature cannot be temporarily enabled (with the temporary feature access key).

Once this feature is enabled, provisioning for this feature can be performed, but the feature will not work until the feature is turned on with the `chg-ctrl-feat` command.

Once this feature has been enabled, the 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 Origin-Based SCCP Routing feature, 893014301.

`:status=on` – used to turn the Origin-Based SCCP Routing feature on.

Once the Origin-Based SCCP Routing feature has been turned on, it be cannot be turned off.

The status of the features in the EAGLE 5 ISS is shown with the `rtrv-ctrl-feat` command.

The Origin-Based SCCP Routing feature requires that DSMs or E5-SM4G cards are installed and provisioned in the EAGLE 5 ISS. TSMs are shown by the entries `TSM` in the `TYPE` column and `SCCP` in the `APPL` column of the `rtrv-card` output. DSMs and E5-SM4G cards are shown by the entries `DSM` in the `TYPE` column and `VSCCP` in the `APPL` column of the `rtrv-card` output. All TSMs running the SCCP application must be replaced with DSMs or E5-SM4G cards. Contact the Customer Care Center before replacing the TSMs. Refer to *Customer Care Center* on page 4 for the contact information.

Before the Origin-Based SCCP Routing feature can be enabled, the EGTT feature must be turned on. The state of the EGTT feature can be verified using the `rtrv-feat` command.

1. Display the status of the Origin-Based SCCP Routing feature by entering the `rtrv-ctrl-feat` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
```

```
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
HC-MIM SLK Capacity       893012707  on      64

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 Origin-Based SCCP Routing feature is enabled and turned on, no further action is necessary. This procedure does not need to be performed.

If the Origin-Based SCCP Routing feature is enabled and but not turned on, skip steps 2 through 9 and go to step 10.

If the Origin-Based SCCP Routing feature is not enabled, go to step 2.

2. Verify that the EGTT feature is on, by entering the `rtrv-feat` command. If the EGTT feature is on, the `EGTT` field should be set to `on`.

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

   Note: If the EGTT feature is on, shown by the entry `EGTT = on` in the `rtrv-feat` command output in step 2, skip step 3 and go to step 4.

3. Turn the enhanced global title translation feature on by entering this command.

   `chg-feat:egtt=on`

   If the GTT feature is not on, turn the GTT feature on by specifying the `gtt=on` parameter with the `egtt=on` parameter.

   Note: Once the Enhanced Global Title Translation (EGTT) feature is turned on with the `chg-feat` command, it cannot be turned off.

   The EGTT feature must be purchased before turning it on. If you are not sure whether you have purchased the EGTT feature, contact your Tekelec Sales Representative or Account Representative.

   When the `chg-feat` has successfully completed, this message should appear.

```
rlghncxa03w 06-10-25 09:57:41 GMT EAGLE5 36.0.0
CHG-FEAT: MASP A - COMPLTD
```

4. Display the cards in the EAGLE 5 ISS using the `rtrv-card` command. The Origin-Based SCCP Routing feature requires that DSMs or E5-SM4G cards running the VSCCP application are in the database. This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:58:31 GMT EAGLE5 36.0.0
CARD   TYPE      APPL      LSET NAME     PORT SLC LSET NAME     PORT SLC
1102   TSM       GLS
1113   GPSM      EOAM
1114   TDM-A
1115   GPSM      EOAM
```

```
1116   TDM-B
1117   MDAL
1118   RESERVED
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   DSM       VSCCP
1303   DSM       VSCCP
1305   DSM       VSCCP
1308   LIMDS0    SS7ANSI   sp6          A    1   sp7          B    0
1314   LIMDS0    SS7ANSI   sp7          A    1   sp5          B    1
1317   ACMENET   STPLAN
```

There are three types of service modules, TSMs running the SCCP application and DSMs or E5-SM4G cards running the VSCCP application.

TSMs are shown by the entries `TSM` in the `TYPE` column and `SCCP` in the `APPL` column. DSMs and E5-SM4G cards are shown by the entries `DSM` in the `TYPE` column and `VSCCP` in the `APPL` column.

To enable this feature, all TSMs running the SCCP application must be replaced by DSMs or E5-SM4G cards. Contact the Customer Care Center before replacing the TSMs. Refer to *Customer Care Center* on page 4 for the contact information.

If no service modules are shown in the `rtrv-card` output, perform the *Adding a Service Module* on page 76 procedure to add DSMs or E5-SM4G cards to the EAGLE 5 ISS.

If DSMs or E5-SM4G cards running the VSCCP application are in the EAGLE 5 ISS, go to step 5.

Note: If the `rtrv-ctrl-feat` output in step 1 shows any controlled features, skip steps 5 through 8, and go to step 9. If the `rtrv-ctrl-feat` output shows only the HC-MIMSLK Capacity feature with a quantity of 64, steps 5 through 8 must be performed.

5. Display the serial number in the database with the `rtrv-serial-num` command. This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

Note: If the serial number is correct and locked, skip steps 6, 7, and 8, and go to step 9. If the serial number is correct but not locked, skip steps 5 and 7, and go to step 8. If the serial number is not correct, but is locked, this feature cannot be enabled and the remainder of this procedure cannot be performed. Contact the Customer Care Center to get an incorrect and locked serial number changed. Refer to *Customer Care Center* on page 4 for the contact information. The serial number can be found on a label affixed to the control shelf (shelf 1100).

6. 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

7. Verify that the serial number entered into step 6 was entered correctly using the `rtrv-serial-num` command. This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

If the serial number was not entered correctly, repeat steps 6 and 7 and re-enter the correct serial number.

8. Lock the serial number in the database by entering the `ent-serial-num` command with the serial number shown in step 5, if the serial number shown in step 5 is correct, or with the serial number shown in step 7, if the serial number was changed in step 6, 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

9. Enable the Origin-Based SCCP Routing feature with the `enable-ctrl-feat` command specifying the part number for the Origin-Based SCCP Routing feature and the feature access key. Enter this command.

```
enable-ctrl-feat:partnum=893014301:fak=<Origin-Based SCCP Routing
feature access key>
```

Note: The Origin-Based SCCP Routing 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 Origin-Based SCCP Routing feature, contact your Tekelec Sales Representative or Account Representative.

When the `enable-crtl-feat` command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENABLE-CTRL-FEAT: MASP B - COMPLTD
```



CAUTION: Once the Origin-Based SCCP Routing feature is enabled, provisioning for Origin-Based SCCP Routing can be performed, but the EAGLE 5 ISS will not perform Origin-Based SCCP Routing on GTT traffic until the Origin-Based SCCP Routing is turned on in step 10.

10. Turn the Origin-Based SCCP Routing feature on with the `chg-ctrl-feat` command specifying the part number for the Origin-Based SCCP Routing feature and the `status=on` parameter.

    Enter this command.

    ```
    chg-ctrl-feat:partnum=893014301:status=on
    ```

    When the `chg-crtl-feat` command has successfully completed, this message should appear.

    ```
    rlghncxa03w 06-10-28 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 Origin-Based SCCP Routing feature part number. Enter this command.

    ```
    rtrv-ctrl-feat:partnum=893014301
    ```

    The following is an example of the possible output.

    ```
    rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
    The following features have been permanently enabled:

    Feature Name              Partnum   Status Quantity
    Origin Based SCCP Routing 893014301 on     ----

    The following features have been temporarily enabled:

    Feature Name              Partnum    Status  Quantity     Trial Period Left
    Zero entries found.

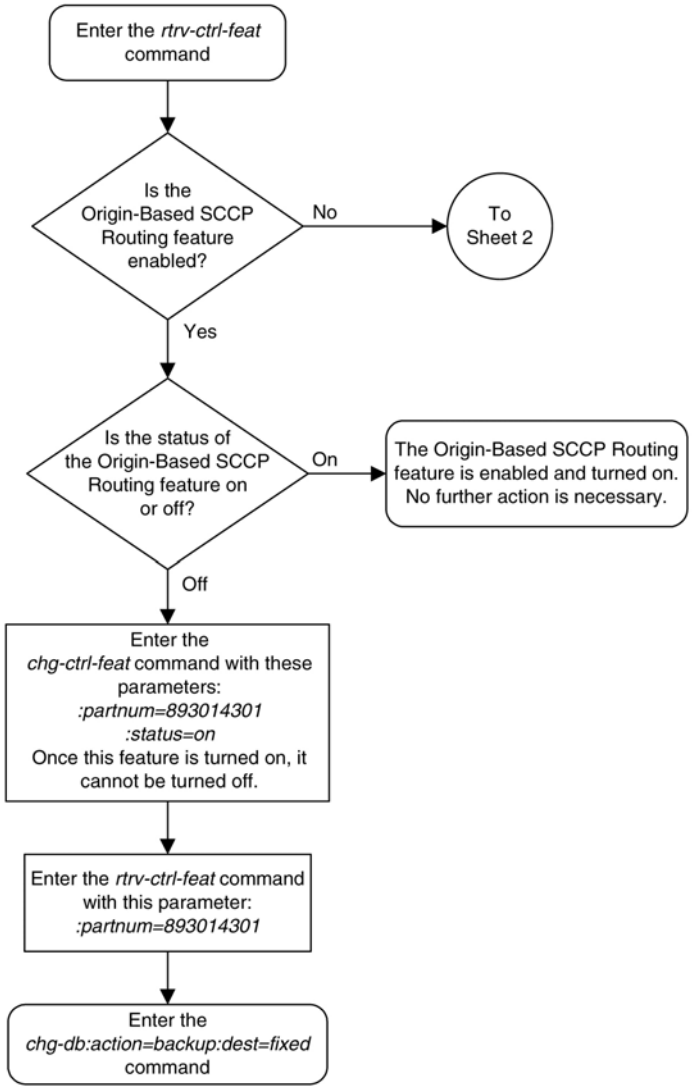
    The following features have expired temporary keys:

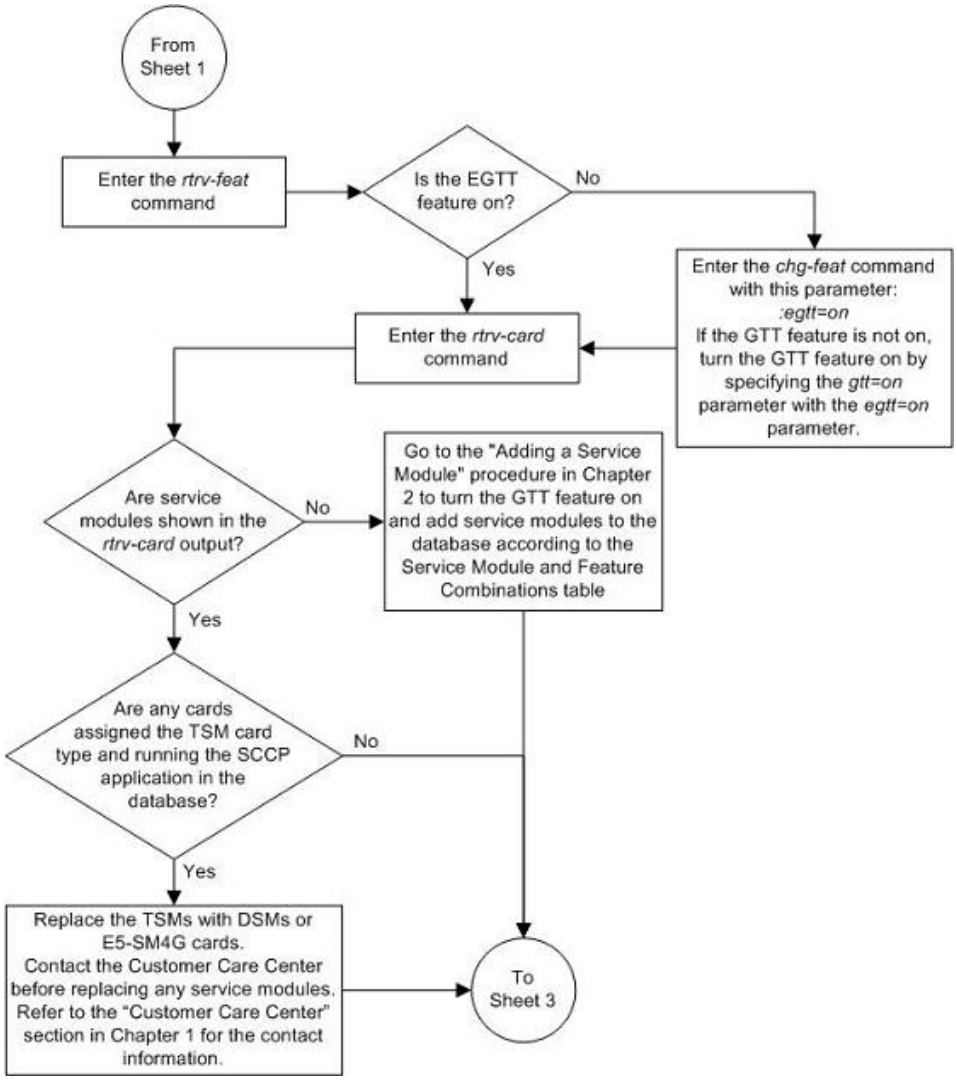
    Feature Name              Partnum
    Zero entries found.
    ```

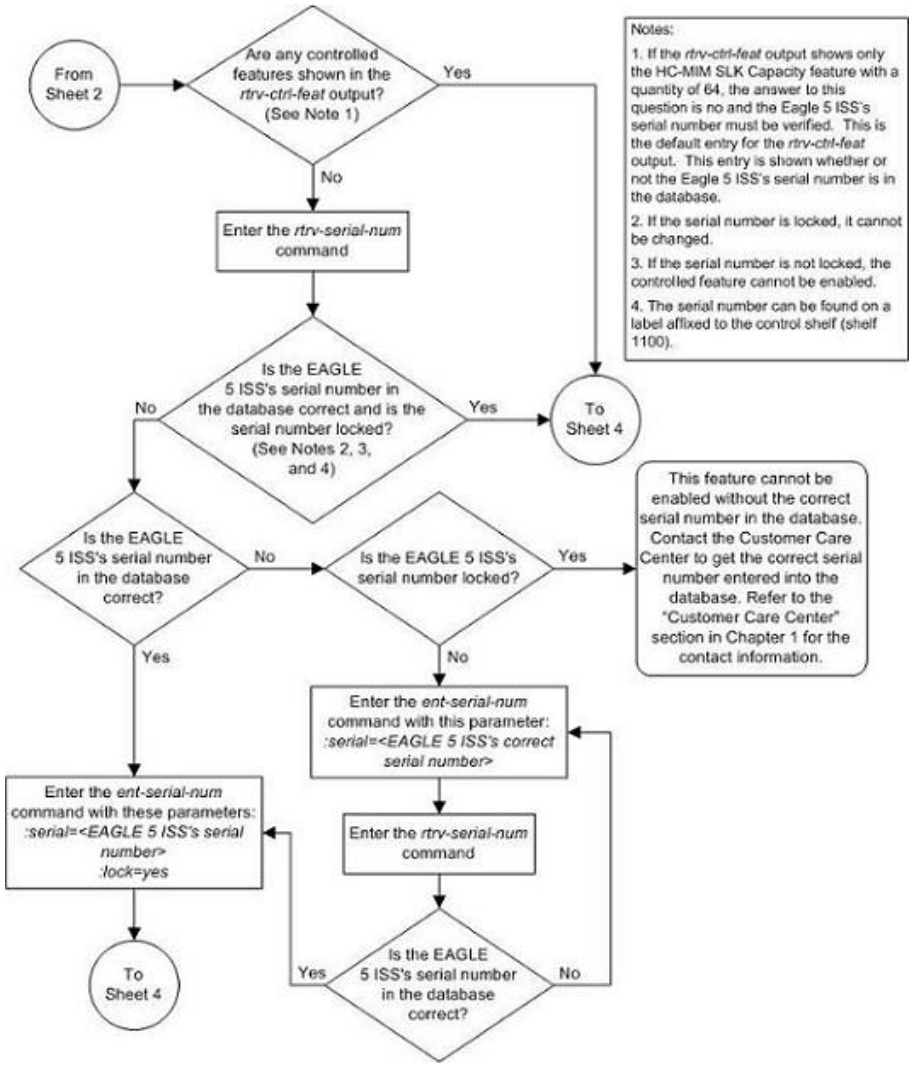
12. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

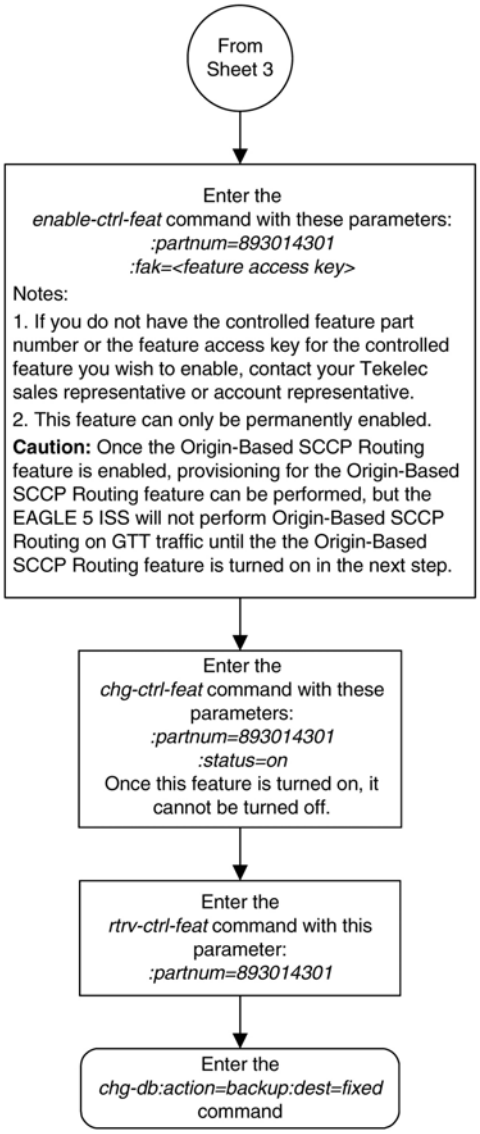
    ```
    BACKUP (FIXED) : MASP A - Backup starts on active MASP.
    BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
    BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
    BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
    ```

Figure 64: Activating the Origin-Based SCCP Routing Feature


Enter the *rtrv-ctrl-feat* command
Is the Origin-Based SCCP Routing feature enabled?
No
To Sheet 2
Yes
Is the status of the Origin-Based SCCP Routing feature on or off?
On
The Origin-Based SCCP Routing feature is enabled and turned on. No further action is necessary.
Off
Enter the *chg-ctrl-feat* command with these parameters:
:partnum=893014301
:status=on
Once this feature is turned on, it cannot be turned off.
Enter the *rtrv-ctrl-feat* command with this parameter:
:partnum=893014301
Enter the *chg-db:action=backup:dest=fixed* command


From Sheet 1
Enter the rtrv-feat command
Is the EGTT feature on?
No
Yes
Enter the chg-feat command with this parameter: :egtt=on
If the GTT feature is not on, turn the GTT feature on by specifying the gtt=on parameter with the egtt=on parameter.
Enter the rtrv-card command
Are service modules shown in the rtrv-card output?
No
Go to the "Adding a Service Module" procedure in Chapter 2 to turn the GTT feature on and add service modules to the database according to the Service Module and Feature Combinations table
Yes
Are any cards assigned the TSM card type and running the SCCP application in the database?
No
Yes
Replace the TSMs with DSMs or E5-SM4G cards.
Contact the Customer Care Center before replacing any service modules. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
To Sheet 3


From Sheet 2
Are any controlled features shown in the rtrv-ctrl-feat output? (See Note 1)
Yes
No
Notes:
1. If the rtrv-ctrl-feat output shows only the HC-MIM SLK Capacity feature with a quantity of 64, the answer to this question is no and the Eagle 5 ISS's serial number must be verified. This is the default entry for the rtrv-ctrl-feat output. This entry is shown whether or not the Eagle 5 ISS's serial number is in the database.
2. If the serial number is locked, it cannot be changed.
3. If the serial number is not locked, the controlled feature cannot be enabled.
4. The serial number can be found on a label affixed to the control shelf (shelf 1100).
Enter the rtrv-serial-num command
Is the EAGLE 5 ISS's serial number in the database correct and is the serial number locked? (See Notes 2, 3, and 4)
No
Yes
To Sheet 4
Is the EAGLE 5 ISS's serial number in the database correct?
No
Is the EAGLE 5 ISS's serial number locked?
Yes
This feature cannot be enabled without the correct serial number in the database. Contact the Customer Care Center to get the correct serial number entered into the database. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
Yes
No
Enter the ent-serial-num command with this parameter: :serial=<EAGLE 5 ISS's correct serial number>
Enter the ent-serial-num command with these parameters: :serial=<EAGLE 5 ISS's serial number> :lock=yes
Enter the rtrv-serial-num command
To Sheet 4
Is the EAGLE 5 ISS's serial number in the database correct?
Yes
No



Activating the Hex Digit Support for GTT Feature

This procedure is used to enable and turn on the Hex Digit Support for GTT feature using the feature's part number and a feature access key.

The feature access key for the Hex Digit Support for GTT feature 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. The feature access key contains 13 alphanumeric characters and is not case sensitive.

`:partnum` – The Tekelec-issued part number of the Hex Digit Support for GTT feature, 893018501.

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).

This feature cannot be temporarily enabled (with the temporary feature access key).

Once this feature is enabled, the feature is also activated. The `chg-ctrl-feat` command cannot be used to turn this feature on. Once this feature is enabled, the feature cannot be turned off.

The status of the feature in the EAGLE 5 ISS is shown with the `rtrv-ctrl-feat` command.

The Hex Digit Support for GTT feature requires that DSMs or E5-SM4Gs are installed and provisioned in the EAGLE 5 ISS. TSMs are shown by the entries `TSM` in the `TYPE` column and `SCCP` in the `APPL` column of the `rtrv-card` output. DSMs and E5-SM4Gs are shown by the entries `DSM` in the `TYPE` column and `VSCCP` in the `APPL` column of the `rtrv-card` output. All TSMs running the SCCP application must be replaced with DSMs or E5-SM4Gs. Contact the Customer Care before replacing the TSMs. Refer to *Customer Care Center* on page 4 for the contact information.

Before the Hex Digit Support for GTT feature can be enabled, the GTT feature must be turned on. The state of the GTT feature can be verified using the `rtrv-feat` command.

1. Display the status of the Hex Digit Support for GTT feature by entering the `rtrv-ctrl-feat` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
HC-MIM SLK Capacity       893012707  on      64

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 Hex Digit Support for GTT feature is enabled, the entry `Hex Digit Support for GTT` is shown in the `rtrv-ctrl-feat` output. No further action is necessary. This procedure does not need to be performed.

If the Hex Digit Support for GTT feature is not enabled, continue the procedure with *Step 2* on page 808.

2. Verify that the GTT feature is on, by entering the `rtrv-feat` command. If the GTT feature is on, the `GTT` field should be set to `on`.

   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 GTT feature is not on, perform the *Adding a Service Module* on page 76 procedure to turn the GTT feature on and add DSMsor E5-SM4G cards to the EAGLE 5 ISS. After the GTT feature is turned on and the DSMsor E5-SM4G cards have been added, continue the procedure with *Step 4* on page 809.

   If the GTT feature is on, continue the procedure with *Step 3* on page 808.

3. Display the cards in the EAGLE 5 ISS using the `rtrv-card` command. The Hex Digit Support for GTT feature requires that DSMsor E5-SM4G cards running the VSCCP application are in the database. This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:58:31 GMT EAGLE5 36.0.0
CARD   TYPE      APPL      LSET NAME     PORT SLC LSET NAME     PORT SLC
1102   TSM       GLS
1113   GPSM      EOAM
1114   TDM-A
1115   GPSM      EOAM
1116   TDM-B
1117   MDAL
1118   RESERVED
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
1308   LIMDS0    SS7ANSI   sp6           A    1   sp7           B    0
1314   LIMDS0    SS7ANSI   sp7           A    1   sp5           B    1
1317   ACMENET   STPLAN
```

There are three types of service modules, TSMs running the SCCP application and DSMs or E5-SM4Gs running the VSCCP application.

TSMs are shown by the entries `TSM` in the `TYPE` column and `SCCP` in the `APPL` column. DSMs and E5-SM4Gs are shown by the entries `DSM` in the `TYPE` column and `VSCCP` in the `APPL` column.

To enable this feature, all TSMs running the SCCP application must be replaced by DSMs or E5-SM4Gs. Contact the Customer Care Center before replacing the TSMs. Refer to *Customer Care Center* on page 4 for the contact information.

If no service modules are shown in the `rtrv-card` output, perform the *Adding a Service Module* on page 76 procedure to add DSMs or E5-SM4Gs to the EAGLE 5 ISS. After the DSMs or E5-SM4Gs have been added, continue the procedure with *Step 4* on page 809.

If DSMs or E5-SM4Gs running the VSCCP application are in the EAGLE 5 ISS, continue the procedure with *Step 4* on page 809.

4. Display the serial number in the database with the `rtrv-serial-num` command.

   Note: If the `rtrv-ctrl-feat` output in *Step 1* on page 807 shows any controlled features, continue the procedure with *Step 8* on page 810. If the `rtrv-ctrl-feat` output shows only the HC-MIM SLK Capacity feature with a quantity of 64, *Step 4* on page 809 through *Step 7* on page 810 must be performed.

   This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

5. Enter the correct serial number into the database using the `ent-serial-num` command with the `serial` parameter.

   Note: If the serial number is correct and locked, continue the procedure with *Step 8* on page 810. If the serial number is correct but not locked, continue the procedure with *Step 7* on page 810. If the serial number is not correct, but is locked, this feature cannot be enabled and the remainder of this procedure cannot be performed. Contact the Customer Care Center to get an incorrect and locked serial number changed. Refer to *Customer Care Center* on page 4 for the contact information. The serial number can be found on a label affixed to the control shelf (shelf 1100).

   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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

6. Verify that the serial number entered in *Step 5* on page 809 was entered correctly using the `rtrv-serial-num` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

   If the serial number was not entered correctly, repeat *Step 5* on page 809 and *Step 6* on page 809 and re-enter the correct serial number.

7. Lock the serial number in the database by entering the `ent-serial-num` command with the serial number shown in *Step 4* on page 809, if the serial number shown in *Step 4* on page 809 is correct, or with the serial number shown in *Step 6* on page 809, if the serial number was changed in *Step 5* on page 809, 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   ENT-SERIAL-NUM:  MASP A - COMPLTD
   ```

8. Enable the Hex Digit Support for GTT feature with the `enable-ctrl-feat` command specifying the part number for the Hex Digit Support for GTT feature and the feature access key. Enter this command.

   ```
   enable-ctrl-feat:partnum=893018501:fak=<Hex Digit Support for GTT
   feature access key>
   ```

   Note: The Hex Digit Support for GTT 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 Hex Digit Support for GTT feature, contact your Tekelec Sales Representative or Account Representative.

   When the `enable-crtl-feat` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   ENABLE-CTRL-FEAT: MASP B - COMPLTD
   ```

9. Verify the changes by entering the `rtrv-ctrl-feat`command with the part number used in *Step 8* on page 810.

   ```
   rtrv-ctrl-feat:partnum=893018501
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   The following features have been permanently enabled:

   Feature Name             Partnum    Status  Quantity
   Hex Digit Support for GTT 893018501  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:

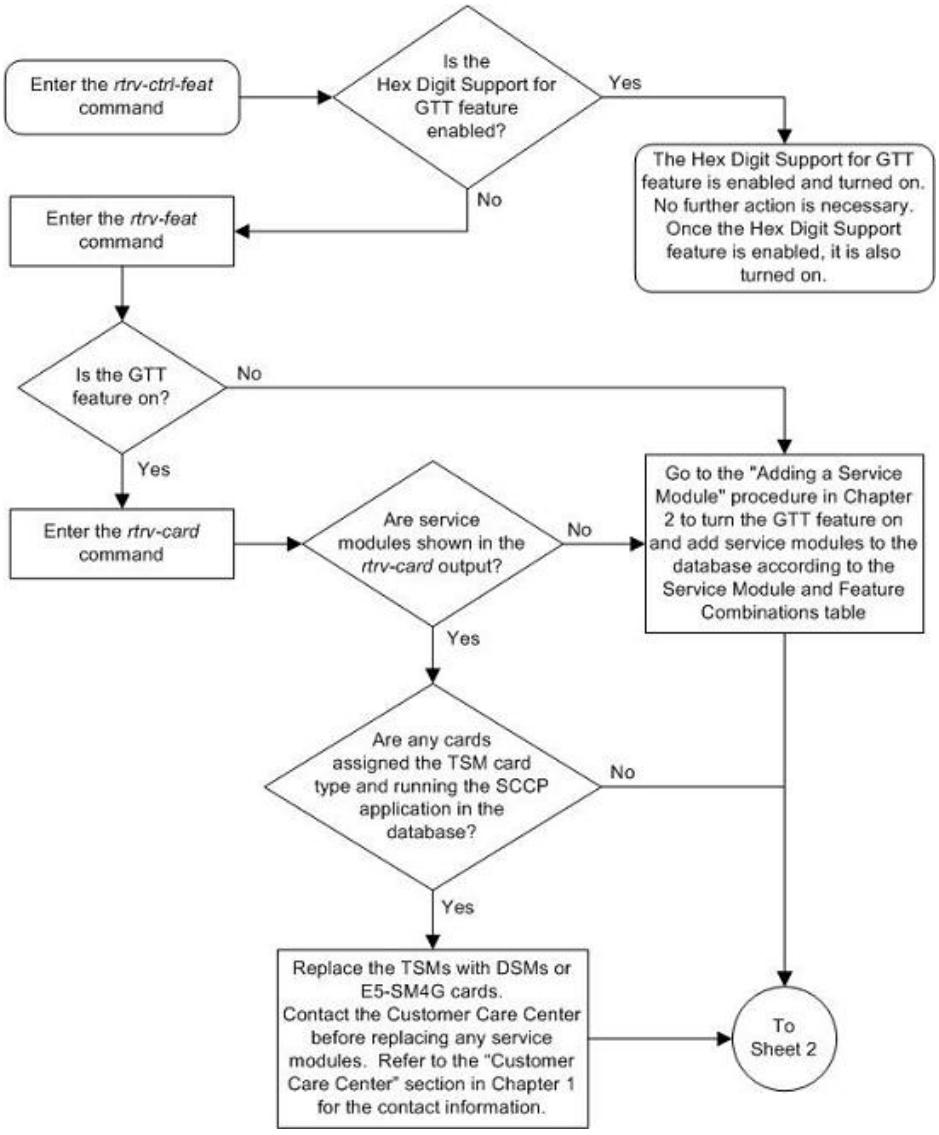
   Feature Name             Partnum
   Zero entries found.
   ```

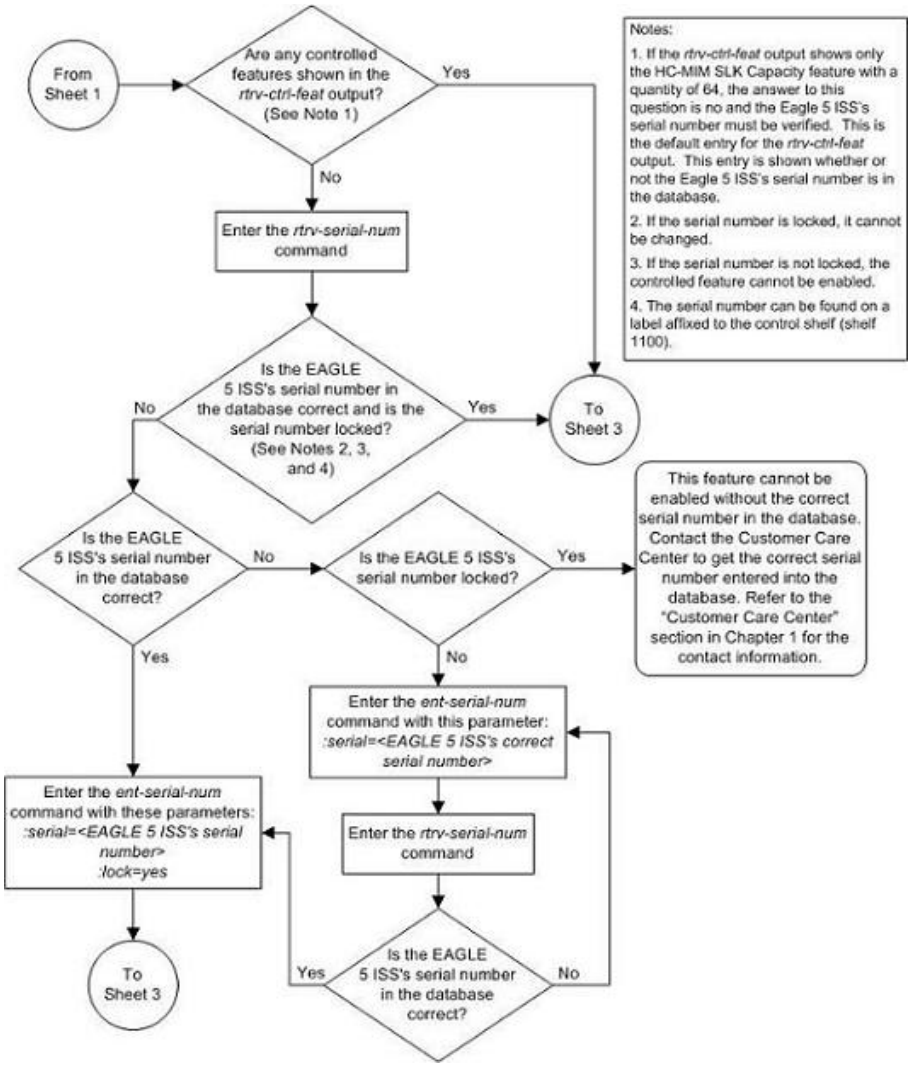
10. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

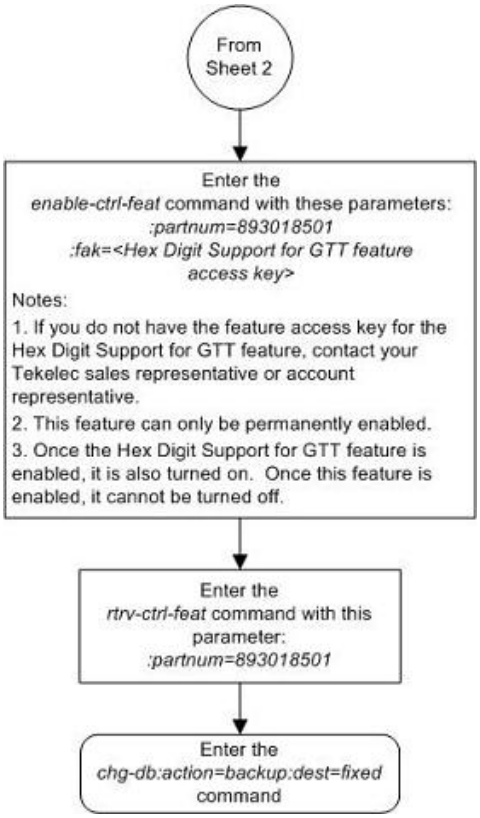
These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 65: Activating the Hex Digit Support for GTT Feature




From Sheet 1
Are any controlled features shown in the rtrv-ctrl-feat output? (See Note 1)
Yes
No
Notes:
1. If the rtrv-ctrl-feat output shows only the HC-MIM SLK Capacity feature with a quantity of 64, the answer to this question is no and the Eagle 5 ISS's serial number must be verified. This is the default entry for the rtrv-ctrl-feat output. This entry is shown whether or not the Eagle 5 ISS's serial number is in the database.
2. If the serial number is locked, it cannot be changed.
3. If the serial number is not locked, the controlled feature cannot be enabled.
4. The serial number can be found on a label affixed to the control shelf (shelf 1100).
Enter the rtrv-serial-num command
Is the EAGLE 5 ISS's serial number in the database correct and is the serial number locked? (See Notes 2, 3, and 4)
No
Yes
To Sheet 3
Is the EAGLE 5 ISS's serial number in the database correct?
No
Is the EAGLE 5 ISS's serial number locked?
Yes
This feature cannot be enabled without the correct serial number in the database. Contact the Customer Care Center to get the correct serial number entered into the database. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
Yes
No
Enter the ent-serial-num command with this parameter: :serial=<EAGLE 5 ISS's correct serial number>
Enter the ent-serial-num command with these parameters: :serial=<EAGLE 5 ISS's serial number> :lock=yes
Enter the rtrv-serial-num command
To Sheet 3
Is the EAGLE 5 ISS's serial number in the database correct?
Yes
No



Activating the Weighted GTT Load Sharing Feature

This procedure is used to enable and turn on the Weighted GTT Load Sharing feature using the feature's part number and a feature access key.

The feature access key for the Weighted GTT Load Sharing feature 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. The feature access key contains 13 alphanumeric characters and is not case sensitive.

`:partnum` – The Tekelec-issued part number of the Weighted GTT Load Sharing feature, 893017001.

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).

This feature cannot be temporarily enabled (with the temporary feature access key).

Once this feature has been enabled, the 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 Weighted GTT Load Sharing feature, 893017001.

`:status=on` – used to turn the Weighted GTT Load Sharing feature on.

Once the Weighted GTT Load Sharing feature has been turned on, it be cannot be turned off.

The status of the features in the EAGLE 5 ISS is shown with the `rtrv-ctrl-feat` command.

The Weighted GTT Load Sharing feature requires that DSMs or E5-SM4G cards are installed and provisioned in the EAGLE 5 ISS. TSMs are shown by the entries `TSM` in the `TYPE` column and `SCCP` in the `APPL` column of the `rtrv-card` output. DSMs and E5-SM4G cards are shown by the entries `DSM` in the `TYPE` column and `VSCCP` in the `APPL` column of the `rtrv-card` output. All TSMs running the SCCP application must be replaced with DSMs or E5-SM4G cards. Contact the Customer Care Center before replacing the TSMs. Refer to *Customer Care Center* on page 4 for the contact information.

Before the Weighted GTT Load Sharing feature can be enabled, the GTT feature must be turned on. The state of the GTT feature can be verified using the `rtrv-feat` command.

1. Display the status of the Weighted GTT Load Sharing feature by entering the `rtrv-ctrl-feat` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
HC-MIM SLK Capacity       893012707  on      64

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 Weighted GTT Load Sharing feature is enabled and turned on, no further action is necessary. This procedure does not need to be performed.

   If the Weighted GTT Load Sharing feature is enabled and but not turned on, skip steps 2 through 8 and go to step 9.

If the Weighted GTT Load Sharing feature is not enabled, go to step 2.

2. Verify that the GTT feature is on, by entering the `rtrv-feat` command. If the GTT feature is on, the `GTT` field should be set to `on`.

   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 GTT feature is on, shown by the entry `GTT = on` in the `rtrv-feat` command output in step 2, go to step 3.

   If the GTT feature is off, perform the *Adding a Service Module* on page 76 procedure to turn the GTT feature on and add the required number of DSMs or E5-SM4G cards. After the *Adding a Service Module* on page 76 procedure is performed, skip step 3 and go to step 4.

3. Display the cards in the EAGLE 5 ISS using the `rtrv-card` command. The Weighted GTT Load Sharing feature requires that DSMs or E5-SM4G cards running the VSCCP application are in the database. This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:58:31 GMT EAGLE5 36.0.0
CARD   TYPE      APPL      LSET NAME     PORT SLC LSET NAME     PORT SLC
1102   TSM       GLS
1113   GPSM      EOAM
1114   TDM-A
1115   GPSM      EOAM
1116   TDM-B
1117   MDAL
1118   RESERVED
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   DSM       VSCCP
1303   DSM       VSCCP
1305   DSM       VSCCP
1308   LIMDS0    SS7ANSI   sp6           A    1   sp7           B    0
1314   LIMDS0    SS7ANSI   sp7           A    1   sp5           B    1
1317   ACMENET   STPLAN
```

   There are two types of service modules, TSMs running the SCCP application and DSMs or E5-SM4G cards running the VSCCP application.

   TSMs are shown by the entries `TSM` in the `TYPE` column and `SCCP` in the `APPL` column. DSMs and E5-SM4G cards are shown by the entries `DSM` in the `TYPE` column and `VSCCP` in the `APPL` column.

   To enable this feature, all TSMs running the SCCP application must be replaced by DSMs or E5-SM4G cards. Contact the Customer Care Center before replacing the TSMs. Refer to *Customer Care Center* on page 4 for the contact information.

   If DSMs or E5-SM4G cards running the VSCCP application are in the EAGLE 5 ISS, go to step 4.

   Note: If the `rtrv-ctrl-feat` output in step 1 shows any controlled features, skip steps 4 through 7, and go to step 8. If the `rtrv-ctrl-feat` output shows only the HC-MIMSLK Capacity feature with a quantity of 64, steps 4 through 7 must be performed.

4. Display the serial number in the database with the `rtrv-serial-num` command. This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

Note: If the serial number is correct and locked, skip steps 5, 6, and 7, and go to step 8. If the serial number is correct but not locked, skip steps 5 and 6, and go to step 7. If the serial number is not correct, but is locked, this feature cannot be enabled and the remainder of this procedure cannot be performed. Contact the Customer Care Center to get an incorrect and locked serial number changed. Refer to *Customer Care Center* on page 4 for the contact information. The serial number can be found on a label affixed to the control shelf (shelf 1100).

5. 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

6. Verify that the serial number entered into step 5 was entered correctly using the `rtrv-serial-num` command. This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

   If the serial number was not entered correctly, repeat steps 5 and 6 and re-enter the correct serial number.

7. Lock the serial number in the database by entering the `ent-serial-num` command with the serial number shown in step 4, if the serial number shown in step 4 is correct, or with the serial number shown in step 6, if the serial number was changed in step 5, 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

8. Enable the Weighted GTT Load Sharing feature with the `enable-ctrl-feat` command specifying the part number for the Weighted GTT Load Sharing feature and the feature access key. Enter this command.

   ```
   enable-ctrl-feat:partnum=893017001:fak=<Weighted GTT Load Sharing feature access key>
   ```

   Note: The Weighted GTT Load Sharing feature cannot be enabled with a temporary feature access key.

   Note: The feature access key (the `fak` parameter) is provided by Tekelec. If you do not have the feature access key for the Weighted GTT Load Sharing feature, contact your Tekelec Sales Representative or Account Representative.

   When the `enable-crtl-feat` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   ENABLE-CTRL-FEAT: MASP B - COMPLTD
   ```

9. Turn the Weighted GTT Load Sharing feature on with the `chg-ctrl-feat` command specifying the part number for the Weighted GTT Load Sharing feature and the `status=on` parameter. Enter this command.

   ```
   chg-ctrl-feat:partnum=893017001:status=on
   ```

   Note: Once this feature is turned on, it cannot be turned off.

   When the `chg-crtl-feat` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   CHG-CTRL-FEAT: MASP B - COMPLTD
   ```

10. Verify the changes by entering the `rtrv-ctrl-feat`command with the Weighted GTT Load Sharing feature part number. Enter this command.

    ```
    rtrv-ctrl-feat:partnum=893017001
    ```

    The following is an example of the possible output.

    ```
    rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
    The following features have been permanently enabled:

    Feature Name              Partnum   Status Quantity
    Weighted GTT Load-Sharing 893017001 on     ----

    The following features have been temporarily enabled:

    Feature Name              Partnum    Status  Quantity     Trial Period Left
    Zero entries found.

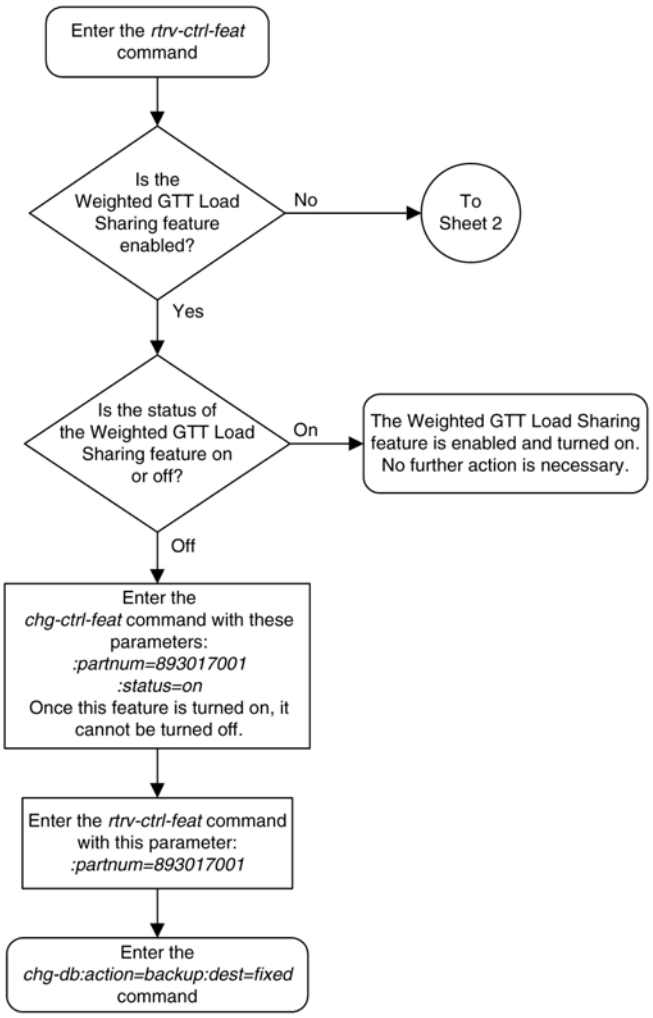
    The following features have expired temporary keys:

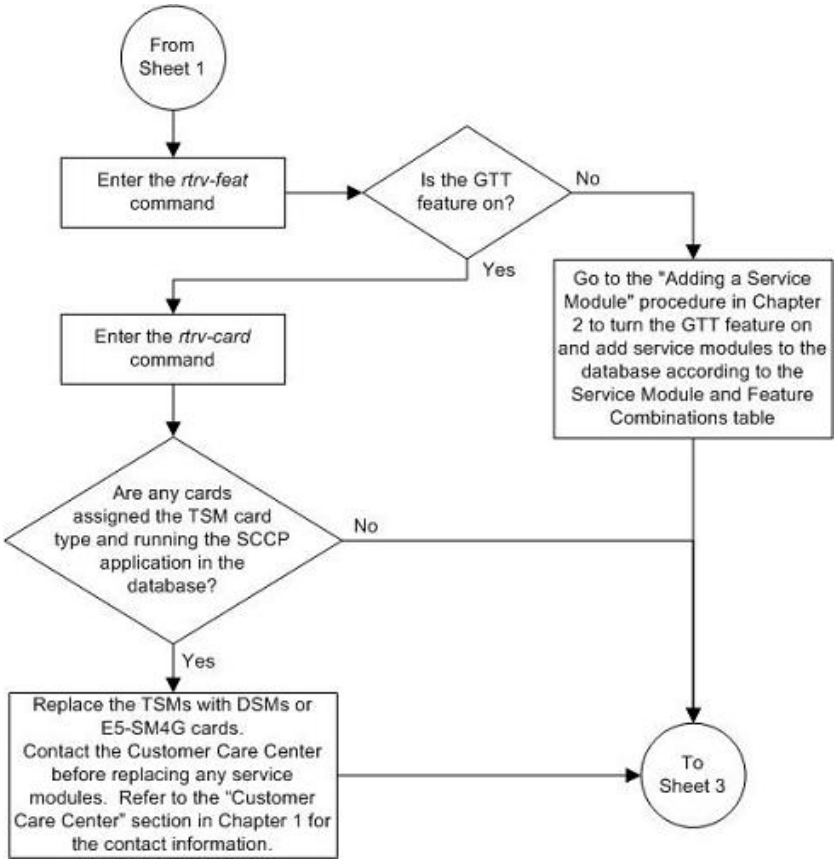
    Feature Name              Partnum
    Zero entries found.
    ```

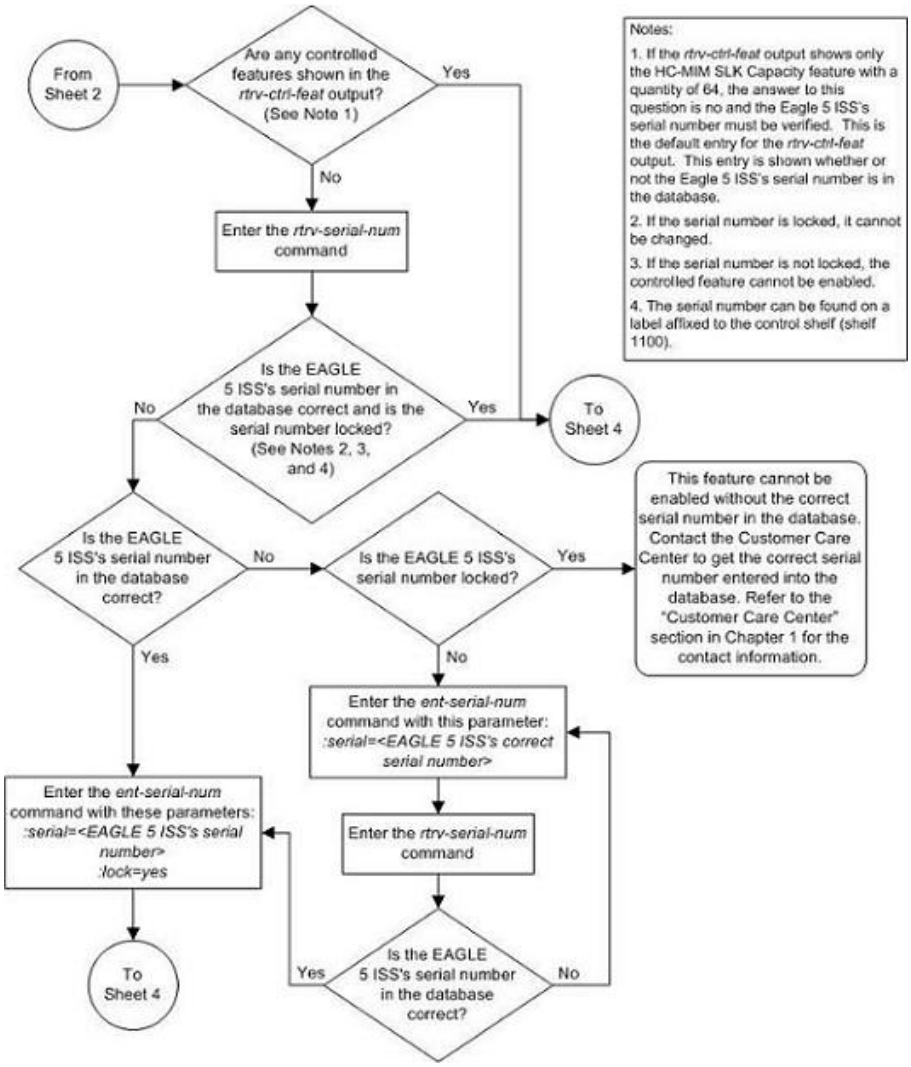
11. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

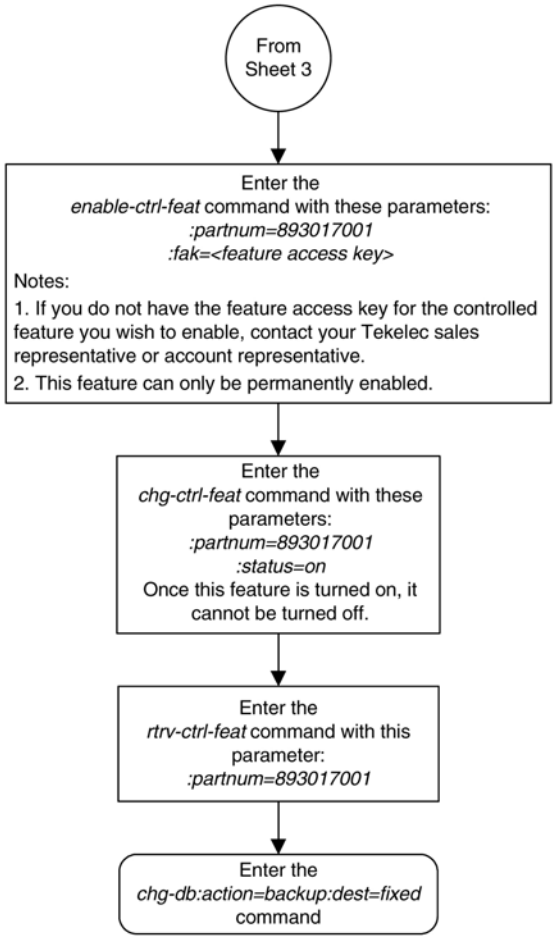
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

Figure 66: Activating the Weighted GTT Load Sharing Feature




From Sheet 1
Enter the rtrv-feat command
Is the GTT feature on?
No
Yes
Go to the "Adding a Service Module" procedure in Chapter 2 to turn the GTT feature on and add service modules to the database according to the Service Module and Feature Combinations table
Enter the rtrv-card command
Are any cards assigned the TSM card type and running the SCCP application in the database?
No
Yes
Replace the TSMs with DSMs or E5-SM4G cards. Contact the Customer Care Center before replacing any service modules. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
To Sheet 3


From Sheet 2
Are any controlled features shown in the rtrv-ctrl-feat output? (See Note 1)
Yes
No
Enter the rtrv-serial-num command
Is the EAGLE 5 ISS's serial number in the database correct and is the serial number locked? (See Notes 2, 3, and 4)
No
Yes
To Sheet 4
Is the EAGLE 5 ISS's serial number in the database correct?
No
Is the EAGLE 5 ISS's serial number locked?
Yes
This feature cannot be enabled without the correct serial number in the database. Contact the Customer Care Center to get the correct serial number entered into the database. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
Yes
No
Enter the ent-serial-num command with this parameter: :serial=<EAGLE 5 ISS's correct serial number>
Enter the ent-serial-num command with these parameters: :serial=<EAGLE 5 ISS's serial number> :lock=yes
Enter the rtrv-serial-num command
To Sheet 4
Is the EAGLE 5 ISS's serial number in the database correct?
Yes
No
Notes:
1. If the rtrv-ctrl-feat output shows only the HC-MIM SLK Capacity feature with a quantity of 64, the answer to this question is no and the Eagle 5 ISS's serial number must be verified. This is the default entry for the rtrv-ctrl-feat output. This entry is shown whether or not the Eagle 5 ISS's serial number is in the database.
2. If the serial number is locked, it cannot be changed.
3. If the serial number is not locked, the controlled feature cannot be enabled.
4. The serial number can be found on a label affixed to the control shelf (shelf 1100).



Activating the Transaction-Based GTT Load Sharing Feature

This procedure is used to enable and turn on the Transaction-Based GTT Load Sharing feature using the feature's part number and a feature access key.

The feature access key for the Transaction-Based GTT Load Sharing feature 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. The feature access key contains 13 alphanumeric characters and is not case sensitive.

`:partnum` – The Tekelec-issued part number of the Transaction-Based GTT Load Sharing feature, 893017101.

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).

This feature cannot be temporarily enabled (with the temporary feature access key).

Once this feature is enabled, provisioning for this feature can be performed, but the feature will not work until the feature is turned on with the `chg-ctrl-feat` command.

Once this feature has been enabled, the 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 Transaction-Based GTT Load Sharing feature, 893017101.

`:status=on` – used to turn the Transaction-Based GTT Load Sharing feature on.

Once the Transaction-Based GTT Load Sharing feature has been turned on, it be cannot be turned off.

The status of the features in the EAGLE 5 ISS is shown with the `rtrv-ctrl-feat` command.

The Transaction-Based GTT Load Sharing feature requires that DSMs or E5-SM4G cards are installed and provisioned in the EAGLE 5 ISS. TSMs are shown by the entries `TSM` in the `TYPE` column and `SCCP` in the `APPL` column of the `rtrv-card` output. DSMs and E5-SM4G cards are shown by the entries `DSM` in the `TYPE` column and `VSCCP` in the `APPL` column of the `rtrv-card` output. All TSMs running the SCCP application must be replaced with DSMs or E5-SM4G cards. Contact the Customer Care Center before replacing the TSMs. Refer to *Customer Care Center* on page 4 for the contact information.

1. Display the status of the Transaction-Based GTT Load Sharing feature by entering the `rtrv-ctrl-feat` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
HC-MIM SLK Capacity       893012707  on      64

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 Transaction-Based GTT Load Sharing feature is enabled and turned on, no further action is necessary. This procedure does not need to be performed.

If the Transaction-Based GTT Load Sharing feature is enabled and but not turned on, skip steps 2 through 7 and go to step 8.

If the Transaction-Based GTT Load Sharing feature is not enabled, go to step 2.

2. Verify that the GTT feature is on, by entering the `rtrv-feat` command. If the GTT feature is on, the `GTT` field should be set to `on`.

   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 GTT feature is on, shown by the entry `GTT = on` in the `rtrv-feat` command output in step 2, go to step 3.

   If the GTT feature is off, perform the *Adding a Service Module* on page 76 procedure to turn the GTT feature on and add the required number of DSMs or E5-SM4G cards. After the *Adding a Service Module* on page 76 procedure is performed, skip step 3 and go to step 4.

3. Display the cards in the EAGLE 5 ISS using the `rtrv-card` command. The Transaction-Based GTT Load Sharing feature requires that DSMs or E5-SM4G cards running the VSCCP application are in the database. This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:58:31 GMT EAGLE5 36.0.0
CARD   TYPE      APPL      LSET NAME     PORT SLC LSET NAME     PORT SLC
1102   TSM       GLS
1113   GPSM      EOAM
1114   TDM-A
1115   GPSM      EOAM
1116   TDM-B
1117   MDAL
1118   RESERVED
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   DSM       VSCCP
1303   DSM       VSCCP
1305   DSM       VSCCP
1308   LIMDS0    SS7ANSI   sp6           A    1   sp7           B    0
1314   LIMDS0    SS7ANSI   sp7           A    1   sp5           B    1
1317   ACMENET   STPLAN
```

There are three types of service modules, TSMs running the SCCP application and DSMs or E5-SM4G cards running the VSCCP application.

TSMs are shown by the entries `TSM` in the `TYPE` column and `SCCP` in the `APPL` column. DSMs and E5-SM4G cards are shown by the entries `DSM` in the `TYPE` column and `VSCCP` in the `APPL` column.

To enable this feature, all TSMs running the SCCP application must be replaced by DSMs or E5-SM4G cards. Contact the Customer Care Center before replacing the TSMs. *Customer Care Center* on page 4 for the contact information.

If DSMs or E5-SM4G cards running the VSCCP application are in the EAGLE 5 ISS, go to step 4.

Note: If the `rtrv-ctrl-feat` output in step 1 shows any controlled features, skip steps 4 through 7, and go to step 8. If the `rtrv-ctrl-feat` output shows only the HC-MIMSLK Capacity feature with a quantity of 64, steps 4 through 7 must be performed.

4. Display the serial number in the database with the `rtrv-serial-num` command. This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

Note: If the serial number is correct and locked, skip steps 5, 6, and 7, and go to step 8. If the serial number is correct but not locked, skip steps 5 and 6, and go to step 7. If the serial number is not correct, but is locked, this feature cannot be enabled and the remainder of this procedure cannot be performed. Contact the Customer Care Center to get an incorrect and locked serial number changed. Refer to *Customer Care Center* on page 4 for the contact information. The serial number can be found on a label affixed to the control shelf (shelf 1100).

5. 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

6. Verify that the serial number entered into step 5 was entered correctly using the `rtrv-serial-num` command. This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

   If the serial number was not entered correctly, repeat steps 5 and 6 and re-enter the correct serial number.

7. Lock the serial number in the database by entering the `ent-serial-num` command with the serial number shown in step 4, if the serial number shown in step 4 is correct, or with the serial number shown in step 6, if the serial number was changed in step 5, 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

8. Enable the Transaction-Based GTT Load Sharing feature with the `enable-ctrl-feat` command specifying the part number for the Transaction-Based GTT Load Sharing feature and the feature access key. Enter this command.

   ```
   enable-ctrl-feat:partnum=893017101:fak=<Transaction-Based GTT Load Sharing feature access key>
   ```

   Note: The Transaction-Based GTT Load Sharing 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 Transaction-Based GTT Load Sharing feature, contact your Tekelec Sales Representative or Account Representative.

   When the `enable-crtl-feat` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   ENABLE-CTRL-FEAT: MASP B - COMPLTD
   ```

   CAUTION: Once the Transaction-Based GTTLoad Sharing feature is enabled, provisioning for Transaction-Based GTTLoad Sharing can be performed, but the EAGLE 5 ISS will not perform Transaction-Based GTTLoad Sharing on GTT traffic until the Transaction-Based GTTLoad Sharing is turned on in step 8.

   Note: If you do not wish to turn the Transaction-Based GTTLoad Sharing feature on, skip step 9 and go to step 10.

9. Turn the Transaction-Based GTT Load Sharing feature on with the `chg-ctrl-feat` command specifying the part number for the Transaction-Based GTT Load Sharing feature and the `status=on` parameter.

   Enter this command.

   ```
   chg-ctrl-feat:partnum=893017101:status=on
   ```

   Note: Once this feature is turned on, it cannot be turned off.

   When the `chg-crtl-feat` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   CHG-CTRL-FEAT: MASP B - COMPLTD
   ```

10. Verify the changes by entering the `rtrv-ctrl-feat`command with the Transaction-Based GTT Load Sharing feature part number. Enter this command.

    ```
    rtrv-ctrl-feat:partnum=893017101
    ```

The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum   Status Quantity
Transaction Based GTT LS  893017101 on     ----

The following features have been temporarily enabled:

Feature Name              Partnum    Status  Quantity     Trial Period Left
Zero entries found.

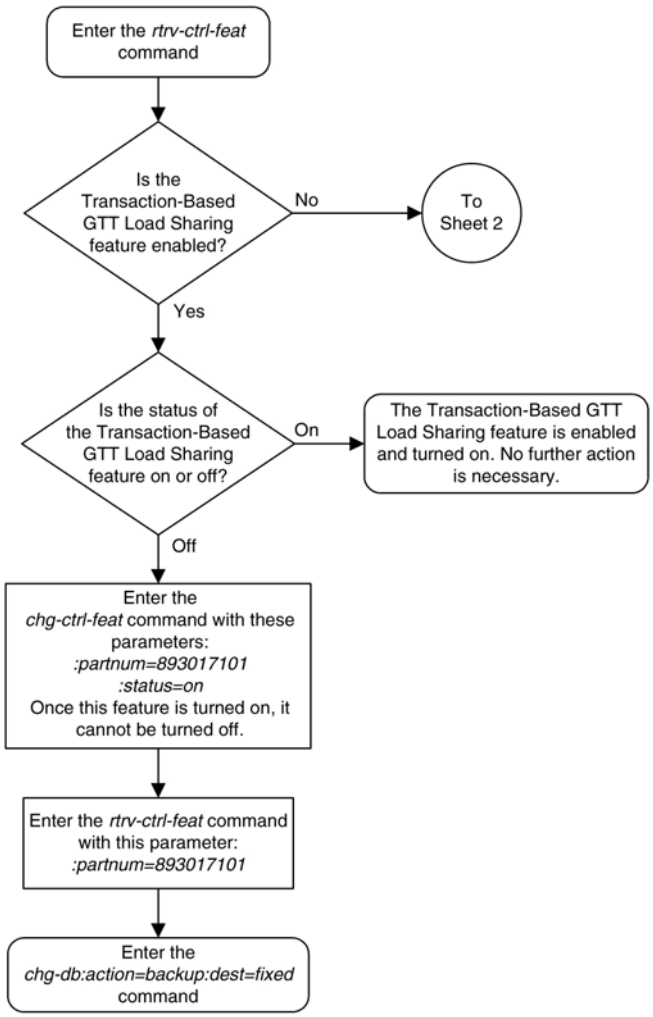
The following features have expired temporary keys:

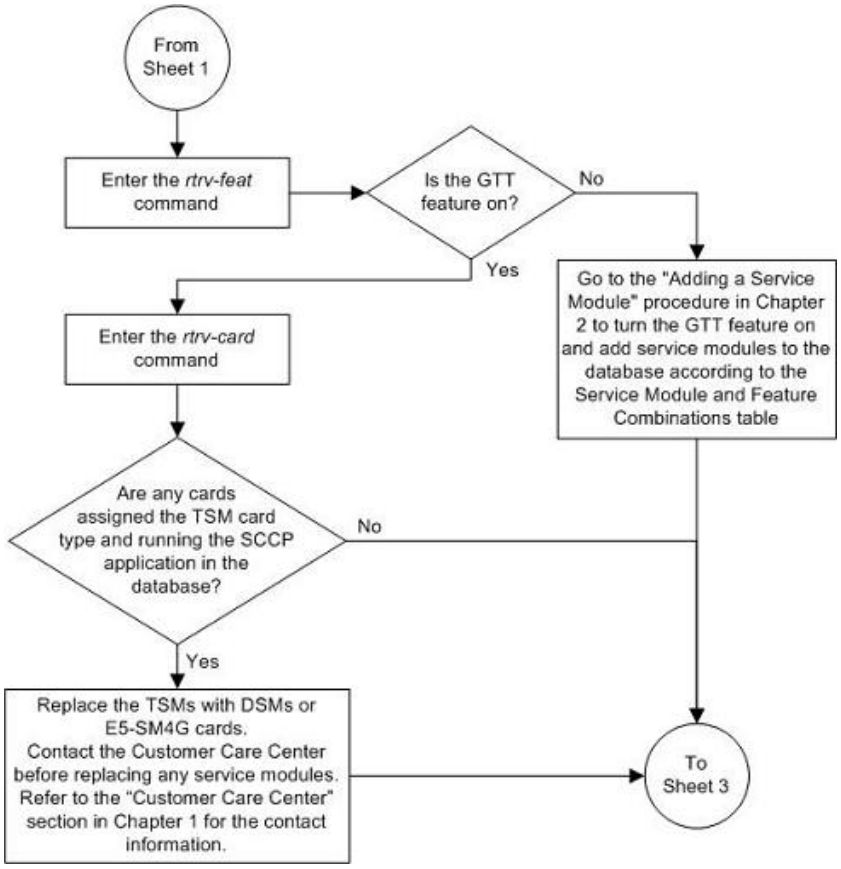
Feature Name              Partnum
Zero entries found.
```

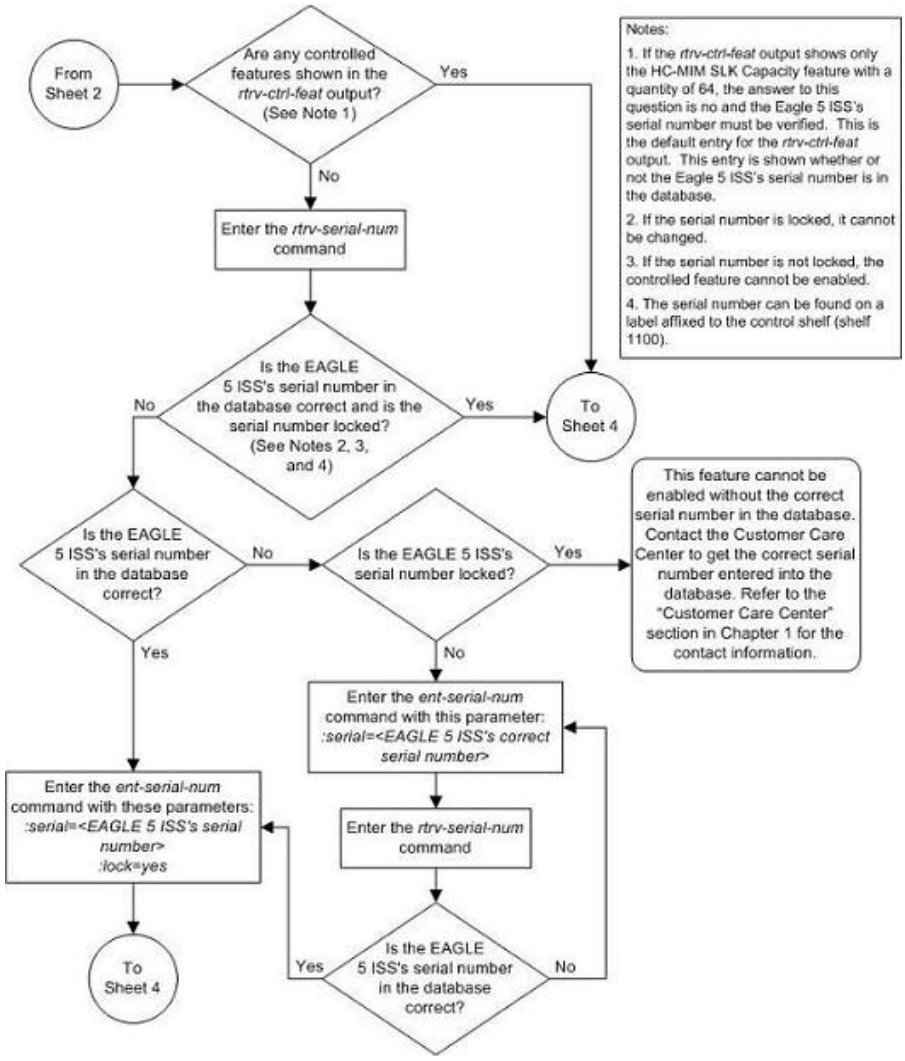
11. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

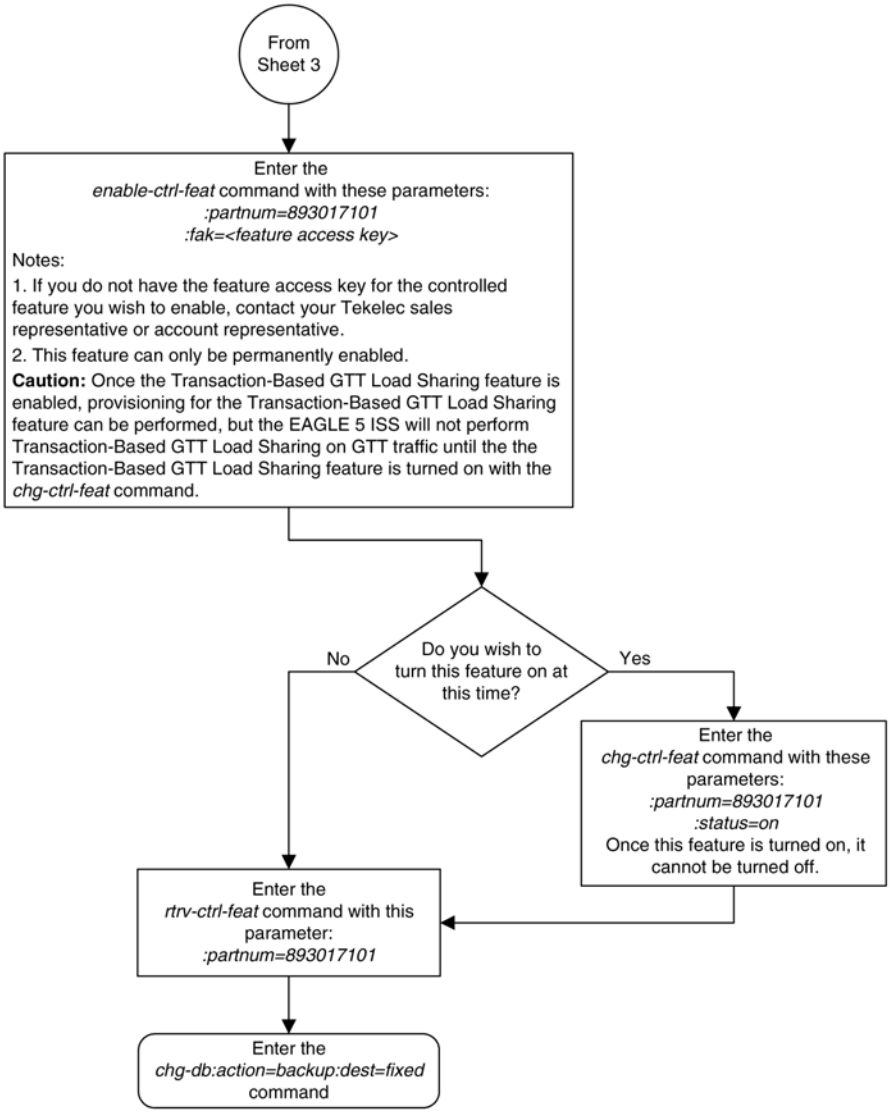
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

Figure 67: Activating the Transaction-Based GTT Load Sharing Feature


Enter the *rtrv-ctrl-feat* command
Is the Transaction-Based GTT Load Sharing feature enabled?
No
To Sheet 2
Yes
Is the status of the Transaction-Based GTT Load Sharing feature on or off?
On
The Transaction-Based GTT Load Sharing feature is enabled and turned on. No further action is necessary.
Off
Enter the *chg-ctrl-feat* command with these parameters:
:partnum=893017101
:status=on
Once this feature is turned on, it cannot be turned off.
Enter the *rtrv-ctrl-feat* command with this parameter:
:partnum=893017101
Enter the *chg-db:action=backup:dest=fixed* command


From Sheet 1
Enter the rtrv-feat command
Is the GTT feature on?
No
Yes
Go to the "Adding a Service Module" procedure in Chapter 2 to turn the GTT feature on and add service modules to the database according to the Service Module and Feature Combinations table
Enter the rtrv-card command
Are any cards assigned the TSM card type and running the SCCP application in the database?
No
Yes
Replace the TSMs with DSMs or E5-SM4G cards.
Contact the Customer Care Center before replacing any service modules. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
To Sheet 3


From Sheet 2
Are any controlled features shown in the rtrv-ctrl-feat output? (See Note 1)
Yes
No
Notes:
1. If the rtrv-ctrl-feat output shows only the HC-MIM SLK Capacity feature with a quantity of 64, the answer to this question is no and the Eagle 5 ISS's serial number must be verified. This is the default entry for the rtrv-ctrl-feat output. This entry is shown whether or not the Eagle 5 ISS's serial number is in the database.
2. If the serial number is locked, it cannot be changed.
3. If the serial number is not locked, the controlled feature cannot be enabled.
4. The serial number can be found on a label affixed to the control shelf (shelf 1100).
Enter the rtrv-serial-num command
Is the EAGLE 5 ISS's serial number in the database correct and is the serial number locked? (See Notes 2, 3, and 4)
No
Yes
To Sheet 4
Is the EAGLE 5 ISS's serial number in the database correct?
No
Is the EAGLE 5 ISS's serial number locked?
Yes
This feature cannot be enabled without the correct serial number in the database. Contact the Customer Care Center to get the correct serial number entered into the database. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
Yes
No
Enter the ent-serial-num command with this parameter: :serial=<EAGLE 5 ISS's correct serial number>
Enter the ent-serial-num command with these parameters: :serial=<EAGLE 5 ISS's serial number> :lock=yes
Enter the rtrv-serial-num command
To Sheet 4
Is the EAGLE 5 ISS's serial number in the database correct?
Yes
No



Activating the SCCP Loop Detection Feature

This procedure is used to enable and turn on the SCCP Loop Detection feature using the feature's part number and a feature access key.

The feature access key for the SCCP Loop Detection feature 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. The feature access key contains 13 alphanumeric characters and is not case sensitive.

`:partnum` – The Tekelec-issued part number of the SCCP Loop Detection feature, 893016501.

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).

This feature cannot be temporarily enabled (with the temporary feature access key).

Once this feature is enabled, provisioning for this feature can be performed, but the feature will not work until the feature is turned on with the `chg-ctrl-feat` command. The `chg-ctrl-feat` command uses these parameters:

`:partnum` – The Tekelec-issued part number of the SCCP Loop Detection feature, 893016501.

`:status=on` – used to turn the SCCP Loop Detection feature on.

Once the SCCP Loop Detection feature has been turned on, it be cannot be turned off.

The status of the features in the EAGLE 5 ISS is shown with the `rtrv-ctrl-feat` command.

Once the SCCP Loop Detection feature is turned on, SCCP Loop Detection is performed on MSUs requiring global title translation. For more information on the SCCP Loop Detection feature, refer to the *SCCP Loop Detection* on page 54 section.

1. Display the status of the SCCP Loop Detection feature by entering the `rtrv-ctrl-feat` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
HC-MIM SLK Capacity       893012707  on            64
Intermed GTT Load Sharing 893006901  on          ----
G-Port Circ Route Prevent 893007001  on          ----
Network Security Enhance  893009101  off         ----
EAGLE OA&M IP Security    893400001  off         ----
Flexible GTT Load-Sharing 893015401  on          ----
Origin Based SCCP Routing 893014301  on          ----
SCCP Loop Detection       893016501  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 SCCP Loop Detection feature is enabled and turned on, no further action is necessary. This procedure does not need to be performed.

If the SCCP Loop Detection feature is enabled and but not turned on, skip steps 2 through 9 and go to step 10.

If the SCCP Loop Detection feature is not enabled, go to step 2.

2. Verify that the GTT feature is on, by entering the `rtrv-feat` command. If the GTT feature is on, the `GTT` field should be set to `on`.

   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 GTT feature is on, shown by the entry `GTT = on` in the `rtrv-feat` command output in skip step 3 and go to step 4.

   If the GTT feature is off, perform step 3 to turn the GTT feature on.

3. Turn the global title translation feature on by entering this command.

   ```
   chg-feat:gtt=on
   ```

   NOTE: Once the Global Title Translation (GTT) feature is turned on with the `chg-feat` command, it cannot be turned off. The GTT feature must be purchased before turning it on. If you are not sure whether you have purchased the GTT feature, contact your Tekelec Sales Representative or Account Representative.

   When the `chg-feat` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 07-03-25 09:57:41 GMT EAGLE5 35.6.0
   CHG-FEAT: MASP A - COMPLTD
   ```

4. Display the cards in the EAGLE 5 ISS using the `rtrv-card` command. The SCCP Loop Detection feature requires that DSMs or E5-SM4G cards running the VSCCP application are in the database. This is an example of the possible output.

   ```
   rlghncxa03w 07-03-25 09:58:31 GMT EAGLE5 35.6.0
   CARD   TYPE      APPL      LSET NAME     PORT SLC LSET NAME     PORT SLC
   1102   TSM       GLS
   1113   GPSM      EOAM
   1114   TDM-A
   1115   GPSM      EOAM
   1116   TDM-B
   1117   MDAL
   1118   RESERVED
   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   DSM       VSCCP
   1303   DSM       VSCCP
   1305   DSM       VSCCP
   1308   LIMDS0    SS7ANSI   sp6           A    1   sp7           B    0
   ```

```
1314   LIMDS0    SS7ANSI   sp7          A    1   sp5          B    1
1317   ACMENET   STPLAN
```

There are three types of service modules, TSMs running the SCCP application and DSMsor E5-SM4G cards running the VSCCP application.

TSMs are shown by the entries TSM in the TYPE column and SCCP in the APPL column. DSMsand E5-SM4G cards are shown by the entries DSM in the TYPE column and VSCCP in the APPL column.

To enable this feature, all TSMs running the SCCP application must be replaced by DSMsor E5-SM4G cards. Contact the Customer Care Center before replacing the TSMs. Refer to *Customer Care Center* on page 4 for the contact information.

If no service modules are shown in the `rtrv-card` output, perform the *Adding a Service Module* on page 76 procedure to add DSMsor E5-SM4G cards to the EAGLE 5 ISS.

If DSMsor E5-SM4G cards running the VSCCP application are in the EAGLE 5 ISS, go to step 5.

Note: If the `rtrv-ctrl-feat` output in step 1 shows any controlled features, skip steps 5 through 8, and go to step 9. If the `rtrv-ctrl-feat` output shows only the HC-MIMSLK Capacity feature with a quantity of 64, steps 5 through 8 must be performed.

5. Display the serial number in the database with the `rtrv-serial-num` command. This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

Note: If the serial number is correct and locked, continue the procedure with *Step 9* on page 834. If the serial number is correct but not locked, continue the procedure with *Step 8* on page 834. If the serial number is not correct, but is locked, this feature cannot be enabled and the remainder of this procedure cannot be performed. Contact the Customer Care Center to get an incorrect and locked serial number changed. Refer to *Customer Care Center* on page 4 for the contact information. The serial number can be found on a label affixed to the control shelf (shelf 1100).

6. 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

7. Verify that the serial number entered into *Step 6* on page 833 was entered correctly using the `rtrv-serial-num` command. This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
```

```
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

If the serial number was not entered correctly, repeat steps 6 and 7 and re-enter the correct serial number.

8. Lock the serial number in the database by entering the `ent-serial-num` command with the serial number shown in *Step 5* on page 833, if the serial number shown in *Step 5* on page 833 is correct, or with the serial number shown in *Step 7* on page 833, if the serial number was changed in *Step 6* on page 833, 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   ENT-SERIAL-NUM:  MASP A - COMPLTD
   ```

9. Enable the SCCP Loop Detection feature with the `enable-ctrl-feat` command specifying the part number for the SCCP Loop Detection feature and the feature access key. Enter this command.

   `enable-ctrl-feat:partnum=893016501:fak=<SCCP Loop Detection feature access key>`

   Note: The SCCP Loop Detection 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 SCCP Loop Detection feature, contact your Tekelec Sales Representative or Account Representative.

   CAUTION: Once the SCCP Loop Detection feature is enabled, provisioning for SCCP Loop Detection can be performed, but the EAGLE 5 ISS will not perform SCCP Loop Detection on GTT traffic until the Origin-Based SCCP Routing is turned on in step 10.

   When the `enable-crtl-feat` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   ENABLE-CTRL-FEAT: MASP B - COMPLTD
   ```

10. Turn the SCCP Loop Detection feature on with the `chg-ctrl-feat` command specifying the part number for the SCCP Loop Detection feature and the `status=on` parameter.

    Enter this command.

    `chg-ctrl-feat:partnum=893016501:status=on`

    Note: Once this feature is turned on, it cannot be turned off.

When the `chg-crtl-feat` command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-28 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 SCCP Loop Detection feature part number. Enter this command.

    `rtrv-ctrl-feat:partnum=893016501`

    The following is an example of the possible output.

```
rlghncxa03w 07-03-28 21:15:37 GMT EAGLE5 35.6.0
The following features have been permanently enabled:

Feature Name              Partnum     Status  Quantity
SCCP Loop Detection       8930165101  on      ----

The following features have been temporarily enabled:

Feature Name              Partnum    Status  Quantity     Trial Period Left
Zero entries found.

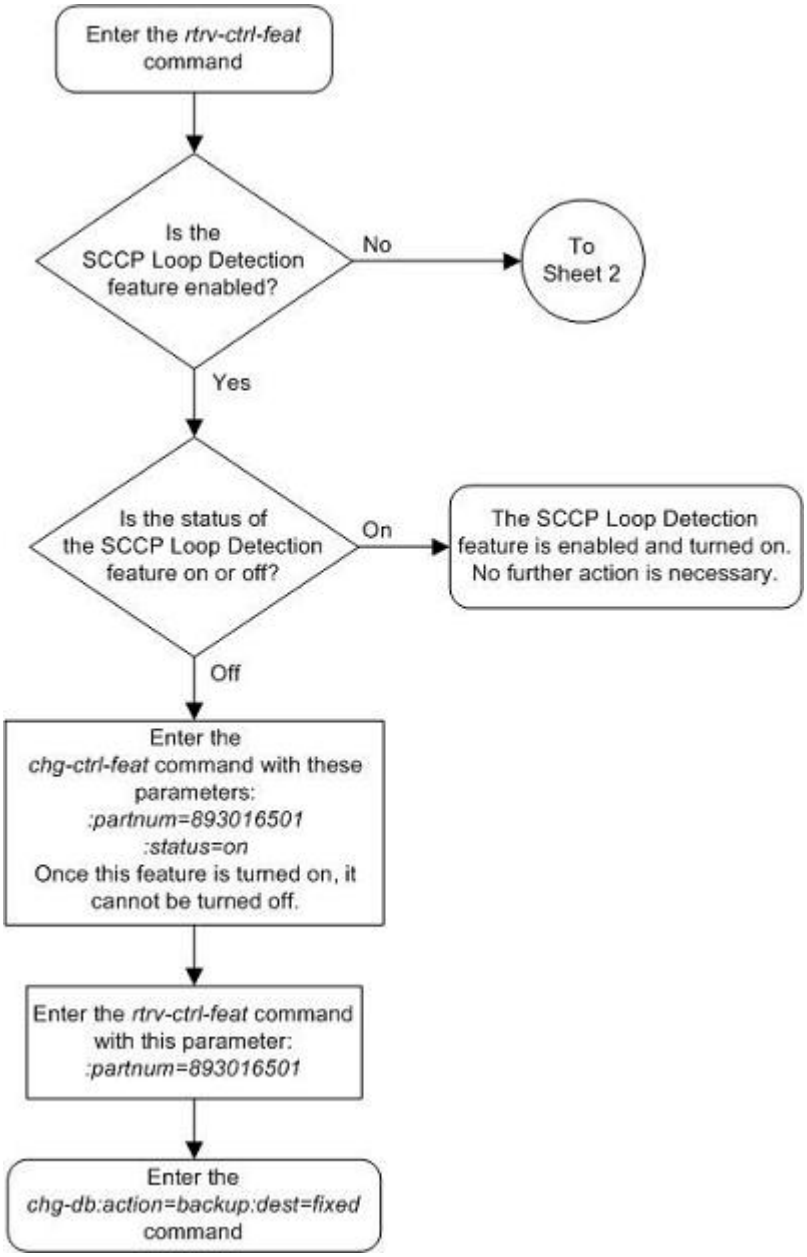
The following features have expired temporary keys:

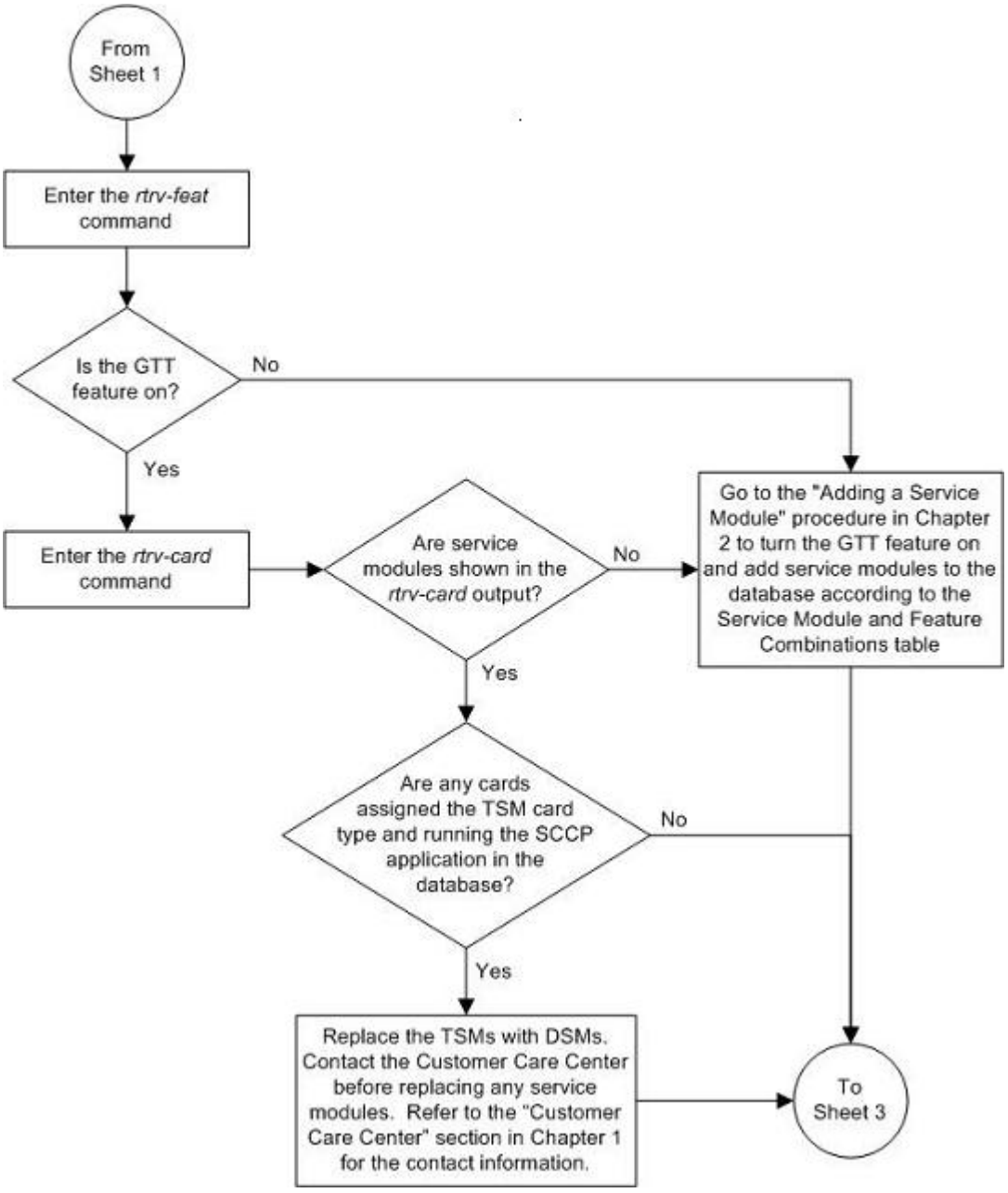
Feature Name              Partnum
Zero entries found.
```

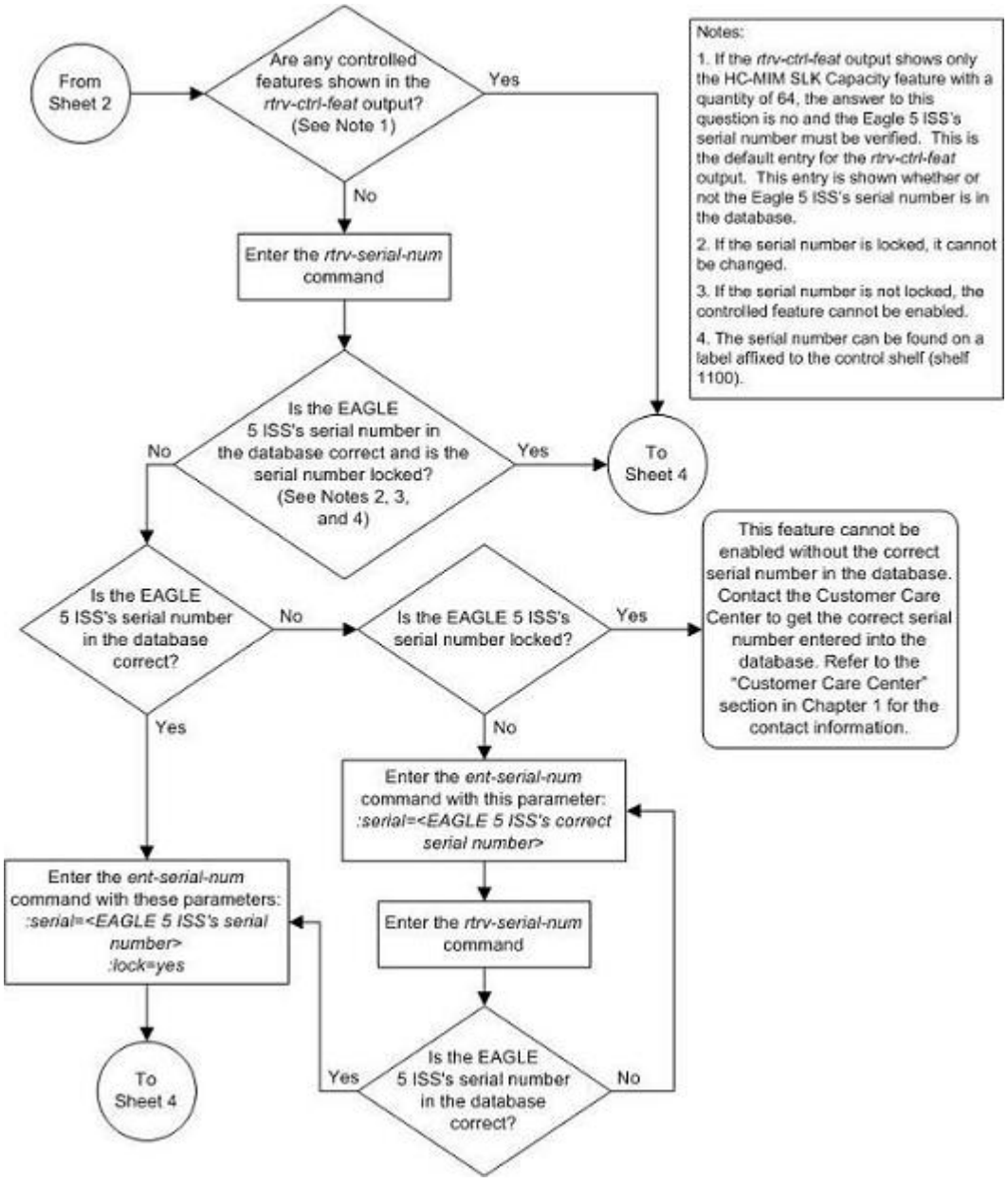
12. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

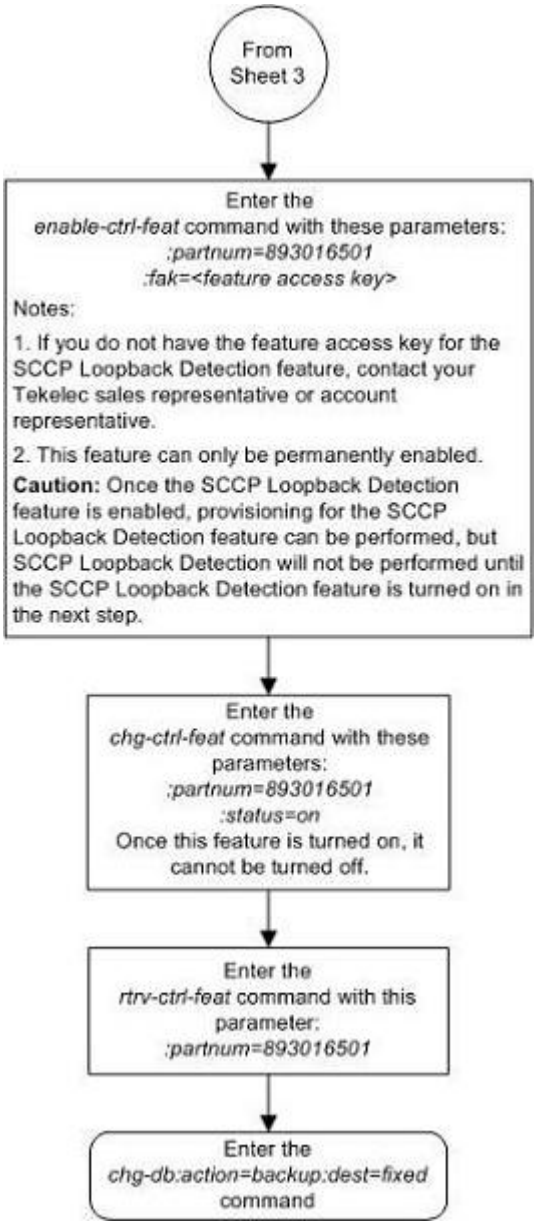
```
BACKUP (FIXED) : MASP A - Backup starts on active MASP.
BACKUP (FIXED) : MASP A - Backup on active MASP to fixed disk complete.
BACKUP (FIXED) : MASP A - Backup starts on standby MASP.
BACKUP (FIXED) : MASP A - Backup on standby MASP to fixed disk complete.
```

Figure 68: Activating the SCCP Loop Detection Feature


Enter the *rtrv-ctrl-feat* command
Is the SCCP Loop Detection feature enabled?
No
To Sheet 2
Yes
Is the status of the SCCP Loop Detection feature on or off?
On
The SCCP Loop Detection feature is enabled and turned on. No further action is necessary.
Off
Enter the *chg-ctrl-feat* command with these parameters:
:partnum=893016501
:status=on
Once this feature is turned on, it cannot be turned off.
Enter the *rtrv-ctrl-feat* command with this parameter:
:partnum=893016501
Enter the *chg-db:action=backup:dest=fixed* command


From Sheet 1
Enter the rtrv-feat command
Is the GTT feature on?
No
Yes
Enter the rtrv-card command
Are service modules shown in the rtrv-card output?
No
Go to the "Adding a Service Module" procedure in Chapter 2 to turn the GTT feature on and add service modules to the database according to the Service Module and Feature Combinations table
Yes
Are any cards assigned the TSM card type and running the SCCP application in the database?
No
Yes
Replace the TSMs with DSMs. Contact the Customer Care Center before replacing any service modules. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
To Sheet 3


From Sheet 2
Are any controlled features shown in the rtrv-ctrl-feat output? (See Note 1)
Yes
No
Notes:
1. If the rtrv-ctrl-feat output shows only the HC-MIM SLK Capacity feature with a quantity of 64, the answer to this question is no and the Eagle 5 ISS's serial number must be verified. This is the default entry for the rtrv-ctrl-feat output. This entry is shown whether or not the Eagle 5 ISS's serial number is in the database.
2. If the serial number is locked, it cannot be changed.
3. If the serial number is not locked, the controlled feature cannot be enabled.
4. The serial number can be found on a label affixed to the control shelf (shelf 1100).
Enter the rtrv-serial-num command
Is the EAGLE 5 ISS's serial number in the database correct and is the serial number locked? (See Notes 2, 3, and 4)
No
Yes
To Sheet 4
Is the EAGLE 5 ISS's serial number in the database correct?
No
Is the EAGLE 5 ISS's serial number locked?
Yes
This feature cannot be enabled without the correct serial number in the database. Contact the Customer Care Center to get the correct serial number entered into the database. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
Yes
No
Enter the ent-serial-num command with this parameter: :serial=<EAGLE 5 ISS's correct serial number>
Enter the ent-serial-num command with these parameters: :serial=<EAGLE 5 ISS's serial number> :lock=yes
Enter the rtrv-serial-num command
To Sheet 4
Is the EAGLE 5 ISS's serial number in the database correct?
Yes
No



Activating the E5-SM4G Throughput Capacity Feature

This procedure is used to enable and turn on the E5-SM4G Throughput Capacity 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 E5-SM4G Throughput Capacity 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. The feature access key contains 13 alphanumeric characters and is not case sensitive.

`:partnum` – The Tekelec-issued part number of the E5-SM4G Throughput Capacity feature, 893019101.

This feature cannot be enabled with a temporary feature access key.

The E5-SM4G Throughput Capacity feature cannot be enabled if the GTT feature is not turned on.

The status of the GTT feature is shown in the `rtrv-feat` command output.

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 E5-SM4G Throughput Capacity feature has been enabled, the 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 E5-SM4G Throughput Capacity feature, 893019101.

`:status=on` – used to turn the E5-SM4G Throughput Capacity feature on.

Once the E5-SM4G Throughput Capacity feature has been turned on, it be cannot be turned off.

The status of the features in the EAGLE 5 ISS is shown with the `rtrv-ctrl-feat` command.

This feature increases the processing capacity of SCCP traffic for an EAGLE 5 ISS processing only GTT traffic (no ELAP- or EPAP-based traffic) from 52,700 transactions per second to 150,000 transactions per second. To achieve this increase in SCCP processing capacity, a maximum of 32 E5-SM4G cards must be provisioned and installed in the EAGLE 5 ISS. If the EAGLE 5 ISS is processing EPAP-based traffic and this feature is enabled and turned on, the processing capacity is increased to 75,000 transactions per second. To achieve this increase in SCCP processing capacity for EPAP-based traffic, a maximum of 25 E5-SM4G cards must be provisioned and installed in the EAGLE 5 ISS.

1. Display the status of the E5-SM4G Throughput Capacity feature by entering the `rtrv-ctrl-feat` command. The following is an example of the possible output.

```
rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.5.0
The following features have been permanently enabled:
```

```
Feature Name              Partnum    Status  Quantity
Command Class Management  893005801   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
HC-MIM SLK Capacity       893012707   on      64

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 E5-SM4G Throughput Capacity feature is enabled and turned on, shown by the entry `E5-SM4G Throughput Cap`, and its status is `on`, no further action is necessary.

If the feature is enabled and its status is `off`, continue the procedure with *Step 9* on page 843.

If the E5-SM4G Throughput Capacity feature is not enabled, continue the procedure with *Step 2* on page 841.

2. To enable the E5-SM4G Throughput Capacity feature, the GTT feature must be turned on. The GTT feature is shown by the entry `GTT` in the `rtrv-feat` output.

   Enter the `rtrv-feat` command to verify whether or not the GTT feature is on.

   If the GTT feature is turned on, continue the procedure with *Step 3* on page 841.

   If the GTT feature is turned off, perform the *Adding a Service Module* on page 76 procedure to turn the GTT feature on and to add the required number of E5-SM4G cards to the database. After the *Adding a Service Module* on page 76 procedure has been performed, continue the procedure with *Step 4* on page 842 .

3. Verify the number of E5-SM4G cards that are provisioned in the database using the `rept-stat-gpl:gpl=sccphc` command. This is an example of the possible output.

```
rlghncxa03w 07-05-01 11:40:26 GMT EAGLE5 37.5.0
GPL     CARD   RUNNING       APPROVED      TRIAL
SCCPHC  1201   126-002-000   126-002-000   126-003-000
SCCPHC  1203   126-002-000   126-002-000   126-003-000
SCCPHC  1207   126-002-000   126-002-000   126-003-000
SCCPHC  1213   126-002-000   126-002-000   126-003-000
SCCPHC  1215   126-002-000   126-002-000   126-003-000
SCCPHC  1305   126-002-000   126-002-000   126-003-000
SCCPHC  1313   126-002-000   126-002-000   126-003-000
SCCPHC  2103   126-002-000   126-002-000   126-003-000
Command Completed
```

   If the required number of E5-SM4G cards are provisioned in the database, continue the procedure with *Step 4* on page 842.

   If the required number of E5-SM4G cards are not provisioned in the database, perform the *Adding a Service Module* on page 76 procedure to add the required number of E5-SM4G cards to the database. After the *Adding a Service Module* on page 76 procedure has been performed, continue the procedure with *Step 4* on page 842.

4. Display the serial number in the database with the `rtrv-serial-num` command. This is an example of the possible output.

   Note: If the `rtrv-ctrl-feat` output in *Step 1* on page 840step 1 shows any controlled features, continue the procedure with *Step 8* on page 843. If the `rtrv-ctrl-feat` output shows only the HC-MIM SLK Capacity feature with a quantity of 64, *Step 4* on page 842 through *Step 7* on page 842 must be performed.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

   Note: If the serial number is correct and locked, continue the procedure with *Step 8* on page 843. If the serial number is correct but not locked, continue the procedure with *Step 7* on page 842. If the serial number is not correct, but is locked, this feature cannot be enabled and the remainder of this procedure cannot be performed. Contact the Customer Care Center to get an incorrect and locked serial number changed. Refer to *Customer Care Center* on page 4 for the contact information. The serial number can be found on a label affixed to the control shelf (shelf 1100).

5. 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

6. Verify that the serial number entered into *Step 5* on page 842 was entered correctly using the `rtrv-serial-num` command. This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

   If the serial number was not entered correctly, repeat *Step 5* on page 842 and *Step 6* on page 842 and re-enter the correct serial number.

7. Lock the serial number in the database by entering the `ent-serial-num` command with the serial number shown in *Step 4* on page 842, if the serial number shown in *Step 4* on page 842 is correct, or with the serial number shown in *Step 6* on page 842, if the serial number was changed in *Step 5* on page 842, 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 06-10-28 21:15:37 GMT EAGLE5 36.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

8. Enable the E5-SM4G Throughput Capacity feature with the permanent key by entering the `enable-ctrl-feat` command. For this example, enter this command.

   `enable-ctrl-feat:partnum=893019101:fak=<E5-SM4G Throughput Capacity feature access key>`

   Note: The E5-SM4G Throughput Capacity 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 E5-SM4G Throughput Capacity feature, contact your Tekelec Sales Representative or Account Representative.

   When the `enable-crtl-feat` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   ENABLE-CTRL-FEAT: MASP B - COMPLTD
   ```

   Note: If you do not wish to turn the E5-SM4G Throughput Capacity feature on, continue the procedure with *Step 10* on page 843.

9. Turn the E5-SM4G Throughput Capacity feature on with the `chg-ctrl-feat` command, specifying the E5-SM4G Throughput Capacity feature part number used in *Step 8* on page 843 and the `status=on` parameter. For this example, enter this command.

   `chg-ctrl-feat:partnum=893019101:status=on`

   Note: Once this feature is turned on, it cannot be turned off.

   When the `chg-crtl-feat` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 36.0.0
   CHG-CTRL-FEAT: MASP B - COMPLTD
   ```

10. Verify the changes by entering the `rtrv-ctrl-feat` command with the E5-SM4G Throughput Capacity feature part number specified in *Step 8* on page 843 or *Step 9* on page 843.

    `rtrv-ctrl-feat:partnum=893019101`

    The following is an example of the possible output.

    ```
    rlghncxa03w 07-05-28 21:15:37 GMT EAGLE5 37.5.0
    The following features have been permanently enabled:

    Feature Name              Partnum   Status Quantity
    E5-SM4G Throughput Cap    893019101   on      ----

    The following features have been temporarily enabled:

    Feature Name              Partnum    Status  Quantity     Trial Period Left
    Zero entries found.

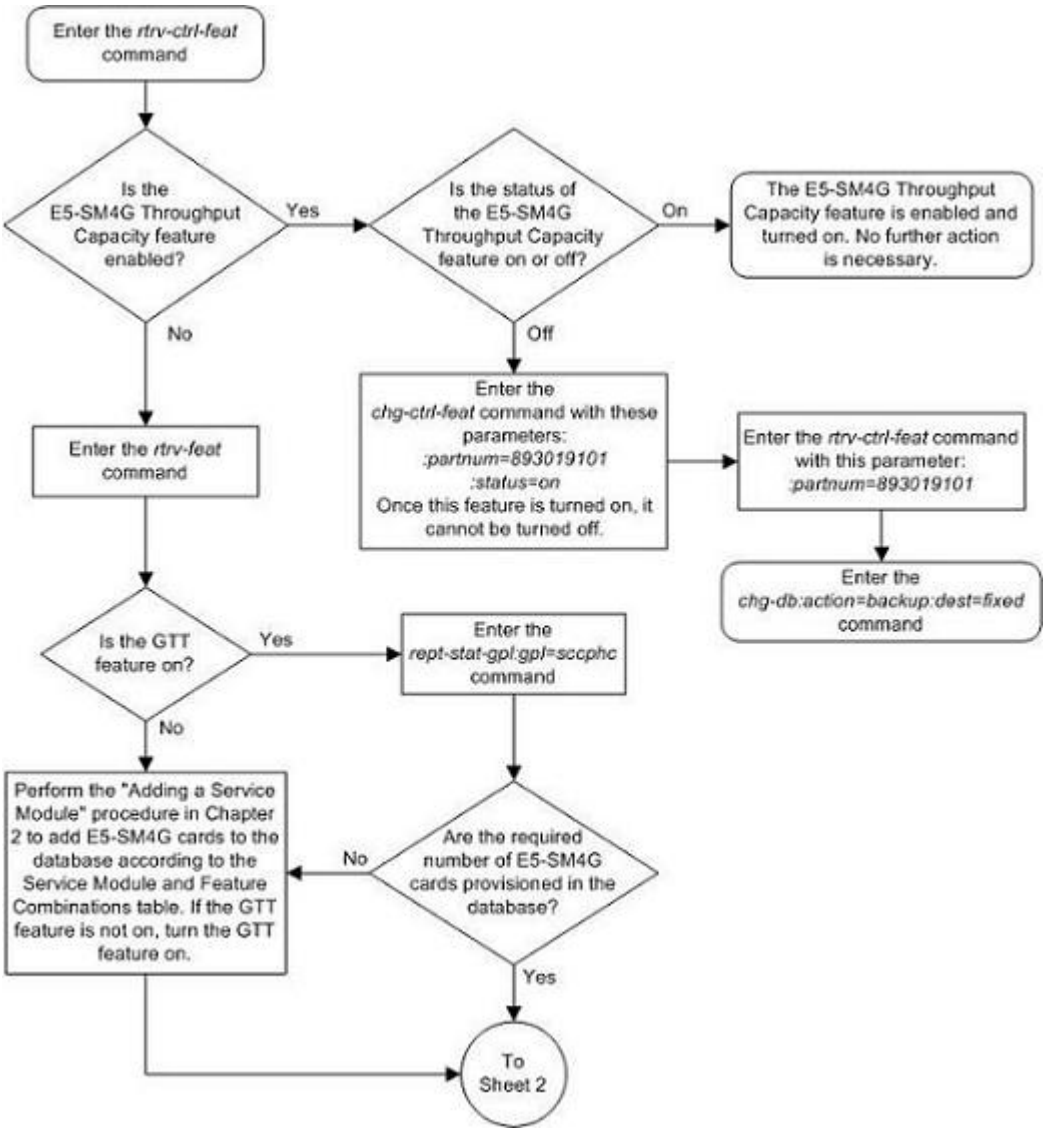
    The following features have expired temporary keys:
    ```

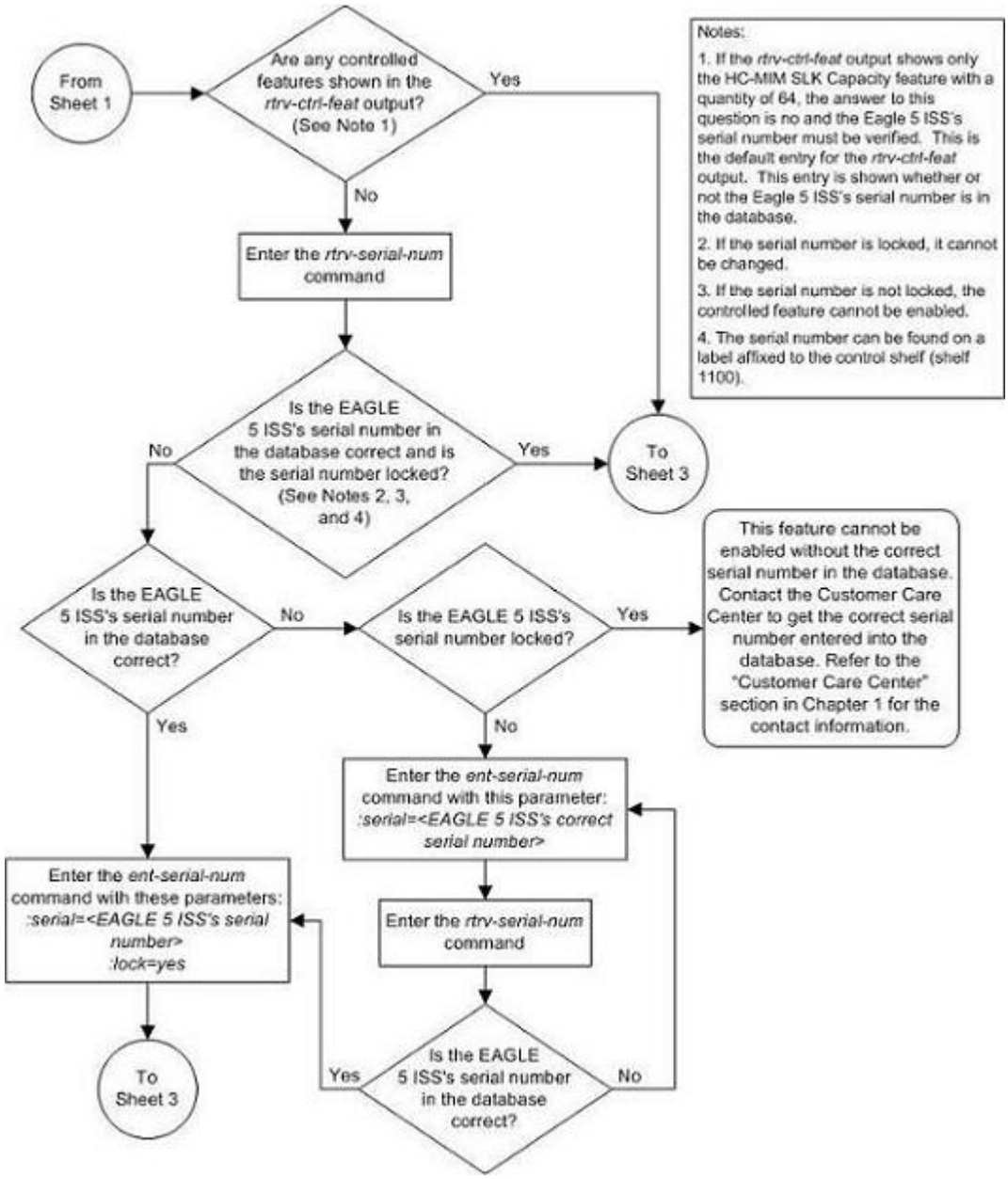
```
Feature Name              Partnum
Zero entries found.
```

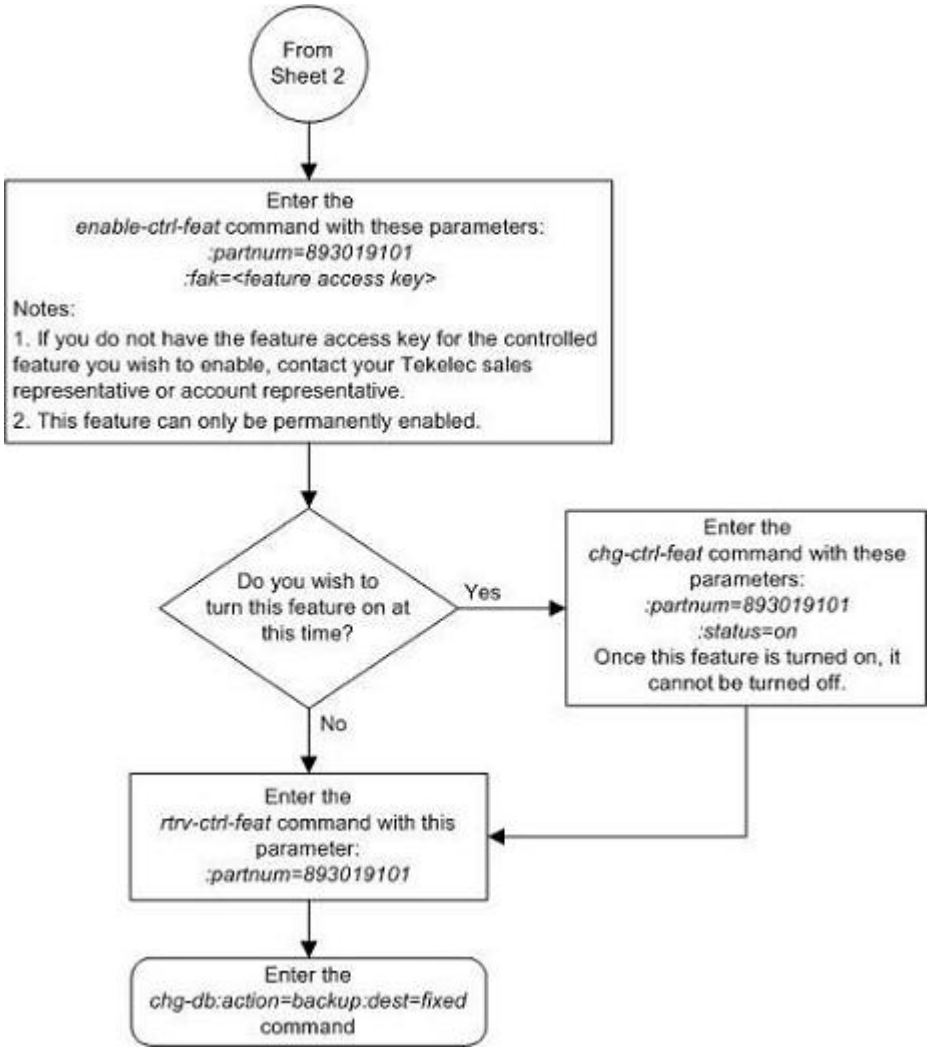
11. Backup the new changes using the `chg-db:action=backup:dest=fixed` command. These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 69: Activating the E5-SM4G Throughput Capacity Feature




From Sheet 1
Are any controlled features shown in the rtrv-ctrl-feat output? (See Note 1)
Yes
No
Enter the rtrv-serial-num command
Is the EAGLE 5 ISS's serial number in the database correct and is the serial number locked? (See Notes 2, 3, and 4)
No
Yes
To Sheet 3
Is the EAGLE 5 ISS's serial number in the database correct?
No
Is the EAGLE 5 ISS's serial number locked?
Yes
This feature cannot be enabled without the correct serial number in the database. Contact the Customer Care Center to get the correct serial number entered into the database. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
Yes
No
Enter the ent-serial-num command with this parameter: :serial=<EAGLE 5 ISS's correct serial number>
Enter the ent-serial-num command with these parameters: :serial=<EAGLE 5 ISS's serial number> :lock=yes
Enter the rtrv-serial-num command
To Sheet 3
Yes
Is the EAGLE 5 ISS's serial number in the database correct?
No
Notes:
1. If the rtrv-ctrl-feat output shows only the HC-MIM SLK Capacity feature with a quantity of 64, the answer to this question is no and the Eagle 5 ISS's serial number must be verified. This is the default entry for the rtrv-ctrl-feat output. This entry is shown whether or not the Eagle 5 ISS's serial number is in the database.
2. If the serial number is locked, it cannot be changed.
3. If the serial number is not locked, the controlled feature cannot be enabled.
4. The serial number can be found on a label affixed to the control shelf (shelf 1100).



Activating the Advanced GT Modification Feature

This procedure is used to enable and turn on the Advanced GT Modification feature using the feature's part number and a feature access key.

The feature access key for the Advanced GT Modification feature 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. The feature access key contains 13 alphanumeric characters and is not case sensitive.

`:partnum` – The Tekelec-issued part number of the Advanced GT Modification feature. There are three part numbers associated with the Advanced GT Modification feature.

- 893021801 - AMGTT - provides GT modification to both the called party address and the calling party address of SCCP messages. This part number can be specified only if no Advanced GT Modification feature is currently enabled.
- 893021802 - AMGTT CdPA Only - provides GT modification to the called party address of SCCP messages only. This feature and its part number is shown in the `rtrv-ctrl-feat` output only if the MGTT feature from previous releases was turned on when the Eagle 5 ISS was upgraded to the release containing the Advanced GT Modification feature. This part number cannot be specified with the `enable-ctrl-feat` command.
- 893021803 - AMGTT CgPA Upgrade - provides GT modification to the calling party address and called party address of SCCP messages. This part number can be specified only if the AMGTT CdPA Only feature (part number 893021802) is enabled.

For more information on the Advanced GT Modification feature, refer to the *Advanced GT Modification Feature* on page 22 section.

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).

These features cannot be temporarily enabled (with the temporary feature access key).

Once any of these features are enabled, they are also activated. The `chg-ctrl-feat` command cannot be used to turn these features on. Once any of these features are enabled, they cannot be turned off.

The status of the Advanced GT Modification features is shown in the `rtrv-ctrl-feat` command output.

Before the Advanced GT Modification feature can be enabled, the GTT feature must be turned on. The state of the GTT feature can be verified using the `rtrv-feat` command.

1. Display the status of the Advanced GT Modification feature by entering the `rtrv-ctrl-feat` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 38.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Command Class Management  893005801  on      ----
LNP Short Message Service 893006601  on      ----
Intermed GTT Load Sharing 893006901  on      ----
HC-MIM SLK Capacity       893012707  on      64
```

```
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 AMGTT or AMGTT CgPA Upgrade feature is enabled, no further action is necessary. This procedure does not need to be performed.

If the AMGTT CdPA Only feature is enabled, and you do not wish to enable the AMGTT CgPA Upgrade feature, no further action is necessary.

If the AMGTT CdPA Only feature is enabled, and you wish to enable the AMGTT CgPA Upgrade feature, continue the procedure with *Step 8* on page 850.

If none of the Advanced GT Modification features are enabled, continue the procedure with *Step 2* on page 848.

2. Verify that the GTT feature is on, by entering the `rtrv-feat` command. If the GTT feature is on, the `GTT` field should be set to `on`.

   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 GTT feature is not on, perform the *Adding a Service Module* on page 76 procedure to turn the GTT feature on and add the appropriate service modules to the EAGLE 5 ISS. After the GTT feature is turned on and the service modules have been added, continue the procedure with *Step 4* on page 849 .

   If the GTT feature is on, continue the procedure with *Step 3* on page 848.

3. Display the cards in the EAGLE 5 ISS using the `rtrv-card` command. The Advanced GT Modification feature requires that service modules are in the database. This is an example of the possible output.

```
rlghncxa03w 06-10-25 09:58:31 GMT EAGLE5 38.0.0
CARD   TYPE      APPL      LSET NAME     PORT SLC LSET NAME     PORT SLC
1102   TSM       GLS
1113   GPSM      EOAM
1114   TDM-A
1115   GPSM      EOAM
1116   TDM-B
1117   MDAL
1118   RESERVED
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
1308   LIMDS0    SS7ANSI   sp6           A    1   sp7           B    0
```

```
1314   LIMDS0    SS7ANSI   sp7           A    1   sp5           B    1
1317   ACMENET   STPLAN
```

There are three types of service modules, TSMs running the SCCP application and DSMs or E5-SM4Gs running the VSCCP application.

TSMs are shown by the entries `TSM` in the `TYPE` column and `SCCP` in the `APPL` column. DSMs and E5-SM4Gs are shown by the entries `DSM` in the `TYPE` column and `VSCCP` in the `APPL` column.

If no service modules are shown in the `rtrv-card` output, perform the *Adding a Service Module* on page 76 procedure to add the appropriate service modules to the EAGLE 5 ISS. After the service modules have been added, continue the procedure with *Step 4* on page 849.

If service modules are in the EAGLE 5 ISS, continue the procedure with *Step 4* on page 849.

4. Display the serial number in the database with the `rtrv-serial-num` command.

   Note: If the `rtrv-ctrl-feat` output in *Step 1* on page 847 shows any controlled features, continue the procedure with *Step 8* on page 850. If the `rtrv-ctrl-feat` output shows only the HC-MIM SLK Capacity feature with a quantity of 64, *Step 4* on page 849 through *Step 7* on page 850 must be performed.

   This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 38.0.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 38.0.0
Command Completed
```

5. Enter the correct serial number into the database using the `ent-serial-num` command with the `serial` parameter.

   Note: If the serial number is correct and locked, continue the procedure with *Step 8* on page 850. If the serial number is correct but not locked, continue the procedure with *Step 7* on page 850. If the serial number is not correct, but is locked, this feature cannot be enabled and the remainder of this procedure cannot be performed. Contact the Customer Care Center to get an incorrect and locked serial number changed. Refer to *Customer Care Center* on page 4 for the contact information. The serial number can be found on a label affixed to the control shelf (shelf 1100).

   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 06-10-28 21:15:37 GMT EAGLE5 38.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

6. Verify that the serial number entered in *Step 5* on page 849 was entered correctly using the `rtrv-serial-num` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 38.0.0
System serial number = nt00001231
```

```
System serial number is not locked.

rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 38.0.0
Command Completed
```

If the serial number was not entered correctly, repeat *Step 5* on page 849 and *Step 6* on page 849 and re-enter the correct serial number.

7. Lock the serial number in the database by entering the `ent-serial-num` command with the serial number shown in *Step 4* on page 849, if the serial number shown in *Step 4* on page 849 is correct, or with the serial number shown in *Step 6* on page 849, if the serial number was changed in *Step 5* on page 849, 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 06-10-28 21:15:37 GMT EAGLE5 38.0.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

8. Enable the Advanced GT Modification feature with the `enable-ctrl-feat` command specifying the part number for the Advanced GT Modification feature and the feature access key.

   If the AMGTT feature is being enabled, enter this command.

   `enable-ctrl-feat:partnum=893021801:fak=<AMGTT feature access key>`

   If the AMGTT CgPA Upgrade feature is being enabled, enter this command.

   `enable-ctrl-feat:partnum=893021803:fak=<AMGTT CgPA Upgrade feature access key>`

   Note: Neither the AMGTT nor the AMGTT CgPA Upgrade feature can 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 AMGTT or the AMGTT CgPA Upgrade feature, contact your Tekelec Sales Representative or Account Representative.

   When the `enable-crtl-feat` command has successfully completed, this message should appear.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 38.0.0
ENABLE-CTRL-FEAT: MASP B - COMPLTD
```

9. Verify the changes by entering the `rtrv-ctrl-feat`command with the part number used in *Step 8* on page 850.

   If the AMGTT feature was enabled in *Step 8* on page 850, enter this command.

   `rtrv-ctrl-feat:partnum=893021801`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 38.0.0
The following features have been permanently enabled:
```

```
Feature Name              Partnum    Status  Quantity
AMGTT                     893021801  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 AMGTT CgPA Upgrade feature was enabled in *Step 8* on page 850, enter this command.

`rtrv-ctrl-feat:partnum=893021803`

The following is an example of the possible output.

```
rlghncxa03w 06-10-28 21:15:37 GMT EAGLE5 38.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
AMGTT CgPA Upgrade        893021803  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:

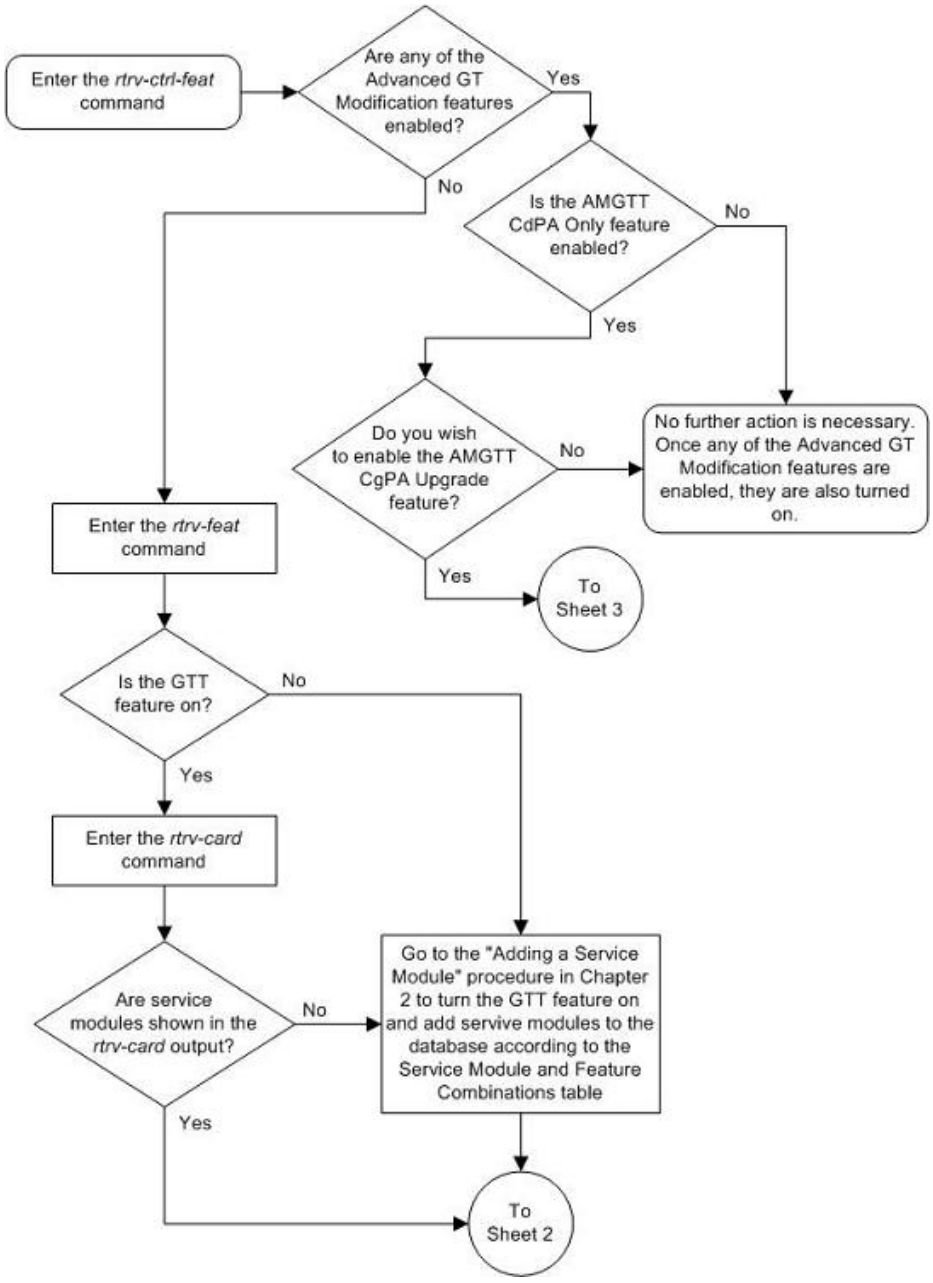
Feature Name              Partnum
Zero entries found.
```

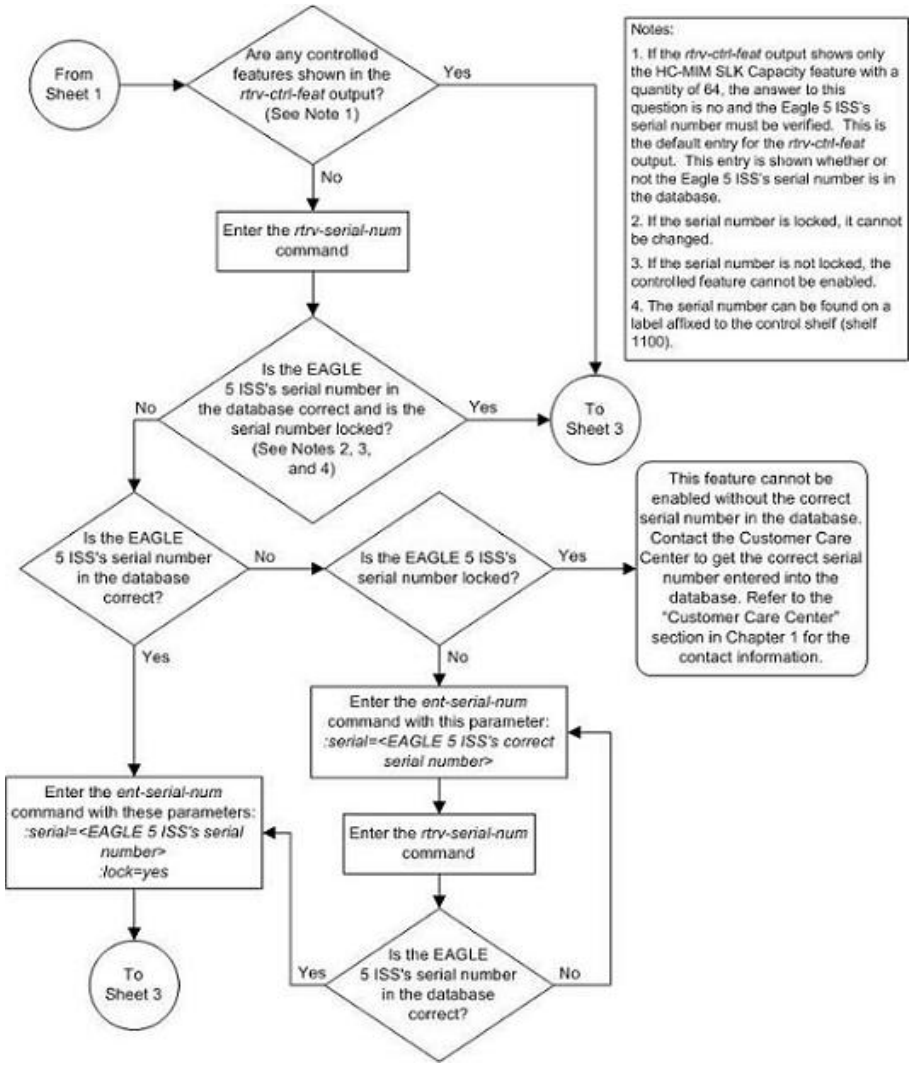
10. Backup the new changes using the `chg-db:action=backup:dest=fixed` command.

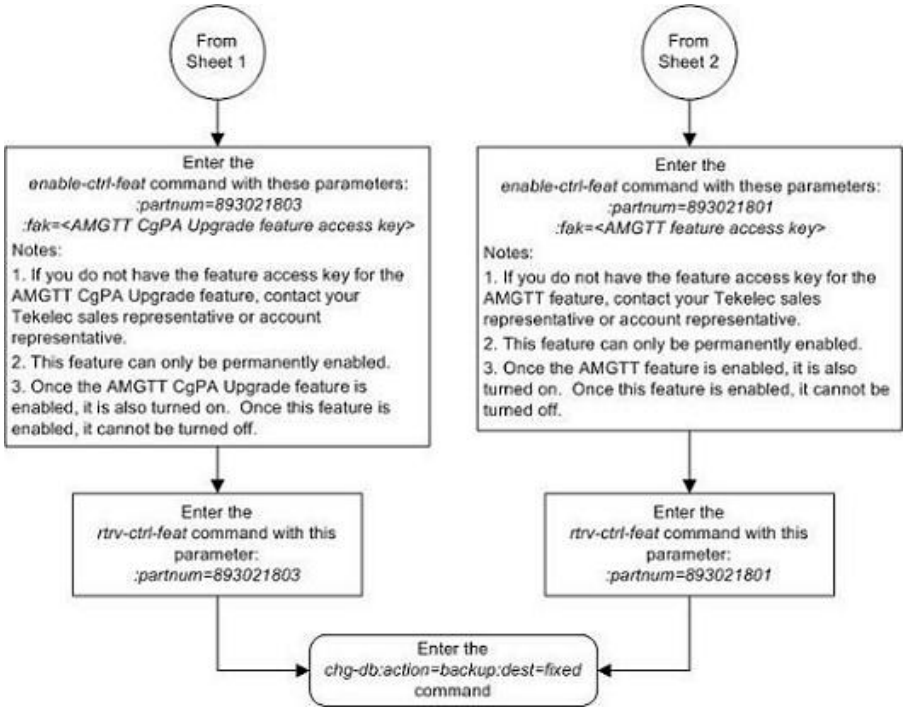
    These messages should appear, the active Maintenance and Administration Subsystem Processor (MASP) appears first.

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

Figure 70: Activating the Advanced GT Modification Feature


Enter the rtrv-ctrl-feat command
Are any of the Advanced GT Modification features enabled?
Yes
No
Is the AMGTT CdPA Only feature enabled?
No
Yes
Do you wish to enable the AMGTT CgPA Upgrade feature?
No
No further action is necessary. Once any of the Advanced GT Modification features are enabled, they are also turned on.
Yes
To Sheet 3
Enter the rtrv-feat command
Is the GTT feature on?
No
Yes
Enter the rtrv-card command
Are service modules shown in the rtrv-card output?
No
Go to the "Adding a Service Module" procedure in Chapter 2 to turn the GTT feature on and add servive modules to the database according to the Service Module and Feature Combinations table
Yes
To Sheet 2


From Sheet 1
Are any controlled features shown in the rtrv-ctrl-feat output? (See Note 1)
Yes
No
Notes:
1. If the rtrv-ctrl-feat output shows only the HC-MIM SLK Capacity feature with a quantity of 64, the answer to this question is no and the Eagle 5 ISS's serial number must be verified. This is the default entry for the rtrv-ctrl-feat output. This entry is shown whether or not the Eagle 5 ISS's serial number is in the database.
2. If the serial number is locked, it cannot be changed.
3. If the serial number is not locked, the controlled feature cannot be enabled.
4. The serial number can be found on a label affixed to the control shelf (shelf 1100).
Enter the rtrv-serial-num command
Is the EAGLE 5 ISS's serial number in the database correct and is the serial number locked? (See Notes 2, 3, and 4)
No
Yes
To Sheet 3
Is the EAGLE 5 ISS's serial number in the database correct?
No
Is the EAGLE 5 ISS's serial number locked?
Yes
This feature cannot be enabled without the correct serial number in the database. Contact the Customer Care Center to get the correct serial number entered into the database. Refer to the "Customer Care Center" section in Chapter 1 for the contact information.
Yes
No
Enter the ent-serial-num command with this parameter: :serial=<EAGLE 5 ISS's correct serial number>
Enter the ent-serial-num command with these parameters: :serial=<EAGLE 5 ISS's serial number> :lock=yes
Enter the rtrv-serial-num command
To Sheet 3
Is the EAGLE 5 ISS's serial number in the database correct?
Yes
No


From Sheet 1
From Sheet 2
Enter the enable-ctrl-feat command with these parameters: :partnum=893021803 :fak=<AMGTT CgPA Upgrade feature access key>
Notes:
1. If you do not have the feature access key for the AMGTT CgPA Upgrade feature, contact your Tekelec sales representative or account representative.
2. This feature can only be permanently enabled.
3. Once the AMGTT CgPA Upgrade feature is enabled, it is also turned on. Once this feature is enabled, it cannot be turned off.
Enter the enable-ctrl-feat command with these parameters: :partnum=893021801 :fak=<AMGTT feature access key>
Notes:
1. If you do not have the feature access key for the AMGTT feature, contact your Tekelec sales representative or account representative.
2. This feature can only be permanently enabled.
3. Once the AMGTT feature is enabled, it is also turned on. Once this feature is enabled, it cannot be turned off.
Enter the rtrv-ctrl-feat command with this parameter: :partnum=893021803
Enter the rtrv-ctrl-feat command with this parameter: :partnum=893021801
Enter the chg-db:action=backup:dest=fixed command

Glossary

A

ANSI	American National Standards Institute An organization that administers and coordinates the U.S. voluntary standardization and conformity assessment system. ANSI develops and publishes standards. ANSI is a non-commercial, non-government organization which is funded by more than 1000 corporations, professional bodies, and enterprises.
A-Port	ANSI-41 Mobile Number Portability
ATINP	ATI Number Portability Query feature
ATINPQ	ATI Number Portability Query (Name of the local subsystem)
ATM	Asynchronous Transfer Mode A packet-oriented transfer mode that uses an asynchronous time division multiplexing technique to multiplex information flow in fixed blocks, called cells. A high-bandwidth, low-delay switching, and multiplexing technology to support applications that include high-speed data, local area network interconnection, multimedia application and imaging, and residential applications such as video telephony and other information-based services.

C

CCGT	Cancel Called Global Title
CdPA	Called Party Address The portion of the MSU that contains the additional addressing information of the destination of the MSU. Gateway screening uses this additional information to determine if MSUs that contain the DPC in the routing label and the subsystem number in the called party address portion of the MSU are allowed in the network where the EAGLE 5 ISS is located.
CgPA	Calling Party Address The point code and subsystem number that originated the MSU. This point code and subsystem number are contained in the calling party address portion of the signaling information field of the MSU. Gateway screening uses this information to determine if MSUs that contain this point code and subsystem number area allowed in the network where the EAGLE 5 ISS is located.
CLLI	Common Language Location Identifier The CLLI uniquely identifies the STP in terms of its physical location. It is usually comprised of a combination of identifiers for the STP's city (or locality), state (or province), building, and traffic unit identity. The format of the CLLI is: The first four characters identify the city, town, or locality. The first character of the CLLI must be an alphabetical character.

C

	The fifth and sixth characters identify state or province. The seventh and eighth characters identify the building. The last three characters identify the traffic unit.
Cluster	A group of signaling points whose point codes have identical values for the network and cluster fields of the point codes. A cluster entry in the routing table is shown as an asterisk (*) in the member field of the point code, for example, 111-011-*. Cluster entries can be provisioned only as ANSI destination point codes.
CPC	Capability Point Code A capability point code used by the SS7 protocol to identify a group of functionally related STPs in the signaling network.
CSPC	Concerned Signaling Point Code
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.
Destination	The node to which the signaling link traffic is routed. This destination is identified by a point

D

code, either a full point code or a cluster point code.

DPC — Destination Point Code

DPC refers to the scheme in SS7 signaling to identify the receiving signaling point. In the SS7 network, the point codes are numeric addresses which uniquely identify each signaling point. This point code can be adjacent to the EAGLE 5 ISS, but does not have to be.

DSM — Database Service Module.

The DSM provides large capacity SCCP/database functionality. The DSM is an application card that supports network specific functions such as EAGLE Provisioning Application Processor (EPAP), Global System for Mobile Communications (GSM), EAGLE Local Number Portability (ELAP), and interface to Local Service Management System (LSMS).

E

E1 — The European equivalent of T1 that transmits digital data over a telephone network at 2.048 Mbps.

EGMS — Enhanced GSM MAP Screening

EGTT — Enhanced Global Title Translation

A feature that is designed for the signaling connection control part (SCCP) of the SS7 protocol. The EAGLE 5 ISS uses this feature to determine to which service database to send the query message when a Message Signaling Unit (MSU) enters the system.

E

EIR	Equipment Identity Register A network entity used in GSM networks, as defined in the 3GPP Specifications for mobile networks. The entity stores lists of International Mobile Equipment Identity (IMEI) numbers, which correspond to physical handsets (not subscribers). Use of the EIR can prevent the use of stolen handsets because the network operator can enter the IMEI of these handsets into a 'blacklist' and prevent them from being registered on the network, thus making them useless.
Enhanced Global Title Translation	See EGTT.
ETT	Existing Translation Type The translation type value included in the called party address of a unitdata (UDT) or extended unitdata (XUDT) message on an incoming or outgoing gateway link set, which will be used for the translation type mapping function.

F

FAK	Feature Access Key The feature access key allows the user to enable a controlled feature in the system by entering either a permanent feature access key or a temporary feature access key. The feature access key is supplied by Tekelec.
Flexible GTT Load Sharing	See FGTTLS.

G

G-Flex	GSM Flexible numbering

G

	A feature that allows the operator to flexibly assign individual subscribers across multiple HLRs and route signaling messages, based on subscriber numbering, accordingly.
GPL	Generic Program Load Software that allows the various features in the system to work. GPLs and applications are not the same software.
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	General Purpose Service Module
GPSM-II	General Purpose Service Module Contains the communications processor and applications processor and provides connections to the Interprocessor Message Transport (IMT) bus. The GPSM-II card can run on the OAM, IPS, or MCP applications.
GSM	Global System for Mobile Communications
GT	Global Title Routing Indicator
GTA	Global Title Address
GTAI	Global Title Address Information

G

GTI — Global Title Indicator

GTT — Global Title Translation

A feature of the signaling connection control part (SCCP) of the SS7 protocol that the EAGLE 5 ISS uses to determine which service database to send the query message when an MSU enters the EAGLE 5 ISS and more information is needed to route the MSU. These service databases also verify calling card numbers and credit card numbers. The service databases are identified in the SS7 network by a point code and a subsystem number.

H

HC-MIM — High Capacity Multi-Channel Interface Module

A card that provides access to eight E1/T1 ports residing on backplane connectors A and B. Each data stream consists of 24 T1 or 31 E1 DS0 signaling links assigned in a time-division multiplex (TDM) manner. Each channel occupies a unique timeslot in the data stream and can be selected as a local signaling link on the interface card. Each card has 8 E1 or 8 T1 port interfaces with a maximum of 64 signaling links provisioned among the 8 E1/T1 ports.

HIPR — High-Speed IMT Packet Router

A card that provides increased system throughput and traffic capacity. HIPR moves EAGLE from an intra-shelf ring topology to an intra-shelf switch topology. HIPR acts as a gateway between the intra-shelf IMT BUS, running

H

	at 125Mbps, and the inter-shelf operating at 1.0625Gbps. The HIPR card will seat in the same slot as an HMUX card (slots xx09 & xx10 of each shelf).
HMUX	High-Speed Multiplexer A card that supports the requirements for up to 1500 links, allowing communication on IMT buses between cards, shelves and frames. HMUX cards interface to 16 serial links, creating a ring from a series of point to point links. Each HMUX card provides a bypass multiplexer to maintain the ring's integrity as cards are removed and inserted into an operational shelf. High-Speed IMT Multiplexer, a replacement card for the IPMX.

I

ID	Identity, identifier
IDP	Initial Detection Point
IGTTLS	Intermediate Global Title Translation Load Sharing
IMSI	International Mobile Subscriber Identity
IMT	Inter-Module-Transport The communication software that operates the inter-module-transport bus on all cards except the LIMATM, DCM, DSM, and HMUX.
IN	Intelligent Network

I

	A network design that provides an open platform for developing, providing and managing services.
INAP	Intelligent Network Application Protocol
INP	INAP-based Number Portability Tekelec's INP can be deployed as a stand-alone or an integrated signal transfer point/number portability solution. With Tekelec's stand-alone NP server, no network reconfiguration is required to implement number portability. The NP server delivers a much greater signaling capability than the conventional SCP-based approach. Intelligent Network (IN) Portability
INTL	FNAI class International
IP	Internet Protocol IP specifies the format of packets, also called datagrams, and the addressing scheme. The network layer for the TCP/IP protocol suite widely used on Ethernet networks, defined in STD 5, RFC 791. IP is a connectionless, best-effort packet switching protocol. It provides packet routing, fragmentation and re-assembly through the data link layer.
IPGWx	Point-to-multipoint MTP-User signaling (e.g. ISUP, TCAP) over IP capability. Typicallyused for A link connectivity which require routing keys. Far End not required

I

	to support MTP3. The IPGWx GPL (IPGWI, SS7IPGW) run on the SSEDCM/E5-ENET hardware.
IS-41	Interim Standard 41, same as and interchangeable with ANSI-41. A standard for identifying and authenticating users, and routing calls on mobile phone networks. The standard also defines how users are identified and calls are routed when roaming across different networks.
ISDN	Integrated Services Digital Network
ISDN	Integrated Services Digital Network Integrates a number of services to form a transmission network. For example, the ISDN network integrates, telephony, facsimile, teletext, Datex-J, video telephony and data transfer services, providing users with various digital service over a single interface: voice, text, images, and other data.
ISS	Integrated Signaling System
ITU	International Telecommunications Union
ITU-N	ITU National

K

Key	For the ICNP feature, a unique DS value used to access a table entry,

K

	consisting of a number length and number type.

L

LIDB	Line Information Database
LIM	Link Interface Module Provides access to remote SS7, X.25, IP and other network elements, such as a Signaling Control Point (SCP) through a variety of signaling interfaces (V.35, OCU, DS0, MPL, E1/T1 MIM, LIM-ATM, E1-ATM, IPLIMx, IPGWx). The LIMs consist of a main assembly and possibly, an interface appliqué board. These appliqués provide level one and some level two functionality on SS7 signaling links.
LNP	Local Number Portability
Load Sharing	A type of routing used by global title translation to route MSUs This type of routing is used when a second point code and subsystem is defined for the primary point code and subsystem. Traffic is shared equally between the replicated point codes and subsystems.

M

MAP	Mobile Application Part
MAP Group	The MAP entities in an entity set used for the distribution of traffic.
MASP	Maintenance and Administration Subsystem Processor

M

	The Maintenance and Administration Subsystem Processor (MASP) function is a logical pairing of the GPSM-II card and the TDM card. The GPSM-II card is connected to the TDM card by means of an Extended Bus Interface (EBI) local bus. The MDAL card contains the removable cartridge drive and alarm logic. There is only one MDAL card in the Maintenance and Administration Subsystem (MAS) and it is shared between the two MASPs.
Mated Application	The point codes and subsystem numbers of the service databases that messages are routed to for global title translation.
MCAP	Maintenance Communications & Applications Processor
MDAL	Maintenance Disk and Alarm Card Provides Alarming and cartridge-based loading of software. It contains a 2.3 Gbyte 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.
MNP	Mobile Number Portability
MO	Magneto Optical Managed Object Mobile Originated

M

	Refers to a connection established by a mobile communication subscriber. Everything initiated by the mobile station is known as mobile originated.
MPS	Multi-Purpose Server The Multi-Purpose Server provides database/reload functionality and a variety of high capacity/high speed offboard database functions for applications. The MPS resides in the General Purpose Frame.
MRC	MAS Redundancy Controller Message Routing under Congestion
MRN	Message Reference Number An unsolicited numbered message (alarm or information) that is displayed in response to an alarm condition detected by the system or in response to an event that has occurred in the system. Mated Relay Node A mated relay node (MRN) group is provisioned in the database to identify the nodes that the traffic is load shared with, and the type of routing, either dominant, load sharing, or combined dominant/load sharing.
MSU	Message Signaling Unit The SS7 message that is sent between signaling points in the SS7 network with the necessary information to get the message to its destination and allow the signaling points in the network to set up either a voice or data

M

connection between themselves. The message contains the following information:

- The forward and backward sequence numbers assigned to the message which indicate the position of the message in the traffic stream in relation to the other messages.
- The length indicator which indicates the number of bytes the message contains.
- The type of message and the priority of the message in the signaling information octet of the message.
- The routing information for the message, shown in the routing label of the message, with the identification of the node that sent message (originating point code), the identification of the node receiving the message (destination point code), and the signaling link selector which the EAGLE 5 ISS uses to pick which link set and signaling link to use to route the message.

MTP

The levels 1, 2, and 3 of the SS7 protocol that control all the functions necessary to route an SS7 MSU through the network.

MTT

Mapped SS7 Message Translation Type

Message Text Table

N

NAI

Nature of Address Indicator

N

Standard method of identifying users who request access to a network.

NAIV — NAI Value

NGT — New Global Title

NP — Number Plan

NPV — Numbering Plan Value

O

OPC — Originating Point Code

P

PC — Point Code

The identifier of a signaling point or service control point in a network. The format of the point code can be one of the following types:

- ANSI point codes in the format network indicator-network cluster-network cluster member (**ni-nc-ncm**).
- Non-ANSI domestic point codes in the format network indicator-network cluster-network cluster member (**ni-nc-ncm**).
- Cluster point codes in the format network indicator-network cluster-* or network indicator-*-*.
- ITU international point codes in the format **zone-area-id**.
- ITU national point codes in the format of a 5-digit number (**nnnnn**), or 2, 3, or 4 numbers

P

(members) separated by dashes (**m1-m2-m3-m4**) as defined by the Flexible Point Code system option. A group code is required (**m1-m2-m3-m4-gc**) when the ITUDUPPC feature is turned on.

- 24-bit ITU national point codes in the format main signaling area-subsignaling area-service point (**msa-ssa-sp**).

The EAGLE 5 ISS LNP uses only the ANSI point codes and Non-ANSI domestic point codes.

PCA — Point Code ANSI

PCI — Peripheral Component Interface; Point Code International; Protocol Control Information; Peripheral Component Interconnect

PCN — Point Code National; Product Change Notice

PPSMS — Prepaid Short Message Service; Prepaid Short Message Service Intercept

PPSMS — Prepaid Short Message Service Intercept

R

RC — Relative Cost

RI — Routing Indicator

R

Route	A path to another signaling point.

S

SBR	Subsystem Backup Routing
SCCP	Signaling Connection Control Part
SCCPCNV	A feature that allow the system to convert MTP-routed SCCP messages from ANSI to ITU format and to convert ITU formatted messages to ANSI.
SCCP Routing Control	The portion of the SCCP subsystem that determines where SCCP messages are routed.
SCP	Service Control Point
SCRC	SCCP Routing Control
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.
Signaling Link	The transmission path connecting the EAGLE 5 ISS to other signaling points in the network and providing access to ANSI SS7, ITU SS7, and X.25 network elements. The signaling link is connected to the EAGLE 5 ISS at the link interface module (LIM).

S

	A generic program load application that is loaded on the LIM to allow the LIM to access a particular network element.
SLS	Signaling Link Selector
SMS	Short Message Service
SNR	Subsystem Normal Routing
SPC	Secondary Point Code The SPC enables the EAGLE 5 ISS to assume more than one point code for SS7 routing. The EAGLE 5 ISS uses the SPC for routing and provisioning as if the SPC were an actual point code of the EAGLE 5 ISS. The EAGLE 5 ISS supports one ANSI true point code and up to seven secondary point codes. Spare Point Code
SRI	Send_Route_Information Message
SRM	Subsystem Routing Messages
SS	Subsystem
SS7	Signaling System #7
SSN	Subsystem Number The subsystem number of a given point code. The subsystem number identifies the SCP application that should receive the message or the subsystem number of the destination point code to be

S

	assigned to an X.25 address or the LNP subsystem of the EAGLE 5 ISS. A value of the routing indicator portion of the global title translation data commands indicating that no further global title translation is required for the specified entry.
STP	Signal Transfer Point STPs are ultra-reliable, high speed packet switches at the heart of SS7 networks, which terminate all link types except F-links. STPs are nearly always deployed in mated pairs for reliability reasons. Their primary functions are to provide access to SS7 networks and to provide routing of signaling messages within and among signaling networks.
STPLAN	Signaling Transfer Point Local Area Network 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.

T

TCAP	Transaction Capabilities Application Part
TCAPCNV	TCAP Conversion A feature that allows the system to convert MTP-routed TCAP messages from ANSI to ITU format and to convert ITU formatted messages to ANSI.
TDM	Terminal Disk Module The MAS card that contains the fixed disk drive (hard disk storage), the terminal processor for the 16 serial I/O ports, and an interface to the MDAL (maintenance disk and alarm) card, which contains the removable cartridge drive and alarm logic. Time Division Multiplexing
TPC	True Point Code
TPS	Transactions Per Second
TSM	Translation Services Module Provides SCCP functionality or GLS functionality for Local Number Portability (LNP)/SCCP (GTT). The SCCP software allows the TSM to be used as a memory board for Global Title Translation (GTT).
TT	Translation Type. Resides in the Called Party Address (CdPA) field of the MSU and determines which service database is to receive query messages. The translation type

T

	indicates which Global Title Translation table determines the routing to a particular service database.
TTN	Translation Type Name

U

UAM	Unsolicited Alarm Message.
UDT	Unit Data Transfer
UDTS	Unit Data Transfer Service
UIM	Unsolicited Information Message

V

V-Flex	Voicemail Flexible Routing An advanced database application based on the industry proven EAGLE 5 ISS. Deployed as a local subsystem on the EAGLE platform, V-Flex centralizes voicemail routing.
VGTT	Variable Length GTT A feature that provides the ability to provision global title entries of varying lengths to a single translation type or GTT set. Users are able to assign global title entries of up to 10 different lengths to a single translation type or GTT set.
VSCCP	VxWorks Signaling Connection Control Part The application used by the Service Module card to support the G-Flex,

V

	G-Port, INP, AINPQ, EIR, A-Port, IGM, V-Flex, and LNP features. If the G-Flex, G-Port, INP, AINPQ, EIR, A-Port, IGM, V-Flex, or LNP feature is not turned on, and a Service Module card is present, the VSCCP GPL processes normal GTT traffic.

X

XLAT	Translate Indicator
XGTT	Expanded GTT (GTT Table Expansion).
XMAP	Expanded MAP Table
XUDT	Extended User Data
XUDTS	Extended User Data Service

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