Tekelec EAGLE® 5

Release 42.0

Database Administration Manual - Gateway Screening

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Chapter 1

Introduction

Topics:

Chapter 1, Introduction, contains general information about the gateway screening feature, the database, and the organization of this manual.

Overview

The Database *Administration Manual* – Gateway Screening describes the procedures used to configure the EAGLE 5 ISS and its database to implement the Gateway Screening Feature.

The Gateway Screening (GWS) feature examines a Message Signaling Unit (MSU) attempting to enter the EAGLE 5 ISS against predefined criteria in the EAGLE 5 ISS database to determine whether the MSU should be allowed to enter. The screening functions are defined by using screening tables or screen sets containing a set of rules. Each screen set is uniquely identified by a screen set name. Each rule in the screen set is identified by a screening reference name. Each screening reference belongs to a specific category, which indicates the criteria used to either accept or reject an incoming MSU. Gateway screening tables provide screening of MTP messages on Link Interface Modules (LIMs) and SCCP messages on the service modules.

Note: Before enabling any the Gateway Screening feature, make sure you have purchased this feature to be turned on. If you are not sure whether you have purchased this 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 Gateway Screening feature.

Manual Organization

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

This document is organized into the following sections.

Introduction contains general information about the gateway screening feature, the database, and the organization of this manual.

Gateway Screening (GWS) Overview contains an overview of the Gateway screening feature and the procedures for provisioning the GLS card, gateway screening stop action sets, the threshold for gateway screening activity, and the maximum number of gateway screening rejected messages.

Allowed Affected Point Code (AFTPC) Screen Configuration contains the procedures necessary to configure allowed affected point code screens.

Allowed Called Party (CDPA) Screen Configuration contains the procedures necessary to configure allowed called party address screens.

Allowed Translation Type (TT) Screen Configuration contains the procedures necessary to configure allowed translation type screens.

Allowed Calling Party (CGPA) Screen Configuration contains the procedures necessary to configure allowed calling party address screens.

Allowed Affected Destination Field (DESTFLD) Screen Configuration contains the procedures necessary to configure allowed affected destination field screens.

Blocked Destination Point Code (BLKDPC) Screen Configuration contains the procedures necessary to configure blocked destination point code screens.

Allowed Destination Point Code (DPC) Screen Configuration contains the procedures necessary to configure allowed destination point code screens.

Allowed Signaling Information Octet (SIO) Screen Configuration contains the procedures necessary to configure allowed signaling information octet screens.

Blocked Originating Point Code (BLKOPC) Screen Configuration contains the procedures necessary to configure blocked originating point code screens.

Allowed Originating Point Code (OPC) Screen Configuration contains the procedures necessary to configure allowed originating point code screens.

Screen Set Configuration contains the procedures necessary to configure screen sets.

Calling Name Conversion Facility (CNCF) Configuration contains a description of the Calling Name Conversion Facility feature the procedure necessary to configure this feature.

Allowed ISUP Message Type Screen Configuration contains the procedures necessary to configure allowed ISUP message type screens.

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

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

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

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

Tekelec - Global

Email (All Regions): support@tekelec.com

- **USA and Canada**

  Phone:

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

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

  TAC Regional Support Office Hours:

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

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

  Phone:

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

  TAC Regional Support Office Hours (except Brazil):

  10:00 a.m. through 7:00 p.m. (GMT minus 6 hours), Monday through Friday, excluding holidays

  - **Argentina**

    Phone:

    0-800-555-5246 (toll-free)

  - **Brazil**

    Phone:

0-800-891-4341 (toll-free)

TAC Regional Support Office Hours:

8:30 a.m. through 6:30 p.m. (GMT minus 3 hours), Monday through Friday, excluding holidays

- **Chile**

  Phone:

  1230-020-555-5468

- **Colombia**

  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)

- **Venezuela**

  Phone:

  0800-176-6497

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

  Regional Office Hours:

  8:30 a.m. through 5:00 p.m. (GMT), Monday through Friday, excluding holidays

  - **Signaling**

    Phone:

    +44 1784 467 804 (within UK)

  - **Software Solutions**

    Phone:

    +33 3 89 33 54 00

- **Asia**

- **India**

  Phone:

  +91 124 436 8552 or +91 124 436 8553

  TAC Regional Support Office Hours:

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

- **Singapore**

  Phone:

  +65 6796 2288

  TAC Regional Support Office Hours:

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

Emergency Response

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

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

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

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

Related Publications

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

Documentation Availability, Packaging, and Updates

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

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

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

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

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

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

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

Maintenance and Administration Subsystem

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

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

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

Legacy Control Cards

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

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

General Purpose Service Module II (GPSM-II) Card

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

Terminal Disk Module (TDM) Card

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

Maintenance Disk and Alarm (MDAL) Card

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

E5-based Control Cards

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

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

Maintenance Communication Application Processor (E5-MCAP) Card

The E5-MCAP card contains the Communications Processor and Applications Processor and provides connections to the IMT bus. The card controls the maintenance and database administration activity and performs both application and communication processing. E5-MCAP cards are located in slots 1113 and 1115 of the control shelf.

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

Terminal Disk Module (E5-TDM) Card

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

Maintenance Disk and Alarm (E5-MDAL) Card

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

EAGLE 5 ISS Database Partitions

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

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

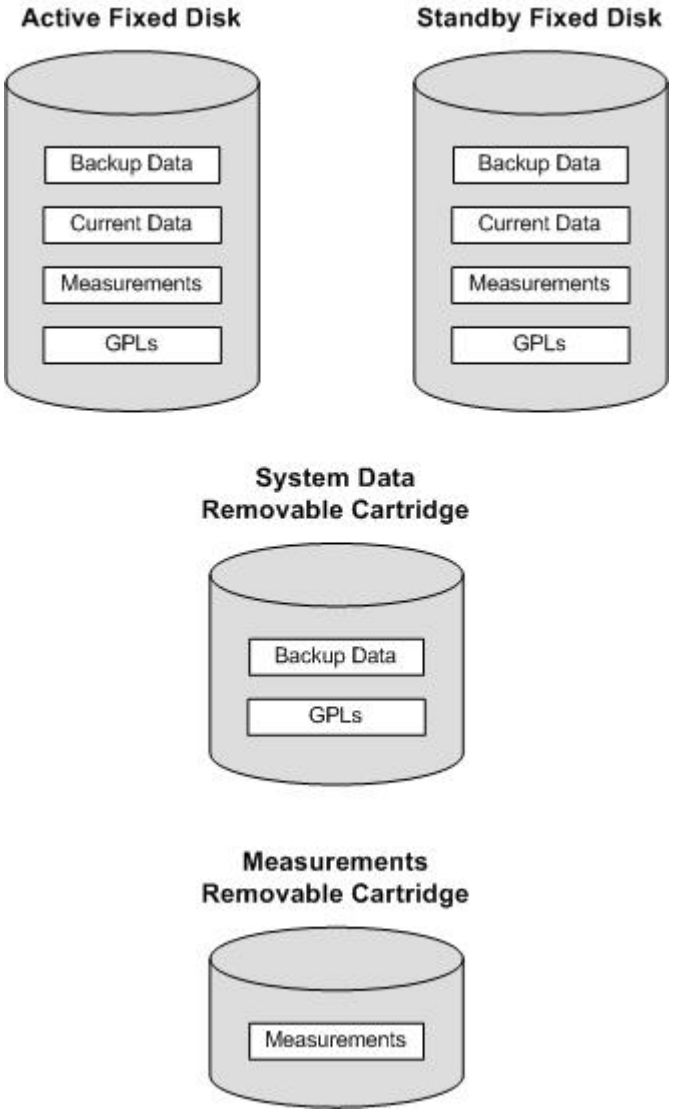
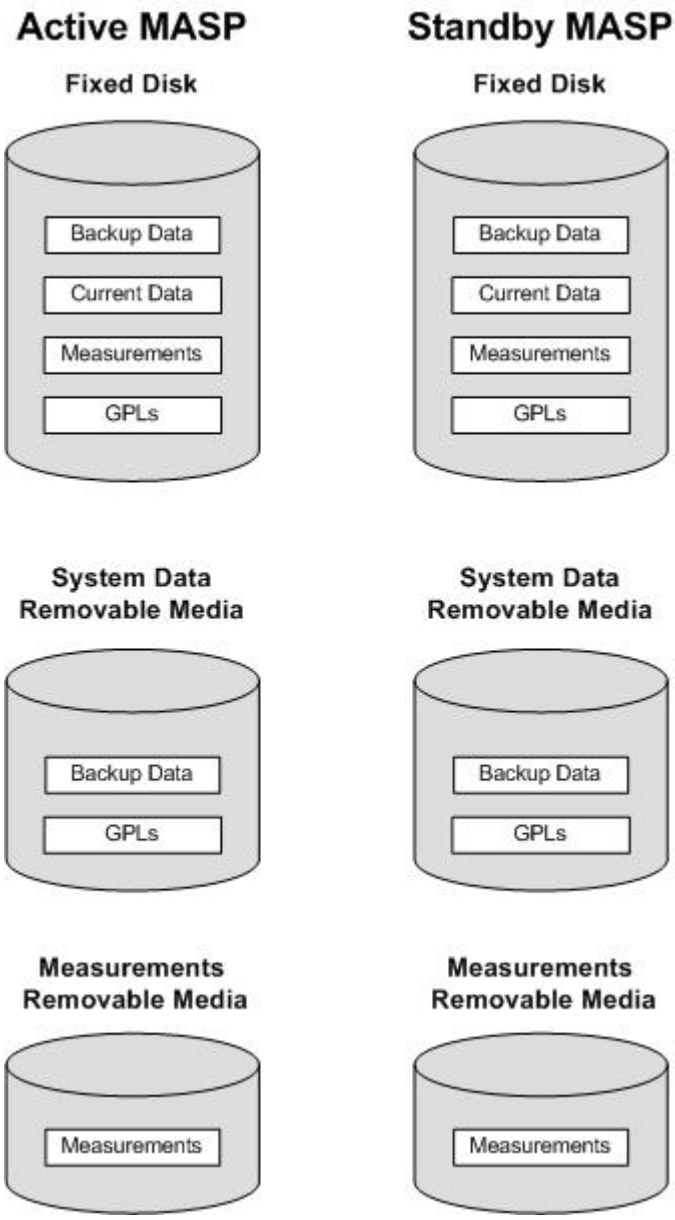


Figure 2: EAGLE 5 ISS Database Partitions (E5-Based Control Cards)



Fixed Disk Drive

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

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

- Current partition
- Backup partition

- Measurements partition
- Generic program loads (GPLs) partition

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

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

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

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

Removable Cartridge or Removable Media

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

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

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

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

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

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

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 Customer Support* site.

   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

Gateway Screening (GWS) Overview

Topics:

Chapter 2, Gateway Screening (GWS) Overview, contains an overview of the Gateway Screening feature and the procedures for provisioning the GLS card, gateway screening stop action sets, the threshold for gateway screening activity, and the maximum number of gateway screening rejected messages.

Introduction

This chapter provides an overview of the gateway screening feature and procedures for provisioning these items in the database:

- GLS cards
- Gateway screening stop action sets
- The threshold for gateway screening activity
- Setting the maximum number of gateway screening rejected messages

The gateway screening tables are loaded onto Link Interface Modules (LIMs) or service modules. Service modules can be any of these cards:

- Database Services Modules (DSMs).
- EAGLE 5-Service Module 4 GB (E5-SM4G)

The use of the service modules in the EAGLE 5 ISS is dependent on the combination of global title translation features that are being used in the EAGLE 5 ISS. for more information on the global title translation features, go to the Database *Administration Manual* - Global Title Translation .

The gateway screening tables provide screening of MTP (LIMs) and SCCP (service modules) messages.

MTP Screening consists of the following items:

- Allowed Originating Point Code (OPC)
- Blocked Originating Point Code (BLKOPC)
- Allowed Signaling Information Octet (SIO)
- Allowed Destination Point Code (DPC)
- Blocked Destination Point Code (BLKDPC)
- Allowed Affected Destination Field (DESTFLD)
- Allowed ISUP Message Type (ISUP) - ISUP and TUP messages can be screened by the allowed ISUP message type screen.

SCCP Screening consists of the following items:

- Allowed Calling Party Address (CGPA)
- Allowed Translation Type (TT)
- Allowed Called Party Address (CDPA)
- Allowed Affected Point Code (AFTPC).

The procedures shown in this manual use a variety of commands. If more information than what is shown in these procedures is needed, go to the *Commands Manual* to find the required information.

The EAGLE 5 ISS's role in the SS7 network is to provide SS7 message transport between originating and destination signaling points. EAGLE 5 ISSs that route messages to and from other networks also perform gateway screening. The screening process results in a message being accepted into the network or rejected. The criteria for message screening depends on the type of message received by the EAGLE 5 ISS, and the contents of the EAGLE 5 ISS screening tables.

Gateway screening functions on the EAGLE 5 ISS reside within the LIM and the service modules and are defined using screening tables or screen sets which contain a set of rules. Each screen set is uniquely identified by a screen set name. Each rule in the screen set is identified by a screening reference name. Each screening reference belongs to a specific category, which indicates the criteria that is used to

either accept or reject an incoming MSU. For example, the category `blkopc` rejects all MSUs with the OPCs specified in the screening reference. The screening parameters (point codes, routing indicator, subsystem number, etc.) are used to match information in the SS7 message. The screening data is defined by the attributes discussed in the *Gateway Screening Attributes* section.

Each group of screening references is referred to as a screen set and is identified by a particular screen set name (`scrn`). The screen set is applied to a particular linkset. This allows the capability, for example, for specific OPCs with particular SIOs and DPCs to be allowed into the network.

With the SEAS interface, the screen set function is performed by a gateway linkset. A gateway linkset combines the functions of a gateway screening screen set and an SS7 linkset specifying the `gwsa=on` and `scrn` parameters. Like an EAGLE 5 ISS gateway screening screen set, a gateway linkset defines the screening references that are to be used to screen the messages on the linkset. It also defines the linkset whose messages are to be screened. A gateway linkset can only be configured from a SEAS terminal and not from an EAGLE 5 ISS terminal. The linkset attributes of a gateway linkset can be displayed on an EAGLE 5 ISS terminal with the `rtrv-ls` command. A gateway linkset is shown by the entry `SEAS` in the `SCRN` field of the `rtrv-ls` command output. The gateway screening portion of the gateway linkset can only be displayed on the SEAS interface.

There are two basic functions, allow and block. In an allowed screen (for example, allowed DPC), if a match is found and the next screening function identifier (`nsfi`) is equal to anything but `stop`, the next screening reference (`nsr`) is identified and the screening process continues to the next screen identified by the `nsfi` and `nsr` parameters. If the next screening function identifier is `stop`, the message is processed and no further screening takes place. If no match is found, the message is rejected.

In a blocked screen (for example, blocked DPC), if a match is found and the next screening function identifier is `fail`, the message is rejected and no further screening takes place. If no match is found and the next screening function identifier is equal to anything but `stop`, the next screening reference is identified and the screening process continues to the next screen identified by the `nsfi` and `nsr` parameters. If the next screening function identifier is equal to `stop`, the message is processed and no further screening takes place.

When the screening process stops, other actions can be assigned to the screen set. These actions, called gateway screening stop actions, define the actions the EAGLE 5 ISS can perform on the MSU that passes gateway screening. For more information on configuring gateway screening stop actions, go to the *Configuring Gateway Screening Stop Action Sets* procedure. The EAGLE 5 ISS currently uses these gateways screening stop actions.

- `COPY` – copy the MSU for the STPLAN feature
- `RDCT` – redirect the MSU for the DTA feature
- `CNCF` – convert the PIP parameter with the GN parameter or the GN parameter with the PIP parameter in the ISUP IAM message for the Calling Name Conversion Facility feature.
- `TLNP` – ISUP IAMs that pass gateway screening are processed either by the ISUP NP with EPAP feature (if the ISUP NP with EPAP feature is enabled and turned on) or by the Triggerless LNP feature (if the Triggerless LNP feature is turned on).
- `TINP` – ISUP IAMs that pass gateway screening are intercepted by the Triggerless ISUP based Number Portability (TINP) feature and converted to include the routing number (RN) if the call is to a ported number. This gateway screening stop action can be specified only if the TINP feature is enabled.

The allowed OPC and DPC screens are useful in the gateway screening process when specifying particular sets of point codes that are allowed to send messages to another network or receive messages from another network. The blocked OPC and DPC screens are useful in the gateway screening process

specifying particular sets of point codes that are not allowed to send SS7 messages to another network or receive SS7 messages from another network.

TUP Message Screening

TUP messages are screened using the Allowed ISUP Message Type screen. The TUP protocol is an obsolete predecessor to the ISUP protocol that remains in use in some areas. To screen for TUP messages, a screen set must be defined to screen for messages containing the service indicator value of 4. This is accomplished by defining an allowed SIO screen in the screen set containing the `si=4` parameter.

Since both ISUP and TUP messages are screened using the allowed ISUP message type screen, it is recommended that the screen set contain an allowed SIO screen to screen for ISUP messages, messages containing the service indicator value of 5. Each of these entries in the allowed SIO screen should have separate next screening functions. This allows the screening rules after the allowed SIO screen to have two separate streams, one that ends with screening ISUP messages, the other that ends with screening TUP messages.

The TUP messages can be screened for point codes before the allowed SIO screen with the allowed and blocked OPC screens, and after the SIO screen with the allowed and blocked DPC screens. However, if the screen set does not contain an allowed SIO screen that screens for TUP messages (messages with the service indicator value of 4), the message will be treated by the allowed ISUP message type screen as an ISUP message.

The following commands show how a screen set can be provisioned to screen for TUP and ISUP messages.

```
ent-scr-isup:sr=is01:isupmt=10:nsfi=stop

ent-scr-isup:sr=tu01:tupmt=1:nsfi=stop

ent-scr-dpc:sr=dpc4:ni=1:nc=2:ncm=3:nsfi=isup:nsr=tu01

ent-scr-dpc:sr=dpc5:ni=7:nc=1:ncm=0:nsfi=isup:nsr=is01

ent-scr-sio:sr=si02:nic=2:pri=0:si=4:nsfi=dpc:nsr=dpc4

ent-scr-sio:sr=si02:nic=2:pri=0:si=5:nsfi=dpc:nsr=dpc5

ent-scrset:scrn=ist2:nsr=si02:nsfi=sio
```

In this example screen set configuration, messages are screened by the allowed SIO screen `si02` for either ISUP or TUP messages. ISUP messages are further screened by the allowed DPC screen `dpc5` and TUP messages are screened by the allowed DPC screen `dpc4`. The ISUP messages containing the ANSI point code 001-002-003 are passed onto the allowed ISUP screen `is01`. The TUP messages containing the ANSI point code 007-001-000 are passed onto the allowed ISUP screen `tu01`.

Note: The gateway screening rules are entered in reverse of the order that the screening process takes place.

Gateway Screening States

Gateway screening on a particular linkset can be set to function in one of four states:

NO SCREENING – Screening is not performed. All message signaling units (MSUs) are passed. This state is set by the `gwsa=off` and `gwsm=off` parameters of the `ent-ls` or `chg-ls` commands.

SCREEN AND REPORT – Screening is performed. When an MSU fails screening it is discarded, an output message is generated, and measurements are pegged. This state is set by the `gwsa=on` and `gwsm=on` parameters of the `ent-ls` or `chg-ls` commands.

SCREEN AND DON'T REPORT – Screening is performed. When an MSU fails screening it is discarded and measurements are pegged, but no output message is generated. This state is set by the `gwsa=on` and `gwsm=off` parameters of the `ent-ls` or `chg-ls` commands.

SCREEN TEST MODE – Screening is performed, but all MSUs are passed. When an MSU fails screening, an output message is generated, but the MSU is still passed. This state is set by the `gwsa=off` and `gwsm=on` parameters of the `ent-ls` or `chg-ls` commands.

CAUTION: When Gateway Screening is in the screen test mode, any action in the gateway screening stop action set specified by the `actname` parameter at the end of the gateway screening process will be performed.

The `gwsa` and `gwsm` parameters are described in the *Linkset Parameters* section.

Linkset Parameters

Optional parameters of the enter linkset (`ent-ls`) command or the change linkset (`chg-ls`) command are used to set the screening state. These parameters are:

SCRN – the name of the gateway screening screen set that is associated with the linkset.

GWSA – Gateway screening action – The value `on` allows gateway screening to be performed on the linkset. The value `off`, does not allow gateway screening to be performed on the linkset. This parameter can only be specified if the `scrn` parameter is specified.

GWSM – Gateway screening messaging – The value `on` allows output messages to be generated. The value `off` does not allow output messages to be generated. This parameter can only be specified if the `scrn` parameter is specified.

GWSD – Gateway screening MSU discard – If gateway screening cannot be performed and the `gwsd` parameter is set to `on`, all MSUs on the linkset are discarded. These are two examples of why gateway screening could not be performed.

- No GLS cards are configured and installed in the EAGLE 5 ISS.
- The screen set is to big to be loaded onto the LIM or service module.

The value `off` does not allow messages to be discarded. This parameter can only be specified if the `scrn` and `gwsa=on` parameters are specified.

Note: Discarding all MSUs on a linkset will not allow any MSUs on the linkset to be routed. It is recommended that the value specified for the `gwsd` parameter is `off`. The `gwsd` parameter should only set to `on` if you wish screen MSUs for gateway screening rather than routing MSUs through the EAGLE 5 ISS.

Refer to the *Commands Manual* for more information on the `ent-ls` or `chg-ls` commands.

Gateway Screening Attributes

Each screen has attributes which hold information required to perform a particular screening function. The following attributes are required in order to implement all of the screening functions.

The screen set name(`scrn`) is a four character (one alpha and up to three alphanumeric) value that specifies the name of the screen set.

The screening reference (`sr`) is a four character (one alpha and up to three alphanumeric) value. Combined with the next screening function identifier (`nsfi`), it uniquely defines a screening table.

The network identifier for ANSI point codes (`ni`) is an integer between 0 and 255, the asterisk "*", or the character "`c`".

The network cluster for ANSI point codes (`nc`) is an integer between 0 and 255, the asterisk "*", or the character "`c`".

The network cluster member for ANSI point codes (`ncm`) is an integer between 0 and 255, the asterisk "*", or the character "`c`".

The zone for ITU international point codes (`zone`) is an integer between 0 and 7, the asterisk "*", or the character "`c`".

The area for ITU international point codes (`area`) is an integer between 0 and 255, the asterisk "*", or the character "`c`".

The ID for ITU international point codes (`id`) is an integer between 0 and 7, the asterisk "*", or the character "`c`".

The 14-bit ITU national point code (`npc`) is an integer between 1 and 16383, the asterisk "*", or the character "`c`". The EAGLE 5 ISS supports different formats for 14-bit ITU national point codes as defined by the `npcfmti` parameter of the `chg-stpopts` command. No matter what format is defined by the `npcfmti` parameter, the 14-bit ITU national point code must be entered as an integer for gateway screening. If the format of the 14-bit ITU national point code that you wish to enter for gateway screening is not a single integer, the point code value must be converted into a single integer value. For more information on converting 14-bit ITU national point code values, see the *14-Bit ITU National Point Code Formats* section. For more information on the different ITU national point code formats, see the 14-Bit ITU National Point Code Formats section in Chapter 2, Configuring Destination Tables in the Database *Administration Manual - SS7* .

Gateway Screening supports using ITU international spare point codes in addition to ITU international point codes, and 14-bit ITU national spare point codes in addition to 14-bit ITU national point codes. The `pcst` parameter is used to specify the whether or not the ITU international and 14-bit ITU national point codes are spare point codes (`pcst=s` parameter) or not (`pcst=none` parameter). For more information about ITU international and 14-bit ITU national spare point codes, see Chapter 2, Configuring Destination Tables in the Database *Administration Manual - SS7* . Gateway Screening does not support using private point codes.

The main signaling area value for 24-bit ITU national point codes (`msa`) is an integer between 0 and 255, the asterisk "*", or the character "`c`".

The sub-signaling area value for 24-bit ITU national point codes (`ssa`) is an integer between 0 and 255, the asterisk "*", or the character "`c`".

The signaling point value for 24-bit ITU national point codes (`sp`) is an integer between 0 and 255, the asterisk "*", or the character "`c`".

The ISUP message type (`isupmt`)/TUP message type (`tupmt`) is an integer between 0 and 255, or the character "*". This parameter specifies either an ISUP message type or a TUP message type for the ISUP screening reference specified in the `sr` parameter.

The service indicator (`si`) is an integer between 0 and 15. This parameter specifies a service indicator for the SIO screening reference specified in the `sr` parameter. The service indicator is the first 4 bits of an SIO.

The network indicator code (`nic`) is an integer between 0 and 3 or an "*" (asterisk). This parameter specifies a network indicator code for the SIO screening reference specified in the `sr` parameter. The network indicator code is the last 2 bits of an SIO.

The H0 heading code (`h0`) is an integer between 0 and 15, or an "*" (asterisk). This parameter specifies the first four bits of a message type for the SIO screening reference.

The H1 heading code (`h1`) is an integer between 0 and 15, or an "*" (asterisk). This parameter specifies last four bits of a message type for the SIO screening reference.

The message priority (`pri`) is an integer between 0 and 3. This parameter specifies the message priorities for the SIO screening reference.

The subsystem number (`ssn`) is an integer between 0 and 255 or an "*" (asterisk). This parameter identifies the SCP application that should receive the message.

The routing indicator (`ri`) is destination point code (DPC), global title translation (GT), or "*" (asterisk). This parameter indicates whether a subsequent global title translation is required.

- gt – indicates that a subsequent translation is required.
- dpc – indicates that no further translation is required.
- * (asterisk) – indicates all possible values (DPC and GT).

The translation type (`type`) is an integer between 0 and 255 or a "*" (asterisk). Identifies the type of global title translation. It is the decimal representation of the 1-byte field used in SS7.

The SCCP message type (`sccpmt`) is an integer with the values 9 (UDT messages), 10 (UDTS messages), 17 (XUDT messages), 18 (XUDTS messages), or "*" (asterisk). This parameter specifies one of these message types and is part of the calling party address screen.

The SCCP management (SCMG) format ID (`scmgfid`) is an integer from 1 to 255 or "*" (asterisk). This parameter specifies the function and format of an SCMG message and is part of the called party address screen.

The next screening function identifier (`nsfi`) is the screen function that is required to continue processing the message. It is the next step in processing the message. The values for this attribute are: `opc`, `blkopc`, `sio`, `dpc`, `blkdpc`, `destfld`, `isup` `cgpa`, `tt`, `cdpa`, `aftpc`, `stop`, and `fail`.

The next screening reference (`nsr`) is a four character (one alpha and up to three alphanumeric) value. Combined with the next screening function identifier (`nsfi`), it uniquely defines the next screening table to be used in the gateway screening process.

The gateway screening stop action set name (`actname`) is a six character (one alpha and up to five alphanumeric characters) value. Specified only with the `nsfi=stop` parameter, the gateway screening stop action set defines the additional actions the EAGLE 5 ISS can perform on MSUs that pass gateway screening.

The asterisk, or "*", is a single entry that indicates all possible values for that parameter.

These attributes are not used on all screens. The following list shows which attributes are required for each screening function. There are two types of attributes, search keys and results. The search keys are used to match fields in the SS7 message in order to determine the screening function result. The result is determined by matching a search key with information in the current SS7 message. The result indicates the next step in the screening process.

- Screen Set screening function
  - Search Key - SCRN
  - Result - NSFI, NSR, ACTNAME
- Allowed OPC screening function
  - Search Key - SR, NI, NC, NCM,.ZONE, AREA, ID, NPC, MSA, SSA, SP, PCST
  - Result - NSFI, NSR, ACTNAME
- Blocked OPC screening function
  - Search Key - SR, NI, NC, NCM,.ZONE, AREA, ID, NPC, MSA, SSA, SP, PCST
  - Result - NSFI, NSR, ACTNAME
- Allowed SIO screening function
  - Search Key - SR, NIC, SI, H0, H1, PRI
  - Result - NSFI, NSR, ACTNAME
- Allowed DPC screening function
  - Search Key - SR, NI, NC, NCM,.ZONE, AREA, ID, NPC, MSA, SSA, SP, PCST
  - Result - NSFI, NSR, ACTNAME
- Blocked Allowed DPC screening function
  - Search Key - SR, NI, NC, NCM,.ZONE, AREA, ID, NPC, MSA, SSA, SP, PCST
  - Result - NSFI, NSR, ACTNAME
- Allowed DESTFLD screening function
  - Search Key - SR, NI, NC, NCM,.ZONE, AREA, ID, NPC, MSA, SSA, SP, PCST
  - Result - NSFI, ACTNAME
- Allowed ISUP screening function
  - Search Key - SR, ISUPMT, TUPMT
  - Result - NSFI, ACTNAME

    Note: The Allowed ISUP Screening function table contains both the ISUP message type (ISUPMT) and TUP message type (TUPMT). Only one of these parameters can be specified for an allowed ISUP screen. The parameter value to be used is dependent on the service indicator (SI) value specified in the allowed SIO screen: SI=5 for an ISUP message type, SI=4 for a TUP message type.
- Allowed CGPA screening function
  - Search Key - SR, NI, NC, NCM,.ZONE, AREA, ID, NPC, MSA, SSA, SP, RI, SSN, SCCPMT, PCST
  - Result - NSFI, NSR, ACTNAME

- Allowed TT screening function
  - Search Key - SR, TYPE
  - Result - NSFI, NSR, ACTNAME
- Allowed CDPA screening function
  - Search Key - SR, NI, NC, NCM,.ZONE, AREA, ID, NPC, MSA, SSA, SP, SSN, SCMGFID, PCST
  - Result - NSFI, NSR, ACTNAME
- Allowed AFTPC screening function
  - Search Key - SR, NI, NC, NCM,.ZONE, AREA, ID, NPC, MSA, SSA, SP, SSN, PCST
  - Result - NSFI, ACTNAME

  Note: The NSR attribute can only be specified when the NSFI is not STOP. The NSR cannot be specified with the ACTNAME attribute.The ACTNAME attribute can only be specified when the NSFI is STOP. The ACTNAME parameter cannot be specified with the NSR parameter. NSFI and NSR can only be defined once per screening table.

Use of the Character " c " for the NI, NC, NCM, ZONE, AREA, ID, NPC, MSA, SSA, and SP Parameters

The character " c " is used in the blocked OPC or DPC screens (for parameters ni, nc, ncm, zone, area, id, npc, msa, ssa, and sp) to allow the screening process to continue for messages with point codes that do not match any point codes in the blocked OPC or DPC screens. The character " c " is used this way. When screening for a blocked OPC or DPC and the point code being screened does not match any of the point codes in the blocked OPC or DPC screens, the message is not rejected and the screening process continues. To allow the screening process to continue, the blocked OPC and blocked DPC screens must have at least one entry consisting of a screening reference, a point code, a next screening function identifier, and a next screening reference. The point code is in the form of ni=c, nc=c, ncm=c (for ANSI point codes), zone=c, area=c, id=c (for ITU international point codes), npc=c (for 14-bit ITU national point codes), and msa=c, ssa=c, sp=c (for 24-bit ITU national point codes). When the character " c " is specified, the next screening function identifier and next screening reference must be specified, unless the next screening function identifier is stop (nsfi=stop). Then the next screening reference cannot be specified.

When the point code does not match any entries in the blocked OPC or DPC screens, the screening process is directed to the screening reference with the point code c-c-c or npc=c. The next screening function identifier and next screening reference in this entry are examined to determine the next step in the screening process.

When a blocked OPC or DPC screen is created, the first entry for the ni-nc-ncm, zone-area-id, or msa-ssa-sp must be c-c-c, or the npc must "c." Subsequent entries can be specific point codes.

If the character " c " is specified for any parameters ni, nc, ncm, zone, area, id, msa, ssa, or sp, it must be specified for all three parameters. No other values can be used. For example, a point code c-c-255 is not allowed. The point code must be c-c-c. The "*" (asterisk) value cannot be used with the character " c " (for example, a point code c-c-* is not allowed).

ANSI, ITU international, or 24-bit ITU national point codes using the value "c" can be entered by specifying only the ni=c parameter (for ANSI point codes), zone=c parameter (for ITU international point codes), or msa=c parameter (for 24-bit ITU national point codes), and the nc, ncm, area, id, ssa, and sp parameters can be omitted.

The `pcst` and `npcst` parameters, for specifying the ITU international and 14-bit ITU national spare point codes, cannot be used with point codes containing the character "`c`".

Specifying a Range of Values for Gateway Screening Parameters

The values of these gateway screening parameters can be specified as a range of values.

`ni` – the network identifier for an ANSI point code

`nc` – the network cluster for an ANSI point code

`ncm` – the network cluster member for an ANSI point code

`pri` – the message priority in the SIO field of an MSU

`h0` – the H0 heading code in the SIF field of an MSU

`h1` – the H1 heading code in the SIF field of an MSU

`type` – the translation type in the called party address field of an MSU

`isupmt` – the ISUP message type

`tupmt` – the TUP message type

A range of values is specified with the values that define the range separated by two ampersands (&&), for example, `:ni=025&&100` specifies all network indicators for ANSI point codes from 25 to 100.

A range of values for an ANSI point code parameter can be specified with asterisks (*) or single values for other point code parameters. *Table 2: Valid Value Combinations for ANSI Point Code Parameters* shows the valid combinations of these parameter values.

Table 2: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk
Range of Values	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

A range of values for the H0 and H1 heading codes can be specified with asterisks (*) or single values for other heading code parameter. *Table 3: Valid Value Combinations for H0 and H1 Parameters* shows the valid combinations of these parameter values.

Table 3: Valid Value Combinations for H0 and H1 Parameters

H0	H1
Single Value	Single Value
Single Value	Range of Values
Single Value	Asterisk
Range of Values	Asterisk
Asterisk	Asterisk

When changing or removing an existing gateway screening entry, the ANSI point code values, priority values, H0 and H1 heading code values, translation type, ISUP message type, or TUP message type values specified with the command must match the values configured in the database for the specified screening reference. If a command is specified with a parameter value that is part of a range of values for that parameter already configured for that screening reference, the command is rejected.

For example, the database contains a gateway screening entry for the range of allowed OPCs 010-010-010 to 010-010-100 in Allowed OPC screening reference `opc1`. If an attempt is made to remove or change Allowed OPC screening reference `opc1` and the ANSI point code 010-010-025 is specified. The command is rejected because point code 010-010-025 is a part of the point code range configured in the database. To remove or change Allowed OPC screening reference `opc1`, these point code parameters must be specified with the command, `ni=010`, `nc=010`, `ncm=010&&100`.

If the ANSI point code, priority value, H0 and H1 heading code values, or translation type values specified with an enter command is within the range of values already configured for the specified screening reference, the command is rejected. For example, the `ent-scr-opc` command is entered with the point code 010-010-050 assigned to screening reference `opc1`. If the database contains the range of point codes 010-010-010 to 010-010-100, specified as `ni=010`, `nc=010`, `ncm=010&&100`, the command is rejected. If the database contains an entry for all point codes with the network identifier of 010 and network cluster of 010, `ni=010`, `nc=010`, `ncm=*`, the command is rejected.

A range of values can be specified when displaying gateway screening entries. The range of values does not have to match the values configured in the database. The range of values specified with a retrieve command is used to limit the number of entries to search for. There are some restrictions for using ANSI point code values with retrieve commands.*Table 4: Valid Parameter Combinations for ANSI Point Code Parameters* shows the valid combinations of the ANSI point code parameters.

Table 4: Valid Parameter Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single value	Single value	Single value, a range of values, an asterisk, or the NCM value not specified
Single value	A range of values, an asterisk, or the NC value is not specified	the NCM value is not specified
A range of NI values, an asterisk, or the NI value is not specified	the NC value is not specified	the NCM value is not specified

The range of values are displayed in the output of the retrieve commands the same way as they were entered. The following are examples of outputs containing ranges of values.

```
rtrv-scr-blkdpc:sr=iec:ni=240:nc=001:ncm=010&&018
```

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = BLOCKED DPC
SR    NI       NC       NCM      NSFI    NSR/ACT
IEC   240      001      010&&020 STOP    -------
```

```
rtrv-scr-sio:sr=iec:nic=1:si=1
```

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED SIO
SR    NIC  PRI  SI  H0     H1     NSFI    NSR/ACT
IEC   2    0&&2 1   08&&11 *      BLKDPC  WDB2
IEC   2    1    1   11     03&&07 DPC     ABC2
```

```
rtrv-scr-tt:all=yes
```

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED TT
SR    TYPE     NSFI   NSR/ACT
IEC   005&&010 STOP   ------
IEC   012      STOP   ------
IEC   016      CDPA   IEC
WRD2  243      STOP   ------
WRD4  *        STOP   ------
```

Use of the Asterisk " * " for the ZONE, AREA, ID, MSA, SSA, and SP Parameters

A range of values for an ITU-I or 24-bit ITU-N point code parameter can be specified using a combination of asterisks (*) and single values for the point code parameters. *Table 5: Valid Value Combinations for ITU-I Point Code Parameters* shows the valid combinations of the ITU-I parameter values. *Table 6: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 5: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 6: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 7: Valid Parameter Combinations for ITU-I Point Code Parameters shows the valid combinations of the ITU-I point code parameters used with the retrieve commands when displaying ITU-I gateway screening entries.

Table 7: Valid Parameter Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single value	Single value	Single value, an asterisk, or the ID value not specified
Single value	An asterisk, or the AREA value is not specified	the ID value is not specified
An asterisk, or the ZONE value is not specified	the AREA value is not specified	the ID value is not specified

Table 8: Valid Parameter Combinations for 24-bit ITU-N Point Code Parameters shows the valid combinations of the 24-bit ITU-N point code parameters used with the retrieve commands when displaying 24-bit ITU-N gateway screening entries.

Table 8: Valid Parameter Combinations for 24-bit ITU-N Point Code Parameters

MSA	SSA	SP
Single value	Single value	Single value, an asterisk, or the SP value not specified
Single value	An asterisk, or the SSA value is not specified	the SP value is not specified
An asterisk, or the MSA value is not specified	the SSA value is not specified	the SP value is not specified

User Interface Requirements

A screening table is created, modified, displayed and removed using these on-line commands. For more information on these commands, go to the *Commands Manual*.

- Screen Set – `ent-scrset`, `chg-scrset`, `dlt-scrset`, `rtrv-scrset`
- Allowed Originating Point Code – `ent-scr-opc`, `chg-scr-opc`, `dlt-scr-opc`, `rtrv-scr-opc`
- Blocked Originating Point Code – `ent-scr-blkopc`, `chg-scr-blkopc`, `dlt-scr-blkopc`, `rtrv-scr-blkopc`
- Allowed Service Information Octet – `ent-scr-sio`, `chg-scr-sio`, `dlt-scr-sio`, `rtrv-scr-sio`
- Allowed Destination Point Code – `ent-scr-dpc`, `chg-scr-dpc`, `dlt-scr-dpc`, `rtrv-scr-dpc`
- Blocked Destination Point Code – `ent-scr-blkdpc`, `chg-scr-blkdpc`, `dlt-scr-blkdpc`, `rtrv-scr-blkdpc`
- Allowed Affected Destination Field – `ent-scr-destfld`, `chg-scr-destfld`, `dlt-scr-destfld`, `rtrv-scr-destfld`
- Allowed ISUP/TUP Message Type – `ent-scr-isup`, `chg-scr-isup`, `dlt-scr-isup`, `rtrv-scr-isup`
- Allowed Calling Party Address – `ent-scr-cgpa`, `chg-scr-cgpa`, `dlt-scr-cgpa`, `rtrv-scr-cgpa`
- Allowed Called Party Address – `ent-scr-cdpa`, `chg-scr-cdpa`, `dlt-scr-cdpa`, `rtrv-scr-cdpa`
- Allowed Translation Type – `ent-scr-tt`, `chg-scr-tt`, `dlt-scr-tt`, `rtrv-scr-tt`
- Allowed Affected Point Code – `ent-scr-aftpc`, `chg-scr-aftpc`, `dlt-scr-aftpc`, `rtrv-scr-aftpc`
- Gateway Screening Stop Action Sets – `chg-gws-actset`, `rtrv-gws-actset`

Command Summary

This section briefly describes each type of command used in this chapter. There are four commands for each screening function. One to enter the screening information (`ent`), one to change the screening information after it has been entered (`chg`), one to delete screening information (`dlt`), and one to display the screening information (`rtrv`).

If the command is not accepted, a "Command Rejected" message is displayed. If the command is accepted, a time stamp and a "Command Completed" message is displayed. For example:

```
E2361 Cmd Rej: Screen set name not defined
```

or

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
ENT-SCR-OPC: MASP A - COMPLTD
```

Any time a screen set is affected by a command (for example, an entry is added to, removed from, or changed in the screen set) a "Screen Set Affected" message is displayed indicating the percentage of memory that screen set occupies (100% = the maximum space available). This information is useful in determining how "full" the screen set is at any given time. The percentages are calculated after the command is executed. For example, the output message, ENT-SCR-OPC: SCREEN SET AFFECTED - SS01 25% FULL, indicates that after an entry was added to screen set SS01 by the `ent-scr-opc` command, it occupied 25% of the maximum space available. The following is an example of the output that can be received when a screen set is affected.

```
Extended Processing Time Required -- Please Wait
Notice: The number of screensets affected is   2.
ENT-SCR-OPC: SCREEN SET AFFECTED - ss01 25% FULL
ENT-SCR-OPC: SCREEN SET AFFECTED - ss04 35% FULL
ENT-SCR-OPC: MASP A - COMPLTD
```

When a new screen set is created it immediately occupies space which may or may not be over the allowed limit. The user must know how much space has been occupied by the new screen set. For example, if the screen set `SCR1` is created, the output of the `ent-scrset` command has the following format:

```
Extended Processing Time Required -- Please Wait
Notice: The number of screensets affected is   1.
ENT-SCRSET: SCREEN SET AFFECTED - scr1   95% FULL
ENT-SCRSET: MASP A - COMPLTD
```

Note: A screen set can be over 100% full, but it is not recommended that the screen set remain in this condition. The gateway screening process will not function properly using a screen set that is over 100% full. Some entries must be removed from the screen set to reduce the screen set capacity to 100% or below.

Enter Commands

All of the parameters in the enter command are mandatory. If the enter command contains a screening reference that does not exist, a new screening table is created. If the screening reference exists, and an entry that matches the specified parameters does not already exist, a new entry is added to the screening table. If an entry exists already, the command is rejected.

Change Commands

At least one parameter must be changed in the change commands. Parameters that are considered part of the search key must be specified in every `chg` command (for example, the `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, and `sp` parameters for the `chg-scr-opc` command). Each of these parameters has a corresponding "new" parameter (for example, `nni`, `nnc`, `nncm`, `nzone`, `narea`, `nid`, `nnpc`, `nmsa`, `nssa`, `nsp`) which may be specified in order to change the entry in the screening table. Parameters that are not part of the search key may be specified, but do not have "new" values. For example, the

nsfi, nsr, ri, and actname parameters do not have "new" parameters (for example, nnsfi, nnsr, nri, or nactname). If a "new" parameter is not specified, it assumes the value of the corresponding search key parameter. For example, if the nni parameter is not specified, then the ni parameter does not change since the nni parameter assumes the value of the ni parameter. If, however, a "new" parameter is specified, it must follow the same rules as the search keys. For example, if the nni and nncm parameters are not specified, and the nnc parameter is specified as an "*" (asterisk), then the ncm parameter must be an "*" (asterisk). The new data must not already exist in the screening table. If an entry already exists which matches the new data, the command is rejected.

Delete Commands

The use of the asterisk value in a delete command implies the deletion of a specific entry containing that asterisk value, not the deletion of multiple entries whose values may be in the range implied by the asterisk. For example, entering dlt-scr-opc:sr=opc1:ni=*:nc=*:ncm=* cannot be used to remove all entries in opc1.

When the last entry is deleted from a screening table, the entire table is deleted, unless it is referenced by another screening table. If a screening table is referenced and an attempt is made to delete the last entry in the screening table, an error message is displayed.

Retrieve Commands

The retrieve commands for each screening function have the same parameters as the enter commands with an additional parameter called all. The all parameter defaults to no, and can only be specified if no other parameters are specified. If the all parameter is specified and is yes, then a detailed output consisting of every entry in each rule of the indicated screening function type is displayed. There are no rules associated with parameter combinations (for example, if the nc parameter is equal to * then the ncm parameter must be "*"). If an entry is specified using a "*", then only the entries where that parameter is a "*" is output.

If the NSFI has a value other than STOP or FAIL, then the name of the screening reference to be used in the next step of the gateway screening process (NSR) must be specified. The value of the NSR is shown in the NSR/ACT field.

If the NSFI is STOP, no NSR value can be specified. The gateway screening stop action sets can be specified with the actname parameter if the NSFI is STOP. If a gateway screening stop set has been assigned to the screen, the NSR/ACT field shows the name of the gateway screening stop action set. for more information on the gateway screening stop action sets, go to the *Configuring Gateway Screening Stop Action Sets* procedure.

If the NSFI is FAIL or STOP and no NSR or ACTNAME value is assigned to the screen, the entry ------ is shown in the NSR/ACT field.

The following is an example of a detailed output using the rtrv-scr-opc command with the all=yes parameter specified.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED OPC
SR    NI       NC       NCM      NSFI    NSR/ACT
IEC   240      001      010&&200 STOP    ------
IEC   241      *        *        CGPA    cg04
SR      ZONE   AREA     ID       NSFI    NSR/ACT
IEC     1      003      4        BLKOPC  blk1
IEC     1      003      5        STOP    COPY
SR      NPC                      NSFI    NSR/ACT
```

```
IEC     00235                    CGPA    cg04
IEC     00240                    CGPA    cg01
SR    NI       NC       NCM      NSFI    NSR/ACT
WRD2  243      015&&075 *        STOP    RDCT
WRD3  243      105      002      CGPA    WRD4
SR      NPC                      NSFI    NSR/ACT
WRD4    00245                    BLKOPC  blk3
WRD4    00247                    STOP    CR
```

For the `rtrv-scrset:all=yes` command, the output consists of every screen set and every screening table in each screen set, in addition to the fields displayed from the `rtrv-scrset` command with no parameters. The following is an example of the detailed output of the `rtrv-scrset:all=yes` command.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0

SCRN  NSFI    NSR/ACT  RULES DESTFLD
SS01  OPC     IEC      120   Y
      DPC     GOOP     33
      SIO     WRD1     5
SS02  STOP    ------   0     Y
SS03  DPC     WRD1     56    Y
      SIO     WRD2     10
      BLKDPC  WRD5     30
```

Parameters that are not specified default to “all possible values” for that parameter. If no parameters are specified (except for the `rtrv-scrset` command), a summary output is displayed. A summary output consists of three columns of information, the screening references for the specified screen (SR), and an indicator of whether the screen table is referenced or not (REF), and the number of entries in the screening reference (RULES). The following is an example of a summary output using the `rtrv-scr-opc` command with no parameters.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED OPC

SR    REF  RULES
IEC   YES     2
WRD2  YES     1
WRD3  NO      4
WRD4  YES     9
```

For the `rtrv-scrset` command, if no parameters are specified, the output displays the following information.

- The capacity of the gateway screening database, as a percentage of the maximum capacity
- The percentage of the maximum number of the CDPA and AFTPC tables
- The total number of screen sets in the database with the percentage of the screen set capacity
- The number of SEAS and EAGLE 5 ISS screen sets being used
- The screen set name (SCRN)
- The next screening function that should be used in the gateway screening process (NSFI)
- The next screening reference or the gateway screening stop action set name (NSR/ACT)
- The memory capacity (percentage) of each screen set (FULL)
- The number of entries (rules) in the screen set (RULES)
- The number of tables in the screen set (TABLES)
- Whether the automatic allowed affected destination screening (DESTFLD) for network management messages is applied against the routing table, self point codes, and capability point codes. When this parameter is on, the automatic screening is applied at the end of the provisioned screen set.

The following is an example of the output of the `rtrv-scrset` command with no parameters.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
ENTIRE GWS DATABASE IS 1% FULL
CDPA + AFTPC TABLES ARE 1% FULL
SCREEN SET TABLE IS (7 OF 255) 2% FULL
THERE ARE 0 SEAS SCREEN SETS USED ( prefix 00nn )
THERE ARE 7 EAGLE SCREEN SETS USED

SCRN  NSFI    NSR/ACT  FULL  RULES  TABLES  DESTFLD
ss01  OPC     opc1      51%  2075   22      Y
ss02  OPC     opc2       2%  75     22      Y
ss03  OPC     opc3       2%  75     22      Y
ss04  OPC     opc1      51%  2075   22      N
ss07  OPC     opc1      51%  2075   22      Y
ss09  OPC     opc1      51%  2075   22      N
ss28  OPC     opc1      51%  2075   22      Y
```

The outputs of the retrieve commands contains the following fields. There are certain fields that are used with specific commands and these are noted in the description of the field.

AREA – The area value of an ITU international point code, expressed as `zone-area-id`. This field is used with all screening functions except screen set, allowed SIO, and allowed TT screening functions.

DESTFLD – Whether the automatic allowed affected destination screening for network management messages is applied against the routing table, self point codes, and capability point codes. When this parameter is on, the automatic screening is applied at the end of the provisioned screen set. This field is only used with the screen set function.

FULL – The capacity of allowed memory a given screen set occupies, expressed as percentage. This field is only used with the screen set function.

H0 – The H0 heading code in the service information field. The `H0` field shows the first four bits of the message type indicator in the SIO field. This field is only used with the allowed SIO screening function.

H1 – The H1 heading code in the service information field. The `H1` field shows the last four bits of the message type indicator in the SIO field. This field is only used with the allowed SIO screening function.

ID – The ID value of an ITU international point code, expressed as `zone-area-id`. This field is used with all screening functions except screen set, allowed SIO, and allowed TT screening functions.

ISUPMT/TUPMT – The ISUP message type (**ISUPMT**) in the service information field of an ISUP message or the TUP message type (**TUPMT**) in the service information field of a TUP message. This field is used only with allowed ISUP screening functions.

MSA – The main signaling area value of a 24-bit ITU national point code, expressed as `msa-ssa-sp`. This field is used with all screening functions except screen set, allowed SIO, and allowed TT screening functions.

NC – The network cluster of an ANSI point code, expressed as `ni-nc-ncm`. This field is used with all screening functions except screen set, allowed SIO, and allowed TT screening functions.

NCM – The network cluster member of an ANSI point code, expressed as `ni-nc-ncm`. This field is used with all screening functions except screen set, allowed SIO, and allowed TT screening functions.

NI – The network identifier of an ANSI point code, expressed as `ni-nc-ncm`. This field is used with all screening functions except screen set, allowed SIO, and allowed TT screening functions.

NIC – The network indicator code in the service information octet. This field is only used with the allowed SIO screening function.

NPC – The ITU national point code. This field is used with all screening functions except screen set, allowed SIO, and allowed TT screening functions.

NSFI – The next screening function identifier. The next screening function identifier specifies the next screening function that should be used in the gateway screening process. This field is used with all screening functions.

NSR/ACT – The next screening reference or the gateway screening stop action set name. The next screening reference is the name of the of the next gateway screening entity that should be used in the screening process. The gateway screening stop action set name is the name of the gateway screening stop action set assigned to the screen defining the additional action to be performed on the MSU that passes gateway screening. This field is used with all screening functions.

PRI – The priority of a message in the service information octet. This field is only used with the allowed SIO screening function.

REF – An indicator of whether the specified screening table is referenced by another screening table. This field is used with the summary outputs of all retrieve commands except the retrieve screen set (`rtrv-scrset`) command.

RI – The routing indicator in the called party address (CDPA). This field is only used with the allowed CGPA screening function.

RULES – The number of entries in the screen. This field is only used with the screen set function.

SCCPMT – The SCCP message type. This field is only used with the allowed calling party address function.

SCMGFID – The SCCP management (SCMG) format ID, which defines the function and format of each SCMG message. This field is only used with the allowed called party address function.

SCRN – The name of the screen set. This field is only used with the screen set function.

SI – The service indicator for the service information octet, which are the last two bits of the subservice field. This field is only used with the allowed SIO screening function.

SP – The signaling point value of a 24-bit ITU national point code, expressed as `msa-ssa-sp`. This field is used with all screening functions except screen set, allowed SIO, and allowed TT screening functions.

SR – The name of the screening reference. This field is used with all screening functions except the screen set screening function.

SSA – The sub-signaling area value of a 24-bit ITU national point code, expressed as `msa-ssa-sp`. This field is used with all screening functions except screen set, allowed SIO, and allowed TT screening functions.

SSN – The subsystem number of a given point code. This field is only used with the allowed CGPA, allowed CDPA, and allowed AFTPC screening functions.

TABLES – The number of tables in the screen. This field is only used with the screen set function.

TYPE – The translation type that is allowed for global title translation. This field is only used with the allowed TT screening function.

ZONE – The zone value of an ITU international point code, expressed as `zone-area-id`. This field is used with all screening functions except screen set, allowed SIO, and allowed TT screening functions.

The ITU international and 14-bit ITU national spare point codes are displayed in the output of the Gateway Screening retrieve commands with the spare point code subtype prefix "`s-`".

14-Bit ITU National Point Code Formats

Gateway screening only allows 14-bit ITU national point codes to be provisioned in the database by the enter, delete, or change gateway screening commands, and displayed by the gateway screening retrieve commands as a single number. If a format other than a single number (14-0-0-0) for the 14-bit ITU national point code has been defined by the `npcfmti` parameter of the `chg-stpopts` command, the 14-bit ITU national point code must be converted into a single number so that it can be used by gateway screening.

For example, the format of the 14-bit ITU national point code is 4-4-4-2 and the user would like to add point code value 7-7-7-1 into the allowed OPC screen. The point code value 7-7-7-1 would have to be converted to a single number so that the point code can be added to the allowed OPC screen. To determine what multiple part 14-bit ITU national point code is represented by the single number 14-bit ITU national point code in the gateway screening table, the single number point code must be converted to a multiple part point code.

To convert a single number 14-bit ITU national point code to a multiple part point code, perform the *Converting Single Number 14-Bit ITU National Point Codes* procedure.

To convert a multiple part 14-bit ITU national point code to a single number point code, perform the *Converting Multiple Part 14-Bit ITU National Point Codes* procedure.

For a definition of the different formats that can be used for 14-bit ITU national point codes, see the 14-Bit ITU National Point Code Formats section in Chapter 2, Configuring Destination Tables in the Database *Administration Manual - SS7* .

Converting Single Number 14-Bit ITU National Point Codes

To convert a single number 14-bit ITU national point code to a multiple part 14-bit ITU national point code, perform these steps. To make this conversion, you will need to know the format of the 14-bit ITU national point code. This can be verified in the `NPCFMTI` field of the `rtrv-stpopts` command output. For this example, the 14-bit ITU national point codes 14781 and 695 are converted to point codes using the 3-8-3-0 format.

1. The point code is converted to a binary number.

   This can be done with most scientific calculators.

   a) The number 14781 converts to the binary number 11100110111101.
   b) The number 695 converts to the binary number 1010110111.

      Note: Make sure the binary number contains 14 digits. If it does not, add leading zeros to the binary number to bring the total number of digits in the number to 14.

      In this example, the binary equivalent for the decimal number 695 (1010110111) contains 10 digits, so four zeros must be added to the beginning of the binary number. The resulting binary number is now 00001010110111.

2. Divide the binary number into the number of parts required by the format of the 14-bit ITU national point code.

   For this example, the format is 3-8-3-0. Since the last part of the point code format is 0, the point code format contains only three parts. Divide the point code into three parts, the first part of the point code contains the first three digits of the 14-digit binary number, the second part of the point

code contains the next eight digits of the 14-digit binary number, and the third part of the point code contains the last three digits of the 14-digit binary number.

For this example, the binary numbers would be divided like this:

a) 11100110111101 = 111 00110111 101
b) 00001010110111 = 000 01010110 111

3. Convert each part of the point code into a decimal number using the same scientific calculator used in step 1 and separate each part of the point code with dashes.

   The results are as follows.

   a) 111 00110111 101 = 7-55-5
   b) 000 01010110 111 = 0-86-7

   When the 14-bit ITU national point codes are converted from single numbers to multiple part point codes, the resulting value of the multiple part point code depends on the point code format specified by the `npcfmti` parameter of the `chg-stpopts` command. When converting the single number point code 14781 to the point code format 3-8-3-0, the resulting point code value is 7-55-5. If point code 14781 is converted to the point code format 4-4-4-2, the resulting point code value is 14-6-15-1.

Converting Multiple Part 14-Bit ITU National Point Codes

To convert multiple part 14-bit ITU national point codes to a single number, perform these steps. To make this conversion, you will need to know the format of the 14-bit ITU national point code. This can be verified in the `NPCFMTI` field of the `rtrv-stpopts` command output. For this example, the 14-bit ITU national point codes 7-55-5 and 0-86-7, using the 3-8-3-0 point code format, are converted into a single number.

1. Convert each part of the point code into a binary number using a scientific calculator.

   The results are as follows.

   a) 7-55-5 = 111 00110111 101
   b) 0-86-7 = 000 01010110 111

2. Combine each part of the point code into a single binary number as follows.

   a) 111 00110111 101 = 11100110111101
   b) 000 01010110 111 = 00001010110111

   Note: If the binary number has any zeros at the beginning of the number, remove these zeros as they are not necessary.

   In this example, the binary equivalent for the point code 0-86-7 (00001010110111) contains four zeros at the beginning of the binary number. When the leading zeros are removed from the binary number, the resulting binary number is now 1010110111.

3. Convert the binary number to a decimal number using the same scientific calculator used in step 1.

   a) The binary number 11100110111101 converts to the decimal number 14781.
   b) The binary number 1010110111 converts to the decimal number 695.

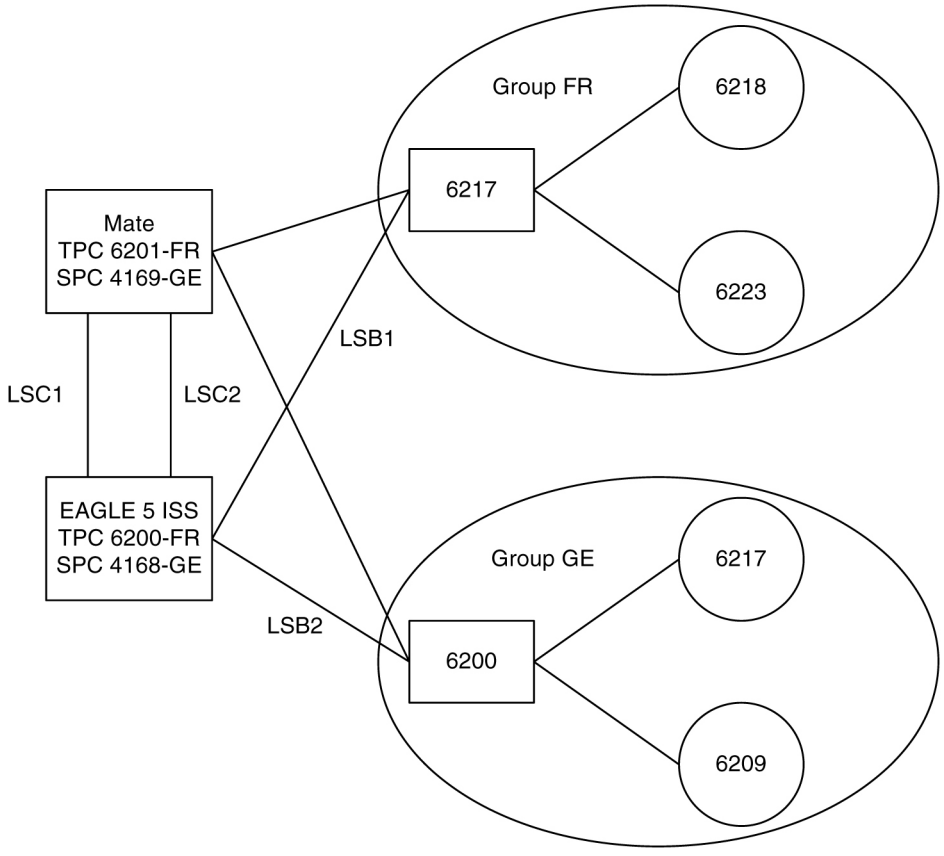
Gateway Screening Using Duplicate ITU National Point Codes

Note: The Duplicate ITU National Point Code feature applies only to 14-bit ITU national point codes.

Gateway screening does not support the Duplicate ITU National Point Code Support feature. The point code value specified with the `npc` parameter can only be a 5-digit number and cannot contain any group code values. However, by assigning a different screenset to the linksets that have different group codes, you can screen on ITU national point codes that have group codes assigned to them. The screenset is assigned to the linkset with the `scrn` parameter of either the `ent-ls` or `chg-ls` command.

For example, in the network in *Figure 3: Sample Network Showing Gateway Screening Using Duplicate ITU National Point Codes*, if you want to screen out MSUs coming from OPC 6217 in group GE, but allow MSUs coming from OPC 6217 in group FR, you could assign different screensets to linksets LSB1 and LSB2. The screenset assigned to linkset LSB1 would allow MSUs from OPC 6217. The screenset assigned to linkset LSB2 would block MSUs from OPC 6217.

Figure 3: Sample Network Showing Gateway Screening Using Duplicate ITU National Point Codes



Gateway Screening Configuration

Gateway screening can be configured in a variety of ways, depending on the criteria you wish to screen the messages for. The examples used in these procedures are based on seven example configurations (*Figure 5: Gateway Screening Configuration - Example 1* through *Figure 11: Gateway Screening Configuration - Example 7*). Each example configuration shows the screening order used by the EAGLE 5 ISS, with the screening criteria for each screen, and the order that these screens are added to the database to achieve the screening order, with the command entry required to enter the screening criteria into the database.

Each procedure adding a gateway screening entity to the database contains a table showing the parameters and the data used for the command examples.

Note: The gateway screening rules table can contain a maximum of 362,700 rules.

The EAGLE 5 ISS can contain a maximum of 255 screen sets.

Each screen set can contain a maximum of 4,000 rules, however the total number of rules contained in all the screen sets cannot exceed 362,700.

These general rules apply to configuring gateway screening entities in the database. Each procedure contains any rules that are specific to that procedure.

1. The gateway screening feature must be turned on before gateway screening entities can be added to the database.

   Verify this by entering the `rtrv-feat` command. If the gateway screening feature is off, it can be turned on by entering the `chg-feat:gws=on` command.

   Note: Once the gateway screening feature is turned on with the `chg-feat` command, it cannot be turned off

2. A TSM running the GLS application must be configured in the database with the `ent-card:type=tsm:appl=gls:loc=<TSM Card Location>` command.

   Verify this with the `rtrv-card` command.

3. Changing or removing an existing gateway screening entity will change the screening order for the messages on the linkset.

   Verify the new screening order before changing or removing any gateway screening entities.

4. If the screen set being added to the database, includes existing screening references, messages in the linkset being screened will be screened against all entries in those screening references.

   This could allow a message into the EAGLE 5 ISS that was not supposed to be allowed in, or a message blocked from the EAGLE 5 ISS that is supposed to be allowed in. Verify the contents of existing screening references to make sure that you want all messages in the linkset screened against all entries in the existing screening references.

5. The gateway screening entity specified by the `nsfi` and `nsr` parameters must be in the database.
6. If the `nsfi` and `nsr` parameters do not reference an existing screening entity, the `nsfi` parameter must be set to `stop` and the `nsr` parameter cannot be specified.

   When the `nsfi` parameter is set to `stop`, the gateway screening process stops at the specified screen.

7. The `actname` parameter, specifying the gateway screening stop action set assigned to the screen, can only be specified with the `nsfi=stop` parameter.

   CAUTION: When Gateway Screening is in the screen test mode, as defined by the linkset parameters `gwsa=off` and `gwsm=on`, any action in the gateway screening stop action set specified by the `actname` parameter at the end of the gateway screening process will be performed.

8. The word `SEAS` cannot be used as a value for the `scrn` parameter of the `ent-scrset`, `dlt-scrset`, and `chg-scrset` commands.

   The word `SEAS` is used in the `rtrv-ls` command output, in the `SCRN` field, to show gateway linksets created on the SEAS interface. A gateway linkset can only be configured from a SEAS terminal and not from an EAGLE 5 ISS terminal. Gateway linksets can only be displayed from the SEAS interface.

9. When removing gateway screening entities from the database, the specified entity cannot be removed if it is referenced by other gateway screening entities.

   If it is referenced by other gateway screening entities, either the `nsfi` parameter in those gateway screening entities must be changed to `stop`, or the `nsfi` and `nsr` parameters in the those gateway screening entities must be changed to reference other gateway screening entities.

10. Point code values containing all zeros, shown in the following list, cannot be specified for any gateway screening command:

    - ANSI Point Code - 000-000-000
    - ITU-I Point Code - 0-000-0

11. For example, the 14-bit ITU national point code 1 (`npc=1`) and the 24-bit ITU national point code 000-000-001 (`msa=0`, `ssa=0`, `sp=1`) cannot be specified for the same screening reference as both of these point codes have the same internal value. This would also apply to using the asterisk as a point code value. The `npc=*` and the `msa=*`, `ssa=*`, `sp=*` parameters cannot be specified in the same screening reference.

12. If the last entry in the specified screening reference is removed from the database, the screening reference is removed from the database.

    If an attempt is made to display that specified screening reference name (for example, entering the `rtrv-scr-opc:sr=iec` command after removing the last entry in the allowed OPC screen IEC), the following error message is displayed showing that the specified screening reference name could not be found in the database.

    ```
    E2573 Cmd Rej: SR or NSR does not reference an existing SR
    ```

13. The EAGLE 5 ISS screens messages in a hierarchical fashion.

    For example, allowed OPC screens are checked before blocked OPC screens; blocked OPC screens are checked before allowed SIO screens, and so on. The gateway screening entities must be entered in reverse of the order that the screening process takes place (see *Figure 4: The Gateway Screening Process*). To add gateway screening entities into the database, the first entity to be entered must be the entity that you want to stop screening the message on. The other entities follow in the proper order and the screen set is the last entity to be added into the database. The screen set entity must be in the database for gateway screening to take place. *Table 9: Gateway Screening Process and Provisioning Order* shows the order of the MTP gateway screening process and the SCCP gateway

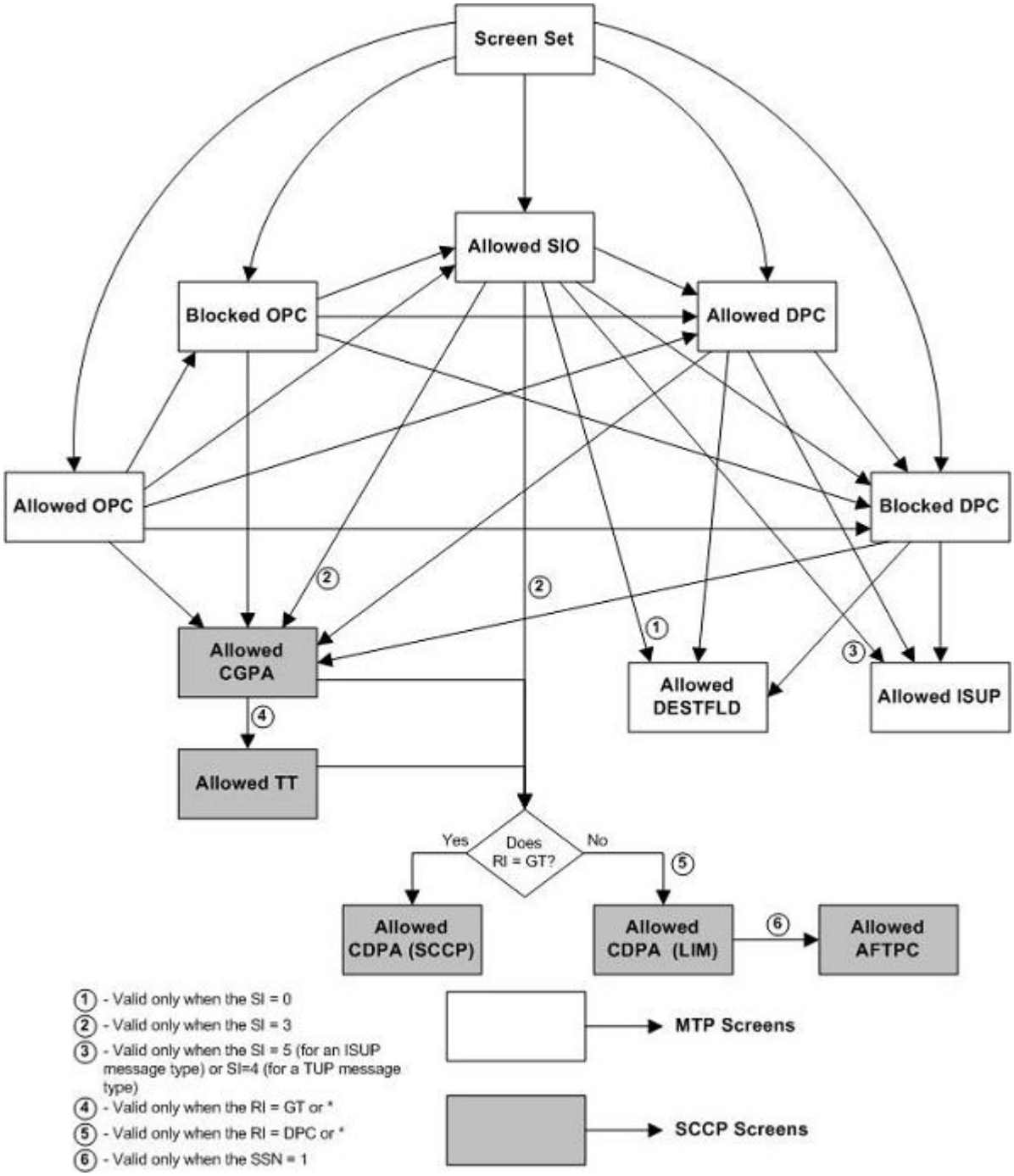
screening process and the order that these gateway screening entities must be entered into the database.

Table 9: Gateway Screening Process and Provisioning Order

MTP Gateway Screening Order		SCCP Gateway Screening Order	
Screening Order	Order of Entry into the Database	Screening Order	Order of Entry into the Database
1. Screen Set	1. Allowed DESTFLD	1. Screen Set	1. Allowed AFTPC
2. Allowed OPC	or Allowed ISUP*	2. Allowed OPC	2. Allowed CDPA
3. Blocked OPC	2. Blocked DPC	3. Blocked OPC	3. Allowed TT
4. Allowed SIO	3. Allowed DPC	4. Allowed SIO	4. Allowed CGPA
5. Allowed DPC	4. Allowed SIO	5. Allowed DPC	5. Blocked DPC
6. Blocked DPC	5. Blocked OPC	6. Blocked DPC	6. Allowed DPC
7. Allowed DESTFLD	6. Allowed OPC	7. Allowed CGPA	7. Allowed SIO
or Allowed ISUP*	7. Screen Set	8. Allowed TT	8. Blocked OPC
		9. Allowed CDPA	9. Allowed OPC
		10. Allowed AFTPC	10. Screen Set
* The allowed ISUP screen can contain ISUP and TUP message types.			

Using the `ent-ls` or `chg-ls` commands, the screen set can then be assigned to a linkset and all messages on that linkset are screened for acceptance into the network.

Figure 4: The Gateway Screening Process


Screen Set
Allowed SIO
Blocked OPC
Allowed DPC
Allowed OPC
Blocked DPC
Allowed CGPA
Allowed DESTFLD
Allowed ISUP
Allowed TT
Does RI = GT?
Yes
No
Allowed CDPA (SCCP)
Allowed CDPA (LIM)
Allowed AFTPC
1 - Valid only when the SI = 0
2 - Valid only when the SI = 3
3 - Valid only when the SI = 5 (for an ISUP message type) or SI=4 (for a TUP message type)
4 - Valid only when the RI = GT or *
5 - Valid only when the RI = DPC or *
6 - Valid only when the SSN = 1
MTP Screens
SCCP Screens

Gateway Screening Configuration Examples

Example 1

Example 1 screens the messages in a linkset for the following criteria. *Figure 5: Gateway Screening Configuration - Example 1* shows the screening order the EAGLE 5 ISS uses and the order that the screens must be entered into the database.

- Allow into the EAGLE 5 ISS messages containing the following items

  The OPC 001-001-001

  The DPC 003-003-003

  The calling party address (CGPA) 006-006-006, with the subsystem number of 253 and the routing indicator (`ri`) of `dpc` and the SCCP message type of UDT

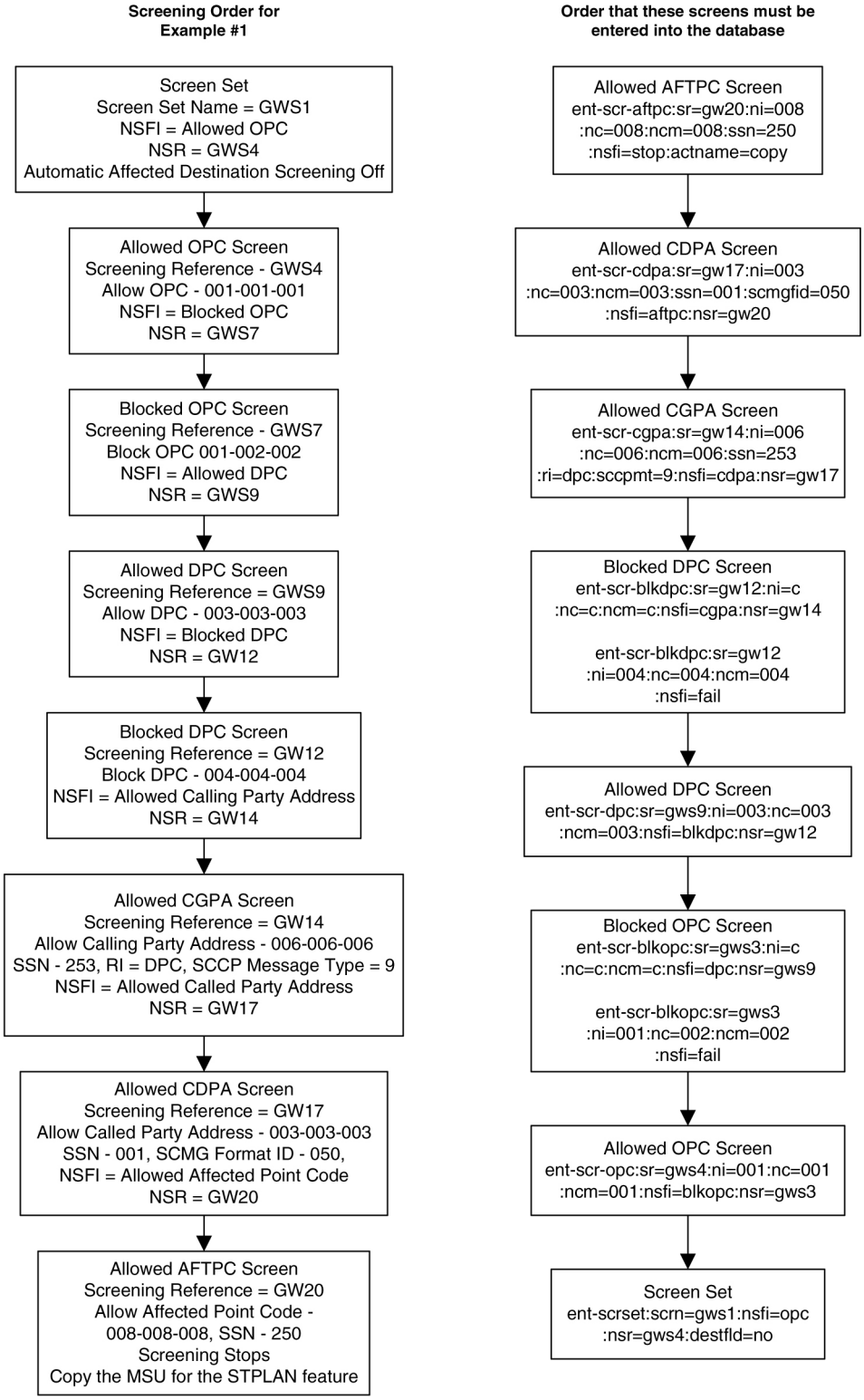
  The called party address (CDPA) 003-003-003 with the subsystem number of 001, and the SCMG format ID of 050

  The allowed affected point code (AFTPC) of 008-008-008 with the subsystem number of 250
- Block from the EAGLE 5 ISS messages containing these items

  The OPC 001-002-002

  The DPC 004-004-004
- The message that passes the gateway screening criteria is copied for the STPLAN application (specified with the `actname` parameter and the name of the gateway screening stop action set containing the `COPY` gateway screening stop action).

Figure 5: Gateway Screening Configuration - Example 1


Screening Order for Example #1
Screen Set
Screen Set Name = GWS1
NSFI = Allowed OPC
NSR = GWS4
Automatic Affected Destination Screening Off
Allowed OPC Screen
Screening Reference - GWS4
Allow OPC - 001-001-001
NSFI = Blocked OPC
NSR = GWS7
Blocked OPC Screen
Screening Reference - GWS7
Block OPC 001-002-002
NSFI = Allowed DPC
NSR = GWS9
Allowed DPC Screen
Screening Reference = GWS9
Allow DPC - 003-003-003
NSFI = Blocked DPC
NSR = GW12
Blocked DPC Screen
Screening Reference = GW12
Block DPC - 004-004-004
NSFI = Allowed Calling Party Address
NSR = GW14
Allowed CGPA Screen
Screening Reference = GW14
Allow Calling Party Address - 006-006-006
SSN - 253, RI = DPC, SCCP Message Type = 9
NSFI = Allowed Called Party Address
NSR = GW17
Allowed CDPA Screen
Screening Reference = GW17
Allow Called Party Address - 003-003-003
SSN - 001, SCMG Format ID - 050,
NSFI = Allowed Affected Point Code
NSR = GW20
Allowed AFTPC Screen
Screening Reference = GW20
Allow Affected Point Code -
008-008-008, SSN - 250
Screening Stops
Copy the MSU for the STPLAN feature
Order that these screens must be entered into the database
Allowed AFTPC Screen
ent-scr-aftpc:sr=gw20:ni=008
:nc=008:ncm=008:ssn=250
:nsfi=stop:actname=copy
Allowed CDPA Screen
ent-scr-cdpa:sr=gw17:ni=003
:nc=003:ncm=003:ssn=001:scmgfid=050
:nsfi=aftpc:nsr=gw20
Allowed CGPA Screen
ent-scr-cgpa:sr=gw14:ni=006
:nc=006:ncm=006:ssn=253
:ri=dpc:sccpmt=9:nsfi=cdpa:nsr=gw17
Blocked DPC Screen
ent-scr-blkdpc:sr=gw12:ni=c
:nc=c:ncm=c:nsfi=cgpa:nsr=gw14
ent-scr-blkdpc:sr=gw12
:ni=004:nc=004:ncm=004
:nsfi=fail
Allowed DPC Screen
ent-scr-dpc:sr=gws9:ni=003:nc=003
:ncm=003:nsfi=blkdpc:nsr=gw12
Blocked OPC Screen
ent-scr-blkopc:sr=gws3:ni=c
:nc=c:ncm=c:nsfi=dpc:nsr=gws9
ent-scr-blkopc:sr=gws3
:ni=001:nc=002:ncm=002
:nsfi=fail
Allowed OPC Screen
ent-scr-opc:sr=gws4:ni=001:nc=001
:ncm=001:nsfi=blkopc:nsr=gws3
Screen Set
ent-scrset:scrn=gws1:nsfi=opc
:nsr=gws4:destfld=no

Example 2

Example 2 screens the messages in a linkset for the following criteria. *Figure 6: Gateway Screening Configuration - Example 2* shows the screening order the EAGLE 5 ISS uses and the order that the screens must be entered into the database.

- Allow messages containing the following items into the EAGLE 5 ISS

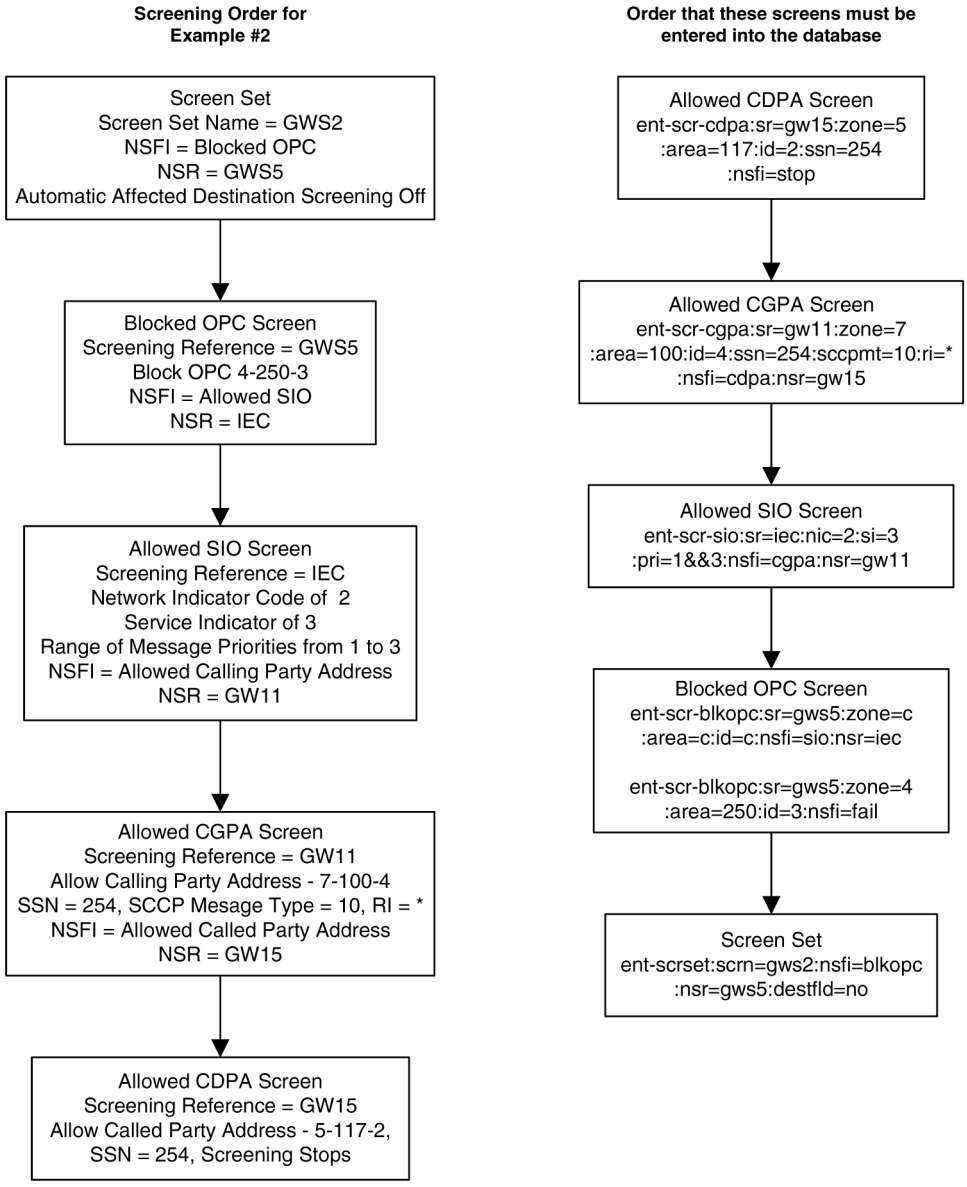
  The following SIO information:

  - The network indicator code of 2 (`nic=2`)
  - The service indicator of 3 (`si=3`)
  - Message priorities ranging from 1 to 3 (`:pri=1&&3`)

  The calling party address (CGPA) 7-100-4, with the subsystem number of 254 and the routing indicator (`ri`) of `*`, and the SCCP message type of UDTS

  The called party address (CDPA) 5-117-2 with the subsystem number of 254
- Block messages containing the OPC 4-250-3 from the EAGLE 5 ISS

Figure 6: Gateway Screening Configuration - Example 2



Example 3

Example 3 screens the messages in a linkset for the following criteria. *Figure 7: Gateway Screening Configuration - Example 3* shows the screening order the EAGLE 5 ISS uses and the order that the screens must be entered into the database.

- Allow into the EAGLE 5 ISS messages containing the following items

  The DPCs from 070-070-025 to 070-070-135

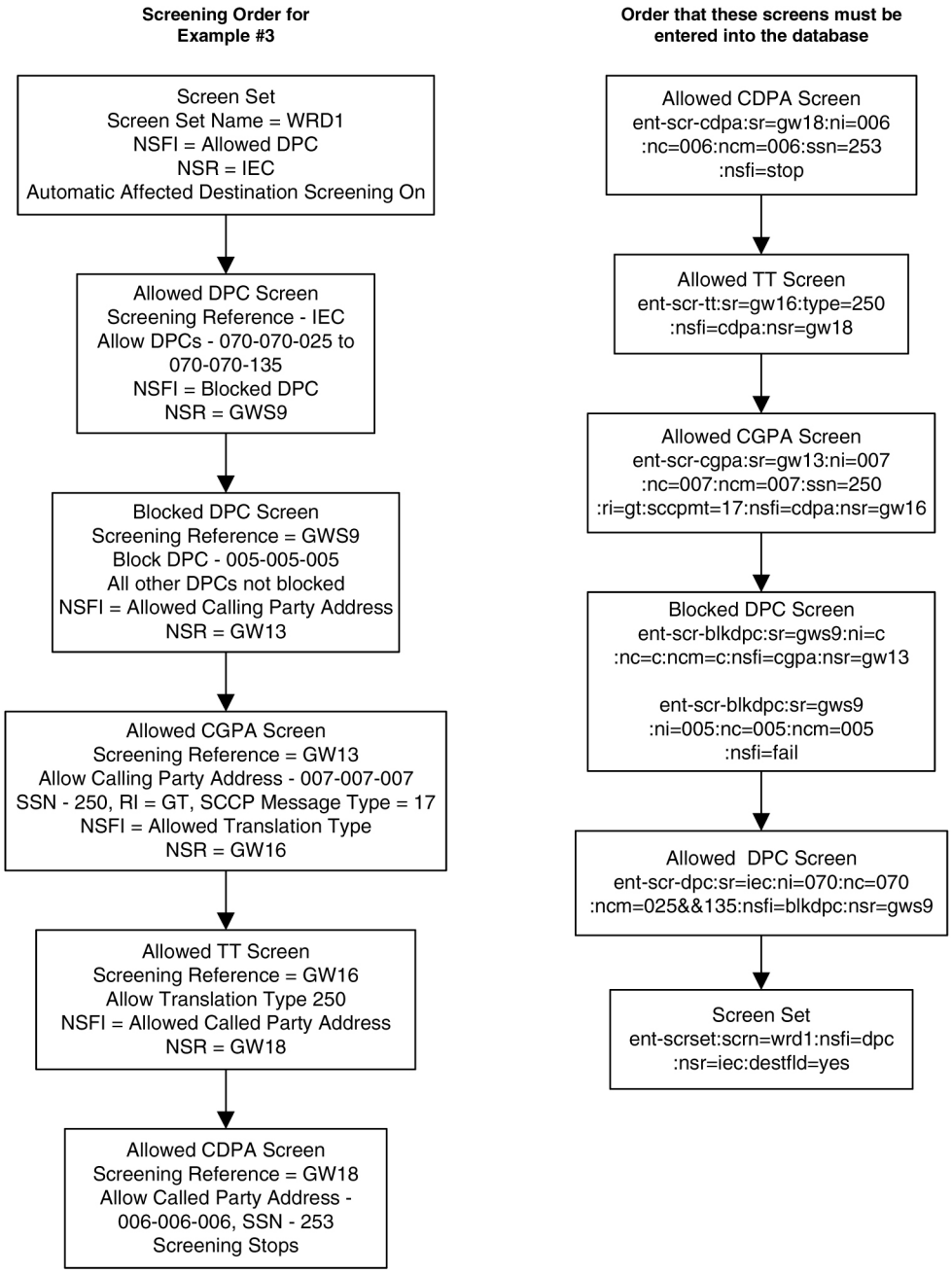
  The calling party address (CGPA) 007-007-007, with the subsystem number of 250 and the routing indicator (`ri`) of `gt` and the SCCP Message type of XUDT

  The translation type (TT) 250

  The called party address (CDPA) 006-006-006 with the subsystem number of 253

- Block messages containing the DPC 005-005-005 from the EAGLE 5 ISS
- Automatic Destination Field screening is on.

Figure 7: Gateway Screening Configuration - Example 3



Example 4

Example 4 screens the messages in a linkset for the following criteria. *Figure 8: Gateway Screening Configuration - Example 4* shows the screening order the EAGLE 5 ISS uses and the order that the screens must be entered into the database.

- Allow messages containing the following items into the EAGLE 5 ISS

  The following SIO information:

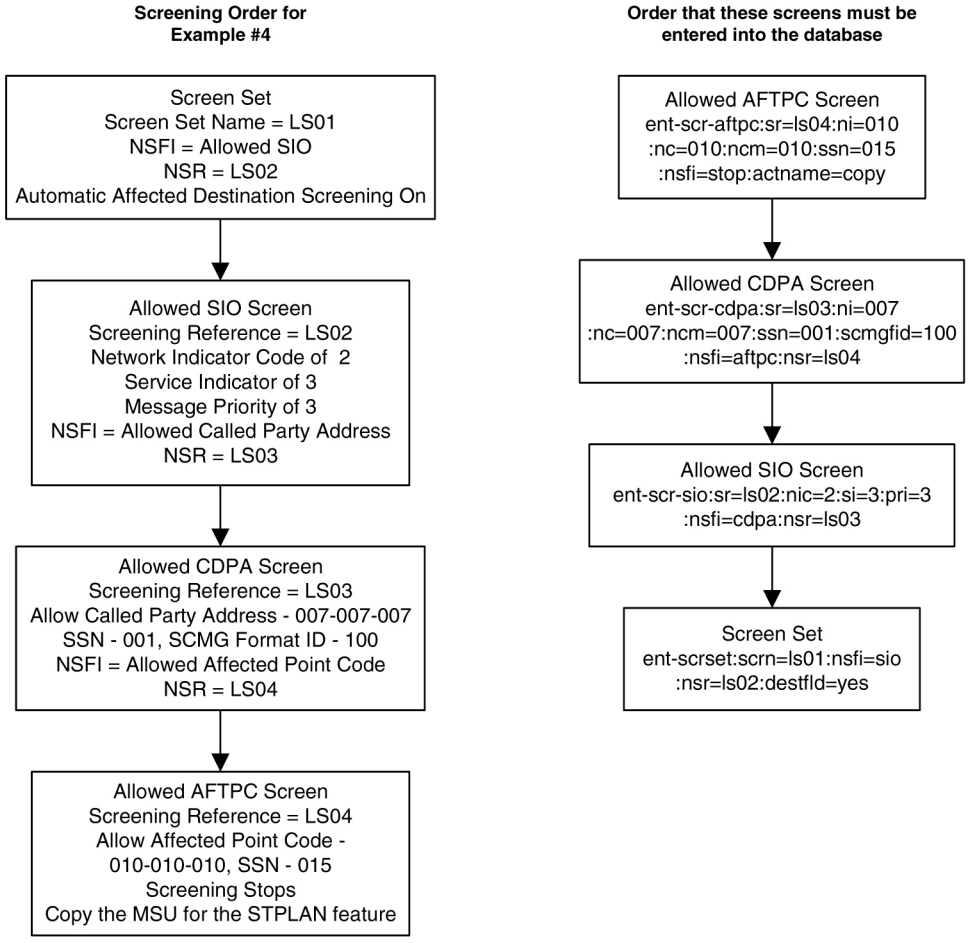
  - The network indicator code of 2 (`nic=2`)
  - The service indicator of 3 (`si=3`)
  - Message priority of 3 (`pri=3`)

  The called party address (CDPA) 007-007-007 with the subsystem number of 001 and SCMG format ID of 100

  The allowed affected point code (AFTPC) of 010-010-010 with the subsystem number of 015

- The message that passes the gateway screening criteria is copied for the STPLAN application (specified with the `actname` parameter and the name of the gateway screening stop action set containing the `COPY` gateway screening stop action).
- Automatic Destination Field screening is on.

Figure 8: Gateway Screening Configuration - Example 4



Example 5

Example 5 screens the messages in a linkset for the following criteria. *Figure 9: Gateway Screening Configuration - Example 5* shows the screening order the EAGLE 5 ISS uses and the order that the screens must be entered into the database.

- Allow into the EAGLE 5 ISS messages containing the following items

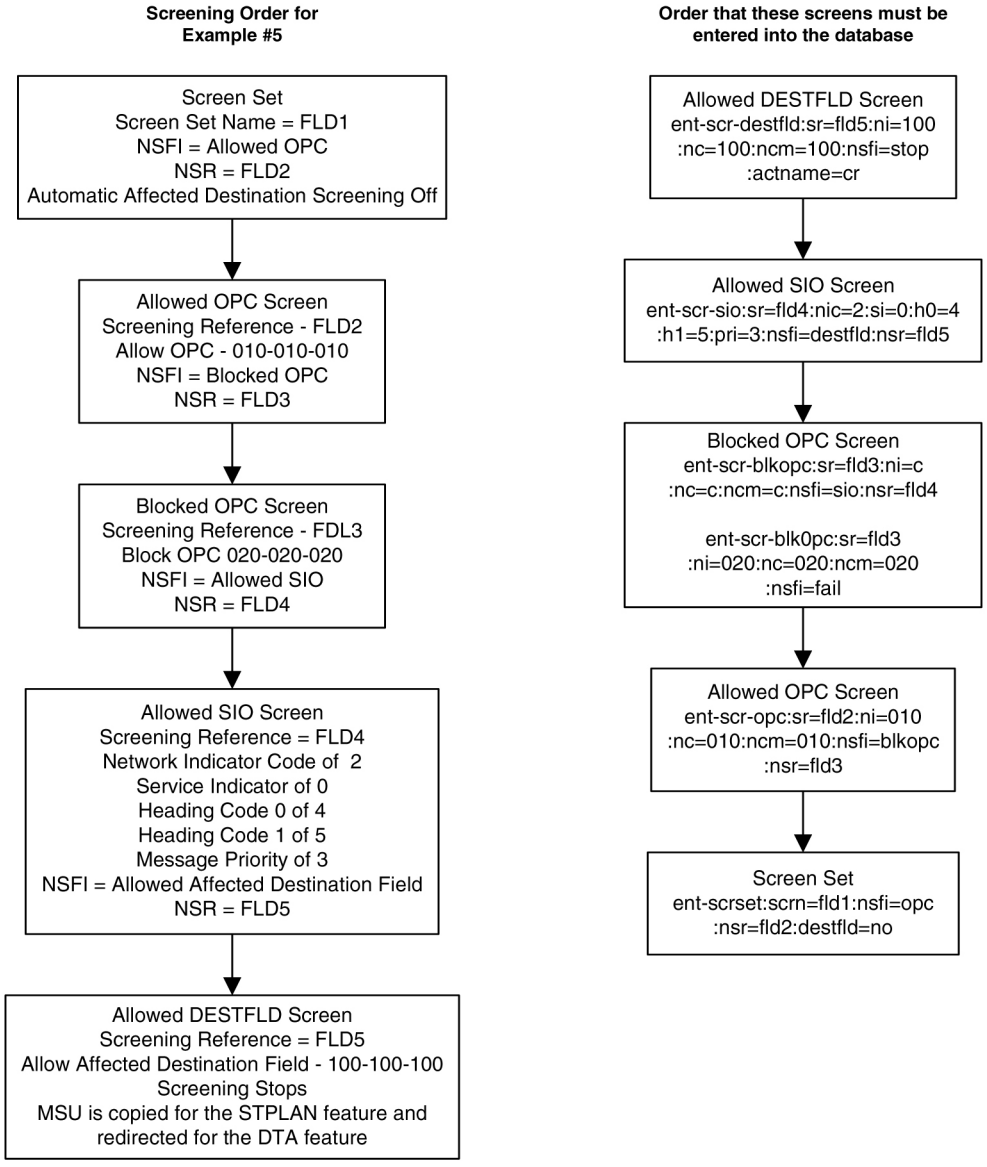
  The OPC 010-010-010

  The following SIO information:

  - The network indicator code of 2 (`nic=2`)
  - The service indicator of 0 (`si=0`)
  - Heading code 0 of 4 (`h0=4`)
  - Heading code 1 of 5 (`h1=5`)
  - Message priority of 3 (`pri=3`)

  The allowed affected destination field (DESTFLD) of 100-100-100
- Block messages containing the OPC 020-020-020 from the EAGLE 5 ISS
- The message that passes the gateway screening criteria is copied for the STPLAN application and is redirected for the gateway screening redirect function (specified with the `actname` parameter and the name of the gateway screening stop action set containing the `COPY` and `RDCT` gateway screening stop actions).

Figure 9: Gateway Screening Configuration - Example 5



Example 6

Example 6 screens the messages in a linkset for the following criteria. *Figure 10: Gateway Screening Configuration - Example 6* shows the screening order the EAGLE 5 ISS uses and the order that the screens must be entered into the database.

- Allow into the EAGLE 5 ISS messages containing the following items

  The OPC 015-015-015

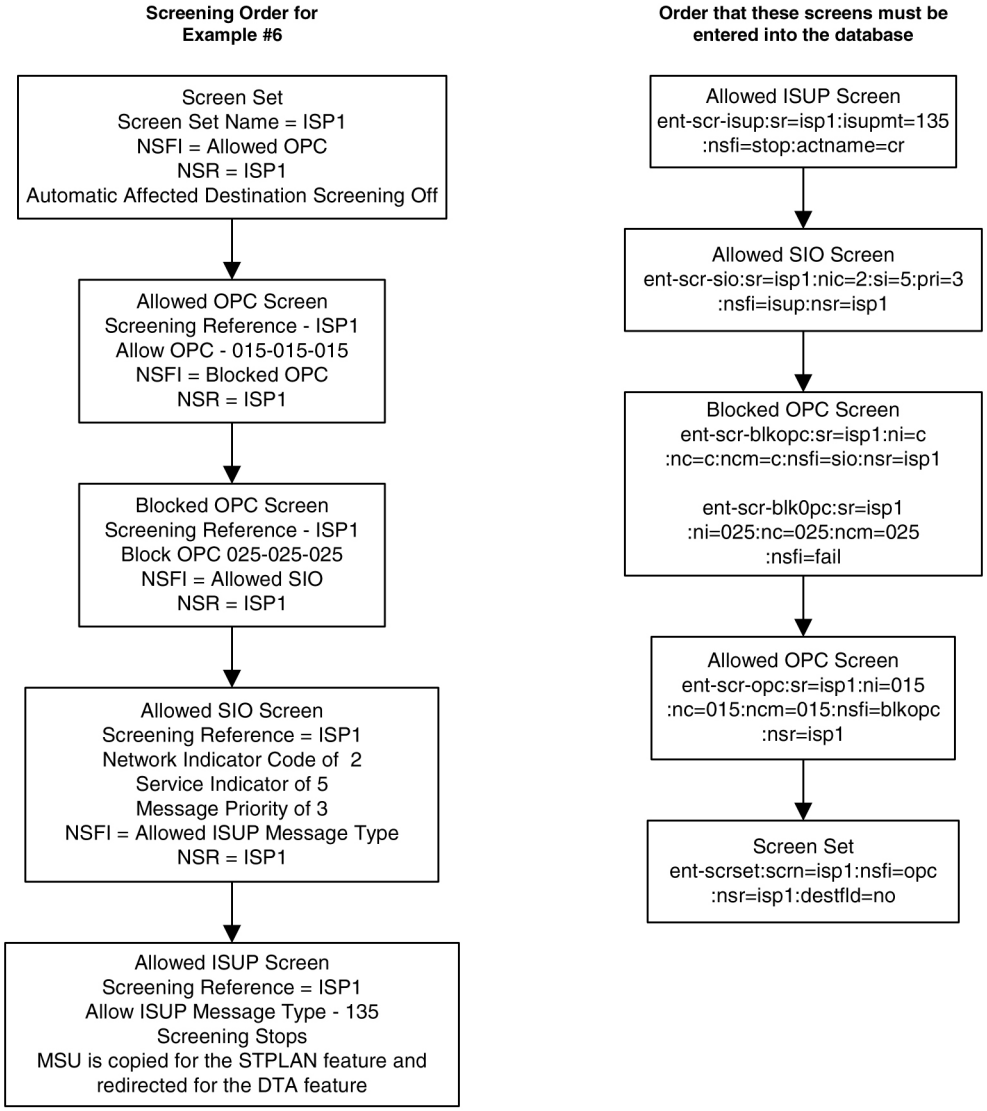
  The following SIO information:

  - The network indicator code of 2 (`nic=2`)
  - The service indicator of 5 (`si=5`)
  - Message priority of 3 (`pri=3`)

The allowed ISUP message type (ISUP) of 135

- Block messages containing the OPC 025-025-025 from the EAGLE 5 ISS
- The message that passes the gateway screening criteria is copied for the STPLAN application and is redirected for the gateway screening redirect function (specified with the `actname` parameter and the name of the gateway screening stop action set containing the `COPY` and `RDCT` gateway screening stop actions).

Figure 10: Gateway Screening Configuration - Example 6



Example 7

Example 7 screens the messages in a linkset for the following criteria. *Figure 11: Gateway Screening Configuration - Example 7* shows the screening order the EAGLE 5 ISS uses and the order that the screens must be entered into the database.

- Allow into the EAGLE 5 ISS messages containing the following items:

- TUP messages containing these items:

  The OPC 017-017-017

  The DPC 050-034-049

  The following SIO information:

  - The network indicator code of 2 (`nic=2`)
  - The service indicator of 4 (`si=4`)
  - Message priority of 3 (`pri=3`)

  The allowed TUP message type of 100
- ISUP messages containing these items:

  The OPC 017-017-017

  The DPC 073-200-059

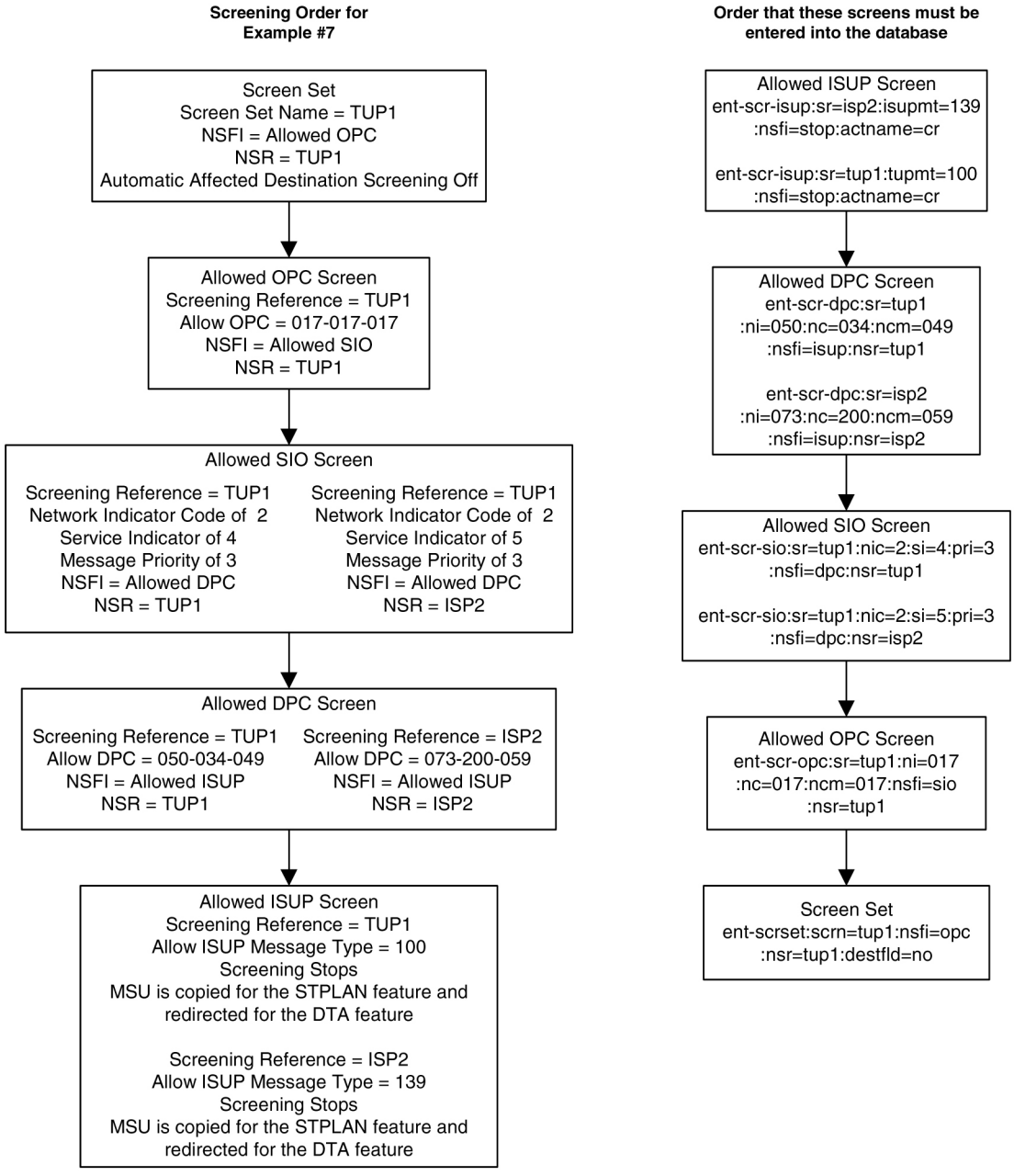
  The following SIO information:

  - The network indicator code of 2 (`nic=2`)
  - The service indicator of 5 (`si=5`)
  - Message priority of 3 (`pri=3`)

  The allowed ISUP message type of 139

- The messages, both TUP and ISUP, that pass the gateway screening criteria are copied for the STPLAN application and are redirected for the gateway screening redirect function (specified with the `actname` parameter and the name of the gateway screening stop action set containing the `COPY` and `RDCT` gateway screening stop actions).

Figure 11: Gateway Screening Configuration - Example 7



Adding a GLS Card

This procedure is used to add a card to support the gateway screening feature (a GLS card), shown in *Table 10: GLS Card Types*, using the `ent-card` command.

Table 10: GLS Card Types

Card Type	Part Number
TSM-256	870-1289-XX
TSM-512	870-1290-XX
TSM-768	870-1291-XX
TSM-1024	870-1292-XX
E5-TSM	870-2943-01

The `ent-card` command uses these parameters.

`:loc` – The location of the card being added to the database.

`:type` – The type of card being added to the database. For this procedure, the value of this parameter is `tsm`.

`:appl` – The application software that is assigned to the card. For this procedure, the value of this parameter is `gls`.

`: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 is obsolete and is no longer 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, see 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.

Before the card can be configured in the database for the gateway screening feature, the gateway screening feature must be turned on with the `chg-feat` command. The `rtrv-feat` command can verify that the gateway screening feature is on.

Note: After the Gateway Screening feature is turned on with the `chg-feat` command, the feature cannot be turned off.

The E5-TSM requires two HIPR cards or two HIPR2 cards in the shelf where it is installed.

The EAGLE 5 ISS can contain a maximum of eight GLS cards. The examples in this procedure are used to add a GLS card in card slot 1212 to the database.

1. Display the cards in the EAGLE 5 ISS using the `rtrv-card` command.

   This is an example of the possible output. 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 09-05-25 09:58:31 GMT EAGLE5 41.0.0
CARD   TYPE      APPL      LSET NAME     LINK SLC  LSET NAME     LINK SLC
1101   DSM       VSCCP
1102   TSM       GLS
1113   GPSM      OAM
1114   TDM-A
1115   GPSM      OAM
1116   TDM-B
1117   MDAL
```

```
1201   LIMDS0    SS7ANSI   sp2           A    0    sp1           B    0
1203   LIMDS0    SS7ANSI   sp3           A    0
1204   LIMDS0    SS7ANSI   sp3           A    1
1206   LIMDS0    SS7ANSI   nsp3          A    1    nsp4          B    1
1211   TSM       GLS
1216   DCM       STPLAN
1308   LIMDS0    SS7ANSI   sp6           A    1    sp7           B    0
1314   LIMDS0    SS7ANSI   sp7           A    1    sp5           B    1
1317   DCM       STPLAN
```

If the APPL field of the `rtrv-card` command output shows cards assigned to the GLS application continue the procedure with *Step 4*.

If the APPL field of the `rtrv-card` command output shows no cards assigned to the GLS application continue the procedure with *Step 2*.

2. Verify that the gateway screening feature is on, by entering the `rtrv-feat` command.

   If the gateway screening feature is on, the GWS field should be set to `on`. For this example, the gateway screening 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*.

   If the Gateway Screening feature is on, continue the procedure with one of these steps.

   - If a TSM is being added, continue the procedure with *Step 7*.
   - If an E5-TSM is being added, continue the procedure with *Step 4* .

   If the Gateway Screening feature is not on, continue the procedure with *Step 3*.

3. If the gateway screening feature is not on, shown by the `GWS = off` entry in the `rtrv-feat` command output in *Step 2* , turn the gateway screening feature on by entering this command.

   ```
   chg-feat:gws=on
   ```

   Note: After the Gateway Screening feature is turned on with the `chg-feat` command, it cannot be turned off.

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

   ```
   rlghncxa03w 06-10-25 15:27:30 GMT EAGLE5 36.0.0
   CHG-FEAT: MASP A - COMPLTD
   ```

   If an E5-TSM is being added, continue the procedure with *Step 4* .

   If a TSM is being added, continue the procedure with *Step 7*.

4. Display the GLS cards that are in the database by entering this command.

   ```
   rept-stat-card:appl=gls
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 08-11-01 16:07:48 GMT  EAGLE5 40.0.0
   CARD   VERSION      TYPE      GPL        PST            SST        AST
   1102   131-010-000  TSM       GLS        IS-NR          Active     -----
   1211   131-010-000  TSM       GLSHC      IS-NR          Active     -----
   ```

```
Command Completed.
```

E5-TSMs are shown by the entry GLSHC in the GPL column of the rept-stat-gpl output. TSMs are shown by the entry GLS in the GPL column of the rept-stat-gpl output. Continue the procedure by performing one of these actions.

- If E5-TSMs are shown in the rept-stat-card output, and an E5-TSM is being added to the same shelf as the E5-TSMs shown in the rept-stat-card output, continue the procedure with *Step 7*.
- If E5-TSMs are shown in the rept-stat-card output, and an E5-TSM is being added to a different shelf as the E5-TSMs shown in the rept-stat-card output, continue the procedure with *Step 5*.
- If E5-TSMs are not shown in the rept-stat-card output, and an E5-TSM is being added, continue the procedure with *Step 5*.
- If a TSM is being added, continue the procedure with *Step 7*.

5. Verify that HIPR cards are installed at card locations 9 and 10 in the shelf where the E5-TSM will be installed. Enter this command.

   ```
   rept-stat-gpl:gpl=hipr
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 08-12-01 11:40:26 GMT  EAGLE5 40.0.0
   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
   Command Completed
   ```

   If HIPR cards are installed at card locations 9 and 10 in the shelf where the E5-TSM will be installed, continue the procedure with *Step 7*.

   If HIPR cards are not installed in the shelf where the E5-TSM will be installed, continue the procedure with *Step 6* .

6. Verify that HIPR2 cards are installed at card locations 9 and 10 in the shelf where the E5-TSM will be installed. Enter this command.

   ```
   rept-stat-gpl:gpl=hipr2
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 09-07-01 11:40:26 GMT  EAGLE5 41.1.0
   GPL        CARD      RUNNING            APPROVED      TRIAL
   HIPR2      1109      126-002-000        126-002-000   126-003-000
   HIPR2      1110      126-002-000        126-002-000   126-003-000
   HIPR2      1209      126-002-000        126-002-000   126-003-000
   HIPR2      1210      126-002-000        126-002-000   126-003-000
   HIPR2      1309      126-002-000        126-002-000   126-003-000
   HIPR2      1310      126-002-000        126-002-000   126-003-000
   HIPR2      2109      126-002-000        126-002-000   126-003-000
   ```

```
HIPR2      2110      126-002-000        126-002-000   126-003-000
Command Completed
```

If HIPR2 cards are installed at card locations 9 and 10 in the shelf where the E5-TSM will be installed, continue the procedure with *Step 7*.

If HIPR or HIPR2 cards are not installed in the shelf where the E5-TSM will be installed, refer to the *Installation Manual - EAGLE 5 ISS* to install the HIPR or HIPR2 cards. Once the HIPR or HIPR2 cards have been installed, continue the procedure with *Step 7*.

7. Verify that the GLS card has been physically installed into the proper location.

   If the GLS card is in the required card location, continue the procedure with *Step 8*.

   If the GLS card is not in the required card location, continue the procedure by performing one of these actions.

   - If the GLS card is a TSM, insert the TSM into the card location. Continue the procedure with *Step 8*.
   - If the GLS card is an E5-TSM, insert the E5-TSM into the card location. Continue the procedure with *Step 8*.

   CAUTION: If the versions of the flash GPLs on the E5-TSM do not match the flash GPL versions in the database when the E5-TSM 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 GLS card to the database using the `ent-card` command.

   For this example, enter this command.

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

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

   ```
   rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
   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 06-10-25 15:29:30 GMT EAGLE5 36.0.0
   CARD   TYPE      APPL      LSET NAME     LINK SLC  LSET NAME     LINK SLC
   1212   TSM       GLS
   ```

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

    `rst-card:loc=1212`

    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.
    ```

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.
```

Removing a GLS Card

This procedure is used to remove GLS cards, used by gateway screening, from the database using the `dlt-card` command. The card cannot be removed if it does not exist in the database.

CAUTION: If the GLS card is the last GLS card in service, removing this card from the database will disable the Gateway Screening feature.

The examples in this procedure are used to remove the GLS card in card location 1205.

Canceling the REPT-STAT-CARD Command

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

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

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

1. Display the cards in the database using the `rtrv-card` command.

This is an example of the possible output.

```
rlghncxa03w 09-05-25 09:58:31 GMT EAGLE5 41.0.0
CARD   TYPE      APPL      LSET NAME     LINK SLC  LSET NAME     LINK SLC
1101   DSM       VSCCP
1102   TSM       GLS
1103   DCM       STPLAN
1104   DCM       STPLAN
1113   GPSM      OAM
1114   TDM-A
1115   GPSM      OAM
```

```
1116   TDM-B
1117   MDAL
1201   LIMDS0    SS7ANSI   lsn1          A    0    lsn2          B    1
1203   LIMDS0    SS7ANSI   lsn2          A    0    lsn1          B    1
1205   TSM       GLS
```

2. Display the cards that are in service with the `rept-stat-card:stat=nr` command.

   `rept-stat-card:stat=nr`

   This is an example of the possible output.

```
rlghncxa03w 09-05-25 15:26:30 GMT  EAGLE5 41.0.0
CARD  VERSION      TYPE    GPL       PST           SST       AST
1101  110-003-000  DSM     VSCCP     IS-NR         Active    -----
1102  110-003-000  TSM     GLS       IS-NR         Active    -----
1103  110-002-000  DCM     STPLAN    IS-NR         Active    -----
1104  110-002-000  DCM     STPLAN    IS-NR         Active    -----
1109  109-003-000  HMUX    BPHMUX    IS-NR         Active    -----
1110  109-003-000  HMUX    BPHMUX    IS-NR         Active    -----
1113  110-003-000  GPSM    EOAM      IS-NR         Active    -----
1114  -----------  TDM               IS-NR         Active    -----
1115  110-003-000  GPSM    EOAM      IS-NR         Standby   -----
1116  -----------  TDM               IS-NR         Active    -----
1117  -----------  MDAL              IS-NR         Active    -----
1201  110-003-000  LIMDS0  SS7ANSI   IS-NR         Active    -----
1203  110-003-000  LIMDS0  SS7ANSI   IS-NR         Active    -----
1205  110-003-000  TSM     GLS       IS-NR         Active    -----
1209  109-003-000  HMUX    BPHMUX    IS-NR         Active    -----
1210  109-003-000  HMUX    BPHMUX    IS-NR         Active    -----
```

3. An GLS card is identified by the entry `GLS` in the `APPL` fields in the outputs in steps 1 and 2.

   Remove the card from service using the `rmv-card` command and specifying the card location. If the GLS card to be inhibited is the only GLS card in service, shown in step 2, the `force=yes` parameter must also be specified. For this example, enter this command.

   `rmv-card:loc=1205`

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

```
rlghncxa03w 06-10-25 15:27:30 GMT  EAGLE5 36.0.0
Card has been inhibited.
```

4. 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=1205`

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

```
rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
DLT-CARD: MASP A - COMPLTD
```

5. Verify the changes using the `rtrv-card` command specifying the card that was removed in step 4.

   For this example, enter this command.

   `rtrv-card:loc=1205`

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

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

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.
```

Configuring Gateway Screening Stop Action Sets

This procedure is used to add a gateway screening stop action set to the database or change an existing gateway screening stop action set using the `chg-gws-actset` command.

The gateway screening stop action sets define the actions that are performed on the MSU when the gateway screening process has stopped. These gateway screening stop action sets replace the `copy` and `redirect` parameters that have been used with the gateway screening commands when the gateway screening process stops.

The database can contain a maximum of 16 gateway screening stop action sets, with each set containing a maximum of 10 gateway screening stop actions. These are the current gateway screening stop actions.

- COPY – copy the MSU for the STPLAN feature
- RDCT – redirect the MSU for the DTA feature
- CNCF – convert the PIP parameter with the GN parameter or the GN parameter with the PIP parameter in the ISUP IAM message for the Calling Name Conversion Facility feature.
- TLNP – ISUP IAMs that pass gateway screening are processed either by the ISUP NP with EPAP feature or by the Triggerless LNP feature. This gateway screening stop action is discussed in more detail in the *Configuring TLNP Gateway Screening Stop Action Sets* procedure.
- TINP – ISUP IAMs that pass gateway screening are intercepted by the Triggerless ISUP based Number Portability (TINP) feature and converted to include the routing number (RN) if the call is to a ported number. This gateway screening stop action can be specified only if the TINP stop action is assigned to a stop action set. If the TINP feature is enabled and turned on, the ISUP NP with EPAP feature (if the ISUP NP with EPAP feature is enabled) is overridden.
- TIF, TIF2, TIF3 - TIF processing is applied to the messages that pass Gateway Screening. These gateway screening stop actions can be specified only if the `tinp`, `tif`, `tif2`, or `tif3` stop action is already assigned to a gateway screening stop action set, or if any of these features are enabled.
  - TIF Number Portability
  - TIF SCS Forwarding
  - TIF Simple Number Substitution
- SCCP - This gateway screening stop action is associated with the MTP Routed GWS Stop Action feature (part number 893035601) and can be specified only if this feature is enabled. If this stop action is configured and the MTP Routed GWS Stop Action feature is turned on, MTP routed SCCP

UDT/XUDT messages that pass Gateway Screening are forwarded to the service modules for further processing.

Note: The MTP Msgs for SCCP Apps feature (part number 893017401) takes precedence over the MTP Routed GWS Stop Action feature. If the MTP Msgs for SCCP Apps feature is enabled and turned on, all MTP routed SCCP messages are forwarded to the service modules for further processing whether or not the SCCP gateway screening stop action is specified.

- NONE – no action is performed on the MSU.

CAUTION: When Gateway Screening is in the screen test mode, as defined by the linkset parameters `gwsa=off` and `gwsm=on`, any action in the gateway screening stop action sets created in this procedure will be performed.

The `chg-gws-actset` command uses these parameters.

`:actid` – The ID number of the gateway screening stop action set. The value of this parameter is from 4 to 16.

`:actname` – The name of the gateway screening stop action set consisting of 1 alphabetic character followed by up to 5 alphanumeric characters.

`:force` – The `force=yes` parameter must be specified when changing the gateway screening stop actions of an existing gateway screening stop action set.

`:all=none` – sets the value of each gateway screening stop action in the gateway screening stop action set to `none`. Refer to the procedure *Removing Gateway Screening Stop Action Sets* for information about using this parameter.

`:act1` to `:act10` – The ten gateway screening stop actions for each gateway screening stop action set. Gateway screening stop action 1 (`act1`) is the first stop action to be performed and gateway screening stop action 10 (`act10`) is the last stop action to be performed on the MSU.

The first three gateway screening stop action sets (`actid=1`, `actid=2`, and `actid=3`) are already defined with the existing gateway screening stop actions shown in *Table 11: Gateway Screening Stop Action Definitions If the CNCF Feature Is Off*.

Table 11: Gateway Screening Stop Action Definitions If the CNCF Feature Is Off

Gateway Screening Stop Action ID	Gateway Screening Stop Action Set Name	Stop Action 1	Stop Action 2	Action Performed by the EAGLE 5 ISS
1	copy	copy	—	copy the MSU for the STPLAN feature
2	rdct	rdct	—	redirect the MSU for the DTA feature
3	cr	copy	rdct	copy the MSU for the STPLAN feature and redirect the MSU for the DTA feature

The word `none` cannot be used for the `actname` parameter.

The `force=yes` parameter must be specified when changing an existing gateway screening stop action set.

If the `copy` gateway screening action is specified with the `chg-gws-actset` command, it must be specified with the `act1` parameter.

A specific gateway screening stop action can only be specified once in a specific gateway screening stop action set. For example, the `chg-gws-actset` command cannot be executed if the `copy` gateway screening stop action is specified for gateway screening stop action parameters `act1` and `act2` as shown in this command example.

```
chg-gws-actset:actid=4:act1=copy:act2=copy
```

The value of the `actname` parameter must be unique. The value of this parameter is used by the `actname` parameter in the gateway screening commands and is shown in the `NSR/ACT` field of the outputs of the retrieve gateway screening commands to define the action that is performed on the MSU that passes gateway screening.

When a gateway screening stop action set is being entered in to the database for the first time, the name of the gateway screening stop action set (`actname`) must be added to the database before any gateway screening stop actions are assigned to the gateway screening stop action set.

Table 12: Gateway Screening Stop Action Set Parameter Combinations shows the combinations of parameter values that can be specified for `act1`, `act2`, and `act3` parameters for gateway screening stop action sets 4 through 16.

Table 12: Gateway Screening Stop Action Set Parameter Combinations

ACT1	ACT2	ACT3
cncf		
copy	cncf	
copy	cncf	rdct
cncf	rdct	
tinp		
copy	tinp	
tif		
copy	tif	
copy	cncf	tif
cncf	tif	
tif2		
copy	tif2	
copy	cncf	tif2
cncf	tif2	
tif3		
copy	tif3	

ACT1	ACT2	ACT3
copy	cncf	tif3
cncf	tif3	
sccp		
copy	sccp	

A blank entry in this table means that the ACT2 or ACT3 parameter has no value.

The cncf stop action can be specified only if the CNCF feature is turned on.

The tinp stop action can be specified only if the tinp stop action is assigned to a stop action set.

The tif, tif2, or tif3 stop actions can be specified only if one or more of these features are enabled.

- TIF Number Portability
- TIF SCS Forwarding
- TIF Simple Number Substitution

The `sccp` stop action can be specified only if the MTP Routed GWS Stop Action feature is enabled.

1. Verify that the gateway screening feature is turned on, by entering the `rtrv-feat` command.

   If the gateway screening feature is turned on, the `GWS` field should be set to `on`. In this example, the gateway screening 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*.

   If the gateway screening feature is turned on, go to *Step 3* .

2. If the gateway screening feature is not turned on, shown by the `GWS = off` entry in the `rtrv-feat` command output in *Step 1* , turn it on by entering this command.

   ```
   chg-feat:gws=on
   ```

   Note: Once the gateway screening feature is turned on with the `chg-feat` command, it cannot be turned off.

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

   ```
   rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
   CHG-FEAT: MASP A - COMPLTD
   ```

3. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   Action IDs 1, 2, and 3 are predefined and cannot be changed. Action ID 1 contains only the COPY stop action. Action ID 2 contains the RDCT stop action. Action ID 3 contains the COPY and the RDCT stop action as shown in this output example.

   ```
   rlghncxa03w 06-10-25 15:27:30 GMT EAGLE5 36.0.0
   ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
   ID   NAME   1    2    3    4    5    6    7    8    9    10
   --   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
   1    copy   copy
   ```

```
2    rdct   rdct
3    cr     copy rdct

GWS action set table is (3 of 16) 19% full
```

Continue the procedure by performing one of these steps.

- The TINP stop action can be specified only if a gateway screening stop action set containing the TINP stop action must be shown in the `rtrv-gws-actset` output. Only two gateway screening stop action sets can contain the TINP stop action.
  - If only one gateway screening stop action contains the TINP stop action, continue the procedure with *Step 7* to specify the TINP stop action for a gateway screening stop action set.
  - If no gateway screening stop action sets contain the TINP stop action, or two gateway screening stop action sets contain the TINP stop action, the TINP stop action cannot be specified for a gateway screening stop action set. Continue the procedure by specifying another stop action.
- The SCCP stop action can be specified if the MTP Routed GWS Stop Action feature is enabled, or if the SCCP stop action is shown in the `rtrv-gws-actset` output.
  - If only one gateway screening stop action contains the SCCP stop action, continue the procedure with *Step 7* to specify the SCCP stop action for a gateway screening stop action set.
  - If no gateway screening stop action sets contain the SCCP stop action, continue the procedure with *Step 4* to verify that the MTP Routed GWS Stop Action feature is enabled.
  - Only two gateway screening stop action sets can contain the SCCP stop action. If two gateway screening stop action sets contain the SCCP stop action, the SCCP stop action cannot be specified for a gateway screening stop action set. Continue the procedure by specifying another stop action.
- The CNCF, TIF, TIF2, or TIF3 stop actions or combinations of these stop actions can be specified for a gateway screening stop action set. Refer to *Table 12: Gateway Screening Stop Action Set Parameter Combinations* for the combinations that can be used. If the CNCF stop action will be specified for a gateway screening stop action set, continue the procedure with *Step 5*. If only the TIF, TIF2, or TIF3 stop actions will be specified for a gateway screening stop action set, continue the procedure with *Step 6*.

4. Enter this command to verify whether or not the MTP Routed GWS Stop Action feature is enabled.

   `rtrv-ctrl-feat:partnum=893035601`

   This is an example of the possible output.

```
rlghncxa03w 09-07-28 21:15:37 GMT EAGLE5 41.1.0
The following features have been permanently enabled:

Feature Name             Partnum    Status  Quantity
MTPRTD GWS Stop Action   893035601  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 MTP Routed GWS Stop Action feature is not enabled, perform the *Activating the MTP Routed GWS Stop Action Feature* procedure to enable the MTP Routed GWS Stop Action feature.

After the *Activating the MTP Routed GWS Stop Action Feature* procedure has been performed, or if the rtrv-ctrl-feat output shows that the MTP Routed GWS Stop Action feature is enabled, continue the procedure with *Step 7*.

5. To specify the CNCF gateway screening stop action, the Calling Name Conversion Facility (CNCF) feature must be turned on. If the CNCF gateway screening stop action is shown in *Step 3*, or if the `rtrv-feat` output in *Step 1* shows that the CNCF feature is on, continue the procedure with *Step 6*. If the CNCF feature is not turned on, shown by the `CNCF = off` entry in the `rtrv-feat` command output in *Step 1*, turn it on by entering this command.

   `chg-feat:cncf=on`

   Note: Once the calling name conversion facility feature is turned on with the `chg-feat` command, it cannot be turned off.

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

   ```
   rlghncxa03w 06-10-25 15:29:30 GMT EAGLE5 36.0.0
   CHG-FEAT: MASP A - COMPLTD
   ```

   Continue this procedure by performing one of these steps.

   - If the TIF, TIF2, or TIF3 stop actions will not be specified for the gateway screening stop action set, continue the procedure with *Step 7*.
   - If the TIF, TIF2, or TIF3 stop actions will be specified for the gateway screening stop action set, and either the TIF, TIF2, or TIF3 stop actions are shown the `rtrv-ctrl-feat` output in *Step 3*, continue the procedure with *Step 7*.
   - If the TIF, TIF2, or TIF3 stop actions will be specified for the gateway screening stop action set, and either the TIF, TIF2, or TIF3 stop actions are not shown the `rtrv-ctrl-feat` output in *Step 3*, continue the procedure with *Step 6*.

6. Display the features that are enabled by entering the `rtrv-ctrl-feat` command. The following is an example of the possible output.

   ```
   rlghncxa03w 07-05-30 21:15:37 GMT EAGLE5 37.2.0
   The following features have been permanently enabled:

   Feature Name              Partnum    Status  Quantity
   Command Class Management  893005801  off     ----
   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
   GSM MAP SRI Redirect      893014001  on      ----
   ISUP NP with EPAP         893013801  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 you wish to specify the TIF, TIF2, or TIF3 stop actions, one or more of these features must be enabled.

- TIF Number Portability
- TIF SCS Forwarding
- TIF Simple Number Substitution

If the TIF Number Portability, TIF SCS Forwarding, or TIF Simple Number Substitution features are enabled, the TIF, TIF2, and TIF3 stop actions can be specified. Continue the procedure with *Step 7*.

The TIF Number Portability, TIF SCS Forwarding, or TIF Simple Number Substitution features must be enabled. If these features are not enabled, perform the procedures in the *Number Plan Processor Guide* to enable at least one of these features. After the TIF Number Portability, TIF SCS Forwarding, or TIF Simple Number Substitution features have been enabled, continue the procedure with *Step 7*.

7. Add the gateway screening stop action to the database by using the `chg-gws-actset` command.

   Table 12: Gateway Screening Stop Action Set Parameter Combinations shows the parameter combinations that can be used for the stop action parameters (`act1` - `act10`).

   ```
   chg-gws-actset:actid=4:actname=cncf:act1=cncf
   chg-gws-actset:actid=5:actname=cpcncf:act1=copy:act2=cncf
   chg-gws-actset:actid=6:actname=cncfrd:act1=cncf:act2=rdct
   chg-gws-actset:actid=7:actname=cpcfrd:act1=copy:act2=cncf:act3=rdct
   chg-gws-actset:actid=8:actname=cptinp:act1=copy:act2=tinp
   chg-gws-actset:actid=9:actname=tinp:act1=tinp
   chg-gws-actset:actid=10:actname=tif1:act1=tif
   chg-gws-actset:actid=11:actname=tif2:act1=copy:act2=tif2
   chg-gws-actset:actid=12:actname=tif3:act1=copy:act2=tif3
   chg-gws-actset:actid=13:actname=sccpa:act1=sccp
   chg-gws-actset:actid=14:actname=sccpb:act1=copy:act2=sccp
   ```

   If an existing gateway screening stop action set is being changed, the `force=yes` parameter must be specified with the `chg-gws-actset` command.

   The `force=yes` parameter can be specified with the `chg-gws-actset` command if a new GWS stop action set is being created, but is not necessary.

   The `actname` parameter must be specified for a new GWS stop action set. The `actname` parameter is not required, but can be specified, if an existing stop action set is being changed.

   If the `actname` parameter value is different from what is shown in the `rtrv-gws-actset` output for the GWS stop action set being changed, the name of the GWS stop action set will be changed to the new `actname` parameter value (see the first Caution).

CAUTION: Changing the name of an existing GWS stop action set will prevent the actions defined in the GWS stop action set from being used to process the MSUs that pass gateway screening. If the name of the GWS stop action set is changed, enter the gateway screening retrieve commands (`rtrv-scrset`, `rtrv-scr-opc`, `rtrv-scr-blkopc`, `rtrv-scr-sio`, `rtrv-scr-dpc`, `rtrv-scr-blkdpc`, `rtrv-scr-destfld`, `rtrv-scr-isup`, `rtrv-scr-cgpa`, `rtrv-scr-tt`, `rtrv-scr-cdpa`, and `rtrv-scr-aftpc`) with the `actname` parameter and the old GWS stop action set name to identify the screens that need to be changed to use the new GWS stop action set name. To change these screens, perform the appropriate procedures in in this manual.

CAUTION: Caution must be used when changing the stop actions in existing gateway screening stop action sets because these gateway screening stop action sets may be used by one or more gateway screening rules. Changes in the existing gateway screening stop action sets will change how MSUs that pass gateway screening are processed.

CAUTION: Caution must be used when specifying the RDCT stop action in an existing GWS stop action set. Specifying the RDCT stop action for Allowed OPC screens containing the adjacent point code of a linkset, for Allowed SIO screens containing the service indicator values 1 (SI=1) or 2 (SI=2), or for Allowed DPC screens containing the EAGLE 5 ISS's point code can cause signaling link failures. To verify whether or not the GWS stop action set name used in this procedure is referenced by these screens, enter the `rtrv-scr-opc`, `rtrv-scr-sio`, or `rtrv-scr-dpc` commands, with the actname parameter and the GWS stop action set name used in this procedure.

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

```
rlghncxa03w 06-10-25 15:30:30 GMT EAGLE5 36.0.0
CAUTION: GWS action set may be referenced by one or more GWS rules
CHG-GWS-ACTSET: MASP A - COMPLTD
```

8. Verify the changes using the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 09-07-25 15:31:30 GMT EAGLE5 41.1.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct
8    cptinp copy tinp
9    tinp   tinp
10   tif1   tif
11   tif2   copy tif2
12   tif3   copy tif3
13   sccpa  sccp
14   sccpb  copy sccp

GWS action set table is (14 of 16) 88% full
```

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.
```

Configuring TLNP Gateway Screening Stop Action Sets

This procedure is used to add a gateway screening stop action set containing the TLNP gateway screening stop action to the database using the `chg-gws-actset` command.

The gateway screening stop action sets define the actions that are performed on the MSU when the gateway screening process has stopped.

The database can contain a maximum of 16 gateway screening stop action sets, with each set containing a maximum of 10 gateway screening stop actions. For this procedure only two gateway screening stop actions can be used.

- COPY – copy the MSU for the STPLAN feature
- TLNP – ISUP IAMs that pass gateway screening are processed either by the ISUP NP with EPAP feature (if the ISUP NP with EPAP feature is enabled and turned on) or by the Triggerless LNP feature (if the LNP feature is enabled and the Triggerless LNP feature is turned on). The ISUP NP with EPAP feature is discussed in more detail in the *Feature Manual* - G-Port . The Triggerless LNP feature is discussed in more detail in the LNP *Feature Activation Guide*.

  The status of the ISUP NP with EPAP feature can be verified with the `rtrv-ctrl-feat` command. The ISUP NP with EPAP feature also requires that the G-Port feature is enabled and that the Gateway Screening feature is turned on. The status of the G-Port feature can be verified with the `rtrv-ctrl-feat` command. The status of the Gateway Screening feature can be verified with the `rtrv-feat` command. Enabling the G-Port feature is discussed in more detail in the *Feature Manual - G-PORT* .

CAUTION: When Gateway Screening is in the screen test mode, as defined by the linkset parameters `gwsa=off` and `gwsm=on`, any action in the gateway screening stop action sets created in this procedure will be performed.

The `chg-gws-actset` command in this procedure uses these parameters.

`:actid` – The ID number of the gateway screening stop action set. The value of this parameter is from 4 to 16.

`:actname` – The name of the gateway screening stop action set consisting of 1 alphabetic character followed by up to 5 alphanumeric characters. The word `none` cannot be used for the `actname` parameter.

`:force` – The `force=yes` parameter must be specified when changing the gateway screening stop actions of an existing gateway screening stop action set.

`:act1` and `:act2` – Only two gateway screening stop action sets can be defined with the TLNP gateway screening stop action:

- One set with only the TLNP gateway Screening stop action (defined with the `act1=tlnp` parameter).
- Another set with the COPY and TLNP gateway screening stop action (defined by the `act1=copy` and `act2=tlnp` parameters).

The value of the `actname` parameter must be unique. The value of this parameter is used by the `actname` parameter in the gateway screening commands and is shown in the `NSR/ACT` field of the outputs of the retrieve gateway screening commands to define the action that is performed on the MSU that passes gateway screening.

When a gateway screening stop action set is being entered into the database for the first time, the name of the gateway screening stop action set (`actname`) must be added to the database before any gateway screening stop actions are assigned to the gateway screening stop action set.

The `tlnp` gateway screening stop action cannot be specified with either the `cncf` (calling name conversion facility) or `rdct` (redirect) gateway screening actions in the same gateway screening action set.

Table 13: Sample TLNP Gateway Screening Stop Action Set Configuration

ACTID	ACTNAME	ACT1	ACT2	ACT3
4	TLNP	tlnp	—	—
5	CPNP	copy	tlnp	—

1. Verify that the gateway screening feature is turned on, by entering the `rtrv-feat` command.

   If the gateway screening feature is turned on, the `GWS` field should be set to `on`. In this example, the gateway screening 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*.

   If the gateway screening feature is turned on, go to step 3.

2. If the gateway screening feature is not turned on, shown by the `GWS = off` entry in the `rtrv-feat` command output in step 1, turn it on by entering this command.

   ```
   chg-feat:gws=on
   ```

   Note: Once the gateway screening feature is turned on with the `chg-feat` command, it cannot be turned off.

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

   ```
   rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
   CHG-FEAT: MASP A - COMPLTD
   ```

3. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

Action IDs 1, 2, and 3 are predefined and cannot be changed. Action ID 1 contains only the COPY stop action. Action ID 2 contains the RDCT stop action. Action ID 3 contains the COPY and the RDCT stop actions as shown in the following output example.

```
rlghncxa03w 06-10-25 15:27:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct

GWS action set table is (3 of 16) 19% full
```

If the `rtrv-gws-actset` output shows that these gateway screening stop action sets: one with `ACT1=tlnp` and the other with `ACT1=copy` and `ACT2=tlnp`, this procedure cannot be performed.

If only one of these gateway screening stop action sets are shown, skip steps 4 through 11, and go to step 12.

If neither of these gateway screening stop action sets are shown, go to step 4.

4. Verify whether or not the LNP or ISUP NP with EPAP features are enabled, using the `rtrv-ctrl-feat` command.

   If the LNP feature is enabled, the `LNP TNs` field with a telephone number quantity greater than zero is shown in the `rtrv-ctrl-feat` output. If the ISUP NP with EPAP feature is enabled, the `ISUP NP with EPAP Active` field is shown in the `rtrv-ctrl-feat` output.

   This is an example of the possible output.

```
rlghncxa03w 06-10-30 21:15:37 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
Command Class Management  893005801  off     ----
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
GSM MAP SRI Redirect      893014001  on      ----
ISUP NP with EPAP Active  893013801  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 ISUP NP with EPAP feature is enabled, skip steps 5 through 10, and go to step 11.

   If the LNP feature is enabled, perform the “Configuring the Triggerless LNP Feature” procedure in the LNP *Feature Activation Guide*.

If neither the ISUP NP with EPAP or the LNP features are enabled, perform the "Configuring the Triggerless LNP Feature" procedure in the LNP *Feature Activation Guide* to use the `tlnp` gateway screening stop action for the Triggerless LNP feature.

To use the `tlnp` gateway screening stop action for the ISUPNP with EPAP feature, and neither the ISUP NP with EPAP or the LNP features are enabled, verify that the G-Port feature is enabled. If the G-Port feature is enabled, the entry `GPORT` is shown in the `rtrv-ctrl-feat` output. If the G-Port feature is not enabled, go to the *Feature Manual* - G-Port and enable the G-Port feature. Then go to step 5.

If the G-Port feature is enabled, go to step 5.

Note: If the `rtrv-ctrl-feat` output in step 4 shows any controlled features, skip steps 5, 6, 7, and 8, and go to step 9.

Note: If the `rtrv-ctrl-feat` output shows only the HC-MIMSLK Capacity feature with a quantity of 64, then no other features are enabled. Steps 5, 6, 7, and 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 06-10-30 21:15:37 GMT EAGLE5 36.0.0
System serial number = ntxxxxxxxxxxxx

System serial number is not locked.

rlghncxa03w 06-10-30 21:15:37 GMT EAGLE5 36.0.0
Command Completed
```

   Note: If the serial number is locked, skip step 6 and go to step 7.

   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 6 and 7, and go to step 8. If the serial number is not correct, but is locked, the ISUPNP with EPAP feature cannot be enabled and the remainder of this procedure cannot be performed. Contact the Customer Care Center to get an incorrect and locked serial number changed. Refer to *Customer Care Center* for the contact information. The serial number can be found on a label affixed to the control shelf (shelf 1100).

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 ISUP NP with EPAP feature by entering the `enable-ctrl-feat` command.

   For this example, enter this command.

   ```
   enable-ctrl-feat:partnum=893013801:fak=<feature access key>
   ```

   Note: The values for the feature access key (the `fak` parameter) are provided by Tekelec. If you do not have the controlled feature part number or the feature access key for the feature you wish to enable, contact your Tekelec Sales Representative or Account Representative.

   When the `enable-ctrl-feat` command has successfully completed, this message should appear.

   ```
   rlghncxa03w 06-10-30 21:15:37 GMT EAGLE5 36.0.0
   ENABLE-CTRL-FEAT: MASP B - COMPLTD
   ```

10. Verify the changes by entering the `rtrv-ctrl-feat`command with the part number specified in step 9.

    ```
    rtrv-ctrl-feat:partnum=893013801
    ```

    The following is an example of the possible output.

    ```
    rlghncxa03w 06-10-30 21:16:37 GMT EAGLE5 36.0.0
    The following features have been permanently enabled:

    Feature Name              Partnum    Status  Quantity
    ISUP NP with EPAP         893013801  off         ----
    ```

    Note: If the TLNP feature is on, shown in the `rtrv-feat` output in step 1, skip this step and step 12, and go to step 13.

11. Turn the TLNP feature on by entering this command.

    ```
    chg-feat:tlnp=on
    ```

    Note: Once the TLNP feature is turned on with the `chg-feat` command, it cannot be turned off.

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

    ```
    rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
    CHG-FEAT: MASP A - COMPLTD
    ```

12. Add the TLNP gateway screening stop action to the database by using the `chg-gws-actset` command.

    For this example, enter these commands based on the sample configuration shown in *Table 13: Sample TLNP Gateway Screening Stop Action Set Configuration*.

    ```
    chg-gws-actset:actid=4:actname=tlnp:act1=tlnp
    ```

    ```
    chg-gws-actset:actid=5:actname=cpnp:act1=copy:act2=tlnp
    ```

    If an existing gateway screening stop action set is being changed, the `force=yes` parameter must be specified with the `chg-gws-actset` command.

    The `force=yes` parameter can be specified with the `chg-gws-actset` command if a new GWS stop action set is being created, but is not necessary.

    The `actname` parameter must be specified for a new GWS stop action set.

    The `actname` parameter is not required, but can be specified, if an existing stop action set is being changed.

    If the `actname` parameter value is different from what is shown in the `rtrv-gws-actset` output for the GWS stop action set being changed, the name of the GWS stop action set will be changed to the new `actname` parameter value (see the first Caution).

    CAUTION

    CAUTION: Changing the name of an existing GWS stop action set will prevent the actions defined in the GWS stop action set from being used to process the MSUs that pass gateway screening. If the name of the GWS stop action set is changed, enter the gateway screening retrieve commands (`rtrv-scrset`, `rtrv-scr-opc`, `rtrv-scr-blkopc`, `rtrv-scr-sio`, `rtrv-scr-dpc`, `rtrv-scr-blkdpc`, `rtrv-scr-destfld`, `rtrv-scr-isup`, `rtrv-scr-cgpa`, `rtrv-scr-tt`, `rtrv-scr-cdpa`, and `rtrv-scr-aftpc`) with the `actname` parameter and the old GWS stop action set name to identify the screens that need to be changed to use the new GWS stop action set name. To change these screens, perform the appropriate procedures in in this manual.

    CAUTION

    CAUTION: Caution must be used when changing the stop actions in existing gateway screening stop action sets because these gateway screening stop action sets may be used by one or more gateway screening rules. Changes in the existing gateway screening stop action sets will change how MSUs that pass gateway screening are processed.

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

    ```
    rlghncxa03w 06-10-25 15:30:30 GMT EAGLE5 36.0.0
    CAUTION: GWS action set may be referenced by one or more GWS rules
    CHG-GWS-ACTSET: MASP A - COMPLTD
    ```

13. Verify the changes using the `rtrv-gws-actset` command.

    This is an example of the possible output.

    ```
    rlghncxa03w 06-10-25 15:31:30 GMT EAGLE5 36.0.0
    ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
    ID   NAME   1    2    3    4    5    6    7    8    9    10
    --   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
    1    copy   copy
    2    rdct   rdct
    3    cr     copy rdct
    ```

```
4    tlnp   tlnp
5    cpnp   copy tlnp

GWS action set table is (5 of 16) 31% full
```

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

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

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

Removing Gateway Screening Stop Action Sets

This procedure is used to remove a gateway screening stop action set from the database or a gateway screening stop action from a gateway screening stop action set from the database using the `chg-gws-actset` command.

The database can contain a maximum of 16 gateway screening stop action sets, with each set containing a maximum of 10 gateway screening stop actions. Five gateway screening stop actions have been defined.

The `chg-gws-actset` command uses these parameters in this procedure.

`:actid` – The ID number of the gateway screening stop action set. The value of this parameter is from 4 to 16.

`:force` – The `force=yes` parameter must be specified when changing the gateway screening stop actions of an existing gateway screening stop action set.

`:all=none` – Sets the value of each gateway screening stop action in the gateway screening stop action set to `none`.

`:act1` to `:act10` – One of ten gateway screening stop actions being removed from the gateway screening stop action set.

The first three gateway screening stop action sets (`actid=1`, `actid=2`, and `actid=3`) cannot be changed or removed.

No other optional parameters can be specified `all=none` parameter.

The `force=yes` parameter must be specified when changing an existing gateway screening stop action set.

1. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:27:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
```

```
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpnf   copy cncf
6    cfrd   copy cncf rdct
7    cnrd   cncf rdct
8    tlnp   tlnp
9    tlcp   copy tlnp

GWS action set table is (9 of 16) 56% full
```

2. Either remove a gateway screening stop action set from the database or remove a gateway screening stop action from a gateway screening stop action set from the database by entering the `chg-gws-actset` command.

   If you wish to remove the gateway screening stop actions from an existing gateway screening stop action set (stop action sets 4 through 16), enter the `chg-gws-actset` command with the `all=none`, `actid`, and `force=yes` parameters, as shown in this command example.

   ```
   chg-gws-actset:actid=4:all=none:force=yes
   ```

   If you wish to remove individual gateway screening stop actions from an existing gateway screening stop action set (stop action sets 4 through 16), enter the `chg-gws-actset` command with the stop action parameter (`act1` through `act10`) value equal to none and the `force=yes` parameter, as shown in this command example.

   ```
   chg-gws-actset:actid=5:act2=none:force=yes
   ```

   CAUTION: Caution must be used when changing the stop actions in existing gateway screening stop action sets because these gateway screening stop action sets may be used by one or more gateway screening rules. Changes in the existing gateway screening stop action sets will change how MSUs that pass gateway screening are processed.

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

   ```
   rlghncxa03w 06-10-25 15:30:30 GMT EAGLE5 36.0.0
   CAUTION: GWS action set may be referenced by one or more GWS rules
   CHG-GWS-ACTSET: MASP A - COMPLTD
   ```

3. Verify the changes using the `rtrv-gws-actset` command.

   This is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:31:30 GMT EAGLE5 36.0.0
   ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
   ID   NAME   1    2    3    4    5    6    7    8    9    10
   --   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
   1    copy   copy
   2    rdct   rdct
   3    cr     copy rdct
   4    ----   ----
   5    cpcncf copy
   6    cncfrd cncf rdct
   7    cpcfrd copy cncf rdct
   8    tlnp   tlnp
   9    cpnp   copy tlnp

   GWS action set table is (8 of 16) 50% 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.
```

Setting the Threshold for Reporting Gateway Screening Activity

This procedure is used to set the threshold for reporting these gateway screening activities using the `set-gtwy-acthresh` command.

- The threshold for MSUs received on a gateway link set.
- The threshold for MSUs rejected on a gateway link set because of screening.

These thresholds are set on a linkset basis. These gateway screening activities are reported only if the threshold is set and only if the threshold is reached.

The `set-gtwy-acthresh` command uses these parameters.

`:intrvl` – The examination period, in minutes, during which the gateway screening activity thresholds are to be tested.

`:lsn` – The name of the linkset that the thresholds are assigned to.

`:recv` – The threshold for MSUs received on the gateway link set.

`:rej` – The threshold for MSUs rejected on the gateway link set because of screening.

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 gateway screening thresholds in the database using the `rtrv-gtwy-acthresh` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
LSN      REJ     RECV   INTRVL
WY644368 10      1000   10
WY234456 25      2000   20
LN123556 25      2500   30
OP239900 -       5      5
```

2. Display the current linkset configuration using the `rtrv-ls` command.

   The following is an example of the possible output.

```
rlghncxa03w 09-05-25 15:26:30 GMT EAGLE5 41.0.0
                                L3T SLT              GWS GWS GWS
LSN          APCA   (SS7)  SCRN  SET SET BEI LST LNKS ACT MES DIS SLSCI NIS
lsa1         240-020-000   ss01  1   1   yes A   1    off off off no    off
lsa2         240-030-000   ss02  1   2   no  C   3    on  on  on  yes   off
lsa3         240-040-000   ss03  1   3   yes C   5    off off off yes   off
ln123556     240-050-000   ss01  1   8   yes C   5    on  on  on  yes   off
op239900     240-060-000   ss01  1   7   yes C   5    on  on  on  yes   off
wy234456     240-070-000   ss01  1   6   yes C   5    on  on  on  yes   off
wy644368     240-080-000   ss01  1   5   yes C   5    on  on  on  yes   off

                                L3T SLT              GWS GWS GWS
LSN          APCI   (SS7)  SCRN  SET SET BEI LST LNKS ACT MES DIS SLSCI NIS
lsi1         1-111-1       ss01  1   1   yes A   1    off off off ---   ---
lsi2         1-111-2       ss02  1   2   no  C   3    on  on  on  ---   ---
lsi3         1-111-3       ss03  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         ss01  1   1   yes A   1    off off off ---   off
lsn2         11112         ss02  1   2   no  C   3    on  on  on  ---   off
lsn3         11113         ss03  1   3   yes C   5    off off off ---   off

Link set table is ( 9 of 1024)  1% full
```

   If the `GWSA` value of the linkset is `no`, shown in the `GWSACT` column of the `rtrv-ls` output, perform the "Changing an SS7 Linkset" procedure in the *Database Administration Manual - SS7* to change the `GWSA` value of the linkset. Continue the procedure with *Step 3*.

   If the `GWSA` value of the linkset is `yes`, continue the procedure with *Step 3*.

3. Set the gateway screening thresholds for a linkset using the `set-gtwy-acthresh` command.

   For this example, enter this command.

   `set-gtwy-acthresh:lsn=lsa2:intrvl=20:rej=30:recv=2500`

   When this command has successfully completed, a message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:29:30 GMT EAGLE5 36.0.0
SET-GTWY-TRHSHLD: MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-gtwy-acthresh` command with the linkset name specified in step 3.

   For this example, enter this command.

   `rtrv-gtwy-acthresh:lsn=lsa2`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:30:30 GMT EAGLE5 36.0.0
LSN      REJ     RECV   INTRVL
LSA2     30      2500   20
```

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

   The following 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.
```

Setting the Maximum Number of Gateway Screening Rejected Messages

When an MSU is rejected because of gateway screening, a UIM is sent to the terminal alerting the user that the MSU has been rejected. The EAGLE 5 ISS allows the user to configure the maximum number of these UIMs that can be sent to the terminal for a specified time period. This procedure is used to configure the maximum number of UIMs sent to the terminal and the time period using the `set-scrrej -prmtrs` command.

The `set-scrrej-prmtrs` command uses these parameters.

`:limit` – the number of UIMs to be sent to the EAGLE 5 ISS terminals during the time period specified by the `intrvl` parameter. The values for this parameter range from 0 to 9999.

`:intrvl` – the amount of time, in minutes, that the maximum number of UIMs, defined by the `limit` parameter, can be sent to the EAGLE 5 ISS terminals.

The examples in this procedure are used to set the number of UIMs to 500 and the time period to 20 minutes.

1. Display the current gateway screening rejected UIM limit in the database using the `rtrv-gtwy-prmtrs` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
LIMIT INTRVL
1000  15
```

2. Set the gateway screening rejected UIM limit using the `set-scrrej-prmtrs` command.

   For this example, enter this command.

   `set-scrrej-prmtrs:limit=500:intrvl=20`

   When this command has successfully completed, a message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
SET-SCRREJ-PRMTRS: MASP A - COMPLTD
```

3. Verify the changes using the `rtrv-gtwy-prmtrs` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:27:30 GMT EAGLE5 36.0.0
LIMIT INTRVL
500   20
```

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

   The following 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.
```

Activating the MTP Routed GWS Stop Action Feature

This procedure is used to enable and turn on the MTP Routed GWS Stop Action feature using the feature's part number and a feature access key.

The feature access key for the MTP Routed GWS Stop Action 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 MTP Routed GWS Stop Action feature, 893035601.

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 MTP Routed GWS Stop Action feature, 893035601.

`:status=on` – used to turn the MTP Routed GWS Stop Action feature on.

Once the MTP Routed GWS Stop Action feature has been turned on, it be can be turned off. For more information on turning the MTP Routed GWS Stop Action feature off, refer to the *Turning the MTP Routed GWS Stop Action Feature Off* procedure.

The status of the features in the EAGLE 5 ISS is shown with the `rtrv-ctrl-feat` command.

When the MTP Routed GWS Stop Action feature is turned on, MTP routed SCCP UDT/XUDT messages that pass gateway screening are forwarded to the service modules for further processing.

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 09-07-28 21:15:37 GMT EAGLE5 41.1.0
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 MTP Routed GWS Stop Action feature is enabled and turned on, no further action is necessary. This procedure does not need to be performed.

   If the MTP Routed GWS Stop Action feature is enabled and but not turned on, continue the procedure with *Step 8*.

   If the MTP Routed GWS Stop Action feature is not enabled, continue the procedure with *Step 2*.

2. To enable the MTP Routed GWS Stop Action feature, the GTT feature must be turned on. Enter the `rtrv-feat` command to verify whether or not the GTT feature is on. 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, refer to the `rtrv-feat` command description in the *Commands Manual*.

   If the GTT feature is off, perform the "Adding a Service Module" procedure in the *Database Administration Manual - Global Title Translation* to turn the GTT feature on. Add any required service modules according to the Service Module and Feature Combination table in the "Adding a Service Module" procedure.

After the "Adding a Service Module" procedure has been performed, or if the GTT feature is on, continue the procedure by performing one of these steps.

- If the `rtrv-ctrl-feat` output shows the HC-MIM SLK Capacity feature with a quantity of 64 and other features, continue the procedure with *Step 7*.
- If the `rtrv-ctrl-feat` output shows only the HC-MIM SLK Capacity feature with a quantity of 64, continue the procedure with *Step 3*.

3. Display the serial number in the database with the `rtrv-serial-num` command. This is an example of the possible output.

```
rlghncxa03w 09-07-28 21:15:37 GMT EAGLE5 41.1.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 09-07-28 21:15:37 GMT EAGLE5 41.1.0
Command Completed
```

Note: If the serial number is correct and locked, continue the procedure with *Step 7*. If the serial number is correct but not locked, continue the procedure with *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* 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 09-07-28 21:15:37 GMT EAGLE5 41.1.0
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 09-07-28 21:15:37 GMT EAGLE5 41.1.0
System serial number = nt00001231

System serial number is not locked.

rlghncxa03w 09-07-28 21:15:37 GMT EAGLE5 41.1.0
Command Completed
```

   If the serial number was not entered correctly, repeat *Step 4* and *Step 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 09-07-28 21:15:37 GMT EAGLE5 41.1.0
ENT-SERIAL-NUM:  MASP A - COMPLTD
```

7. Enable the MTP Routed GWS Stop Action feature with the `enable-ctrl-feat` command specifying the part number for the MTP Routed GWS Stop Action feature and the feature access key. Enter this command.

   `enable-ctrl-feat:partnum=893035601:fak=<MTP Routed GWS Stop Action feature access key>`

   The MTP Routed GWS Stop Action feature cannot be enabled with a temporary feature access key.

   The value for the feature access key (the `fak` parameter) is provided by Tekelec. If you do not have the feature access key for the MTP Routed GWS Stop Action feature, contact your Tekelec Sales Representative or Account Representative.

   When the `enable-crtl-feat` command has successfully completed, this message should appear.

```
rlghncxa03w 09-07-28 21:15:37 GMT EAGLE5 41.1.0
ENABLE-CTRL-FEAT: MASP B - COMPLTD
```

CAUTION: Once the MTP Routed GWS Stop Action feature is enabled, the SCCP gateway screening stop action can be provisioned for Gateway Screening rules. MTP routed SCCP UDT/XUDT messages that pass gateway screening will not be forwarded to the service modules for further processing until the MTP Routed GWS Stop Action is turned on in *Step 8*.

8. Turn the MTP Routed GWS Stop Action feature on with the `chg-ctrl-feat` command specifying the part number for the MTP Routed GWS Stop Action feature and the `status=on` parameter. Enter this command.

   `chg-ctrl-feat:partnum=893035601:status=on`

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

```
rlghncxa03w 09-07-28 21:15:37 GMT EAGLE5 41.1.0
CHG-CTRL-FEAT: MASP B - COMPLTD
```

9. Verify the changes by entering the `rtrv-ctrl-feat`command with the MTP Routed GWS Stop Action feature part number. Enter this command.

   `rtrv-ctrl-feat:partnum=893035601`

   The following is an example of the possible output.

```
rlghncxa03w 09-07-28 21:15:37 GMT EAGLE5 41.1.0
The following features have been permanently enabled:

Feature Name             Partnum    Status  Quantity
MTPRTD GWS Stop Action   893035601  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.
```

Turning the MTP Routed GWS Stop Action Feature Off

This procedure is used to turn off the MTP Routed GWS Stop Action feature, using the `chg-ctrl-feat` command.

The `chg-ctrl-feat` command uses the following parameters:

`:partnum` - The part number of the MTP Routed GWS Stop Action feature, 893035601.

`:status=off` – used to turn off the MTP Routed GWS Stop Action feature.

The status of the MTP Routed GWS Stop Action feature must be `on` and is shown with the `rtrv-ctrl-feat` command.

CAUTION: If the MTP Routed GWS Stop Action feature is turned off, MTP routed SCCP UDT/XUDT messages that pass gateway screening will not be forwarded to the service modules for further processing.

1. Display the status of the MTP Routed GWS Stop Action feature by entering the `rtrv-ctrl-feat:partnum=893035601` command.

   The following is an example of the possible output.

```
rlghncxa03w 09-07-28 21:15:37 GMT EAGLE5 41.1.0
The following features have been permanently enabled:

Feature Name              Partnum    Status  Quantity
MTPRTD GWS Stop Action    893035601  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 MTP Routed GWS Stop Action feature is off, or if the MTP Routed GWS Stop Action feature is not enabled, this procedure cannot be performed.

2. Turn off the MTP Routed GWS Stop Action feature by entering the `chg-ctrl-feat` command with the `status=off` parameter.

   For example, enter this command.

   ```
   chg-ctrl-feat:partnum=893035601:status=off
   ```

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

   ```
   rlghncxa03w 09-07-28 21:16:37 GMT EAGLE5 41.1.0
   CHG-CTRL-FEAT: MASP A - COMPLTD
   ```

3. Verify that the MTP Routed GWS Stop Action feature has been turned off by using the `rtrv-ctrl-feat:partnum=893035601` command. The following is an example of the possible output.

   ```
   rlghncxa03w 09-07-28 21:15:37 GMT EAGLE5 41.1.0
   The following features have been permanently enabled:

   Feature Name              Partnum    Status  Quantity
   MTPRTD GWS Stop Action    893035601  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.
   ```

Chapter 3

Allowed Affected Point Code (AFTPC) Screen Configuration

Topics:

Chapter 3, Allowed Affected Point Code (AFTPC) Screen Configuration, contains the procedures necessary to configure allowed affected point code screens.

Introduction

The allowed affected point code (AFTPC) screen is used to identify affected point codes. Messages containing the allowed affected point code in the AFTPC screen are allowed into the EAGLE 5 ISS for further processing. The gray shaded areas in *Figure 13: Allowed Affected Point Code Screening Function* shows the fields of the SS7 message that are checked by the AFTPC screening function. Affected point codes are found in subsystem-prohibited (SSP), subsystem-status-test (SST) and subsystem-allowed (SSA) SCCP management messages. This is the last screen in the gateway screening process.

Gateway Screening Actions

The Gateway Screening process stops with this screen. The `nsfi` parameter value can only be `stop`.

If a match is not found, the message is discarded.

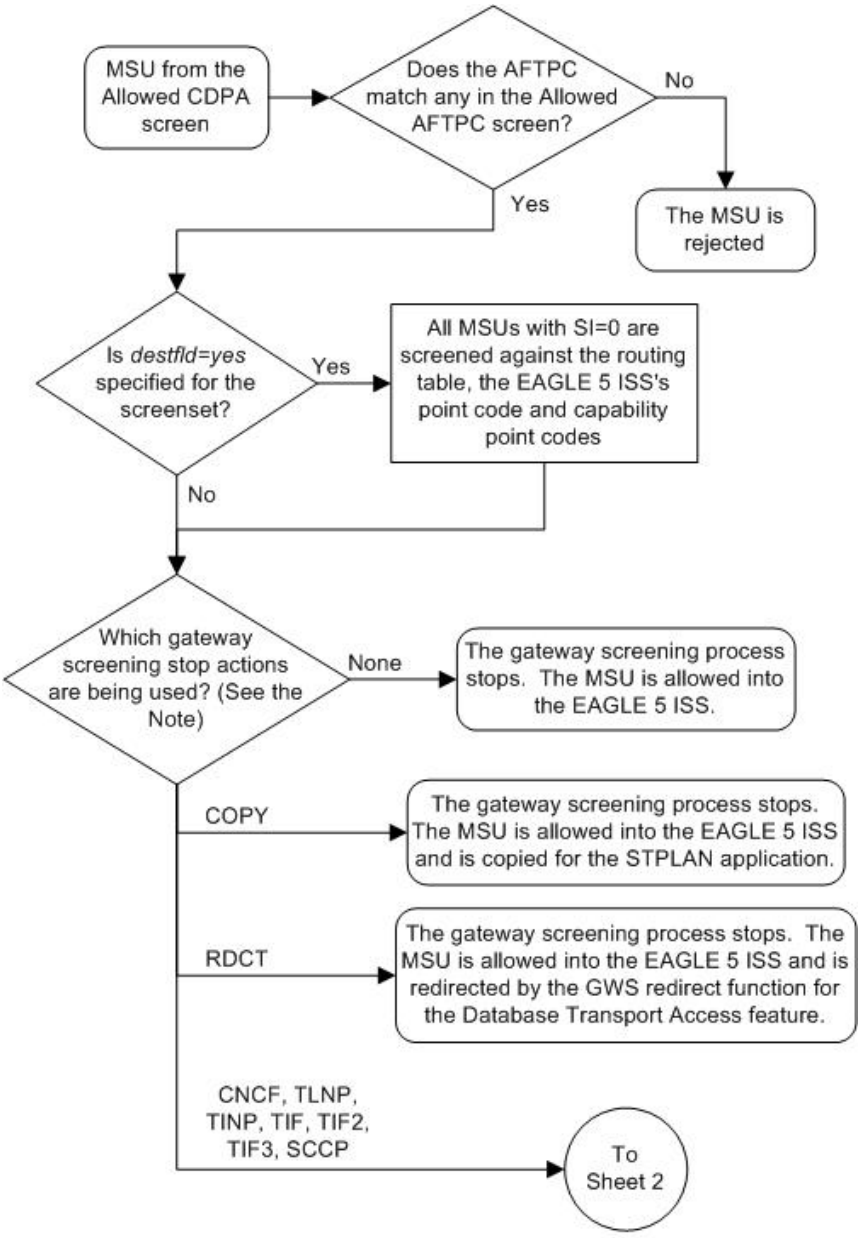
If a match is found, the message is processed. If a gateway screening stop action set is specified with the screen, shown by the `actname` parameter value, the message is processed according to the gateway screening stop actions that are assigned to the gateway screening stop action set.

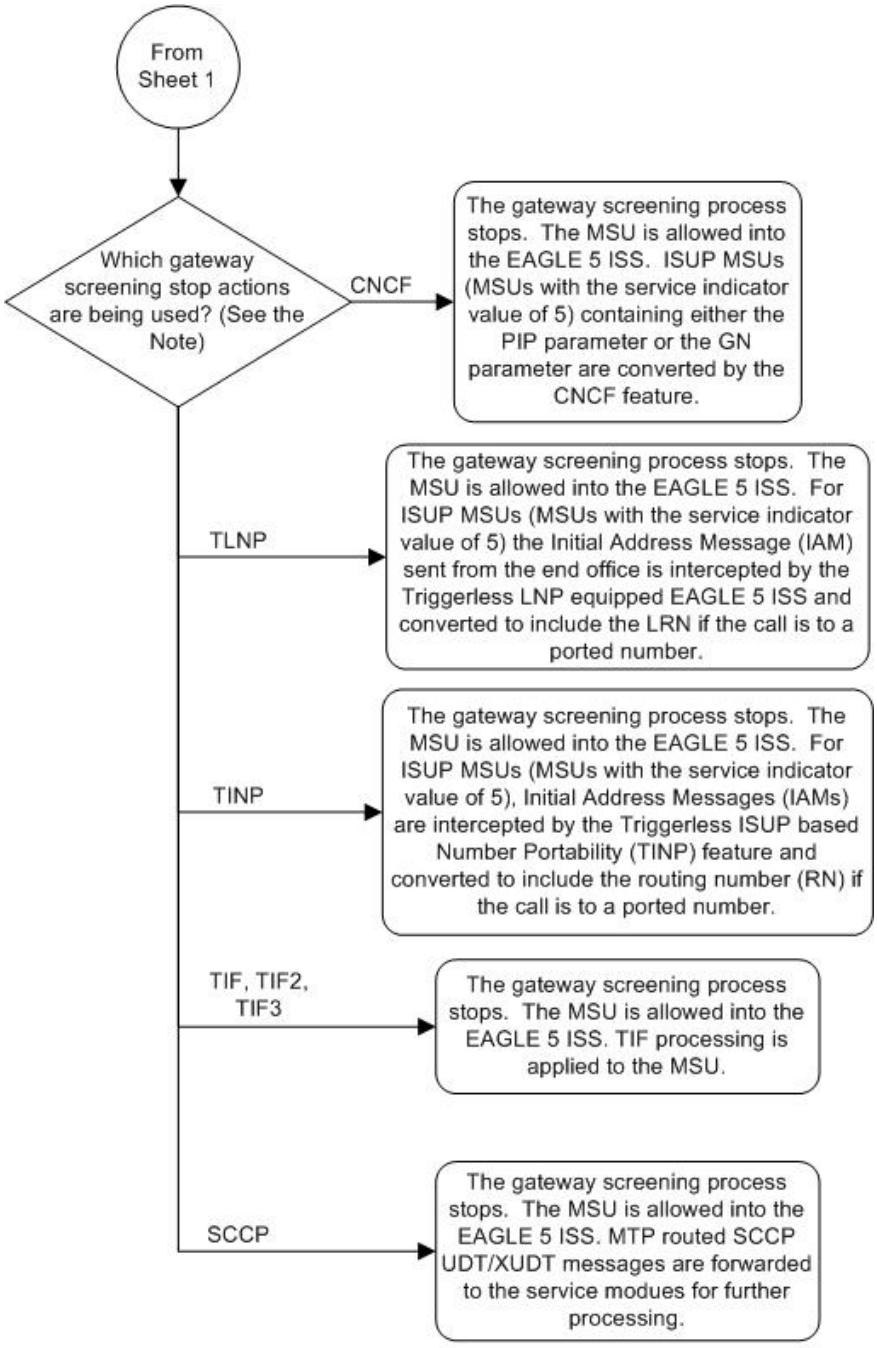
- If the `copy` gateway screening stop action is specified, the message is processed and a copy of the message is sent by the STPLAN feature to an external application.
- If the `rdct` (redirect) gateway screening stop action is specified,the message is diverted from the original destination and sent to another destination with the Database Transport Access feature, specified by global title translation, for further processing.
- If the `cncf` gateway screening stop action is specified, the PIP parameter in the incoming ISUP IAM message is converted to the GN parameter. The GN parameter in the incoming ISUP IAM message is converted to the PIP parameter. The message is then sent to the node specified by the DPC in the routing label in the message. For more information on the Calling Name Conversion Facility feature, see *Calling Name Conversion Facility (CNCF) Configuration*.
- If the `tlnp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are processed either by the ISUP NP with EPAP feature (if the ISUP NP with EPAP feature is enabled and turned on) or by the Triggerless LNP feature (if the Triggerless LNP feature is turned on). The ISUP NP with EPAP feature is discussed in more detail in the *Feature Manual - G-Port*. The Triggerless LNP feature is discussed in more detail in the *LNP Feature Activation Guide*.
- If the `tinp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are intercepted by the Triggerless ISUP based Number Portability (TINP) feature and converted to include the routing number (RN) if the call is to a ported number. The TINP feature is discussed in more detail in the *Feature Manual - G-Port*.
- If the `tif`, `tif2`, or `tif3` gateway screening stop actions are specified, TIF processing is applied to the message.
- If the `sccp` gateway screening stop action is specified, MTP routed SCCP UDT/XUDT are forwarded to the service modules for further processing.

Allowed AFTPC Screening Actions

Figure 12: Allowed AFTPC Screening Actions shows the screening actions of the allowed AFTPC screen.

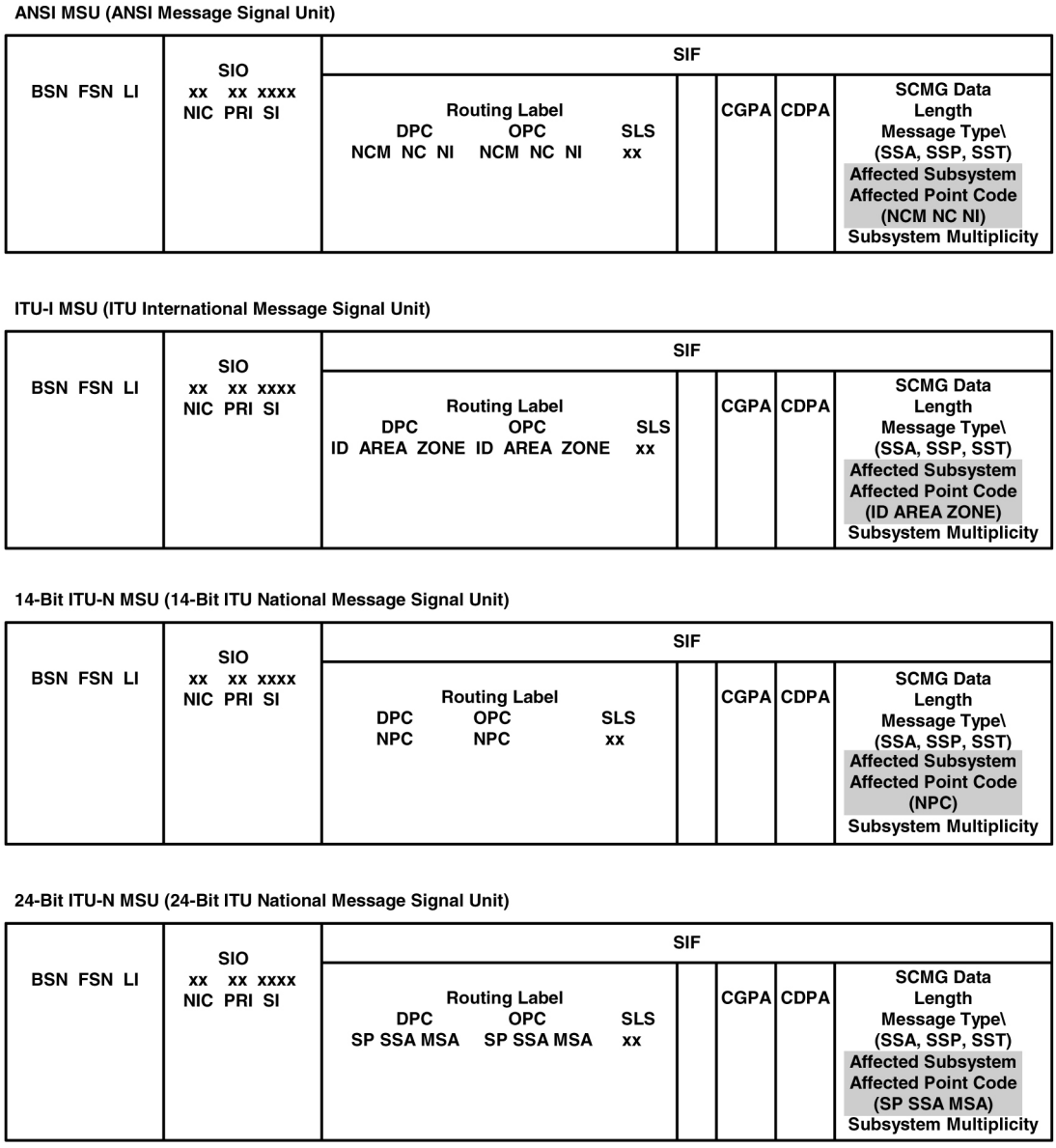
Figure 12: Allowed AFTPC Screening Actions


MSU from the Allowed CDPA screen
Does the AFTPC match any in the Allowed AFTPC screen?
No
Yes
The MSU is rejected
Is destfld=yes specified for the screenset?
Yes
All MSUs with SI=0 are screened against the routing table, the EAGLE 5 ISS's point code and capability point codes
No
Which gateway screening stop actions are being used? (See the Note)
None
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS.
COPY
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is copied for the STPLAN application.
RDCT
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is redirected by the GWS redirect function for the Database Transport Access feature.
CNCF, TLNP, TINP, TIF, TIF2, TIF3, SCCP
To Sheet 2
Note: Combinations of the gateway screening stop actions shown on Sheets 2 and 3 may be assigned to a gateway screening stop action set. Refer to the Configuring Gateway Screening Stop Action Sets and the Configuring TLNP Gateway Screening Stop Action Sets procedures in Chapter 2 of this manual for the combinations that can be used.



Note: Combinations of the gateway screening stop actions shown on Sheets 2 and 3 may be assigned to a gateway screening stop action set. Refer to the Configuring Gateway Screening Stop Action Sets and the Configuring TLNP Gateway Screening Stop Action Sets procedures in Chapter 2 of this manual for the combinations that can be used.

Figure 13: Allowed Affected Point Code Screening Function



Adding an Allowed Affected Point Code Screen

This procedure is used to add an allowed affected point code (AFTPC) screen to the database using the `ent-scr-aftpc` command. The parameters used by the `ent-scr-aftpc` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The examples in this procedure are used to add the allowed AFTPC screen data shown in *Table 14: Example Gateway Screening Allowed AFTPC Configuration Table* and based on the example configurations

shown in *Figure 5: Gateway Screening Configuration - Example 1* and *Figure 8: Gateway Screening Configuration - Example 4*.

Table 14: Example Gateway Screening Allowed AFTPC Configuration Table

Screening Reference	NI	NC	NCM	SSN	NSFI	ACTNAME
gw20	008	008	008	250	stop	COPY
ls04	010	010	010	015	stop	COPY

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

Specifying a Range of Values

A range of values can be specified for the point code parameters `ni`, `nc`, or `ncm`.

If a range of values is specified for any of these parameters, and the value of the other parameters match existing values for the screening reference name, the range of values for the point code parameter cannot include any values for that parameter that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NI       NC       NCM      SSN      NSFI     NSR/ACT
SCR1  240      001      010      012      STOP     ------
SCR1  241      010      020      015      STOP     ------
```

Another entry for screening reference `scr1` with the `ni` value of 240 and the `nc` value of 001 cannot be specified if the range of values for the `ncm` parameter includes the value 010.

The ANSI point code parameter values can be specified as a single value, a range of values, or with an asterisk (*). The asterisk specifies all possible values for the `ni`, `nc`, and `ncm` parameters. *Table 15: Valid Value Combinations for ANSI Point Code Parameters* shows the valid combinations of these parameter values.

Table 15: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk
Range of Values	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

A range of values can also be specified for an ITU-I or 24-bit ITU-N point code parameter using a combination of asterisks (*) and single values for the point code parameters. *Table 16: Valid Value*

Combinations for ITU-I Point Code Parameters shows the valid combinations of the ITU-I parameter values. *Table 17: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 16: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 17: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

1. Verify that the gateway screening feature is on, by entering the `rtrv-feat` command.

   If the gateway screening feature is on, the `GWS` 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*.

   If the gateway screening feature is on, shown by the entry `GWS = on` in the `rtrv-feat` command output, skip step 2, and go to step 3.

2. Turn the gateway screening feature on by entering this command.

   `chg-feat:gws=on`

   Note: Once the gateway screening feature is turned on with the `chg-feat` command, it cannot be turned off.

   The gateway screening feature must be purchased before you turn this feature on with the `chg-feat` command. If you are not sure if you have purchased the gateway screening feature, contact your Tekelec Sales Representative or Account Representative.

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

   ```
   rlghncxa03w 06-10-28 11:43:04 GMT EAGLE5 36.0.0
   CHG-FEAT: MASP A - COMPLTD
   ```

3. Display all allowed AFTPC screens in the database using the `rtrv-scr-aftpc` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED AFTPC
SR    REF  RULES
IEC   YES     2
WRD2  YES     1
WRD4  YES     9
```

If the screening reference names that you wish to add with this procedure are not shown in the `rtrv-scr-aftpc` command output, go to step 4. For this example, the screening reference names are not shown. If these screening reference names are shown in the `rtrv-scr-aftpc` command output, make sure the screening data you wish to enter is not already in the database by entering the `rtrv-scr-aftpc` command with the screening reference name. For example, enter the `rtrv-scr-aftpc:sr=iec` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED AFTPC
SR    NI       NC       NCM      SSN      NSFI    NSR/ACT
IEC   010      010      011      012      STOP    ------
IEC   010      010      013      012      STOP    ------
```

If a gateway screening stop action set is to be assigned to the allowed AFTPC screen being added to the database, go to step 4. Otherwise, go to step 5.

4. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

   If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

   Note: If the point code being added in this procedure is not an ITU-I or 14-bit ITU-N spare point code, skip step 5 and to step 6.

   Note: If the point code being added in this procedure is an ITU-I or 14-bit ITU-N spare point code and the screening reference contains ITU-I or 14-bit ITU-N spare point codes, skip step 5 and go to step 6.

5. Display the status of the ITU National and International Spare Point Code Support feature by entering the `rtrv-ctrl-feat` command with the ITU National and International Spare Point Code Support feature part number.

   Enter this command.

`rtrv-ctrl-feat:partnum=893013601`

This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum   Status Quantity
Spare Point Code Support  893013601 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 ITU National and International Spare Point Code Support feature is enabled, go to step 6.

If the ITU National and International Spare Point Code Support feature is not enabled, perform the "Activating the ITU National and International Spare Point Code Support Feature" procedure in the Database *Administration Manual - SS7* to enable the ITU National and International Spare Point Code Support feature as required. After the feature has been enabled, go to step 6.

6. Add the new allowed AFTPC screen to the database using the `ent-scr-aftpc` command.

CAUTION: The EAGLE 5 ISS does not support redirecting MSUs for the DTA feature or intercepting ISUP IAM messages for the Calling Name Conversion Facility feature from the allowed AFTPC screen. Gateway screening stop action sets containing either the RDCT (redirect) or CNCF (calling name conversion facility) stop actions should not be assigned to the allowed AFTPC screen. If a gateway screening stop action set containing the RDCT or CNCF stop actions is specified with the `ent-scr-aftpc` command, unsolicited information message (UIM) 1127 is generated when the attempt is made to redirect MSUs from the allowed AFTPC screen. Unsolicited information message (UIM) 1217 is generated when ISUP IAM MSUs are intercepted from the allowed AFTPC screen. For more information on UIMs 1127 and 1217, go to the *Unsolicited Alarm and Information Messages Manual* .

If a gateway screening stop action is to be assigned to the allowed AFTPC screen being changed, enter the `ent-scr-aftpc` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 4.

The following list contains the values for `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, `sp`, and `ssn` parameters:

- ni – 0 - 255 or an asterisk (*)
- nc – 0 - 255 or an asterisk (*)
- ncm – 0 - 255 or an asterisk (*)
- zone – 0 - 7 or an asterisk (*)
- area – 0 - 255 or an asterisk (*)
- id – 0 - 7 or an asterisk (*)
- npc – 1 - 16383 or an asterisk (*)
- msa – 0 - 255 or an asterisk (*)

- ssa – 0 - 255 or an asterisk (*)
- sp – 0 - 255 or an asterisk (*)
- ssn – 0 - 255 or an asterisk (*)

A range of values can be specified for the `ni`, `nc`, and `ncm` parameters. See the *"Specifying a Range of Values"* section for more information on how the asterisk and a range of values are used for the `ni`, `nc`, and `ncm` parameters.

To add a spare point code to the allowed AFTPC screen, the `pcst=s` parameter must be specified. To add a non-spare point code to the allowed AFTPC screen, the `pcst` parameter does not have to be specified. If the `pcst` parameter is specified for a screen containing an ITU-I or 14-bit ITU-N non-spare point code, the value must be `none`. For this example, enter these commands.

```
ent-scr-aftpc:sr=gw20:ni=008:nc=008:ncm=008:ssn=250:nsfi=stop :actname=copy
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:27:30 GMT  EAGLE5 36.0.0
ENT-SCR-AFTPC: SCREEN SET AFFECTED - GW20  1% FULL
ENT-SCR-AFTPC: MASP A - COMPLTD
```

```
ent-scr-aftpc:sr=ls04:ni=010:nc=010:ncm=010:ssn=015:nsfi=stop :actname=copy
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
ENT-SCR-AFTPC: SCREEN SET AFFECTED - LS04  1% FULL
ENT-SCR-AFTPC: MASP A - COMPLTD
```

7. Verify the changes using the `rtrv-scr-aftpc` command with the screening reference name used in step 6.

   For this example, enter these commands.

   ```
   rtrv-scr-aftpc:sr=gw20
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED AFTPC
   SR    NI       NC       NCM      SSN      NSFI    NSR/ACT
   GW20  008      008      008      250      STOP    COPY
   ```

   ```
   rtrv-scr-aftpc:sr=ls04
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED AFTPC
   SR    NI       NC       NCM      SSN      NSFI    NSR/ACT
   LS04  010      010      010      015      STOP    COPY
   ```

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

   The following 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.
```

Removing an Allowed Affected Point Code Screen

This procedure is used to remove an allowed affected point code (AFTPC) screen from the database using the `dlt-scr-aftpc` command. The parameters used by the `dlt-scr-aftpc` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure removes the allowed AFTPC screen `wrd0` from the database.

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

1. Display the allowed AFTPC screens in the database using the `rtrv-scr-aftpc` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED AFTPC
SR    REF  RULES
GW20  YES     1
IEC   YES     2
LS04  YES     1
WRD0  YES     1
WRD2  YES     1
WRD4  YES     9
```

   From the `rtrv-scr-aftpc` output, display the allowed AFTPC screen you wish to remove using the `rtrv-scr-aftpc` command with the screening reference name. For this example, enter the `rtrv-scr-aftpc:sr=wrd0` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED AFTPC
SR      ZONE   AREA     ID       SSN      NSFI    NSR/ACT
WRD0    1      004      6        023      STOP    ------
```

2. An allowed AFTPC screen can only be referenced by an allowed CDPA screen.

   Verify any references to the allowed AFTPC screen being removed from the database using the `rtrv-scr-cdpa:nsfi=aftpc` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED CDPA
SR      ZONE   AREA    ID       SSN      SCMGFID  NSFI    NSR/ACT
IEC     1      134     *        001      002      AFTPC   IEC

SR      ZONE   AREA    ID       SSN      SCMGFID  NSFI    NSR/ACT
WRD1    1      004     6        001      005      AFTPC   WRD0
```

```
SR      NPC                     SSN     SCMGFID  NSFI    NSR/ACT
WRD4    12345                   001     100      AFTPC   IEC
```

If the screen being removed is referenced by any CDPA screens, perform the *Changing an Allowed Called Party Address Screen* procedure to change the NSFI of those CDPA screens to reference other AFTPC screens or change the NSFI of these screens to STOP.

3. Remove the allowed AFTPC screen from the database using the `dlt-scr-aftpc` command with the screening reference name shown in the `rtrv-scr-aftpc` output in step 1 and with the point code parameter values (`ni`, `nc`, `ncm`, or `zone`, `area`, `id`, or `npc`, or `msa`, `ssa`, `sp`) and the `ssn` parameter value of the screen being removed from the database.

   The values for these parameters must be entered exactly as shown in the `rtrv-scr-aftpc` output.

   To remove an entry containing either an ITU-I or a 14-bit ITU-N spare point code, the `pcst=s` parameter must be specified with the `dlt-scr-aftpc` command.

   To remove an entry containing either an ITU-I or a 14-bit ITU-N non-spare point code, the `pcst` parameter does not have to be specified with the `dlt-scr-aftpc` command. If the `pcst` parameter is specified, the value must be `none`.

   For this example, enter this command.

   ```
   dlt-scr-aftpc:sr=wrd0:zone=1:area=004:id=6:ssn=023
   ```

   A message similar to the following should appear.

   ```
   rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
   DLT-SCR-AFTPC: SCREEN SET AFFECTED - WRD0  0% FULL
   DLT-SCR-AFTPC: MASP A - COMPLTD
   ```

4. Verify the changes using the `rtrv-scr-aftpc` command with screening reference name used in step 3.

   For this example, enter this command.

   ```
   rtrv-scr-aftpc:sr=wrd0
   ```

   The following message should appear.

   ```
   E2573 Cmd Rej: SR or NSR does not reference an existing SR
   ```

   This message shows that the specified screening reference name is not in the database and the action of the `dlt-scr-aftpc` command in step 5 was successful. If the specified screening reference name contained more than one entry when the `dlt-scr-aftpc` command was executed in step 4, the `rtrv-scr-aftpc:sr=` command output would show the remaining entries in the screening reference instead of error message E2573.

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

   The following 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.
   ```

Changing an Allowed Affected Point Code Screen

This procedure is used to change the attributes of an allowed affected point code (AFTPC) screen in the database using the `chg-scr-aftpc` command. The parameters used by the `chg-scr-aftpc` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure is used to change the point code 009-009-009 for the allowed AFTPC screen `gw21` to 100-100-100, and the subsystem number from 253 to 150.

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

Specifying a Range of Values

A range of values can be specified for the point code parameters `ni`, `nc`, or `ncm`.

If a range of values is specified for any of these parameters, and the value of the other parameters match existing values for the screening reference name, the range of values for the point code parameter cannot include any values for that parameter that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NI       NC       NCM      SSN      NSFI     NSR/ACT
SCR1  240      001      010      012      STOP     ------
SCR1  241      010      020      015      STOP     ------
```

Another entry for screening reference `scr1` with the `ni` value of 240 and the `nc` value of 001 cannot be specified if the range of values for the `ncm` parameter includes the value 010.

The ANSI point code parameter values can be specified as a single value, a range of values, or with an asterisk (*). The asterisk specifies all possible values for the `ni`, `nc`, and `ncm` parameters. *Table 18: Valid Value Combinations for ANSI Point Code Parameters* shows the valid combinations of these parameter values.

Table 18: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk
Range of Values	Asterisk	Asterisk

NI	NC	NCM
Asterisk	Asterisk	Asterisk

A range of values can also be specified for an ITU-I or 24-bit ITU-N point code parameter using a combination of asterisks (*) and single values for the point code parameters. *Table 19: Valid Value Combinations for ITU-I Point Code Parameters* shows the valid combinations of the ITU-I parameter values. *Table 20: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 19: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 20: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

1. Display the allowed AFTPC screens in the database using the `rtrv-scr-aftpc` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED AFTPC
SR    REF  RULES
GW20  YES     1
GW21  YES     1
IEC   YES     2
LS04  YES     1
WRD0  YES     1
```

```
WRD2  YES     1
WRD4  YES     9
```

From the `rtrv-scr-aftpc` output, display the allowed AFTPC screen you wish to change using the `rtrv-scr-aftpc` command with the screening reference name. For this example, enter this command.

```
rtrv-scr-aftpc:sr=gw21
```

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED AFTPC
SR    NI       NC       NCM      SSN      NSFI    NSR/ACT
GW21  009      009      009      253      STOP    ------
```

If a gateway screening stop action set is to be assigned to the allowed AFTPC screen being changed in this procedure, go to step 2. Otherwise, skip step 2 and go to step 3.

2. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

   If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

3. Display the status of the ITU National and International Spare Point Code Support feature by entering the `rtrv-ctrl-feat` command with the ITU National and International Spare Point Code Support feature part number.

   Note: If any of these conditions apply to this procedure, skip this step and go to step 4:

   - The point code in the screen is not being changed.
   - The screen being changed contains either an ANSI or 24-bit ITU-N point code.
   - The ITU-I or 14-bit ITU-N non-spare point code in the screen is not being changed to an ITU-I or 14-bit ITU-N spare point code.
   - The point code in the screen is an ITU-I or 14-bit ITU-N spare point code or the screening reference contains other screens with ITU-I or 14-bit ITU-N spare point codes.

   Enter this command.

```
rtrv-ctrl-feat:partnum=893013601
```

This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum   Status Quantity
Spare Point Code Support  893013601 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 ITU National and International Spare Point Code Support feature is enabled, go to step 4.

If the ITU National and International Spare Point Code Support feature is not enabled, perform the "Activating the ITU National and International Spare Point Code Support Feature" procedure in the Database *Administration Manual* - SS7 to enable the ITU National and International Spare Point Code Support feature as required. After the feature has been enabled, go to step 4.

4. Change the attributes of an allowed AFTPC screen using the `chg-scr-aftpc` command.

   If a gateway screening stop action is to be assigned to the allowed AFTPC screen being changed, enter the `chg-scr-aftpc` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 2.

   The current values for the `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, `sp`, and `ssn` parameters must be entered exactly as shown in the `rtrv-scr-aftpc` output in step 1.

   The following list contains the values for the `nni`, `nnc`, `nncm`, `nzone`, `narea`, `nid`, `nnpc`, `nmsa`, `nssa`, `nsp`, and `nssn` parameters:

   - nni - 0-255 or an asterisk (*)
   - nnc - 0-255 or an asterisk (*)
   - nncm - 0-255 or an asterisk (*)
   - nzone - 0-7 or an asterisk (*)
   - narea - 0-255 or an asterisk (*)
   - nid - 0-7 or an asterisk (*)
   - nnpc - 1 - 16383 or an asterisk (*)
   - nmsa - 0-255 or an asterisk (*)
   - nssa - 0-255 or an asterisk (*)
   - nsp - 0-255 or an asterisk (*)
   - nssn – 0 - 255 or an asterisk (*)

   A range of values can be specified for the `nni`, `nnc`, and `nncm` parameters. See the *"Specifying a Range of Values"* section for more information on how the asterisk and a range of values are used for the `nni`, `nnc`, and `nncm` parameters.

   To change an ITU-I or 14-bit ITU-N spare point code to a non-spare point code, both the `pcst=s` and `npcst=none` parameters must be specified with the `chg-scr-aftpc` command.

To change an ITU-I or 14-bit ITU-N non-spare point code to a spare point code, the `npcst=s` parameter must be specified with the `chg-scr-aftpc` command. The `pcst` parameter does not have to be specified.

If the current point code in the screen being changed is either an ITU-I or 14-bit ITU-N spare point code, the `pcst=s` parameter must be specified with the `chg-scr-aftpc` command.

If the current point code in the screen being changed is either an ITU-I or 14-bit ITU-N non-spare point code, the `pcst` parameter does not have to be specified with the `chg-scr-aftpc` command. If the `pcst` parameter is specified for a screen containing either an ITU-I or 14-bit ITU-N non-spare point code, the `pcst` parameter value must be `none`.

For this example, enter this command.

```
chg-scr-aftpc:sr=gw21:ni=009:nc=009:ncm=009:ssn=253:nni=100
:nnc=100:nncm=100:nssn=150
```

CAUTION: The EAGLE 5 ISS does not support redirecting MSUs for the DTA feature or intercepting ISUP IAM messages for the Calling Name Conversion Facility feature from the allowed AFTPC screen. Gateway screening stop action sets containing either the RDCT (redirect) or CNCF (calling name conversion facility) stop actions should not be assigned to the allowed AFTPC screen. If a gateway screening stop action set containing the RDCT or CNCF stop actions is specified with the `chg-scr-aftpc` command, unsolicited information message (UIM) 1127 is generated when the attempt is made to redirect MSUs from the allowed AFTPC screen. Unsolicited information message (UIM) 1217 is generated when ISUP IAM MSUs are intercepted from the allowed AFTPC screen. For more information on UIMs 1127 and 1217, go to the *Unsolicited Alarm and Information Messages Manual* .

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:27:30 GMT  EAGLE5 36.0.0
CHG-SCR-AFTPC: SCREEN SET AFFECTED - GW21  1% FULL
CHG-SCR-AFTPC: MASP A - COMPLTD
```

5. Verify the changes using the `rtrv-scr-aftpc` command with screening reference name used in step 4.

   For this example, enter this command.

   ```
   rtrv-scr-aftpc:sr=gw21
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED AFTPC
   SR    NI       NC       NCM      SSN      NSFI    NSR/ACT
   GW21  100      100      100      150      STOP    ------
   ```

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

   The following 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.
   ```

Chapter 4

Allowed Called Party (CDPA) Screen Configuration

Topics:

Chapter 4, Allowed Called Party (CDPA) Screen Configuration, contains the procedures necessary to configure allowed called party address screens.

Introduction

The allowed called party address (CDPA) screen is used to screen SCCP messages for a DPC in the routing label and a subsystem number in the called party address. The gray shaded areas in *Figure 15: Allowed Called Party Address Screening Function* shows the fields of the SS7 message that are checked by the CDPA screening function. The screening reference contains a list of point codes and subsystem number combinations.

Gateway Screening Actions

If a match is not found, the message is discarded.

If a match is found, the `nsfi` is examined to determine the next step in the screening process. If the `nsfi` value is any value other than `stop`, the next screening reference (`nsr`) is identified and the screening process continues to the next screen identified by the `nsfi` and `nsr` parameter values.

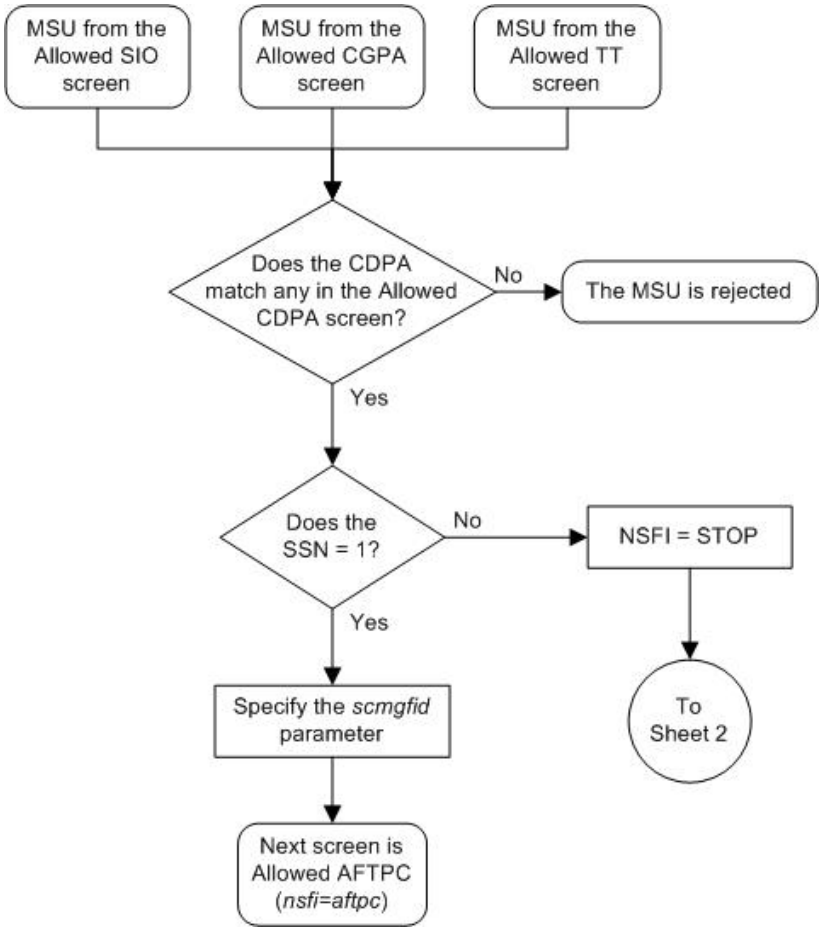
If the `nsfi` is equal to `stop`, the screening process stops and the message is processed. If a gateway screening stop action set is specified with the screen, shown by the `actname` parameter value, the message is processed according to the gateway screening stop actions that are assigned to the gateway screening stop action set.

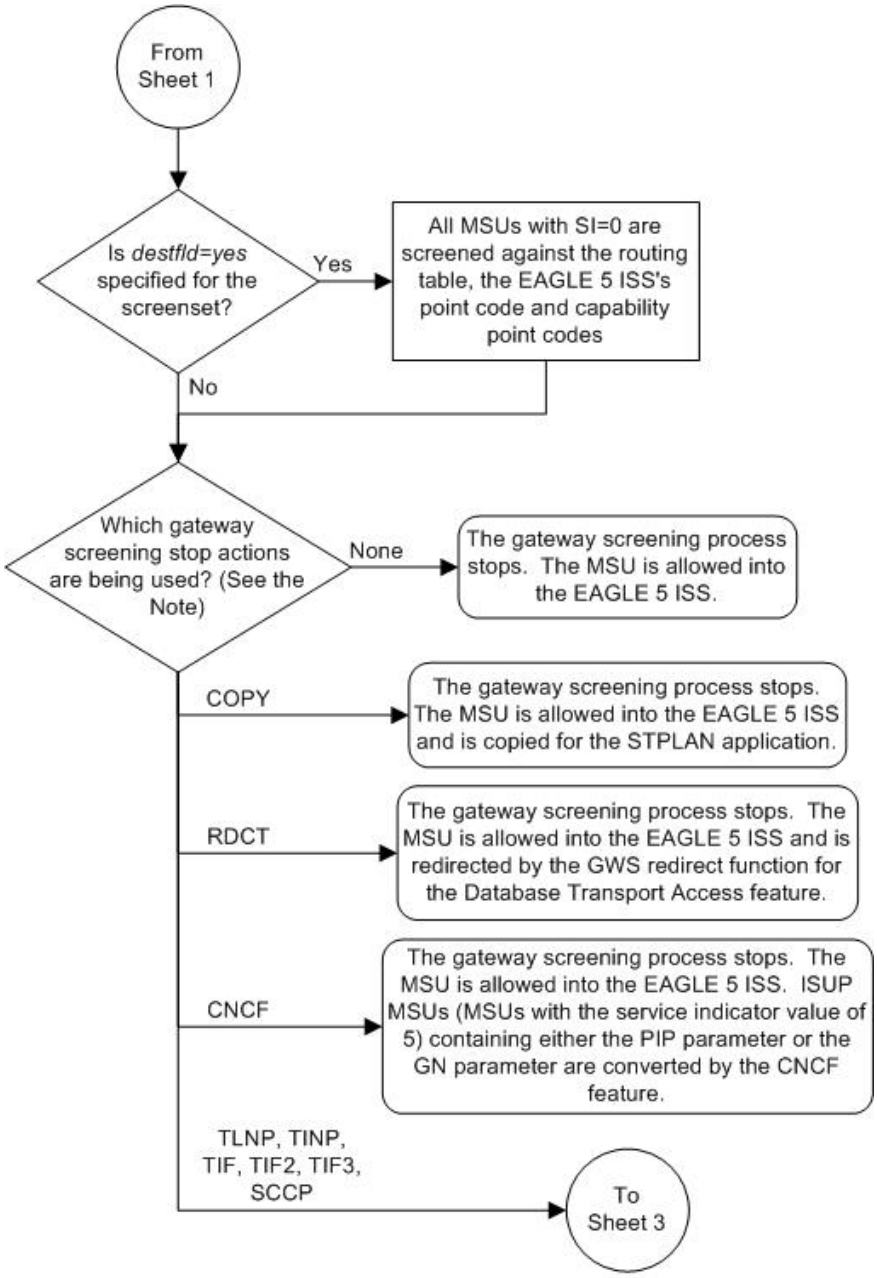
- If the `copy` gateway screening stop action is specified, the message is processed and a copy of the message is sent by the STPLAN feature to an external application.
- If the `rdct` (redirect) gateway screening stop action is specified,the message is diverted from the original destination and sent to another destination with the Database Transport Access feature, specified by global title translation, for further processing.
- If the `cncf` gateway screening stop action is specified, the PIP parameter in the incoming ISUP IAM message is converted to the GN parameter. The GN parameter in the incoming ISUP IAM message is converted to the PIP parameter. The message is then sent to the node specified by the DPC in the routing label in the message. For more information on the Calling Name Conversion Facility feature, see *Calling Name Conversion Facility (CNCF) Configuration*.
- If the `tlnp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are processed either by the ISUP NP with EPAP feature (if the ISUP NP with EPAP feature is enabled and turned on) or by the Triggerless LNP feature (if the Triggerless LNP feature is turned on). The ISUP NP with EPAP feature is discussed in more detail in the *Feature Manual - G-Port*. The Triggerless LNP feature is discussed in more detail in the *LNP Feature Activation Guide*.
- If the `tinp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are intercepted by the Triggerless ISUP based Number Portability (TINP) feature and converted to include the routing number (RN) if the call is to a ported number. The TINP feature is discussed in more detail in the *Feature Manual - G-Port*.
- If the `tif`, `tif2`, or `tif3` gateway screening stop actions are specified, TIF processing is applied to the message.
- If the `sccp` gateway screening stop action is specified, MTP routed SCCP UDT/XUDT are forwarded to the service modules for further processing.

Allowed CDPA Screening Actions

Figure 14: Allowed CDPA Screening Actions shows the screening actions of the allowed CDPA screen.

Figure 14: Allowed CDPA Screening Actions


MSU from the Allowed SIO screen
MSU from the Allowed CGPA screen
MSU from the Allowed TT screen
Does the CDPA match any in the Allowed CDPA screen?
No
The MSU is rejected
Yes
Does the SSN = 1?
No
NSFI = STOP
Yes
To Sheet 2
Specify the scmgfid parameter
Next screen is Allowed AFTPC (nsfi=aftpc)


From Sheet 1
Is destfld=yes specified for the screenset?
Yes
All MSUs with SI=0 are screened against the routing table, the EAGLE 5 ISS's point code and capability point codes
No
Which gateway screening stop actions are being used? (See the Note)
None
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS.
COPY
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is copied for the STPLAN application.
RDCT
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is redirected by the GWS redirect function for the Database Transport Access feature.
CNCF
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS. ISUP MSUs (MSUs with the service indicator value of 5) containing either the PIP parameter or the GN parameter are converted by the CNCF feature.
TLNP, TINP, TIF, TIF2, TIF3, SCCP
To Sheet 3
Note: Combinations of the gateway screening stop actions shown on Sheets 2 and 3 may be assigned to a gateway screening stop action set. Refer to the Configuring Gateway Screening Stop Action Sets and the Configuring TLNP Gateway Screening Stop Action Sets procedures in Chapter 2 of this manual for the combinations that can be used.

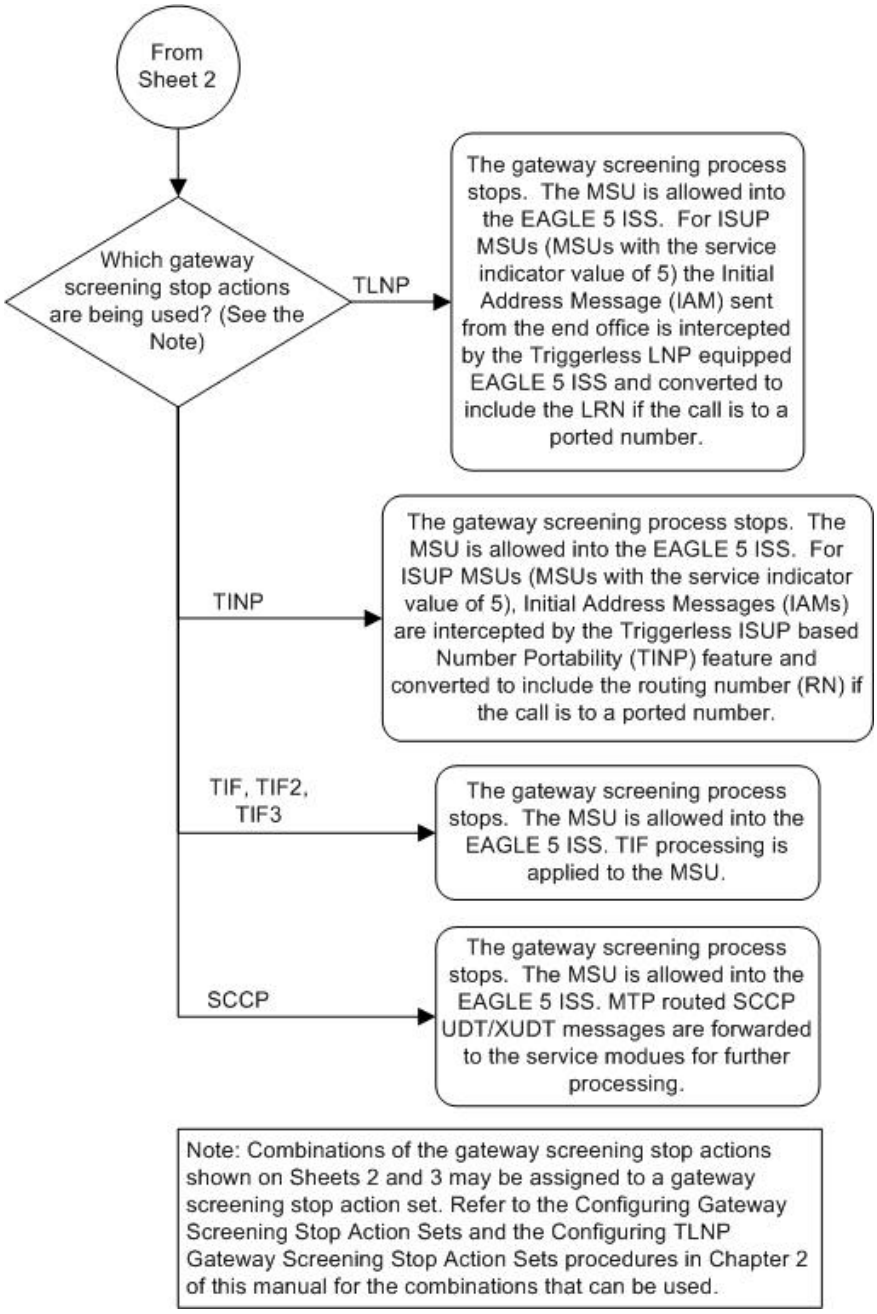


Figure 15: Allowed Called Party Address Screening Function

ANSI MSU (ANSI Message Signal Unit)

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

ITU-I MSU (ITU International Message Signal Unit)

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

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 NPC OPC NPC SLS xx	CGPA Length Address Indicator Subsystem Point Code (NPC)	CDPA Length Address Indicator (x x xxxx xx) (x RI xxxx xx) Subsystem Point Code (NPC)	SCMG Data Length SCMG Format (xxxx xxxx) Point Code (NPC) Subsystem

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 SP SSA MSA OPC SP SSA MSA SLS xx	CGPA Length Address Indicator Subsystem Point Code (SP SSA MSA)	CDPA Length Address Indicator (x x xxxx xx) (x RI xxxx xx) Subsystem Point Code (SP SSA MSA)	SCMG Data Length SCMG Format (xxxx xxxx) Point Code (SP SSA MSA) Subsystem

Adding an Allowed Called Party Address Screen

This procedure is used to add an allowed called party address (CDPA) screen to the database using the `ent-scr-cdpa` command. The parameters used by the `ent-scr-cdpa` command are shown in

the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The examples in this procedure are used to add the allowed CDPA screen data shown in *Table 21: Example Gateway Screening Allowed CDPA Configuration Table* and based on the example configurations shown in *Figure 5: Gateway Screening Configuration - Example 1* through *Figure 8: Gateway Screening Configuration - Example 4*.

Table 21: Example Gateway Screening Allowed CDPA Configuration Table

Screening Reference	ZONE	AREA	ID	SSN	SCMGFID	NSFI	NSR
gw15	5	117	2	254	----	stop	----
Screening Reference	NI	NC	NCM	SSN	SCMGFID	NSFI	NSR
gw17	003	003	003	001	050	aftpc	gw20
gw18	006	006	006	253	----	stop	----
ls03	007	007	007	001	100	aftpc	ls04

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The allowed CDPA screen can only reference an allowed AFTPC screen and the allowed AFTPC screen being referenced must be in the database. This can be verified using the `rtrv-scr-aftpc:all=yes` command. If the desired allowed AFTPC screen is not in the database, perform one of these procedures to add the required screen to the database or change an existing screen in the database.

- *Adding an Allowed Affected Point Code Screen*
- *Changing an Allowed Affected Point Code Screen*

Specifying a Range of Values

A range of values can be specified for the point code parameters `ni`, `nc`, or `ncm`.

If a range of values is specified for any of these parameters, and the value of the other parameters match existing values for the screening reference name, the range of values for the point code parameter cannot include any values for that parameter that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NI       NC       NCM       SSN       SCMGFID  NSFI    NSR/ACT
SCR1  240      001      010       012       ------   STOP    ------
SCR1  241      010      020       001       002      AFTPC   SCR1
```

Another entry for screening reference `scr1` with the `ni` value of 240 and the `nc` value of 001 cannot be specified if the range of values for the `ncm` parameter includes the value 010.

The ANSI point code parameter values can be specified as a single value, a range of values, or with an asterisk (*). The asterisk specifies all possible values for the `ni`, `nc`, and `ncm` parameters. *Table 22:*

Valid Value Combinations for ANSI Point Code Parameters shows the valid combinations of these parameter values.

Table 22: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk
Range of Values	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

A range of values can also be specified for an ITU-I or 24-bit ITU-N point code parameter using a combination of asterisks (*) and single values for the point code parameters. *Table 23: Valid Value Combinations for ITU-I Point Code Parameters* shows the valid combinations of the ITU-I parameter values. *Table 24: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 23: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 24: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

1. Verify that the gateway screening feature is on, by entering the `rtrv-feat` command.

   If the gateway screening feature is on, the `GWS` 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*.

If the gateway screening feature is on, shown by the entry `GWS = on` in the `rtrv-feat` command output, skip step 2, and go to step 3.

2. Turn the gateway screening feature on by entering this command.

   `chg-feat:gws=on`

   Note: Once the gateway screening feature is turned on with the `chg-feat` command, it cannot be turned off.

   The gateway screening feature must be purchased before you turn this feature on with the `chg-feat` command. If you are not sure if you have purchased the gateway screening feature, contact your Tekelec Sales Representative or Account Representative.

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

```
rlghncxa03w 06-10-28 11:43:04 GMT EAGLE5 36.0.0
CHG-FEAT: MASP A - COMPLTD
```

3. Display all allowed CDPA screens in the database using the `rtrv-scr-cdpa` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED CDPA
SR    REF  RULES
IEC   YES     2
WRD2  YES     1
WRD4  YES     9
```

   If the screening reference names that you wish to add with this procedure are not shown in the `rtrv-scr-cdpa` command output, go to step 4. For this example, the screening reference names are not shown. If these screening reference names are shown in the `rtrv-scr-cdpa` command output, make sure the screening data you wish to enter is not already in the database by entering the `rtrv-scr-cdpa` command with the screening reference name. For example, enter the `rtrv-scr-cdpa:sr=iec` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED CDPA
SR    NI       NC      NCM       SSN      SCMGFID  NSFI    NSR/ACT
IEC   240      001     010       012      ------   STOP    ------
SR      ZONE   AREA    ID        SSN      SCMGFID  NSFI    NSR/ACT
IEC     1      134     *         001      002      AFTPC   IEC
```

   If a gateway screening stop action set is to be assigned to the allowed CDPA screen being added to the database, go to step 4.

   Step 4 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen being added in this procedure is STOP. If the NSFI of the new screen will be STOP, but a gateway screening stop action set name will not be assigned to the new screen, skip steps 4 and 5 and go to step 6. If the NSFI of the new screen is AFTPC, skip step 4 and go to step 5.

4. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:27:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

Note: If the NSFI of the screen being added in this procedure is STOP, skip step 5 and go to step 6.

5. Enter the `rtrv-scr-aftpc` command to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 7 is in the database.

   If the desired screen is not in the database, perform one of these procedures to add the desired screen to the database or change an existing screen in the database.

   - *Adding an Allowed Affected Point Code Screen*
   - *Changing an Allowed Affected Point Code Screen*.

   Note: If the point code being added in this procedure is not an ITU-I or 14-bit ITU-N spare point code, skip step 6 and to step 7.

   Note: If the point code being added in this procedure is an ITU-I or 14-bit ITU-N spare point code and the screening reference contains ITU-I or 14-bit ITU-N spare point codes, skip step 6 and go to step 7.

6. Display the status of the ITU National and International Spare Point Code Support feature by entering the `rtrv-ctrl-feat` command with the ITU National and International Spare Point Code Support feature part number.

   Enter this command.

   `rtrv-ctrl-feat:partnum=893013601`

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name             Partnum   Status Quantity
Spare Point Code Support  893013601 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 ITU National and International Spare Point Code Support feature is enabled, go to step 7.

If the ITU National and International Spare Point Code Support feature is not enabled, perform the "Activating the ITU National and International Spare Point Code Support Feature" procedure in the Database *Administration Manual* - SS7 to enable the ITU National and International Spare Point Code Support feature as required. After the feature has been enabled, go to step 7.

7. Add a new allowed CDPA screen to the database using the `ent-scr-cdpa` command.

   If a gateway screening stop action is to be assigned to the allowed CDPA screen being added to the database, enter the `ent-scr-cdpa` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 4.

   CAUTION: The EAGLE 5 ISS does not support redirecting MSUs for the DTA feature or intercepting ISUP IAM messages for the Calling Name Conversion Facility feature from the allowed CDPA screen. Gateway screening stop action sets containing either the RDCT (redirect) or CNCF (calling name conversion facility) stop actions should not be assigned to the allowed CDPA screen. If a gateway screening stop action set containing the RDCT or CNCF stop actions is specified with the `ent-scr-cdpa` command, unsolicited information message (UIM) 1125 is generated when the attempt is made to redirect MSUs from the allowed CDPA screen. Unsolicited information message (UIM) 1215 is generated when ISUP IAM MSUs are intercepted from the allowed CDPA screen. For more information on UIMs 1125 and 1215, go to the *Unsolicited Alarm and Information Messages Manual* .

   The following list contains the values for `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, `sp`, `ssn`, and `scmgfid` parameters:

   - ni – 0 - 255 or an asterisk (*)
   - nc – 0 - 255 or an asterisk (*)
   - ncm – 0 - 255 or an asterisk (*)
   - zone – 0 - 7 or an asterisk (*)
   - area – 0 - 255 or an asterisk (*)
   - id – 0 - 7 or an asterisk (*)
   - npc – 1 - 16383 or an asterisk (*)
   - msa – 0 - 255 or an asterisk (*)
   - ssa – 0 - 255 or an asterisk (*)
   - sp – 0 - 255 or an asterisk (*)
   - ssn – 0 - 255 or an asterisk (*)
   - scmgfid – 1 - 255 or an asterisk (*)

   Note: The `scmgfid`, `ssn`, `nsfi`, and `nsr` parameters can be specified only as shown in *Table 25: CDPA Parameter Combinations*.

Table 25: CDPA Parameter Combinations

SSN	SCMGFID	NSFI	NSR
1	1 - 255, *	AFTPC	Must be specified

SSN	SCMGFID	NSFI	NSR
0, 2-255, *	Cannot be specified	STOP	Cannot be specified

A range of values can be specified for the `ni`, `nc`, and `ncm` parameters. See the *"Specifying a Range of Values"* section for more information on how the asterisk and a range of values are used for the `ni`, `nc`, and `ncm` parameters.

To add a spare point code to the allowed CDPA screen, the `pcst=s` parameter must be specified. To add a non-spare point code to the allowed CDPA screen, the `pcst` parameter does not have to be specified. If the `pcst` parameter is specified for a screen containing an ITU-I or 14-bit ITU-N non-spare point code, the value must be `none`.

For this example, enter these commands.

```
ent-scr-cdpa:sr=gw15:zone=5:area=117:id=2:ssn=254:nsfi=stop
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
ENT-SCR-CDPA: SCREEN SET AFFECTED - GW15  1% FULL
ENT-SCR-CDPA: MASP A - COMPLTD
```

```
ent-scr-cdpa:sr=gw17:ni=003:nc=003:ncm=003:ssn=001:scmgfid=050
:nsfi=aftpc:nsr=gw20
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
ENT-SCR-CDPA: SCREEN SET AFFECTED - GW17  1% FULL
ENT-SCR-CDPA: MASP A - COMPLTD
```

```
ent-scr-cdpa:sr=gw18:ni=006:nc=006:ncm=006:ssn=253:nsfi=stop
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
ENT-SCR-CDPA: SCREEN SET AFFECTED - GW18  1% FULL
ENT-SCR-CDPA: MASP A - COMPLTD
```

```
ent-scr-cdpa:sr=ls03:ni=007:nc=007:ncm=007:ssn=001:scmgfid=100
:nsfi=aftpc:nsr=ls04
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:31:30 GMT  EAGLE5 36.0.0
ENT-SCR-CDPA: SCREEN SET AFFECTED - LS03  1% FULL
ENT-SCR-CDPA: MASP A - COMPLTD
```

8. Verify the changes using the `rtrv-scr-cdpa` command with the screening reference name used in step 7.

   For this example, enter these commands.

   ```
   rtrv-scr-cdpa:sr=gw15
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:32:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED CDPA
   ```

```
SR      ZONE   AREA    ID        SSN      SCMGFID  NSFI    NSR/ACT
GW15    5      117     2         254      ------   STOP    ------
```

`rtrv-scr-cdpa:sr=gw17`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:33:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED CDPA
SR    NI       NC      NCM       SSN      SCMGFID  NSFI    NSR/ACT
GW17  003      003     003       001      050      AFTPC   GW20
```

`rtrv-scr-cdpa:sr=gw18`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:34:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED CDPA
SR    NI       NC      NCM       SSN      SCMGFID  NSFI    NSR/ACT
GW18  006      006     006       253      ------  STOP    ------
```

`rtrv-scr-cdpa:sr=ls03`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:35:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED CDPA
SR    NI       NC      NCM       SSN      SCMGFID  NSFI    NSR/ACT
LS03  007      007     007       001      100      AFTPC   ------
```

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

   The following 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.
```

Removing an Allowed Called Party Address Screen

This procedure is used to remove an allowed called party address (CDPA) screen from the database using the `dlt-scr-cdpa` command. The parameters used by the `dlt-scr-cdpa` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure removes the allowed CDPA screen `gw17` from the database.

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The allowed CDPA screen can be referenced by one of the following screens.

- Allowed SIO
- Allowed CGPA

- Allowed TT

Verifying the Gateway Screening Configuration

Enter the following commands to verify that none of these screens reference the allowed CDPA screen being removed from the database.

- `rtrv-scr-sio:nsfi=cdpa`
- `rtrv-scr-cgpa:nsfi=cdpa`
- `rtrv-scr-tt:nsfi=cdpa`

Gateway Screening Configuration Procedures

To change the NSFI of any of these screens, preform one of these procedures.

- *Changing an Allowed Translation Type Screen*
- *Changing an Allowed Calling Party Address Screen*
- *Changing an Allowed SIO Screen*

1. Display the allowed CDPA screens in the database using the `rtrv-scr-cdpa` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED CDPA
SR    REF  RULES
GW15  YES     1
GW17  YES     1
GW18  YES     1
IEC   YES     2
LS03  YES     1
WRD2  YES     1
WRD4  YES     9
```

   From the `rtrv-scr-cdpa` output, display the allowed CDPA screen you wish to remove using the `rtrv-scr-cdpa` command with the screening reference name. For this example, enter the `rtrv-scr-cdpa:sr=gw17` command. The following is an example of the possible output.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED CDPA
SR    NI       NC      NCM       SSN      SCMGFID  NSFI    NSR/ACT
GW17  003      003     003       001      050      AFTPC   GW20
```

2. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen being removed is not referenced by other screens in the database.

   If the screen being removed is referenced by other screens, perform the procedures shown in the *Gateway Screening Configuration Procedures* section to change the NSFI of those screens to reference other screens or change the NSFI of these screens to STOP.

3. Remove the allowed CDPA screen from the database using the `dlt-scr-cdpa` command.

   The current values for the `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, `sp`, and `ssn` parameters must be entered exactly as shown in the `rtrv-scr-cdpa` output in *Step 1* .

   To remove an entry containing either an ITU-I or a 14-bit ITU-N spare point code, the `pcst=s` parameter must be specified with the `dlt-scr-cdpa` command.

To remove an entry containing either an ITU-I or a 14-bit ITU-N non-spare point code, the `pcst` parameter does not have to be specified with the `dlt-scr-cdpa` command. If the `pcst` parameter is specified, the value must be `none`.

For this command, enter this command:

```
dlt-scr-cdpa:sr=gw17:ni=003:nc=003:ncm=003:ssn=001
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
DLT-SCR-CDPA: SCREEN SET AFFECTED - GW17  0% FULL
DLT-SCR-CDPA: MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-scr-cdpa` command with the screening reference name used in *Step 3* .

   For this example, enter this command.

   ```
   rtrv-scr-cdpa:sr=gw17
   ```

   The following is an example of the possible output.

   ```
   E2573 Cmd Rej: SR or NSR does not reference an existing SR
   ```

   This message shows that the specified screening reference name is not in the database and the action of the `dlt-scr-cdpa` command in *Step 3* was successful. If the specified screening reference name contained more than one entry when the `dlt-scr-cdpa` command was executed in *Step 3* , the `rtrv-scr-cdpa:sr=` command output would show the remaining entries in the screening reference instead of error message E2573.

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

   The following 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.
   ```

Changing an Allowed Called Party Address Screen

This procedure is used to change the attributes of an allowed called party address (CDPA) screen in the database using the `chg-scr-cdpa` command. The parameters used by the `chg-scr-cdpa` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure is used to change the point code 5-117-2 for the allowed CDPA screen `gw15` to 2-230-7, the subsystem number from 254 to 001, the NSFI to `aftpc`, the NSR of `itu1`, and the new SCMG format ID of 150.

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The allowed CDPA screen can only reference an allowed AFTPC screen. This can be verified using the `rtrv-scr-aftpc:all=yes` command. If the desired allowed AFTPC screen is not in the database, perform one of these procedures to add the required screen to the database or change an existing screen in the database.

- *Adding an Allowed Affected Point Code Screen*
- *Changing an Allowed Affected Point Code Screen*

Specifying a Range of Values

A range of values can be specified for the point code parameters `ni`, `nc`, or `ncm`.

If a range of values is specified for any of these parameters, and the value of the other parameters match existing values for the screening reference name, the range of values for the point code parameter cannot include any values for that parameter that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NI       NC       NCM       SSN      SCMGFID  NSFI    NSR/ACT
SCR1  240      001      010       012      ------   STOP    ------
SCR1  241      010      020       001      002      AFTPC   SCR1
```

Another entry for screening reference `scr1` with the `ni` value of 240 and the `nc` value of 001 cannot be specified if the range of values for the `ncm` parameter includes the value 010.

The ANSI point code parameter values can be specified as a single value, a range of values, or with an asterisk (*). The asterisk specifies all possible values for the `ni`, `nc`, and `ncm` parameters. *Table 26: Valid Value Combinations for ANSI Point Code Parameters* shows the valid combinations of these parameter values.

Table 26: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk
Range of Values	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

A range of values can also be specified for an ITU-I or 24-bit ITU-N point code parameter using a combination of asterisks (*) and single values for the point code parameters. *Table 27: Valid Value Combinations for ITU-I Point Code Parameters* shows the valid combinations of the ITU-I parameter

values. *Table 28: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 27: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 28: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

1. Display the allowed CDPA screens in the database using the `rtrv-scr-cdpa` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED CDPA
SR    REF  RULES
GW15  YES     1
GW17  YES     1
GW18  YES     1
IEC   YES     2
LS03  YES     1
WRD2  YES     1
WRD4  YES     9
```

   From the `rtrv-scr-cdpa` output, display the allowed CDPA screen you wish to change using the `rtrv-scr-cdpa` command with the screening reference name. For this example, enter this command.

   `rtrv-scr-cdpa:sr=gw15`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
```

```
SCREEN = ALLOWED CDPA
SR      ZONE    AREA    ID        SSN      SCMGFID  NSFI    NSR/ACT
GW15    5       117     2         254      ------   STOP    ------
```

If a gateway screening stop action set is to be assigned to the allowed CDPA screen being changed in this procedure, go to step 2.

Step 2 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen being changed in this procedure is STOP. If the NSFI of the screen will be changed to STOP, but a gateway screening stop action set name will not be assigned to the screen, skip steps 2 and 3 and go to step 4. If the NSFI of the screen will not be STOP, skip step 2 and go to step 3.

2. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

   If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure and configure the required gateway screening stop action set.

   Note: If the NSFI of the screen being added in this procedure is STOP, skip step 3 and go to step 4.

3. Enter the `rtrv-scr-aftpc` command to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 5 is in the database.

   If the desired screen is not in the database, perform one of these procedures to add the desired screen to the database or change an existing screen in the database.

   - *Adding an Allowed Affected Point Code Screen*
   - *Changing an Allowed Affected Point Code Screen*.

   Note: If any of these conditions apply to this procedure, skip step 4 and go to step 5:

   - The point code in the screen is not being changed.
   - The screen being changed contains either an ANSI or 24-bit ITU-N point code.
   - The ITU-I or 14-bit ITU-N non-spare point code in the screen is not being changed to an ITU-I or 14-bit ITU-N spare point code.
   - The point code in the screen is an ITU-I or 14-bit ITU-N spare point code or the screening reference contains other screens with ITU-I or 14-bit ITU-N spare point codes.

4. Display the status of the ITU National and International Spare Point Code Support feature by entering the `rtrv-ctrl-feat` command with the ITU National and International Spare Point Code Support feature part number.

   Enter this command.

   ```
   rtrv-ctrl-feat:partnum=893013601
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
   The following features have been permanently enabled:

   Feature Name              Partnum   Status Quantity
   Spare Point Code Support  893013601 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 ITU National and International Spare Point Code Support feature is enabled, go to step 5.

   If the ITU National and International Spare Point Code Support feature is not enabled, perform the "Activating the ITU National and International Spare Point Code Support Feature" procedure in the Database *Administration Manual - SS7* to enable the ITU National and International Spare Point Code Support feature as required. After the feature has been enabled, go to step 5.

5. Change the attributes for the allowed CDPA screen using the `chg-scr-cdpa` command.

   If a gateway screening stop action is to be assigned to the allowed CDPA screen being changed, enter the `chg-scr-cdpa` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 2.

   CAUTION: The EAGLE 5 ISS does not support redirecting MSUs for the DTA feature or intercepting ISUP IAM messages for the Calling Name Conversion Facility feature from the allowed CDPA screen. Gateway screening stop action sets containing either the RDCT (redirect) or CNCF (calling name conversion facility) stop actions should not be assigned to the allowed CDPA screen. If a gateway screening stop action set containing the RDCT or CNCF stop actions is specified with the `chg-scr-cdpa` command, unsolicited information message (UIM) 1125 is generated when the attempt is made to redirect MSUs from the allowed CDPA screen. Unsolicited information message (UIM) 1215 is generated when ISUP IAM MSUs are intercepted from the allowed CDPA screen. For more information on UIMs 1125 and 1215, go to the *Unsolicited Alarm and Information Messages Manual* .

   The current values for the `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, and `sp`, `ssn`, and `scmgfid` parameters must be entered exactly as shown in the `rtrv-scr-cdpa` output in step 1. If the `scmgfid` value is shown as dashes, the `scmgfid` parameter cannot be specified.

   The following list contains the values for `nni`, `nnc`, `nncm`, `nzone`, `narea`, `nid`, `nnpc`, `nmsa`, `nssa`, `nsp`, `nssn`, and `nscmgfid` parameters:

- nni – 0 - 255 or an asterisk (*)
- nnc – 0 - 255 or an asterisk (*)
- nncm – 0 - 255 or an asterisk (*)
- nzone – 0 - 7 or an asterisk (*)
- narea – 0 - 255 or an asterisk (*)
- nid – 0 - 7 or an asterisk (*)
- nnpc – 1 - 16383 or an asterisk (*)
- nmsa – 0 - 255 or an asterisk (*)
- nssa – 0 - 255 or an asterisk (*)
- nsp – 0 - 255 or an asterisk (*)
- nssn – 0 - 255 or an asterisk (*)
- nscmgfid – 1 - 255 or an asterisk (*)

Note: The `nsfi=aftpc` parameter can be specified only if the `ssn` value (new or current) is 1. *Table 29: CDPA Parameter Combinations* shows the valid parameter combinations for the `ssn`, `scmgfid`, `nsfi`, and `nsr` parameter values.

Table 29: CDPA Parameter Combinations

New or Current SSN Value	New or Current SCMGFID Value	NSFI	NSR
1	1 - 255, *	AFTPC or STOP	Must be specified if NSFI=AFTPC
0, 2-255, *	Cannot be specified	STOP	Cannot be specified

A range of values can be specified for the `nni`, `nnc`, and `nncm` parameters. See the *"Specifying a Range of Values"* section for more information on how the asterisk and a range of values are used for the `nni`, `nnc`, and `nncm` parameters.

To change an ITU-I or 14-bit ITU-N spare point code to a non-spare point code, both the `pcst=s` and `npcst=none` parameters must be specified with the `chg-scr-cdpa` command.

To change an ITU-I or 14-bit ITU-N non-spare point code to a spare point code, the `npcst=s` parameter must be specified with the `chg-scr-cdpa` command. The `pcst` parameter does not have to be specified.

If the current point code in the screen being changed is either an ITU-I or 14-bit ITU-N spare point code, the `pcst=s` parameter must be specified with the `chg-scr-cdpa` command.

If the current point code in the screen being changed is either an ITU-I or 14-bit ITU-N non-spare point code, the `pcst` parameter does not have to be specified with the `chg-scr-cdpa` command. If the `pcst` parameter is specified for a screen containing either an ITU-I or 14-bit ITU-N non-spare point code, the `pcst` parameter value must be `none`.

For this example, enter this command.

```
chg-scr-cdpa:sr=gw15:zone=5:area=117:id=2:ssn=254:nzone=2
:narea=230:nid=7:nssn=001:nscmgfid=150:nsfi=aftpc:nsr=itu1
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:27:30 GMT  EAGLE5 36.0.0
CHG-SCR-CDPA: SCREEN SET AFFECTED - GW15  1% FULL
CHG-SCR-CDPA: MASP A - COMPLTD
```

6. Verify the changes using the `rtrv-scr-cdpa` command with the screening reference name used in step 5.

   For this example, enter this command.

   `rtrv-scr-cdpa:sr=gw15`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED CDPA
SR      ZONE   AREA    ID        SSN      SCMGFID  NSFI    NSR/ACT
GW15    2      230     7         001      150      AFTPC   ITU1
```

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

   The following 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.
```

Chapter 5

Allowed Translation Type (TT) Screen Configuration

Topics:

Chapter 5, Allowed Translation Type (TT) Screen Configuration, contains the procedures necessary to configure allowed translation type screens.

Introduction

The allowed translation type (TT) screen is used to screen all SCCP messages which have the specified translation type value in the called party address. The gray shaded areas in *Figure 17: Allowed Translation Type Screening Function* shows the fields of the SS7 message that are checked by the TT screening function.

Gateway Screening Actions

If a match is not found, the message is discarded.

If a match is found, the `nsfi` is examined to determine the next step in the screening process. If the `nsfi` value is any value other than `stop`, the next screening reference (`nsr`) is identified and the screening process continues to the next screen identified by the `nsfi` and `nsr` parameter values.

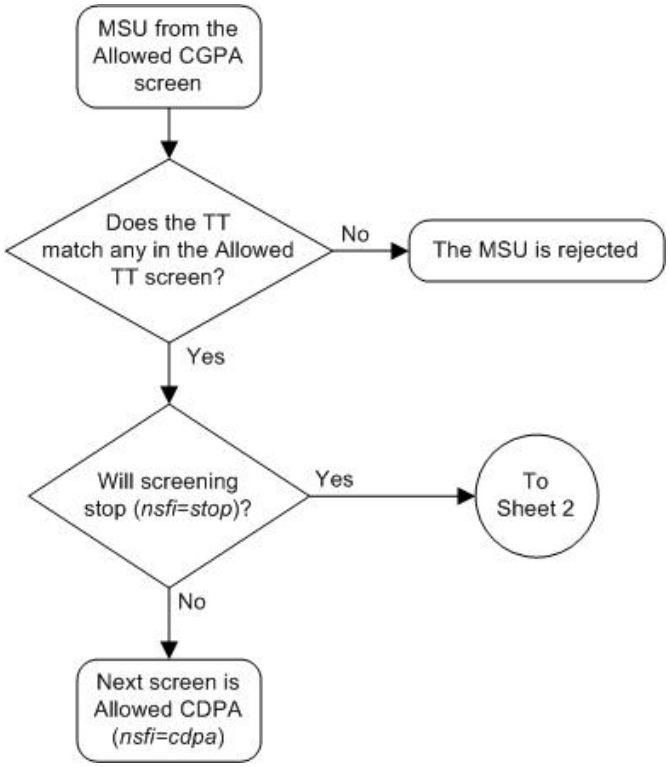
If the `nsfi` is equal to `stop`, the screening process stops and the message is processed. If a gateway screening stop action set is specified with the screen, shown by the `actname` parameter value, the message is processed according to the gateway screening stop actions that are assigned to the gateway screening stop action set.

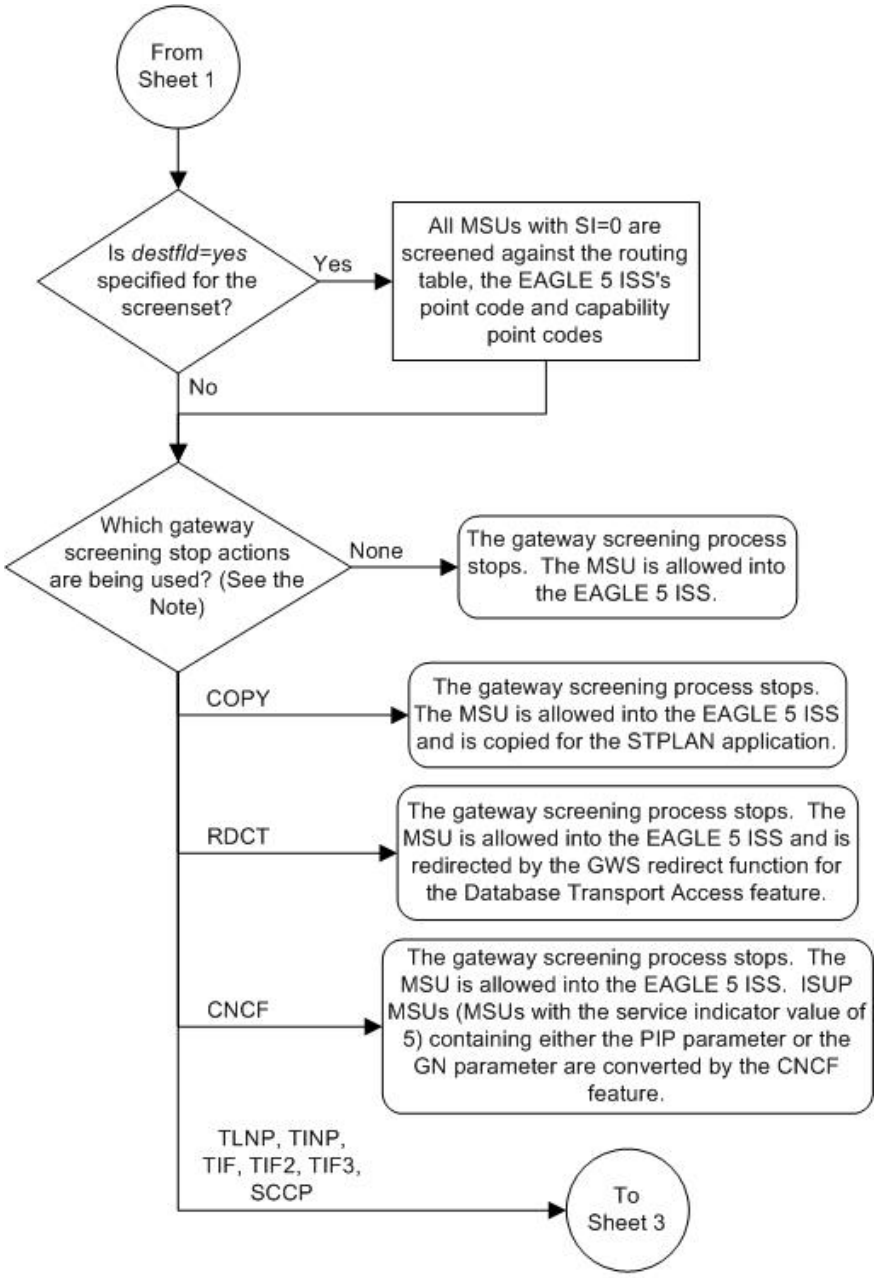
- If the `copy` gateway screening stop action is specified, the message is processed and a copy of the message is sent by the STPLAN feature to an external application.
- If the `rdct` (redirect) gateway screening stop action is specified,the message is diverted from the original destination and sent to another destination with the Database Transport Access feature, specified by global title translation, for further processing.
- If the `cncf` gateway screening stop action is specified, the PIP parameter in the incoming ISUP IAM message is converted to the GN parameter. The GN parameter in the incoming ISUP IAM message is converted to the PIP parameter. The message is then sent to the node specified by the DPC in the routing label in the message. For more information on the Calling Name Conversion Facility feature, see *Calling Name Conversion Facility (CNCF) Configuration*.
- If the `tlnp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are processed either by the ISUP NP with EPAP feature (if the ISUP NP with EPAP feature is enabled and turned on) or by the Triggerless LNP feature (if the Triggerless LNP feature is turned on). The ISUP NP with EPAP feature is discussed in more detail in the *Feature Manual - G-Port*. The Triggerless LNP feature is discussed in more detail in the *LNP Feature Activation Guide*.
- If the `tinp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are intercepted by the Triggerless ISUP based Number Portability (TINP) feature and converted to include the routing number (RN) if the call is to a ported number. The TINP feature is discussed in more detail in the *Feature Manual - G-Port*.
- If the `tif`, `tif2`, or `tif3` gateway screening stop actions are specified, TIF processing is applied to the message.
- If the `sccp` gateway screening stop action is specified, MTP routed SCCP UDT/XUDT are forwarded to the service modules for further processing.

Allowed TT Screening Actions

Figure 16: Allowed TT Screening Actions shows the screening actions of the allowed TT screen.

Figure 16: Allowed TT Screening Actions


MSU from the Allowed CGPA screen
Does the TT match any in the Allowed TT screen?
No
The MSU is rejected
Yes
Will screening stop (nsfi=stop)?
Yes
To Sheet 2
No
Next screen is Allowed CDPA (nsfi=cdpa)


From Sheet 1
Is destfld=yes specified for the screenset?
Yes
All MSUs with SI=0 are screened against the routing table, the EAGLE 5 ISS's point code and capability point codes
No
Which gateway screening stop actions are being used? (See the Note)
None
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS.
COPY
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is copied for the STPLAN application.
RDCT
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is redirected by the GWS redirect function for the Database Transport Access feature.
CNCF
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS. ISUP MSUs (MSUs with the service indicator value of 5) containing either the PIP parameter or the GN parameter are converted by the CNCF feature.
TLNP, TINP, TIF, TIF2, TIF3, SCCP
To Sheet 3
Note: Combinations of the gateway screening stop actions shown on Sheets 2 and 3 may be assigned to a gateway screening stop action set. Refer to the Configuring Gateway Screening Stop Action Sets and the Configuring TLNP Gateway Screening Stop Action Sets procedures in Chapter 2 of this manual for the combinations that can be used.

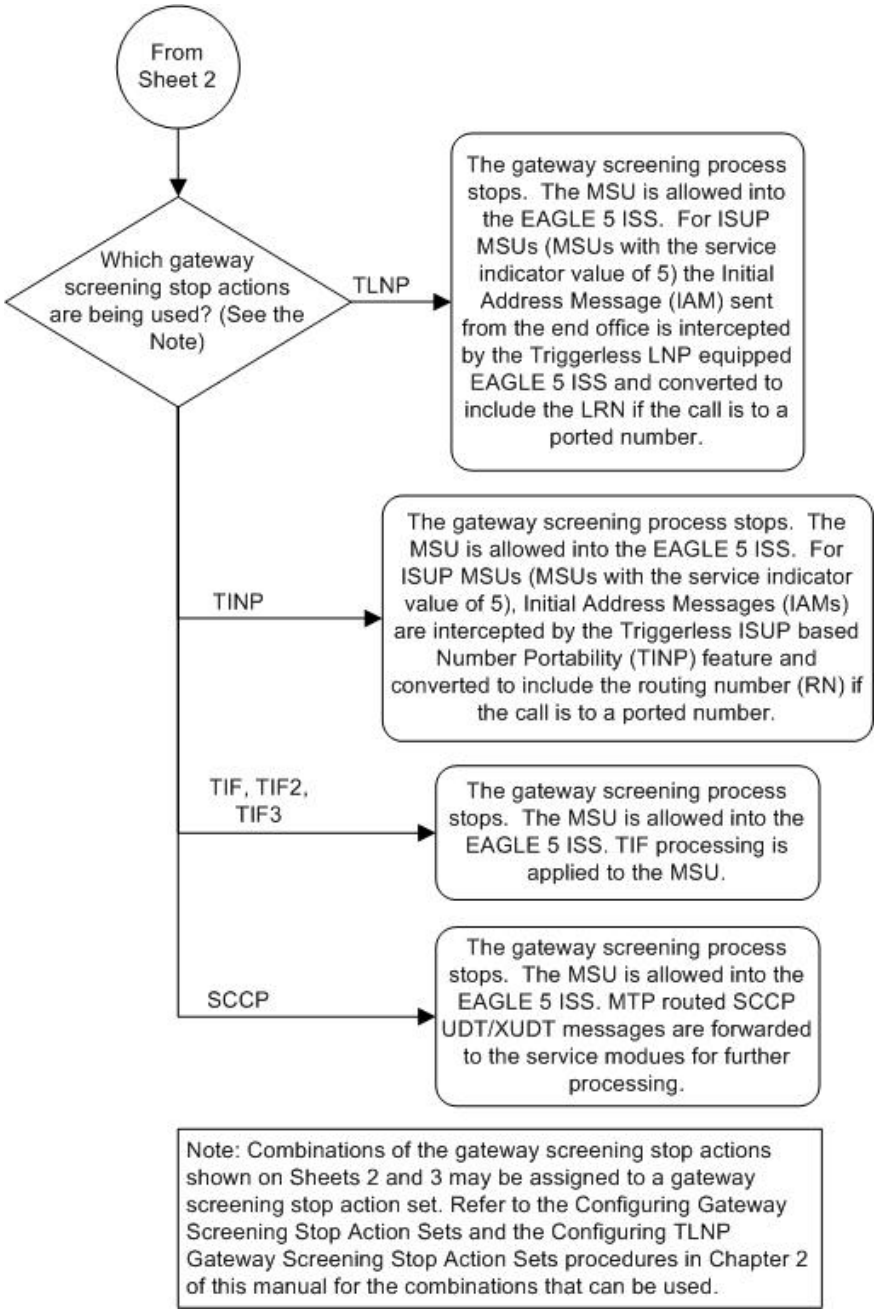


Figure 17: Allowed Translation Type Screening Function

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 Subsystem Point Code (NCM NC NI)	CDPA Length Address Indicator (x x xxxx xx) (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 Subsystem Point Code (ID AREA ZONE)	CDPA Length Address Indicator (x x xxxx xx) (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 Subsystem Point Code (NPC)	CDPA Length Address Indicator (x x xxxx xx) (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 SP SSA MSA SP SSA MSA xx		CGPA Length Address Indicator Subsystem Point Code (SP SSA MSA)	CDPA Length Address Indicator (x x xxxx xx) (x RI xxxx xx) Subsystem Point Code (SP SSA MSA) Address (Translation Type) (Digits)

Adding an Allowed Translation Type Screen

This procedure is used to add an allowed translation type (TT) screen to the database using the `ent-scr-tt` command. The parameters used by the `ent-scr-tt` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The examples in this procedure are used to add the allowed TT screen data shown in *Table 30: Example Gateway Screening Allowed TT Configuration Table* and based on the example configuration shown in *Figure 7: Gateway Screening Configuration - Example 3*.

Table 30: Example Gateway Screening Allowed TT Configuration Table

Screening Reference	TYPE	NSFI	NSR
gw16	250	cdpa	gw18

The allowed TT screen can only reference an allowed CDPA screen and the allowed CDPA screen being referenced must be in the database. This can be verified using the `rtrv-scr-cdpa:all=yes` command. If the desired allowed CDPA screen is not in the database, perform one of these procedures to add the required screen to the database or change an existing screen in the database.

- *Adding an Allowed Called Party Address Screen*
- *Changing an Allowed Called Party Address Screen*

Specifying a Range of Values

A range of values can be specified for the `type` parameter. The range of values specified for the `type` parameter cannot include any values currently provisioned for the screen reference name.

For example, screening reference name `scr1` contains these entries:

```
SR   TYPE      NSFI    NSR/ACT
scr1 110       STOP    ------
scr1 125       STOP    ------
```

Another entry for screening reference `scr1` cannot contain a range of values that would include the `type` parameter values 110 or 125.

1. Verify that the gateway screening feature is on, by entering the `rtrv-feat` command.

   If the gateway screening feature is on, the `GWS` 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*.

   If the gateway screening feature is on, shown by the entry `GWS = on` in the `rtrv-feat` command output, skip step 2, and go to step 3.

2. Turn the gateway screening feature on by entering this command.

   `chg-feat:gws=on`

Note: Once the gateway screening feature is turned on with the `chg-feat` command, it cannot be turned off.

The gateway screening feature must be purchased before you turn this feature on with the `chg-feat` command. If you are not sure if you have purchased the gateway screening feature, contact your Tekelec Sales Representative or Account Representative.

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

```
rlghncxa03w 06-10-28 11:43:04 GMT EAGLE5 36.0.0
CHG-FEAT: MASP A - COMPLTD
```

3. Display all allowed TT screens in the database using the `rtrv-scr-tt` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED TT
SR    REF  RULES
IEC   YES     2
WRD2  YES     1
WRD4  YES     9
```

   If the screening reference names that you wish to add with this procedure are not shown in the `rtrv-scr-tt` command output, go to step 4. For this example, the screening reference names are not shown. If these screening reference names are shown in the `rtrv-scr-tt` command output, make sure the screening data you wish to enter is not already in the database by entering the `rtrv-scr-tt` command with the screening reference name. For example, enter the `rtrv-scr-tt:sr=iec` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED TT
SR    TYPE     NSFI   NSR/ACT
IEC   005&&010 STOP   ------
IEC   012      STOP   ------
IEC   016      CDPA   IEC
WRD2  243      STOP   ------
WRD4  *        STOP   ------
```

   If a gateway screening stop action set is to be assigned to the allowed TT screen being added to the database, go to step 4.

   Step 4 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen being added in this procedure is STOP. If the NSFI of the new screen will be STOP, but a gateway screening stop action set name will not be assigned to the new screen, skip steps 4 and 5 and go to step 6. If the NSFI of the new screen is CDPA, skip step 4 and go to step 5.

4. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:27:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
```

```
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

Note: If the NSFI of the screen being added in this procedure is STOP, skip step 5 and go to step 6.

5. Enter the `rtrv-scr-cdpa` command to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 6 is in the database.

   If the desired screen is not in the database, perform one of these procedures to add the desired screen to the database or change an existing screen in the database.

   - *Adding an Allowed Called Party Address Screen*
   - *Changing an Allowed Called Party Address Screen*.

6. Add a new allowed TT screen to the database using the `ent-scr-tt` command.

   If a gateway screening stop action is to be assigned to the allowed TT screen being changed, enter the `ent-scr-tt` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 4.

   CAUTION: The EAGLE 5 ISS does not support redirecting MSUs for the DTA feature or intercepting ISUP IAM messages for the Calling Name Conversion Facility feature from the allowed TT screen. Gateway screening stop action sets containing either the RDCT (redirect) or CNCF (calling name conversion facility) stop actions should not be assigned to the allowed TT screen. If a gateway screening stop action set containing the RDCT or CNCF stop actions is specified with the `ent-scr-tt` command, unsolicited information message (UIM) 1128 is generated when the attempt is made to redirect MSUs from the allowed TT screen. Unsolicited information message (UIM) 1218 is generated when ISUP IAM MSUs are intercepted from the allowed TT screen. For more information on UIMs 1128 and 1218, go to the *Unsolicited Alarm and Information Messages Manual* .

   The value of the `type` parameter can be from 0 to 255 or an asterisk (*).

   A range of values can be specified for the `type` parameter. See the *"Specifying a Range of Values"* section for more information on how a range of values is used for the `type` parameter.

   For this example, enter this command.

   ```
   ent-scr-tt:sr=gw16:type=250:nsfi=cdpa:nsr=gw18
   ```

   A message similar to the following should appear.

   ```
   rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
   ENT-SCR-TT: SCREEN SET AFFECTED - GW16  1% FULL
   ENT-SCR-TT: MASP A - COMPLTD
   ```

7. Verify the changes using the `rtrv-scr-tt` command with the screening reference name used in step 6.

   For this example, enter this command.

   `rtrv-scr-tt:sr=gw16`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED TT
SR    TYPE     NSFI   NSR/ACT
GW16  250      CDPA   GW18
```

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

   The following 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.
```

Removing an Allowed Translation Type Screen

This procedure is used to remove an allowed translation type (TT) screen from the database using the `dlt-scr-tt` command. The parameters used by the `dlt-scr-tt` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure removes the allowed TT screen `iec`, with the translation type 016 from the database.

The allowed TT screen can be referenced by the Allowed CGPA screen. Enter the `rtrv-scr-cgpa:nsfi=tt` command to verify that this screen does not reference the allowed TT screen being removed from the database.

To change the NSFI of any of these screens, perform the *Changing an Allowed Calling Party Address Screen* procedure.

1. Display the allowed TT screens in the database using the `rtrv-scr-tt` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED TT
SR    REF  RULES
GW16  YES     1
IEC   YES     3
WRD2  YES     1
WRD4  YES     1
```

   From the `rtrv-scr-tt` output, display the allowed TT screen you wish to remove using the `rtrv-scr-tt` command with the screening reference name. For this example, enter the

`rtrv-scr-tt:sr=iec` command. The following is an example of the possible output. The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED TT
SR    TYPE     NSFI   NSR/ACT
IEC   005&&010 STOP   ------
IEC   012      STOP   ------
IEC   016      CDPA   IEC
```

2. Enter the `rtrv-scr-cgpa:nsfi=tt` command to verify that the screen being removed is not referenced by other screens in the database.

   If the screen being removed is referenced by other screens, perform the *Changing an Allowed Calling Party Address Screen* procedure procedure and change the NSFI of those screens to reference other screens or change the NSFI of these screens to STOP.

3. Remove the allowed TT screen from the database using the `dlt-scr-tt` command.

   The current value of the `type` parameter must be entered exactly as shown in the `rtrv-scr-tt` output. For this example, enter this command.

   `dlt-scr-tt:sr=iec:type=016`

   A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
DLT-SCR-TT: SCREEN SET AFFECTED - IEC   2% FULL
DLT-SCR-TT: MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-scr-tt` command with the screening reference name used in step 3.

   For this example, enter this command.

   `rtrv-scr-tt:sr=iec`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED TT
SR    TYPE     NSFI   NSR/ACT
IEC   005&&010 STOP   ------
IEC   012      STOP   ------
```

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

   The following 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.
```

Changing an Allowed Translation Type Screen

This procedure is used to change the attributes of an allowed translation type (TT) screen in the database using the `chg-scr-tt` command. The parameters used by the `chg-scr-tt` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure is used to change the translation type 016 for the allowed CGPA screen `iec` to 210 and change the NSFI to `stop`.

The allowed TT screen can only reference an allowed CDPA screen. This can be verified using the `rtrv-scr-cdpa:all=yes` command. If the desired allowed CDPA screen is not in the database, perform one of these procedures to add the required screen to the database or change an existing screen in the database.

- *Adding an Allowed Called Party Address Screen*
- *Changing an Allowed Called Party Address Screen*

Specifying a Range of Values

A range of values can be specified for the `type` parameter. The range of values specified for the `type` parameter cannot include any values currently provisioned for the screen reference name.

For example, screening reference name `scr1` contains these entries:

```
SR   TYPE      NSFI    NSR/ACT
scr1 110       STOP    ------
scr1 125       STOP    ------
```

Another entry for screening reference `scr1` cannot contain a range of values that would include the `type` parameter values 110 or 125.

1. Display the allowed TT screens in the database using the `rtrv-scr-tt` command.

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
   SCREEN = ALLOWED TT
   SR    REF  RULES
   GW16  YES     1
   IEC   YES     3
   WRD2  YES     1
   WRD4  YES     1
   ```

   From the `rtrv-scr-tt` output, display the allowed TT screen you wish to remove using the `rtrv-scr-tt` command with the screening reference name. For this example, enter the `rtrv-scr-tt:sr=iec` command.

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
   SCREEN = ALLOWED TT
   SR    TYPE     NSFI   NSR/ACT
   IEC   005&&010 STOP   ------
   ```

```
IEC   012      STOP   ------
IEC   016      CDPA   IEC
```

If a gateway screening stop action set is to be assigned to the allowed TT screen being added to the database, go to step 2.

Step 2 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen being changed in this procedure is STOP. If the NSFI of the screen will be changed to STOP, but a gateway screening stop action set name will not be assigned to the screen, skip steps 2 and 3 and go to step 4. If the NSFI of the screen will not be STOP, skip step 2 and go to step 3.

2. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

   If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

   Note: If the NSFI of the screen being added in this procedure is STOP, skip step 3 and go to step 4.

3. Enter the `rtrv-scr-cdpa` command to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 4 is in the database.

   If the desired screen is not in the database, perform one of these procedures to add the desired screen to the database or change an existing screen in the database.

   - *Adding an Allowed Called Party Address Screen*
   - *Changing an Allowed Called Party Address Screen*.

4. Change the attributes of an allowed TT screen using the `chg-scr-tt` command.

   If a gateway screening stop action is to be assigned to the allowed TT screen being changed, enter the `chg-scr-tt` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 2.

CAUTION: The EAGLE 5 ISS does not support redirecting MSUs for the DTA feature or intercepting ISUP IAM messages for the Calling Name Conversion Facility feature from the allowed TT screen. Gateway screening stop action sets containing either the RDCT (redirect) or CNCF (calling name conversion facility) stop actions should not be assigned to the allowed TT screen. If a gateway screening stop action set containing

the RDCT or CNCF stop actions is specified with the `chg-scr-tt` command, unsolicited information message (UIM) 1128 is generated when the attempt is made to redirect MSUs from the allowed TT screen. Unsolicited information message (UIM) 1218 is generated when ISUP IAM MSUs are intercepted from the allowed TT screen. For more information on UIMs 1128 and 1218, go to the *Unsolicited Alarm and Information Messages Manual* .

The value of the `ntype` parameter can be from 0 to 255 or an asterisk (*). The current value of the `type` parameter must be entered exactly as shown in the `rtrv-scr-tt` output in step 1.

A range of values can be specified for the `ntype` parameter. See the *"Specifying a Range of Values"* section for more information on how a range of values is used for the `ntype` parameter.

For this example, enter this command.

```
chg-scr-tt:sr=iec:type=016:ntype=210:nsfi=stop
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:27:30 GMT  EAGLE5 36.0.0
CHG-SCR-TT: SCREEN SET AFFECTED - IEC   4% FULL
CHG-SCR-TT: MASP A - COMPLTD
```

5. Verify the changes using the `rtrv-scr-tt` command with the screening reference name used in step 4.

   For this example, enter this command.

   ```
   rtrv-scr-tt:sr=iec
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
   SCREEN = ALLOWED TT
   SR    TYPE     NSFI   NSR/ACT
   IEC   005&&010 STOP   ------
   IEC   012      STOP   ------
   IEC   210      STOP   ------
   ```

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

   The following 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.
   ```

Chapter 6

Allowed Calling Party (CGPA) Screen Configuration

Topics:

Chapter 6, Allowed Calling Party (CGPA) Screen Configuration, contains the procedures necessary to configure allowed calling party address screens.

Introduction

The allowed calling party address (CGPA) screen is used to screen SCCP messages from another network. The gray shaded areas in *Figure 19: Allowed Calling Party Address Screening Function* shows the fields of the SS7 message that are checked by the CGPA screening function. The screening reference contains a list of point codes and subsystem number combinations.

Gateway Screening Actions

If a match is not found, the message is discarded.

If a match is found, the `nsfi` is examined to determine the next step in the screening process. If the `nsfi` value is any value other than `stop`, the next screening reference (`nsr`) is identified and the screening process continues to the next screen identified by the `nsfi` and `nsr` parameter values.

If the `nsfi` is equal to `stop`, the screening process stops and the message is processed. If a gateway screening stop action set is specified with the screen, shown by the `actname` parameter value, the message is processed according to the gateway screening stop actions that are assigned to the gateway screening stop action set.

- If the `copy` gateway screening stop action is specified, the message is processed and a copy of the message is sent by the STPLAN feature to an external application.
- If the `rdct` (redirect) gateway screening stop action is specified,the message is diverted from the original destination and sent to another destination with the Database Transport Access feature, specified by global title translation, for further processing.
- If the `cncf` gateway screening stop action is specified, the PIP parameter in the incoming ISUP IAM message is converted to the GN parameter. The GN parameter in the incoming ISUP IAM message is converted to the PIP parameter. The message is then sent to the node specified by the DPC in the routing label in the message. For more information on the Calling Name Conversion Facility feature, see *Calling Name Conversion Facility (CNCF) Configuration*.
- If the `tlnp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are processed either by the ISUP NP with EPAP feature (if the ISUP NP with EPAP feature is enabled and turned on) or by the Triggerless LNP feature (if the Triggerless LNP feature is turned on). The ISUP NP with EPAP feature is discussed in more detail in the *Feature Manual - G-Port*. The Triggerless LNP feature is discussed in more detail in the *LNP Feature Activation Guide*.
- If the `tinp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are intercepted by the Triggerless ISUP based Number Portability (TINP) feature and converted to include the routing number (RN) if the call is to a ported number. The TINP feature is discussed in more detail in the *Feature Manual - G-Port*.
- If the `tif`, `tif2`, or `tif3` gateway screening stop actions are specified, TIF processing is applied to the message.
- If the `sccp` gateway screening stop action is specified, MTP routed SCCP UDT/XUDT are forwarded to the service modules for further processing.

Allowed CGPA Screening Actions

Any MSU that does not contain a service indicator of 3 in the SIO field and does not contain the SCCP message types 9, 10, 17, or 18 and reaches this screen in the gateway screening process automatically passes gateway screening and is allowed into the EAGLE 5 ISS.

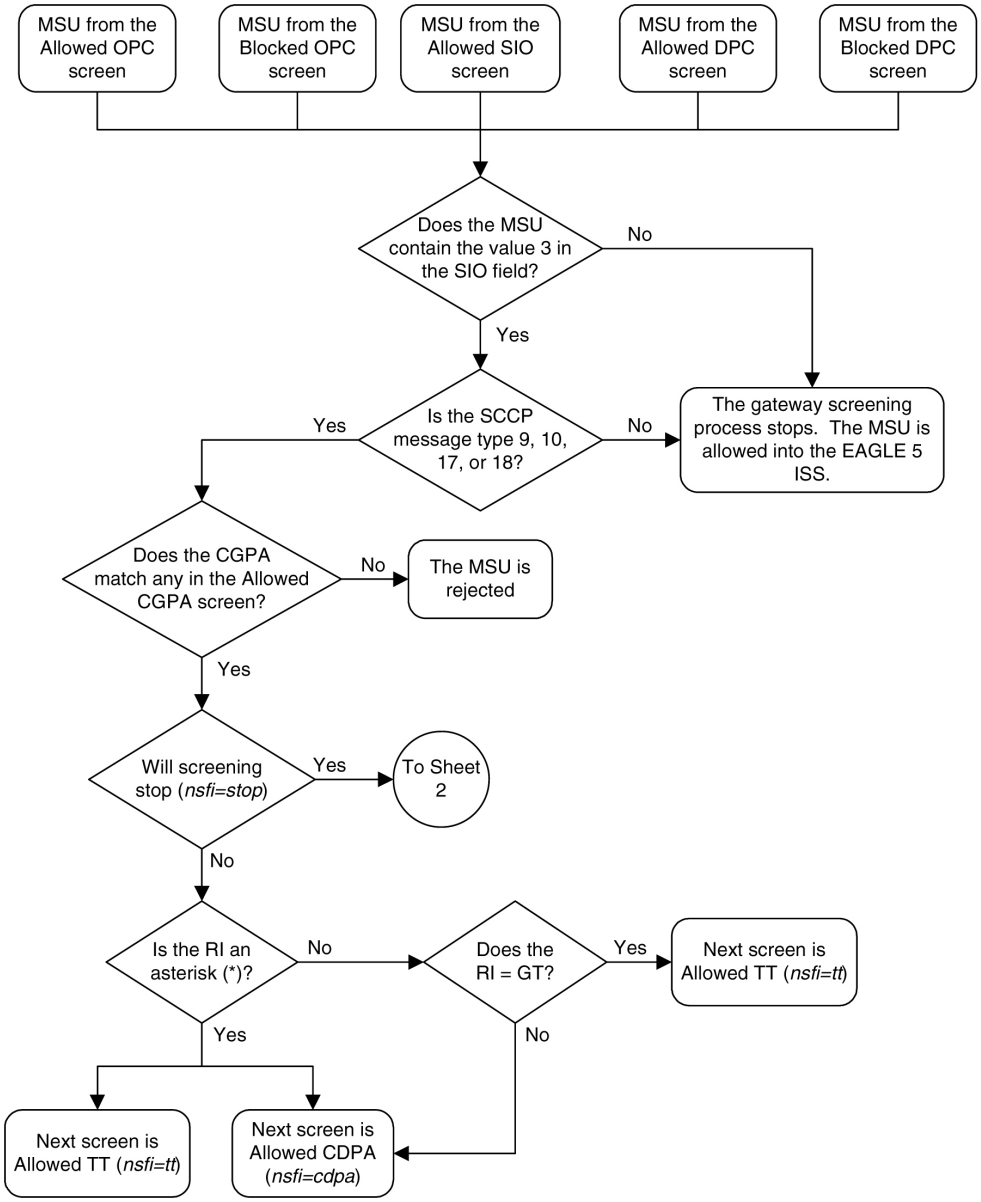
The value of the `nsfi` parameter is based on the value of the routing indicator (`ri`) parameter. *Table 31: Valid Parameter Combinations for the Allowed CGPA Screening Function* shows the valid combinations of `nsfi` values and routing indicator values.

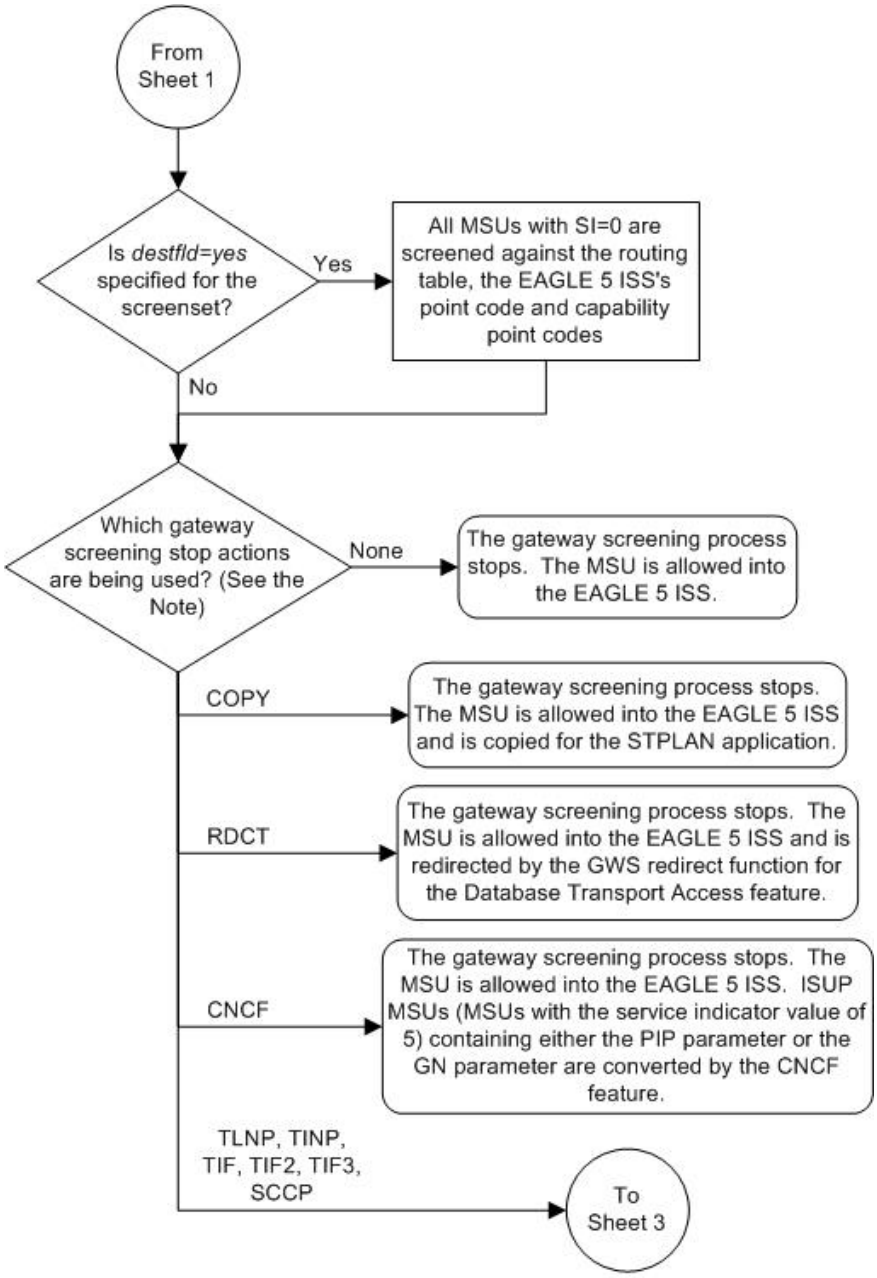
Table 31: Valid Parameter Combinations for the Allowed CGPA Screening Function

Routing Indicator (RI) Values	Nest Screening Function Identifier (NSFI) Values
GT	TT
DPC	CDPA
* (asterisk)	TT, CDPA

Figure 18: Allowed CGPA Screening Actions shows the screening actions of the allowed CGPA screen.

Figure 18: Allowed CGPA Screening Actions


MSU from the Allowed OPC screen
MSU from the Blocked OPC screen
MSU from the Allowed SIO screen
MSU from the Allowed DPC screen
MSU from the Blocked DPC screen
Does the MSU contain the value 3 in the SIO field?
No
Yes
Is the SCCP message type 9, 10, 17, or 18?
Yes
No
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS.
Does the CGPA match any in the Allowed CGPA screen?
No
The MSU is rejected
Yes
Will screening stop (nsfi=stop)
Yes
To Sheet 2
No
Is the RI an asterisk (*)?
No
Does the RI = GT?
Yes
Next screen is Allowed TT (nsfi=tt)
Yes
No
Next screen is Allowed TT (nsfi=tt)
Next screen is Allowed CDPA (nsfi=cdpa)


From Sheet 1
Is destfld=yes specified for the screenset?
Yes
All MSUs with SI=0 are screened against the routing table, the EAGLE 5 ISS's point code and capability point codes
No
Which gateway screening stop actions are being used? (See the Note)
None
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS.
COPY
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is copied for the STPLAN application.
RDCT
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is redirected by the GWS redirect function for the Database Transport Access feature.
CNCF
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS. ISUP MSUs (MSUs with the service indicator value of 5) containing either the PIP parameter or the GN parameter are converted by the CNCF feature.
TLNP, TINP, TIF, TIF2, TIF3, SCCP
To Sheet 3
Note: Combinations of the gateway screening stop actions shown on Sheets 2 and 3 may be assigned to a gateway screening stop action set. Refer to the Configuring Gateway Screening Stop Action Sets and the Configuring TLNP Gateway Screening Stop Action Sets procedures in Chapter 2 of this manual for the combinations that can be used.

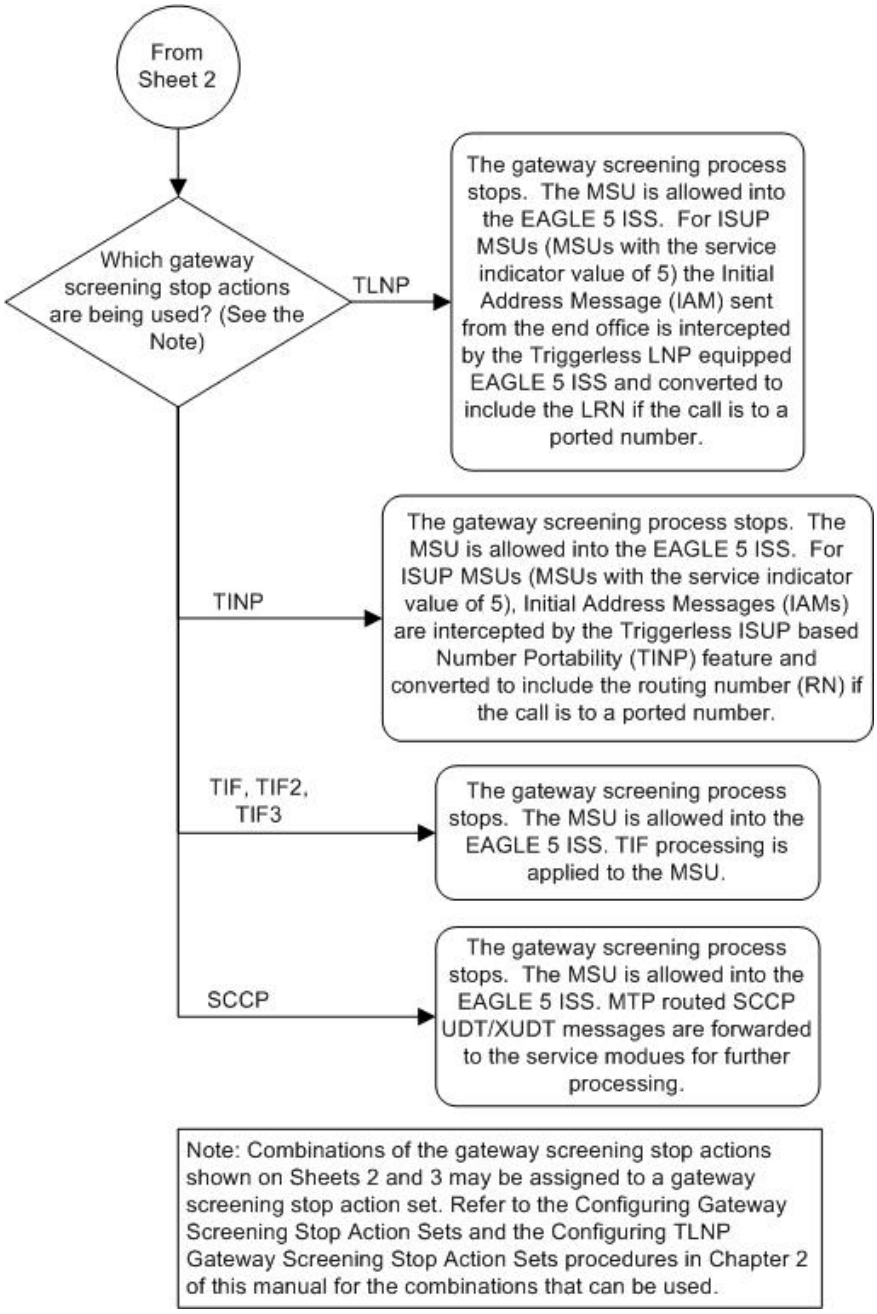


Figure 19: Allowed Calling Party Address Screening Function

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	SCCP Message Type xxxx xxxx	CGPA Length Address Indicator Subsystem Point Code (NCM NC NI)	CDPA Length Address Indicator (x x xxxx xx) (x RI xxxx xx) Subsystem Point Code (NCM NC NI)

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	SCCP Message Type xxxx xxxx	CGPA Length Address Indicator Subsystem Point Code (ID AREA ZONE)	CDPA Length Address Indicator (x x xxxx xx) (x RI xxxx xx) Subsystem Point Code (ID AREA ZONE)

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	SCCP Message Type xxxx xxxx	CGPA Length Address Indicator Subsystem Point Code (NPC)	CDPA Length Address Indicator (x x xxxx xx) (x RI xxxx xx) Subsystem Point Code (NPC)

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 SP SSA MSA SP SSA MSA xx	SCCP Message Type xxxx xxxx	CGPA Length Address Indicator Subsystem Point Code (SP SSA MSA)	CDPA Length Address Indicator (x x xxxx xx) (x RI xxxx xx) Subsystem Point Code (SP SSA MSA)

Adding an Allowed Calling Party Address Screen

This procedure is used to add an allowed calling party address (CGPA) screen to the database using the `ent-scr-cgpa` command. The parameters used by the `ent-scr-cgpa` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The examples in this procedure are used to add the allowed CGPA screen data shown in *Table 32: Example Gateway Screening Allowed CGPA Configuration Table* and based on the example configurations shown in *Figure 5: Gateway Screening Configuration - Example 1* through *Figure 7: Gateway Screening Configuration - Example 3*.

Table 32: Example Gateway Screening Allowed CGPA Configuration Table

Screening Reference	ZONE	AREA	ID	SSN	RI	SCCPMT	NSFI	NSR
gw11	7	100	4	254	*	010	cdpa	gw15
Screening Reference	NI	NC	NCM	SSN	RI	SCCPMT	NSFI	NSR
gw13	007	007	007	250	gt	017	tt	gw16
gw14	006	006	006	253	dpc	009	cdpa	gw17

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The allowed CGPA screen can reference one of the following screens.

- Allowed TT
- Allowed CDPA

Verifying the Gateway Screening Configuration

Enter the following commands to verify that these screens are in the database.

- `rtrv-scr-tt:all=yes`
- `rtrv-scr-cdpa:all=yes`

Gateway Screening Configuration Procedures

If the desired screen is not in the database, perform one of the following procedures to add the desired screen to the database or change an existing screen in the database.

- *Adding an Allowed Translation Type Screen*
- *Adding an Allowed Called Party Address Screen*
- *Changing an Allowed Translation Type Screen*
- *Changing an Allowed Called Party Address Screen*

Specifying a Range of Values

A range of values can be specified for the point code parameters `ni`, `nc`, or `ncm`.

If a range of values is specified for any of these parameters, and the value of the other parameters match existing values for the screening reference name, the range of values for the point code parameter cannot include any values for that parameter that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NI       NC       NCM      SSN      RI   SCCPMT   NSFI     NSR/ACT
SCR1  240      001      010      012      DPC  009      STOP     ------
SCR1  241      010      020      *        GT   017      TT       SCR1
```

Another entry for screening reference `scr1` with the `ni` value of 240 and the `nc` value of 001 cannot be specified if the range of values for the `ncm` parameter includes the value 010.

The ANSI point code parameter values can be specified as a single value, a range of values, or with an asterisk (*). The asterisk specifies all possible values for the `ni`, `nc`, and `ncm` parameters. *Table 33: Valid Value Combinations for ANSI Point Code Parameters* shows the valid combinations of these parameter values.

Table 33: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk
Range of Values	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

A range of values can also be specified for an ITU-I or 24-bit ITU-N point code parameter using a combination of asterisks (*) and single values for the point code parameters. *Table 34: Valid Value Combinations for ITU-I Point Code Parameters* shows the valid combinations of the ITU-I parameter values. *Table 35: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 34: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 35: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

1. Verify that the gateway screening feature is on, by entering the `rtrv-feat` command.

   If the gateway screening feature is on, the `GWS` 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*.

   If the gateway screening feature is on, shown by the entry `GWS = on` in the `rtrv-feat` command output, skip step 2, and go to step 3.

2. Turn the gateway screening feature on by entering this command.

   ```
   chg-feat:gws=on
   ```

   Note: Once the gateway screening feature is turned on with the `chg-feat` command, it cannot be turned off.

   The gateway screening feature must be purchased before you turn this feature on with the `chg-feat` command. If you are not sure if you have purchased the gateway screening feature, contact your Tekelec Sales Representative or Account Representative.

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

   ```
   rlghncxa03w 06-10-28 11:43:04 GMT EAGLE5 36.0.0
   CHG-FEAT: MASP A - COMPLTD
   ```

3. Display all allowed CGPA screens in the database using the `rtrv-scr-cgpa` command.

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
   SCREEN = ALLOWED CGPA
   SR    REF  RULES
   IEC   YES     2
   WRD2  YES     1
   WRD4  YES     9
   ```

   If the screening reference names that you wish to add with this procedure are not shown in the `rtrv-scr-cgpa` command output, go to step 2. For this example, the screening reference names are not shown. If these screening reference names are shown in the `rtrv-scr-cgpa` command output, make sure the screening data you wish to enter is not already in the database by entering the `rtrv-scr-cgpa` command with the screening reference name. For example, enter the `rtrv-scr-cgpa:sr=iec` command. The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED CGPA
   SR    NI       NC       NCM      SSN      RI   SCCPMT   NSFI    NSR/ACT
   ```

```
IEC   240      001      010      012      DPC  009      STOP    ------
IEC   241      010      *        *        GT   017      TT      TT1
```

If a gateway screening stop action set is to be assigned to the allowed CGPA screen being added to the database, go to step 4.

Step 4 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen being added in this procedure is STOP. If the NSFI of the new screen will be STOP, but a gateway screening stop action set name will not be assigned to the new screen, skip steps 4 and 5 and go to step 6. If the NSFI of the new screen is not STOP, skip step 4 and go to step 5.

4. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:27:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

   If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

   Note: If the NSFI of the screen being added in this procedure is STOP, skip step 5 and go to step 6.

5. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 7 is in the database.

   If the desired screen is not in the database, perform one of the procedures shown in the *Gateway Screening Configuration Procedures* section to add the desired screen to the database or change an existing screen in the database.

   Note: If the point code being added in this procedure is not an ITU-I or 14-bit ITU-N spare point code, skip step 6 and to step 7.

   Note: If the point code being added in this procedure is an ITU-I or 14-bit ITU-N spare point code and the screening reference contains ITU-I or 14-bit ITU-N spare point codes, skip step 6 and go to step 7.

6. Display the status of the ITU National and International Spare Point Code Support feature by entering the `rtrv-ctrl-feat` command with the ITU National and International Spare Point Code Support feature part number.

   Enter this command.

   `rtrv-ctrl-feat:partnum=893013601`

This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum   Status Quantity
Spare Point Code Support  893013601 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 ITU National and International Spare Point Code Support feature is enabled, go to step 7.

If the ITU National and International Spare Point Code Support feature is not enabled, perform the "Activating the ITU National and International Spare Point Code Support Feature" procedure in the Database *Administration Manual* - SS7 to enable the ITU National and International Spare Point Code Support feature as required. After the feature has been enabled, go to step 7.

7. Add a new allowed CGPA screen to the database using the `ent-scr-cgpa` command.

   If a gateway screening stop action is to be assigned to the allowed CGPA screen being changed, enter the `ent-scr-cgpa` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 4.

   CAUTION: The EAGLE 5 ISS does not support redirecting MSUs for the DTA feature or intercepting ISUP IAM messages for the Calling Name Conversion Facility feature from the allowed CGPA screen. Gateway screening stop action sets containing either the RDCT (redirect) or CNCF (calling name conversion facility) stop actions should not be assigned to the allowed CGPA screen. If a gateway screening stop action set containing the RDCT or CNCF stop actions is specified with the `ent-scr-cgpa` command, unsolicited information message (UIM) 1126 is generated when the attempt is made to redirect MSUs from the allowed CGPA screen. Unsolicited information message (UIM) 1216 is generated when ISUP IAM MSUs are intercepted from the allowed CGPA screen. For more information on UIMs 1126 and 1216, go to the *Unsolicited Alarm and Information Messages Manual* .

   The following list contains the values for `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, `sp`, `ssn`, `ri`, and `sccpmt` parameters:

   - ni – 0 - 255 or an asterisk (*)
   - nc – 0 - 255 or an asterisk (*)
   - ncm – 0 - 255 or an asterisk (*)
   - zone – 0 - 7 or an asterisk (*)
   - area – 0 - 255 or an asterisk (*)
   - id – 0 - 7 or an asterisk (*)
   - npc – 1 - 16383 or an asterisk (*)
   - msa – 0 - 255 or an asterisk (*)
   - ssa – 0 - 255 or an asterisk (*)

- sp – 0 - 255 or an asterisk (*)
- ssn – 0 - 255 or an asterisk (*)
- ri – gt, dpc or an asterisk (*)
- sccpmt – 9, 10, 17, 18 or an asterisk (*)

Note: If either the `ri=gt` or `nsfi=tt` parameter is specified, the other parameter must be specified. If either the `ri=dpc` or `nsfi=cdpa` parameter is specified, the other parameter must be specified. If the `ri=*` parameter is specified, either the `nsfi=gt` or `nsfi=dpc` parameters can be specified.

Note: If the `sccpmt` parameter is not specified, an asterisk will be entered as the value of the `sccpmt` parameter.

A range of values can be specified for the `ni`, `nc`, and `ncm` parameters. See the *"Specifying a Range of Values"* section for more information on how the asterisk and a range of values are used for the `ni`, `nc`, and `ncm` parameters.

To add a spare point code to the allowed CGPA screen, the `pcst=s` parameter must be specified. To add a non-spare point code to the allowed CGPA screen, the `pcst` parameter does not have to be specified. If the `pcst` parameter is specified for a screen containing an ITU-I or 14-bit ITU-N non-spare point code, the value must be `none`.

For this example, enter these commands.

```
ent-scr-cgpa:sr=gw11:zone=7:area=100:id=4:ssn=254:ri=*
:sccpmt=010:nsfi=cdpa:nsr=gw15
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
ENT-SCR-CGPA: SCREEN SET AFFECTED - GW11  1% FULL
ENT-SCR-CGPA: MASP A - COMPLTD
```

```
ent-scr-cgpa:sr=gw13:ni=007:nc=007:ncm=007:ssn=250:ri=gt
:sccpmt=017:nsfi=tt:nsr=gw16
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
ENT-SCR-CGPA: SCREEN SET AFFECTED - GW13  1% FULL
ENT-SCR-CGPA: MASP A - COMPLTD
```

```
ent-scr-cgpa:sr=gw14:ni=006:nc=006:ncm=006:ssn=253:ri=dpc
:sccpmt=009:nsfi=cdpa:nsr=gw17
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
ENT-SCR-CGPA: SCREEN SET AFFECTED - GW14  1% FULL
ENT-SCR-CGPA: MASP A - COMPLTD
```

8. Verify the changes using the `rtrv-scr-cgpa` command with the screening reference name used in step 7.

   For this example, enter these commands.

   ```
   rtrv-scr-cgpa:sr=gw11
   ```

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:32:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED CGPA
SR      ZONE   AREA     ID       SSN      RI   SCCPMT   NSFI    NSR/ACT
GW11    7      100      4        254      *    010      CDPA    GW15
```

`rtrv-scr-cgpa:sr=gw13`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:33:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED CGPA
SR    NI       NC       NCM      SSN      RI   SCCPMT   NSFI    NSR/ACT
GW13  007      007      007      250      SSN  017      CDPA    GW16
```

`rtrv-scr-cgpa:sr=gw14`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:34:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED CGPA
SR    NI       NC       NCM      SSN      RI   SCCPMT   NSFI    NSR/ACT
GW14  006      006      006      253      GT   009      TT      GW17
```

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

   The following 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.
```

Removing an Allowed Calling Party Address Screen

This procedure is used to remove an allowed calling party address (CGPA) screen from the database using the `dlt-scr-cgpa` command. The parameters used by the `dlt-scr-cgpa` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure removes the allowed CGPA screen `gw14` from the database.

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The allowed CGPA screen can be referenced by one of the following screens.

- Allowed OPC
- Blocked OPC
- Allowed SIO
- Allowed DPC
- Blocked DPC

Verifying the Gateway Screening Configuration

Enter the following commands to verify that none of these screens reference the allowed CGPA screen being removed from the database.

- `rtrv-scr-opc:nsfi=cgpa`
- `rtrv-scr-blkopc:nsfi=cgpa`
- `rtrv-scr-sio:nsfi=cgpa`
- `rtrv-scr-dpc:nsfi=cgpa`
- `rtrv-scr-blkdpc:nsfi=cgpa`

Gateway Screening Configuration Procedures

To change the NSFI of any of these screens, perform one of these procedures.

- *Changing a Blocked DPC Screen*
- *Changing an Allowed DPC Screen*
- *Changing an Allowed SIO Screen*
- *Changing a Blocked OPC Screen*
- *Changing an Allowed OPC Screen*

1. Display the allowed CGPA screens in the database using the `rtrv-scr-cgpa` command.

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
   SCREEN = ALLOWED CGPA
   SR    REF  RULES
   GW11  YES     1
   GW13  YES     1
   GW14  YES     1
   IEC   YES     2
   WRD2  YES     1
   WRD4  YES     9
   ```

   From the `rtrv-scr-cgpa` output, display the allowed CGPA screen you wish to remove using the `rtrv-scr-cgpa` command with the screening reference name. For this example, enter the `rtrv-scr-cgpa:sr=gw14` command. The following is an example of the possible output.

   ```
   rtrv-scr-cgpa:sr=gw14
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED CGPA
   SR    NI       NC       NCM      SSN      RI   SCCPMT   NSFI    NSR/ACT
   GW14  003      003      003      253      GT   009      TT      GW17
   ```

2. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen being removed is not referenced by other screens in the database.

   If the screen being removed is referenced by other screens, perform the procedures shown in the *Gateway Screening Configuration Procedures* section to change the NSFI of those screens to reference other screens or change the NSFI of these screens to STOP.

3. Remove the allowed CGPA screen from the database using the `dlt-scr-cgpa` command.

   The current values for the `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, `sp`, `ri`, `ssn`, or `sccpmt` parameters must be entered exactly as shown in the `rtrv-scr-cgpa` output.

To remove an entry containing either an ITU-I or a 14-bit ITU-N spare point code, the `pcst=s` parameter must be specified with the `dlt-scr-cgpa` command.

To remove an entry containing either an ITU-I or a 14-bit ITU-N non-spare point code, the `pcst` parameter does not have to be specified with the `dlt-scr-cgpa` command. If the `pcst` parameter is specified, the value must be `none`.

For this example, enter this command.

```
dlt-scr-cgpa:sr=gw14:ni=003:nc=003:ncm=003:ssn=253:sccpmt=009
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
DLT-SCR-CGPA: SCREEN SET AFFECTED - GW14  0% FULL
DLT-SCR-CGPA: MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-scr-cgpa` command with the screening reference name used in step 3.

   For this example, enter this command.

   ```
   rtrv-scr-cgpa:sr=gw14
   ```

   The following is an example of the possible output.

   ```
   E2573 Cmd Rej: SR or NSR does not reference an existing SR
   ```

   This message shows that the specified screening reference name is not in the database and the action of the `dlt-scr-cgpa` command in step 3 was successful. If the specified screening reference name contained more than one entry when the `dlt-scr-cgpa` command was executed in step 3, the `rtrv-scr-cgpa:sr=` command output would show the remaining entries in the screening reference instead of error message E2573.

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

   The following 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.
   ```

Changing an Allowed Calling Party Address Screen

This procedure is used to change the attributes of an allowed calling party address (CGPA) screen in the database using the `chg-scr-cgpa` command. The parameters used by the `chg-scr-cgpa` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure is used to change the point code 003-003-003 for the allowed CGPA screen `gw14` to 230-230-230 and change the subsystem number from 253 to 150.

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The allowed CGPA screen can reference one of the following screens.

- Allowed TT
- Allowed CDPA

Verifying the Gateway Screening Configuration

Enter the following commands to verify that these screens are in the database.

- `rtrv-scr-tt:all=yes`
- `rtrv-scr-cdpa:all=yes`

Gateway Screening Configuration Procedures

If the desired screen is not in the database, perform one of these procedures to add the desired screen to the database or change an existing screen in the database.

- *Adding an Allowed Translation Type Screen*
- *Adding an Allowed Called Party Address Screen*
- *Changing an Allowed Translation Type Screen*
- *Changing an Allowed Called Party Address Screen*

Specifying a Range of Values

A range of values can be specified for the point code parameters `ni`, `nc`, or `ncm`.

If a range of values is specified for any of these parameters, and the value of the other parameters match existing values for the screening reference name, the range of values for the point code parameter cannot include any values for that parameter that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NI       NC       NCM      SSN      RI   SCCPMT   NSFI     NSR/ACT
SCR1  240      001      010      012      DPC  009      STOP     ------
SCR1  241      010      020      *        GT   017      TT       SCR1
```

Another entry for screening reference `scr1` with the `ni` value of 240 and the `nc` value of 001 cannot be specified if the range of values for the `ncm` parameter includes the value 010.

The ANSI point code parameter values can be specified as a single value, a range of values, or with an asterisk (*). The asterisk specifies all possible values for the `ni`, `nc`, and `ncm` parameters. *Table 36: Valid Value Combinations for ANSI Point Code Parameters* shows the valid combinations of these parameter values.

Table 36: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values

NI	NC	NCM
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk
Range of Values	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

A range of values can also be specified for an ITU-I or 24-bit ITU-N point code parameter using a combination of asterisks (*) and single values for the point code parameters. *Table 37: Valid Value Combinations for ITU-I Point Code Parameters* shows the valid combinations of the ITU-I parameter values. *Table 38: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 37: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 38: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

1. Display the allowed CGPA screens in the database using the `rtrv-scr-cgpa` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED CGPA
SR    REF  RULES
GW11  YES     1
GW13  YES     1
GW14  YES     1
IEC   YES        2
WRD2  YES     1
WRD4  YES     9
```

From the `rtrv-scr-cgpa` output, display the allowed CGPA screen you wish to change using the `rtrv-scr-cgpa` command with the screening reference name. For this example, enter this command.

`rtrv-scr-cgpa:sr=gw14`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED CGPA
SR    NI       NC       NCM      SSN      RI   SCCPMT   NSFI    NSR/ACT
GW14  003      003      003      253      GT   009      TT      GW17
```

If a gateway screening stop action set is to be assigned to the allowed CGPA screen being added to the database, go to step 2.

Step 2 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen being changed in this procedure is STOP. If the NSFI of the screen will be changed to STOP, but a gateway screening stop action set name will not be assigned to the screen, skip steps 2 and 3 and go to step 4. If the NSFI of the screen will not be STOP, skip step 2 and go to step 3.

2. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

Note: If the NSFI of the screen being changed in this procedure will be STOP, or if the NSFI of the screen is not being changed, skip step 3 and go to step 4.

3. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 5 is in the database.

   If the desired screen is not in the database, perform one of the procedures shown in the *Gateway Screening Configuration Procedures* section to add the desired screen to the database or change an existing screen in the database.

   Note: If any of these conditions apply to this procedure, skip this step and go to step 5:

   - The point code in the screen is not being changed.
   - The screen being changed contains either an ANSI or 24-bit ITU-N point code.
   - The ITU-I or 14-bit ITU-N non-spare point code in the screen is not being changed to an ITU-I or 14-bit ITU-N spare point code.
   - The point code in the screen is an ITU-I or 14-bit ITU-N spare point code or the screening reference contains other screens with ITU-I or 14-bit ITU-N spare point codes.

4. Display the status of the ITU National and International Spare Point Code Support feature by entering the `rtrv-ctrl-feat` command with the ITU National and International Spare Point Code Support feature part number.

   Enter this command.

   ```
   rtrv-ctrl-feat:partnum=893013601
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
   The following features have been permanently enabled:

   Feature Name              Partnum   Status Quantity
   Spare Point Code Support  893013601 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 ITU National and International Spare Point Code Support feature is enabled, go to step 5.

   If the ITU National and International Spare Point Code Support feature is not enabled, perform the "Activating the ITU National and International Spare Point Code Support Feature" procedure in the Database *Administration Manual - SS7* to enable the ITU National and International Spare Point Code Support feature as required. After the feature has been enabled, go to step 5.

5. Change the attributes of an allowed CGPA screen using the `chg-scr-cgpa` command.

   If a gateway screening stop action is to be assigned to the allowed CGPA screen being changed, enter the `chg-scr-cgpa` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 2.

   CAUTION: The EAGLE 5 ISS does not support redirecting MSUs for the DTA feature or intercepting ISUP IAM messages for the Calling Name Conversion Facility feature from the allowed CGPA screen. Gateway screening stop action sets containing either

the RDCT (redirect) or CNCF (calling name conversion facility) stop actions should not be assigned to the allowed CGPA screen. If a gateway screening stop action set containing the RDCT or CNCF stop actions is specified with the `chg-scr-cgpa` command, unsolicited information message (UIM) 1126 is generated when the attempt is made to redirect MSUs from the allowed CGPA screen. Unsolicited information message (UIM) 1216 is generated when ISUP IAM MSUs are intercepted from the allowed CGPA screen. For more information on UIMs 1126 and 1216, go to the *Unsolicited Alarm and Information Messages Manual* .

The current values for the `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, `sp`, `ssn`, `ri`, and `sccpmt` parameters must be entered exactly as shown in the `rtrv-scr-cgpa` output in step 1.

The following list contains the values for `nni`, `nnc`, `nncm`, `nzone`, `narea`, `nid`, `nnpc`, `nssn`, `nmsa`, `nssa`, `nsp`, `nri`, and `nsccpmt` parameters:

- nni – 0 - 255 or an asterisk (*)
- nnc – 0 - 255 or an asterisk (*)
- nncm – 0 - 255 or an asterisk (*)
- nzone – 0 - 7 or an asterisk (*)
- narea – 0 - 255 or an asterisk (*)
- nid – 0 - 7 or an asterisk (*)
- nnpc – 1 - 16383 or an asterisk (*)
- nmsa – 0 - 255 or an asterisk (*)
- nssa – 0 - 255 or an asterisk (*)
- nsp – 0 - 255 or an asterisk (*)
- nssn – 0 - 255 or an asterisk (*)
- nri – gt, dpc or an asterisk (*)
- nsccpmt – 9, 10, 17, 18 or an asterisk (*)

Note: The `nri`, `nsfi`, and `nsr` parameters can be specified only as shown in *Table 39: CGPA Parameter Combinations*.

Table 39: CGPA Parameter Combinations

New or Current RI Value	NSFI	NSR
GT	TT, STOP	Must be specified if NSFI=TT
DPC	CDPA, STOP	Must be specified if NSFI=CDPA
*	TT, CDPA, STOP	Must be specified if NSFI=TT or NSFI=CDPA

A range of values can be specified for the `nni`, `nnc`, and `nncm` parameters. See the *"Specifying a Range of Values"* section for more information on how the asterisk and a range of values are used for the `nni`, `nnc`, and `nncm` parameters.

To change an ITU-I or 14-bit ITU-N spare point code to a non-spare point code, both the `pcst=s` and `npcst=none` parameters must be specified with the `chg-scr-cgpa` command.

To change an ITU-I or 14-bit ITU-N non-spare point code to a spare point code, the `npcst=s` parameter must be specified with the `chg-scr-cgpa` command. The `pcst` parameter does not have to be specified.

If the current point code in the screen being changed is either an ITU-I or 14-bit ITU-N spare point code, the `pcst=s` parameter must be specified with the `chg-scr-cgpa` command.

If the current point code in the screen being changed is either an ITU-I or 14-bit ITU-N non-spare point code, the `pcst` parameter does not have to be specified with the `chg-scr-cgpa` command. If the `pcst` parameter is specified for a screen containing either an ITU-I or 14-bit ITU-N non-spare point code, the `pcst` parameter value must be `none`.

For this example, enter this command.

```
chg-scr-cgpa:sr=gw14:ni=003:nc=003:ncm=003:ssn=253:sccpmt=009
:nni=230:nnc=230:nncm=230:nssn=150
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:27:30 GMT  EAGLE5 36.0.0
CHG-SCR-CGPA: SCREEN SET AFFECTED - GW14  1% FULL
CHG-SCR-CGPA: MASP A - COMPLTD
```

6. Verify the changes using the `rtrv-scr-cgpa` command with the screening reference name used in step 5.

   For this example, enter this command.

   ```
   rtrv-scr-cgpa:sr=gw14
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED CGPA
   SR    NI       NC       NCM      SSN      RI   SCCPMT   NSFI    NSR/ACT
   GW14  230      230      230      150      GT   009      TT      GW17
   ```

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

   The following 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.
   ```

Chapter 7

Allowed Affected Destination Field (DESTFLD) Screen Configuration

Topics:

Chapter 7, Allowed Affected Destination Field (DESTFLD) Screen Configuration, contains the procedures necessary to configure allowed affected destination field screens.

Introduction

The Affected Destination Field screen identifies the point code in the affected destination field, the concerned signaling point code of incoming MTP network management messages from another network that are allowed into the EAGLE 5 ISS. The gray shaded areas in *Figure 21: Allowed Affected Destination Field Screening Function* shows the fields of the SS7 message that are checked by the Affected Destination Field screening function.

Network management messages contain the entry 0 in the service indicator field of the SIO. This is the last screen in the MTP portion of the gateway screening process. This `nsfi` for this screen has only one value, `stop`.

Note: Screening of the affected destination field can also be performed without configuring an allowed affected destination field screen by specifying the `destfld=yes` parameter when configuring a screen set. For more information on the screen set `destfld=yes` parameter, see the section *Automatic Destination Field Screening*.

Gateway Screening Actions

The Gateway Screening process stops with this screen. The `nsfi` parameter value can only be `stop`.

If a match is not found, the message is discarded.

If a match is found, the message is processed. If a gateway screening stop action set is specified with the screen, shown by the `actname` parameter value, the message is processed according to the gateway screening stop actions that are assigned to the gateway screening stop action set.

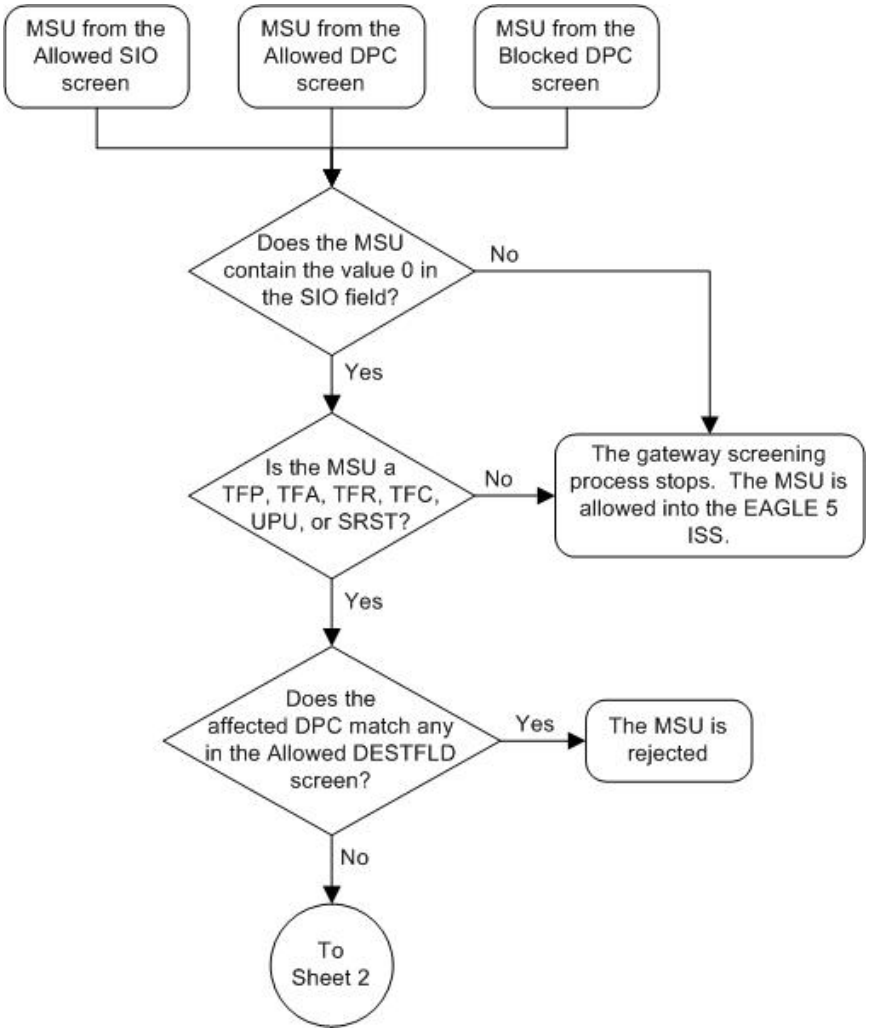
- If the `copy` gateway screening stop action is specified, the message is processed and a copy of the message is sent by the STPLAN feature to an external application.
- If the `rdct` (redirect) gateway screening stop action is specified,the message is diverted from the original destination and sent to another destination with the Database Transport Access feature, specified by global title translation, for further processing.
- If the `cncf` gateway screening stop action is specified, the PIP parameter in the incoming ISUP IAM message is converted to the GN parameter. The GN parameter in the incoming ISUP IAM message is converted to the PIP parameter. The message is then sent to the node specified by the DPC in the routing label in the message. For more information on the Calling Name Conversion Facility feature, see *Calling Name Conversion Facility (CNCF) Configuration*.
- If the `tlnp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are processed either by the ISUP NP with EPAP feature (if the ISUP NP with EPAP feature is enabled and turned on) or by the Triggerless LNP feature (if the Triggerless LNP feature is turned on). The ISUP NP with EPAP feature is discussed in more detail in the *Feature Manual - G-Port*. The Triggerless LNP feature is discussed in more detail in the *LNP Feature Activation Guide*.
- If the `tinp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are intercepted by the Triggerless ISUP based Number Portability (TINP) feature and converted to include the routing number (RN) if the call is to a ported number. The TINP feature is discussed in more detail in the *Feature Manual - G-Port*.
- If the `tif`, `tif2`, or `tif3` gateway screening stop actions are specified, TIF processing is applied to the message.
- If the `sccp` gateway screening stop action is specified, MTP routed SCCP UDT/XUDT are forwarded to the service modules for further processing.

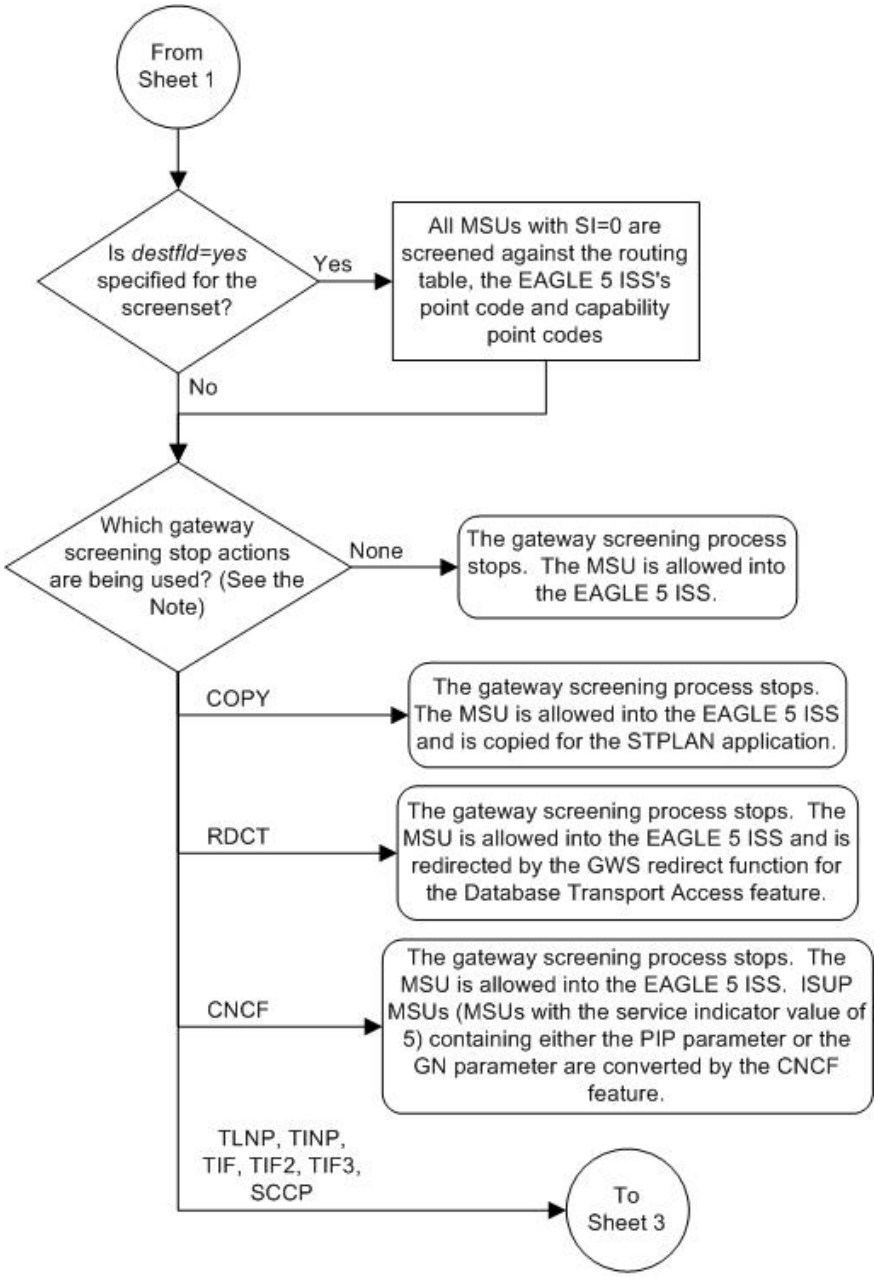
Allowed Affected Destination Screening Actions

These network management messages are screened by the Allowed Affected Destination Field: TFP, TFA, TFR, TFC, UPU, and SRST (RSP, RSR). Any MSU that is not one of these network management message types, or does not contain a service indicator of 0 in the SIO field and reaches this screen in the gateway screening process automatically passes gateway screening and is allowed into the EAGLE 5 ISS.

Figure 20: Allowed Affected Destination Screening Actions shows the screening actions of the allowed affected destination field screen.

Figure 20: Allowed Affected Destination Screening Actions




From Sheet 1
Is destfld=yes specified for the screenset?
Yes
All MSUs with SI=0 are screened against the routing table, the EAGLE 5 ISS's point code and capability point codes
No
Which gateway screening stop actions are being used? (See the Note)
None
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS.
COPY
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is copied for the STPLAN application.
RDCT
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is redirected by the GWS redirect function for the Database Transport Access feature.
CNCF
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS. ISUP MSUs (MSUs with the service indicator value of 5) containing either the PIP parameter or the GN parameter are converted by the CNCF feature.
TLNP, TINP, TIF, TIF2, TIF3, SCCP
To Sheet 3
Note: Combinations of the gateway screening stop actions shown on Sheets 2 and 3 may be assigned to a gateway screening stop action set. Refer to the Configuring Gateway Screening Stop Action Sets and the Configuring TLNP Gateway Screening Stop Action Sets procedures in Chapter 2 of this manual for the combinations that can be used.

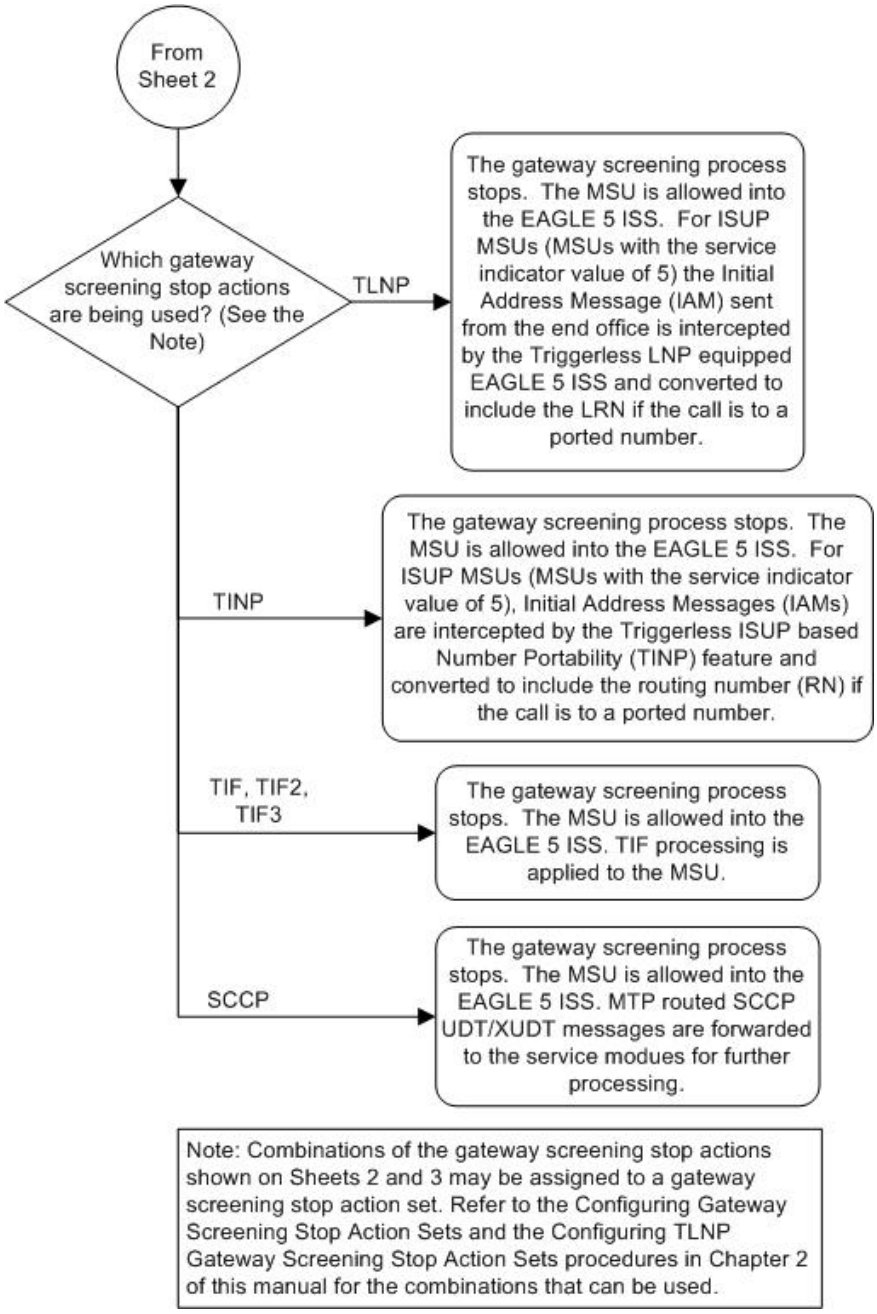
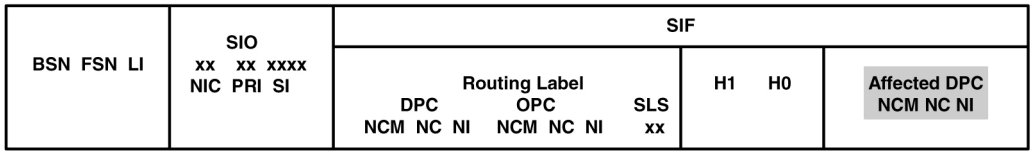
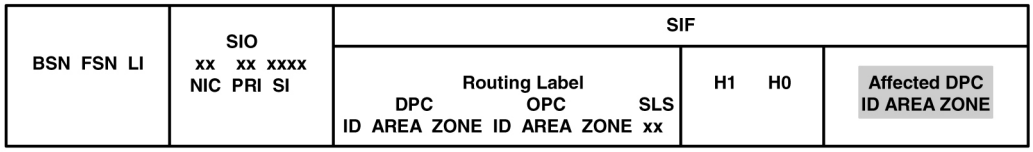


Figure 21: Allowed Affected Destination Field Screening Function

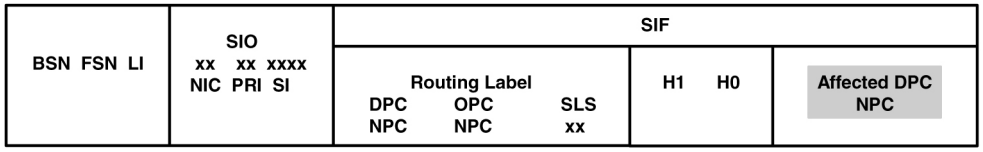
ANSI MSU (ANSI Message Signal Unit)



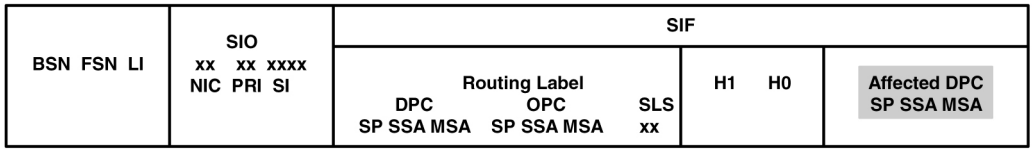
ITU-I MSU (ITU International Message Signal Unit)



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



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



Adding an Allowed Affected Destination Field Screen

This procedure is used to add an allowed affected destination field (DESTFLD) screen to the database using the `ent-scr-destfld` command. The parameters used by the `ent-scr-destfld` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The examples in this procedure are used to add the allowed DESTFLD screen data shown in *Table 40: Example Gateway Screening Allowed DESTFLD Configuration Table* and based on the example configuration shown in *Figure 9: Gateway Screening Configuration - Example 5*.

Table 40: Example Gateway Screening Allowed DESTFLD Configuration Table

Screening Reference	NI	NC	NCM	NSFI	ACTNAME
fld5	100	100	100	stop	CR

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

Specifying a Range of Values

A range of values can be specified for the point code parameters `ni`, `nc`, or `ncm`.

If a range of values is specified for any of these parameters, and the value of the other parameters match existing values for the screening reference name, the range of values for the point code parameter cannot include any values for that parameter that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NI       NC       NCM      NSFI    NSR/ACT
SCR1  240      001      010      STOP    ------
SCR1  241      010      020      STOP    ------
```

Another entry for screening reference `scr1` with the `ni` value of 240 and the `nc` value of 001 cannot be specified if the range of values for the `ncm` parameter includes the value 010.

The ANSI point code parameter values can be specified as a single value, a range of values, or with an asterisk (*). The asterisk specifies all possible values for the `ni`, `nc`, and `ncm` parameters. *Table 41: Valid Value Combinations for ANSI Point Code Parameters* shows the valid combinations of these parameter values.

Table 41: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk
Range of Values	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

A range of values can also be specified for an ITU-I or 24-bit ITU-N point code parameter using a combination of asterisks (*) and single values for the point code parameters. *Table 42: Valid Value Combinations for ITU-I Point Code Parameters* shows the valid combinations of the ITU-I parameter values. *Table 43: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 42: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk

ZONE	AREA	ID
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 43: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

1. Verify that the gateway screening feature is on, by entering the `rtrv-feat` command.

   If the gateway screening feature is on, the `GWS` 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*.

   If the gateway screening feature is on, shown by the entry `GWS = on` in the `rtrv-feat` command output, skip step 2, and go to step 3.

2. Turn the gateway screening feature on by entering this command.

   `chg-feat:gws=on`

   Note: Once the gateway screening feature is turned on with the `chg-feat` command, it cannot be turned off.

   The gateway screening feature must be purchased before you turn this feature on with the `chg-feat` command. If you are not sure if you have purchased the gateway screening feature, contact your Tekelec Sales Representative or Account Representative.

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

```
rlghncxa03w 06-10-28 11:43:04 GMT EAGLE5 36.0.0
CHG-FEAT: MASP A - COMPLTD
```

3. Display all allowed DESTFLD screens in the database using the `rtrv-scr-destfld` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED DESTFLD
SR    REF  RULES
IEC   YES     2
WRD2  YES     1
WRD4  YES     9
```

   If the screening reference names that you wish to add with this procedure are not shown in the `rtrv-scr-destfld` command output, go to step 4. For this example, the screening reference names are not shown. If these screening reference names are shown in the `rtrv-scr-destfld` command output, make sure the screening data you wish to enter is not already in the database

by entering the `rtrv-scr-destfld` command with the screening reference name. For example, enter the `rtrv-scr-destfld:sr=iec` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED DESTFLD
SR    NI       NC       NCM      NSFI   NSR/ACT
IEC   240      001      010      STOP    ------
IEC   241      010      *        STOP    COPY
```

If a gateway screening stop action set is to be assigned to the allowed DESTFLD screen being added to the database, go to step 4. Otherwise, go to step 5.

4. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:28:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

   If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

   Note: If the point code being added in this procedure is not an ITU-I or 14-bit ITU-N spare point code, skip this step and to step 6.

   Note: If the point code being added in this procedure is an ITU-I or 14-bit ITU-N spare point code and the screening reference contains ITU-I or 14-bit ITU-N spare point codes, skip this step and go to step 6.

5. Display the status of the ITU National and International Spare Point Code Support feature by entering the `rtrv-ctrl-feat` command with the ITU National and International Spare Point Code Support feature part number.

   Enter this command.

   `rtrv-ctrl-feat:partnum=893013601`

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum   Status Quantity
Spare Point Code Support  893013601 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 ITU National and International Spare Point Code Support feature is enabled, go to step 6.

If the ITU National and International Spare Point Code Support feature is not enabled, perform the "Activating the ITU National and International Spare Point Code Support Feature" procedure in the Database *Administration Manual* - SS7 to enable the ITU National and International Spare Point Code Support feature as required. After the feature has been enabled, go to step 6.

6. Add a new allowed DESTFLD screen to the database using the `ent-scr-destfld` command.

   If a gateway screening stop action is to be assigned to the allowed DESTFLD screen being changed, enter the `ent-scr-destfld` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 4.

   The following list contains the values for `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, and `sp` parameters:

   - `ni` – 0 - 255 or an asterisk (*)
   - `nc` – 0 - 255 or an asterisk (*)
   - `ncm` – 0 - 255 or an asterisk (*)
   - `zone` – 0 - 7 or an asterisk (*)
   - `area` – 0 - 255 or an asterisk (*)
   - `id` – 0 - 7 or an asterisk (*)
   - `npc` – 1 - 16383 or an asterisk (*)
   - `msa` – 0 - 255 or an asterisk (*)
   - `ssa` – 0 - 255 or an asterisk (*)
   - `sp` – 0 - 255 or an asterisk (*)

   A range of values can be specified for the `ni`, `nc`, and `ncm` parameters. See the *"Specifying a Range of Values"* section for more information on how the asterisk and a range of values are used for the `ni`, `nc`, and `ncm` parameters.

   To add a spare point code to the allowed DESTFLD screen, the `pcst=s` parameter must be specified. To add a non-spare point code to the allowed DESTFLD screen, the `pcst` parameter does not have to be specified. If the `pcst` parameter is specified for a screen containing an ITU-I or 14-bit ITU-N non-spare point code, the value must be `none`.

   For this example, enter this command.

   `ent-scr-destfld:sr=fld5:ni=100:nc=100:ncm=100:nsfi=stop :actname=cr`

   A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
ENT-SCR-DESTFLD: SCREEN SET AFFECTED - FLD5  1% FULL
ENT-SCR-DESTFLD: MASP A - COMPLTD
```

7. Verify the changes using the `rtrv-scr-destfld` command with the screening reference name used in step 6. For this example, enter this command.

`rtrv-scr-destfld:sr=fld5`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED DESTFLD
SR    NI       NC       NCM      NSFI   NSR/ACT
FLD5  100      100      100      STOP    CR
```

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

   The following 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.
```

Removing an Allowed Affected Destination Field Screen

This procedure is used to remove an allowed affected destination field (DESTFLD) screen from the database using the `dlt-scr-destfld` command. The parameters used by the `dlt-scr-destfld` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure removes the allowed DESTFLD screen `fld5` from the database.

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The allowed DESTFLD screen can be referenced by one of the following screens.

- Allowed SIO
- Allowed DPC
- Blocked DPC

Verifying the Gateway Screening Configuration

Enter the following commands to verify that none of these screens reference the allowed CGPA screen being removed from the database.

- `rtrv-scr-sio:nsfi=destfld`
- `rtrv-scr-dpc:nsfi=destfld`
- `rtrv-scr-blkdpc:nsfi=destfld`

Gateway Screening Configuration Procedures

To change the NSFI of any of these screens, perform one of these procedures.

- *Changing an Allowed SIO Screen*
- *Changing an Allowed DPC Screen*
- *Changing a Blocked DPC Screen*

1. Display the allowed DESTFLD screens in the database using the `rtrv-scr-destfld` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED DESTFLD
SR    REF  RULES
FLD5  YES     1
IEC   YES     6
WRD2  YES     1
WRD4  YES     9
```

From the `rtrv-scr-destfld` output, display the allowed DESTFLD screen you wish to remove using the `rtrv-scr-destfld` command with the screening reference name. For this example, enter this command.

`rtrv-scr-destfld:sr=fld5`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED DESTFLD
SR    NI       NC       NCM      NSFI   NSR/ACT
fld5  100      100      100      STOP   cr
```

2. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen being removed is not referenced by other screens in the database.

   If the screen being removed is referenced by other screens, perform the procedures shown in the *Gateway Screening Configuration Procedures* section to change the NSFI of those screens to reference other screens or change the NSFI of these screens to STOP.

3. Remove the allowed DESTFLD screen from the database using the `dlt-scr-destfld` command with the screening reference name shown in the `rtrv-scr-destfld` output in step 1 and with the point code parameter values (`ni`, `nc`, `ncm`, or `zone`, `area`, `id`, `npc`, `msa`, `ssa`, or `sp`) of the screen being removed from the database.

   The values for these parameters must be entered exactly as shown in the `rtrv-scr-destfld` output.

   To remove an entry containing either an ITU-I or a 14-bit ITU-N spare point code, the `pcst=s` parameter must be specified with the `dlt-scr-destfld` command.

   To remove an entry containing either an ITU-I or a 14-bit ITU-N non-spare point code, the `pcst` parameter does not have to be specified with the `dlt-scr-destfld` command. If the `pcst` parameter is specified, the value must be `none`.

   For this example, enter this command.

   `dlt-scr-destfld:sr=fld5:ni=100:nc=100:ncm=100`

   A message similar to the following should appear.

   ```
   rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
   DLT-SCR-DESTFLD: SCREEN SET AFFECTED - FLD5  0% FULL
   DLT-SCR-DESTFLD: MASP A - COMPLTD
   ```

4. Verify the changes using the `rtrv-scr-destfld` command with the screening reference name used in step 3.

   For this example, enter this command.

   `rtrv-scr-destfld:sr=fld5`

The following is an example of the possible output.

```
E2573 Cmd Rej: SR or NSR does not reference an existing SR
```

This message shows that the specified screening reference name is not in the database and the action of the `dlt-scr-destfld` command in step 3 was successful. If the specified screening reference name contained more than one entry when the `dlt-scr-destfld` command was executed in step 3, the `rtrv-scr-destfld:sr=` command output would show the remaining entries in the screening reference instead of error message E2573.

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

   The following 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.
```

Changing an Allowed Affected Destination Field Screen

This procedure is used to change the attributes of an allowed affected destination field (DESTFLD) screen in the database using the `chg-scr-destfld` command. The parameters used by the `chg-scr-destfld` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure is used to change the point code 100-100-100 for the allowed DESTFLD screen `fld5` to 030-030-030 and to redirect the MSU for the DTA feature.

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

Specifying a Range of Values

A range of values can be specified for the point code parameters `ni`, `nc`, or `ncm`.

If a range of values is specified for any of these parameters, and the value of the other parameters match existing values for the screening reference name, the range of values for the point code parameter cannot include any values for that parameter that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NI       NC       NCM      NSFI    NSR/ACT
SCR1  240      001      010      STOP    ------
SCR1  241      010      020      STOP    ------
```

Another entry for screening reference `scr1` with the `ni` value of 240 and the `nc` value of 001 cannot be specified if the range of values for the `ncm` parameter includes the value 010.

The ANSI point code parameter values can be specified as a single value, a range of values, or with an asterisk (*). The asterisk specifies all possible values for the `ni`, `nc`, and `ncm` parameters. *Table 44:*

Valid Value Combinations for ANSI Point Code Parameters shows the valid combinations of these parameter values.

Table 44: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk
Range of Values	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

A range of values can also be specified for an ITU-I or 24-bit ITU-N point code parameter using a combination of asterisks (*) and single values for the point code parameters. *Table 45: Valid Value Combinations for ITU-I Point Code Parameters* shows the valid combinations of the ITU-I parameter values. *Table 46: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 45: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 46: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value

MSA	SSA	SP
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

1. Display the allowed DESTFLD screens in the database using the `rtrv-scr-destfld` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED DESTFLD
SR    REF  RULES
FLD5  YES     1
IEC   YES     6
WRD2  YES     1
WRD4  YES     9
```

   From the `rtrv-scr-destfld` output, display the allowed DESTFLD screen you wish to change using the `rtrv-scr-destfld` command with the screening reference name. For this example, enter this command.

```
rtrv-scr-destfld:sr=fld5
```

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED DESTFLD
SR    NI       NC       NCM      NSFI   NSR/ACT
fld5  100      100      100      STOP    cr
```

   If a gateway screening stop action set is to be assigned to the allowed DESTFLD screen being added to the database, go to step 2. Otherwise, go to step 3.

2. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct
```

```
GWS action set table is (7 of 16) 44% full
```

If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

3. Display the status of the ITU National and International Spare Point Code Support feature by entering the `rtrv-ctrl-feat` command with the ITU National and International Spare Point Code Support feature part number.

   Note: If any of these conditions apply to this procedure, skip this step and go to step 4:

   - The point code in the screen is not being changed.
   - The screen being changed contains either an ANSI or 24-bit ITU-N point code.
   - The ITU-I or 14-bit ITU-N non-spare point code in the screen is not being changed to an ITU-I or 14-bit ITU-N spare point code.
   - The point code in the screen is an ITU-I or 14-bit ITU-N spare point code or the screening reference contains other screens with ITU-I or 14-bit ITU-N spare point codes.

   Enter this command.

   `rtrv-ctrl-feat:partnum=893013601`

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum   Status Quantity
Spare Point Code Support  893013601 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 ITU National and International Spare Point Code Support feature is enabled, go to step 4.

   If the ITU National and International Spare Point Code Support feature is not enabled, perform the "Activating the ITU National and International Spare Point Code Support Feature" procedure in the Database *Administration Manual* - SS7 to enable the ITU National and International Spare Point Code Support feature as required. After the feature has been enabled, go to step 4.

4. Change the attributes of an allowed DESTFLD screen using the `chg-scr-destfld` command.

   If a gateway screening stop action is to be assigned to the allowed DESTFLD screen being changed, enter the `chg-scr-destfld` command with the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 2.

   The current values for the `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, and `sp` parameters must be entered exactly as shown in the `rtrv-scr-destfld` output in step 1.

The following list contains the values for the `nni`, `nnc`, `nncm`, `nzone`, `narea`, `nid`, `nnpc`, `nmsa`, `nssa`, and `nsp` parameters:

- nni - 0-255 or an asterisk (*)
- nnc - 0-255 or an asterisk (*)
- nncm - 0-255 or an asterisk (*)
- nzone - 0-7 or an asterisk (*)
- narea - 0-255 or an asterisk (*)
- nid - 0-7 or an asterisk (*)
- nnpc - 1 - 16383 or an asterisk (*)
- nmsa - 0-255 or an asterisk (*)
- nssa - 0-255 or an asterisk (*)
- nsp - 0-255 or an asterisk (*)

```
chg-scr-destfld:sr=fld5:ni=100:nc=100:ncm=100:nni=030:nnc=030
:nncm=030:actname=rdct
```

The following messages appear.

```
rlghncxa03w 06-10-25 15:27:30 GMT  EAGLE5 36.0.0
CHG-SCR-DESTFLD: SCREEN SET AFFECTED - FLD5  1% FULL
CHG-SCR-DESTFLD: MASP A - COMPLTD
```

5. Verify the changes using the `rtrv-scr-destfld` command with screening reference name used in step 4.

   For this example, enter this command.

   ```
   rtrv-scr-destfld:sr=fld5
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED DESTFLD
   SR    NI       NC       NCM      NSFI   NSR/ACT
   fld5  030      030      030      STOP    rdct
   ```

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

   The following 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.
   ```

Chapter 8

Blocked Destination Point Code (BLKDPC) Screen Configuration

Topics:

Chapter 8, Blocked Destination Point Code (BLKDPC) Screen Configuration, contains the procedures necessary to configure blocked destination point code screens.

Introduction

The blocked DPC screen identifies DPC's that are not allowed to receive SS7 messages from another network. The gray shaded areas in *Figure 23: Blocked DPC Screening Functions* shows the fields of the SS7 message that are checked by the blocked DPC screening function.

Gateway Screening Actions

If a match is found, the `nsfi` is equal to `fail`, the message is discarded and no further screening takes place.

If a match is not found, the `nsfi` is examined to determine the next step in the screening process. If the `nsfi` value is any value other than `stop`, the next screening reference (`nsr`) is identified and the screening process continues to the next screen identified by the `nsfi` and `nsr` parameter values.

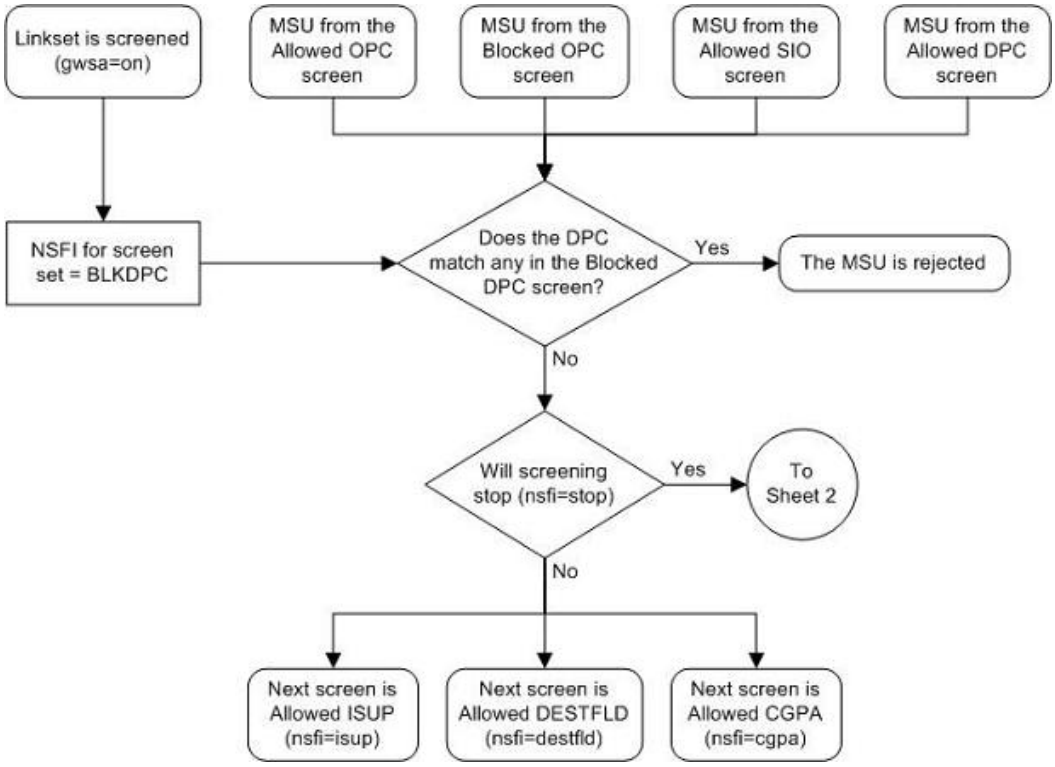
If the `nsfi` is equal to `stop`, the screening process stops and the message is processed. If a gateway screening stop action set is specified with the screen, shown by the `actname` parameter value, the message is processed according to the gateway screening stop actions that are assigned to the gateway screening stop action set.

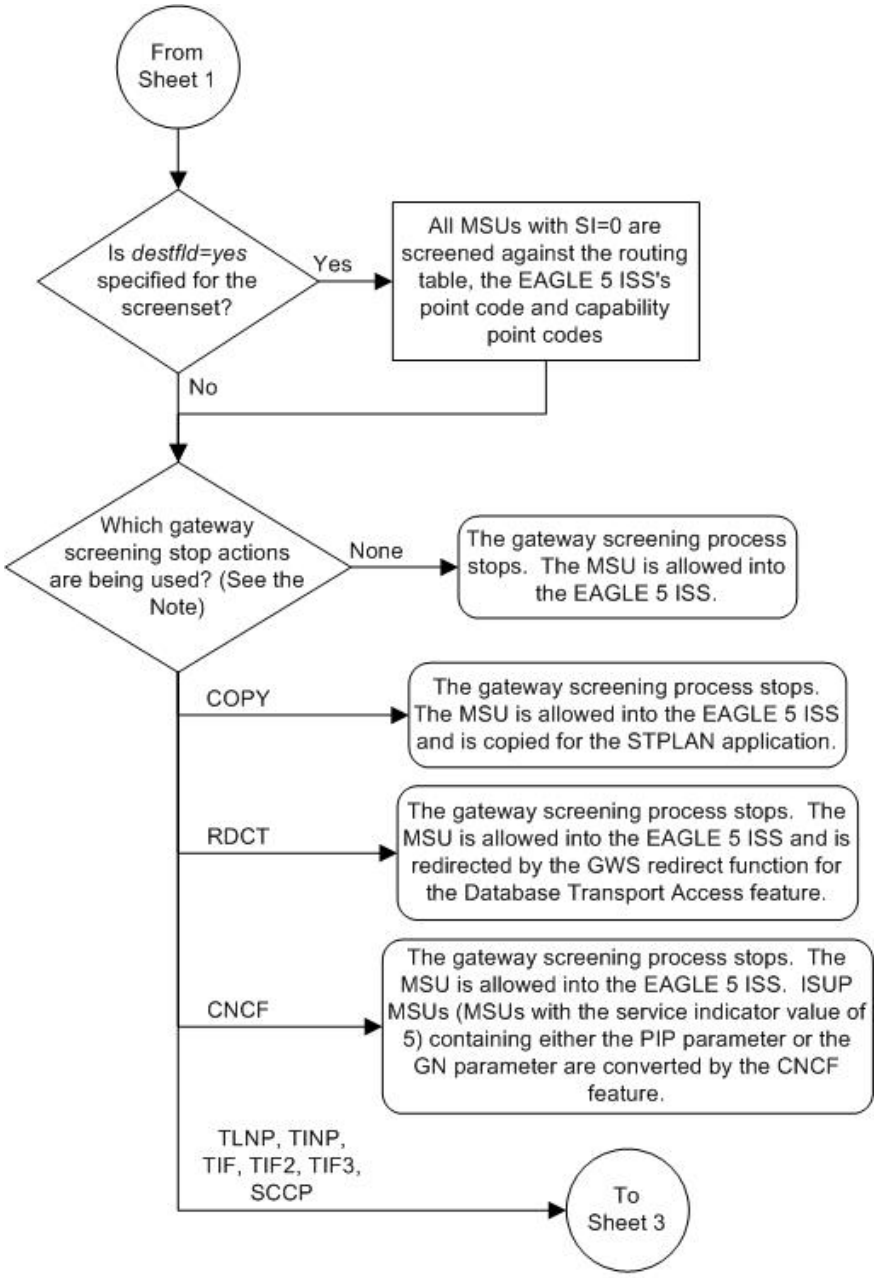
- If the `copy` gateway screening stop action is specified, the message is processed and a copy of the message is sent by the STPLAN feature to an external application.
- If the `rdct` (redirect) gateway screening stop action is specified,the message is diverted from the original destination and sent to another destination with the Database Transport Access feature, specified by global title translation, for further processing.
- If the `cncf` gateway screening stop action is specified, the PIP parameter in the incoming ISUP IAM message is converted to the GN parameter. The GN parameter in the incoming ISUP IAM message is converted to the PIP parameter. The message is then sent to the node specified by the DPC in the routing label in the message. For more information on the Calling Name Conversion Facility feature, see *Calling Name Conversion Facility (CNCF) Configuration*.
- If the `tlnp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are processed either by the ISUP NP with EPAP feature (if the ISUP NP with EPAP feature is enabled and turned on) or by the Triggerless LNP feature (if the Triggerless LNP feature is turned on). The ISUP NP with EPAP feature is discussed in more detail in the *Feature Manual - G-Port*. The Triggerless LNP feature is discussed in more detail in the *LNP Feature Activation Guide*.
- If the `tinp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are intercepted by the Triggerless ISUP based Number Portability (TINP) feature and converted to include the routing number (RN) if the call is to a ported number. The TINP feature is discussed in more detail in the *Feature Manual - G-Port*.
- If the `tif`, `tif2`, or `tif3` gateway screening stop actions are specified, TIF processing is applied to the message.
- If the `sccp` gateway screening stop action is specified, MTP routed SCCP UDT/XUDT are forwarded to the service modules for further processing.

Blocked DPC Screening Actions

Figure 22: Blocked DPC Screening Actions shows the screening actions of the blocked DPC screen.

Figure 22: Blocked DPC Screening Actions


Linkset is screened (gwsa=on)
MSU from the Allowed OPC screen
MSU from the Blocked OPC screen
MSU from the Allowed SIO screen
MSU from the Allowed DPC screen
NSFI for screen set = BLKDPC
Does the DPC match any in the Blocked DPC screen?
Yes
The MSU is rejected
No
Will screening stop (nsfi=stop)
Yes
To Sheet 2
No
Next screen is Allowed ISUP (nsfi=isup)
Next screen is Allowed DESTFLD (nsfi=destfld)
Next screen is Allowed CGPA (nsfi=cgpa)


From Sheet 1
Is destfld=yes specified for the screenset?
Yes
All MSUs with SI=0 are screened against the routing table, the EAGLE 5 ISS's point code and capability point codes
No
Which gateway screening stop actions are being used? (See the Note)
None
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS.
COPY
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is copied for the STPLAN application.
RDCT
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is redirected by the GWS redirect function for the Database Transport Access feature.
CNCF
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS. ISUP MSUs (MSUs with the service indicator value of 5) containing either the PIP parameter or the GN parameter are converted by the CNCF feature.
TLNP, TINP, TIF, TIF2, TIF3, SCCP
To Sheet 3
Note: Combinations of the gateway screening stop actions shown on Sheets 2 and 3 may be assigned to a gateway screening stop action set. Refer to the Configuring Gateway Screening Stop Action Sets and the Configuring TLNP Gateway Screening Stop Action Sets procedures in Chapter 2 of this manual for the combinations that can be used.

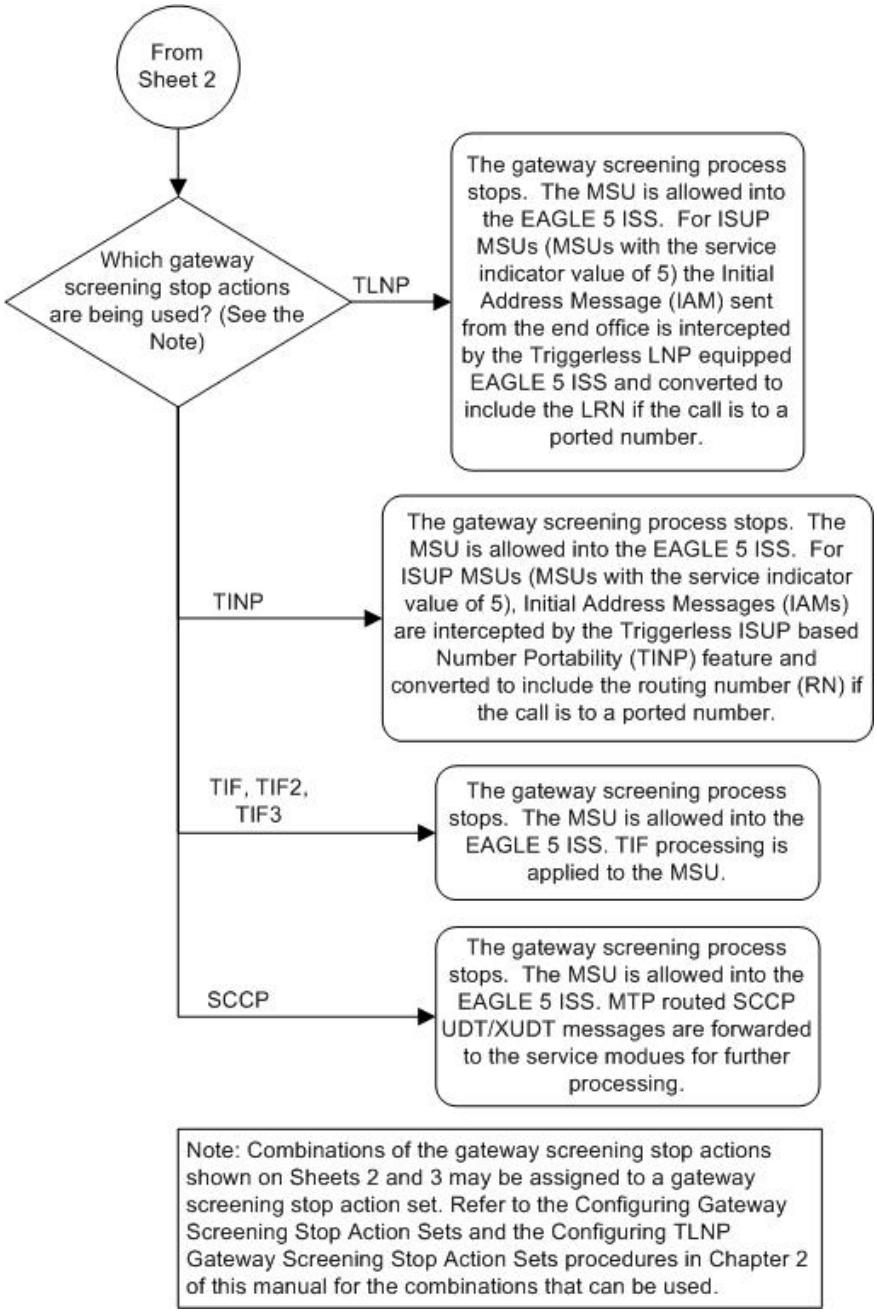
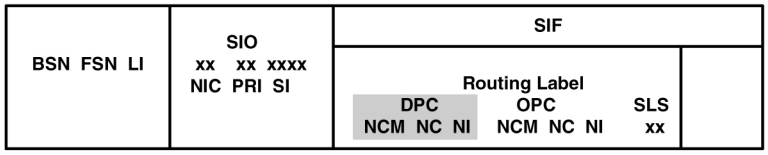
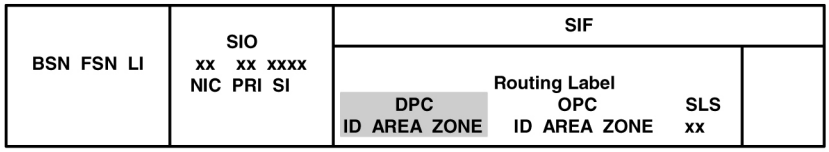


Figure 23: Blocked DPC Screening Functions

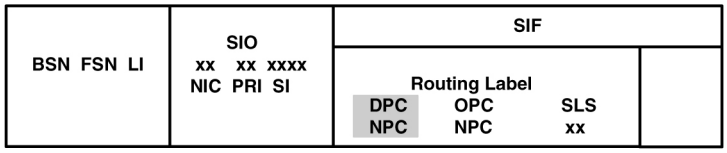
ANSI MSU (ANSI Message Signal Unit)



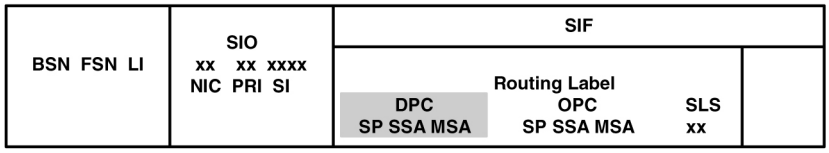
ITU-I MSU (ITU International Message Signal Unit)



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



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



Adding a Blocked DPC Screen

This procedure is used to add a blocked destination point code (DPC) screen to the database using the `ent-scr-blkdpc` command. The parameters used by the `ent-scr-blkdpc` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The examples in this procedure are used to add the blocked DPC screen data shown in *Table 47: Example Gateway Screening Blocked DPC Configuration Table* and based on the example configurations shown in *Figure 5: Gateway Screening Configuration - Example 1* and *Figure 7: Gateway Screening Configuration - Example 3*.

Table 47: Example Gateway Screening Blocked DPC Configuration Table

Screening Reference	NI	NC	NCM	NSFI	NSR
gws9	C	C	C	cgpa	gw13
gws9	005	005	005	fail	----
gw12	C	C	C	cgpa	gw14
gw12	004	004	004	fail	----

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The blocked DPC screen can reference one of the following screens.

- Allowed Affected Destination Field
- Allowed CGPA
- Allowed ISUP

Verifying Gateway Screening Configuration

Enter the following commands to verify that these screens are in the database.

- `rtrv-scr-destfld:all=yes`
- `rtrv-scr-cgpa:all=yes`
- `rtrv-scr-isup:all=yes`

Gateway Screening Configuration Procedures

If the desired screen is not in the database, perform one of the following procedures to add the desired screen to the database or change an existing screen in the database.

- *Adding an Allowed Affected Destination Field Screen*
- *Adding an Allowed Calling Party Address Screen*
- *Adding an Allowed ISUP Message Type Screen*
- *Changing an Allowed Affected Destination Field Screen*
- *Changing an Allowed Calling Party Address Screen*
- *Changing an Allowed ISUP Message Type Screen*

For the first entry for a specific screening reference, the value for the point code must be `c`, and the NSFI must be either `stop` or `cgpa`. If the NSFI is `stop`, the screening of the message will stop at the specified blocked DPC screen. If the NSFI is `cgpa`, then any message containing a point code that is not listed in the blocked DPC screen with a NSFI equal to `fail`, will continue to be screened with the allowed CGPA screen. All subsequent entries for that screening reference must contain a numeric point code value, the NSFI must be equal to `fail`, and the `nsr` parameter cannot be specified. Any message that contains a DPC in the blocked DPC screen with the NSFI equal to `fail` will be rejected from the network and the screening process is stopped.

The `pcst` parameter, specifying whether or not the ITU-I or 14-bit ITU-N point code is a spare point code, cannot be used with the `zone=c` or `npc=c` parameters.

Specifying a Range of Values

A range of values can be specified for the point code parameters `ni`, `nc`, or `ncm`.

If a range of values is specified for any of these parameters, and the value of the other parameters match existing values for the screening reference name, the range of values for the point code parameter cannot include any values for that parameter that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NI       NC       NCM      NSFI    NSR/ACT
SCR1  C        C        C        CGPA    cg01
SCR1  240      001      010      FAIL    ------
SCR1  241      010      020      FAIL    ------
```

Another entry for screening reference `scr1` with the `ni` value of 240 and the `nc` value of 001 cannot be specified if the range of values for the `ncm` parameter includes the value 010.

The ANSI point code parameter values can be specified as a single value, a range of values, or with an asterisk (*). The asterisk specifies all possible values for the `ni`, `nc`, and `ncm` parameters. *Table 48: Valid Value Combinations for ANSI Point Code Parameters* shows the valid combinations of these parameter values.

Table 48: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk
Range of Values	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

A range of values can also be specified for an ITU-I or 24-bit ITU-N point code parameter using a combination of asterisks (*) and single values for the point code parameters. *Table 49: Valid Value Combinations for ITU-I Point Code Parameters* shows the valid combinations of the ITU-I parameter values. *Table 50: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 49: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 50: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

1. Verify that the gateway screening feature is on, by entering the `rtrv-feat` command.

   If the gateway screening feature is on, the `GWS` 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*.

   If the gateway screening feature is on, shown by the entry `GWS = on` in the `rtrv-feat` command output, skip step 2, and go to step 3.

2. Turn the gateway screening feature on by entering this command.

   `chg-feat:gws=on`

   Note: Once the gateway screening feature is turned on with the `chg-feat` command, it cannot be turned off.

   The gateway screening feature must be purchased before you turn this feature on with the `chg-feat` command. If you are not sure if you have purchased the gateway screening feature, contact your Tekelec Sales Representative or Account Representative.

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

```
rlghncxa03w 06-10-28 11:43:04 GMT EAGLE5 36.0.0
CHG-FEAT: MASP A - COMPLTD
```

3. Display all blocked DPC screens in the database using the `rtrv-scr-blkdpc` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = BLOCKED DPC
SR    REF  RULES
IEC   YES     6
WRD2  YES     1
WRD3  NO      4
WRD4  YES     9
```

   If the screening reference names that you wish to add with this procedure are not shown in the `rtrv-scr-blkdpc` command output, go to step 4. For this example, the screening reference names are not shown. If these screening reference names are shown in the `rtrv-scr-blkdpc` command output, make sure the screening data you wish to enter is not already in the database by entering the `rtrv-scr-blkdpc` command with the screening reference name. For example, enter the `rtrv-scr-blkdpc:sr=iec` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
SCREEN = BLOCKED DPC
```

```
SR    NI       NC       NCM      NSFI    NSR/ACT
IEC   240      001      010      FAIL    ------
IEC   241      010      *        FAIL    ------

SR      NPC                      NSFI    NSR/ACT
IEC     00235                    FAIL    ------

SR      ZONE   AREA     ID       NSFI    NSR/ACT
IEC     1      003      4        FAIL    ------
IEC     1      003      5        FAIL    ------
IEC     C      C        C        CGPA    cg01
```

If a gateway screening stop action set is to be assigned to the blocked DPC screen being added to the database, go to step 4.

Step 4 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen being added in this procedure is STOP. If the NSFI of the new screen will be STOP, but a gateway screening stop action set name will not be assigned to the new screen, skip steps 4 and 5 and go to step 6. If the NSFI of the new screen is not STOP, skip step 4 and go to step 5.

4. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:27:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

   If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

   Note: If the NSFI of the screen being added in this procedure is STOP or FAIL, skip step 5 and go to step 6.

5. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 7 is in the database.

   If the desired screen is not in the database, perform one of the procedures shown in the *Gateway Screening Configuration Procedures* section to add the desired screen to the database or change an existing screen in the database.

   Note: If the point code being added in this procedure is not an ITU-I or 14-bit ITU-N spare point code, skip this step and to step 7.

   Note: If the point code being added in this procedure is an ITU-I or 14-bit ITU-N spare point code and the screening reference contains ITU-I or 14-bit ITU-N spare point codes, skip this step and go to step 7.

6. Display the status of the ITU National and International Spare Point Code Support feature by entering the `rtrv-ctrl-feat` command with the ITU National and International Spare Point Code Support feature part number.

   Enter this command.

   ```
   rtrv-ctrl-feat:partnum=893013601
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
   The following features have been permanently enabled:

   Feature Name              Partnum   Status Quantity
   Spare Point Code Support  893013601 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 ITU National and International Spare Point Code Support feature is enabled, go to step 7.

   If the ITU National and International Spare Point Code Support feature is not enabled, perform the "Activating the ITU National and International Spare Point Code Support Feature" procedure in the Database *Administration Manual* - SS7 to enable the ITU National and International Spare Point Code Support feature as required. After the feature has been enabled, go to step 7.

7. Add a new blocked DPC screen to the database using the `ent-scr-blkdpc` command.

   If a gateway screening stop action is to be assigned to the blocked DPC screen being added, enter the `ent-scr-blkdpc` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 4.

   The following list contains the values for `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, and `sp` parameters:

   - ni - 0-255, c, or an asterisk (*)
   - nc - 0-255, c, or an asterisk (*)
   - ncm - 0-255, c, or an asterisk (*)
   - zone - 0-7, c, or an asterisk (*)
   - area - 0-255, c, or an asterisk (*)
   - id - 0-7, c, or an asterisk (*)
   - npc - 1 - 16383, c, or an asterisk (*)
   - msa - 0-255, c, or an asterisk (*)
   - ssa - 0-255, c, or an asterisk (*)
   - sp - 0-255, c, or an asterisk (*)

   A range of values can be specified for the `ni`, `nc`, and `ncm` parameters. See the *"Specifying a Range of Values"* section for more information on how the asterisk and a range of values are used for the `ni`, `nc`, and `ncm` parameters.

To add a spare point code to the blocked DPC screen, the `pcst=s` parameter must be specified. To add a non-spare point code to the blocked DPC screen, the `pcst` parameter does not have to be specified. If the `pcst` parameter is specified for a screen containing an ITU-I or 14-bit ITU-N non-spare point code, the value must be `none`. The `pcst` parameter cannot be used with the `zone=c` or `npc=c` parameters.

For this example, enter these commands.

```
ent-scr-blkdpc:sr=gws9:ni=c:nc=c:ncm=c:nsfi=cgpa:nsr=gw13
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
ENT-SCR-BLKDPC: SCREEN SET AFFECTED - GWS9  1% FULL
ENT-SCR-BLKDPC: MASP A - COMPLTD
```

```
ent-scr-blkdpc:sr=gws9:ni=005:nc=005:ncm=005:nsfi=fail
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
ENT-SCR-BLKDPC: SCREEN SET AFFECTED - GWS9  1% FULL
ENT-SCR-BLKDPC: MASP A - COMPLTD
```

```
ent-scr-blkdpc:sr=gw12:ni=c:nc=c:ncm=c:nsfi=cgpa:nsr=gw14
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
ENT-SCR-BLKDPC: SCREEN SET AFFECTED - GW12  1% FULL
ENT-SCR-BLKDPC: MASP A - COMPLTD
```

```
ent-scr-blkdpc:sr=gw12:ni=004:nc=004:ncm=004:nsfi=fail
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:31:30 GMT  EAGLE5 36.0.0
ENT-SCR-BLKDPC: SCREEN SET AFFECTED - GW12  1% FULL
ENT-SCR-BLKDPC: MASP A - COMPLTD
```

8. Verify the changes using the `rtrv-scr-blkdpc` command with the screening reference name used in step 7. For this example, enter these commands.

   ```
   rtrv-scr-blkdpc:sr=gws9
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:32:30 GMT  EAGLE5 36.0.0
   SCREEN = BLOCKED DPC
   SR    NI       NC       NCM      NSFI    NSR/ACT
   GWS9  C        C        C        CGPA    GW13
   GWS9  005      005      005      FAIL    ------
   ```

   ```
   rtrv-scr-blkdpc:sr=gw12
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:33:30 GMT  EAGLE5 36.0.0
   SCREEN = BLOCKED DPC
   SR    NI       NC       NCM      NSFI    NSR/ACT
   ```

```
GW12  C        C        C        CGPA    GW14
GW12  004      004      004      FAIL    -----
```

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

   The following 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.
```

Removing a Blocked DPC Screen

This procedure is used to remove a blocked destination point code (DPC) screen from the database using the `dlt-scr-blkdpc` command. The parameters used by the `dlt-scr-blkdpc` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure removes the blocked DPC screen `iec` with the point code 240-001-010 from the database.

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The `c-c-c` entry cannot be removed from the blocked DPC screen unless all other entries in the blocked DPC screen have been removed. The `c-c-c` entry cannot be removed from the blocked DPC screen if other screens reference the blocked DPC screen. If the last entry (`c-c-c`) in the blocked DPC screen is removed, the blocked DPC screen is removed. The blocked DPC screen can be referenced by one of the following screens.

- Screen Set
- Allowed OPC
- Blocked OPC
- Allowed SIO
- Allowed DPC

Verifying the Gateway Screening Configuration

Enter the following commands to verify that none of these screens reference the blocked DPC screen being removed from the database.

- `rtrv-scrset:nsfi=blkdpc`
- `rtrv-scr-opc:nsfi=blkdpc`
- `rtrv-scr-blkopc:nsfi=blkdpc`
- `rtrv-scr-sio:nsfi=blkdpc`
- `rtrv-scr-dpc:nsfi=blkdpc`

Gateway Screening Configuration Procedures

To change the NSFI of any of these screens, perform one of these procedures.

- *Changing a Screen Set*
- *Changing an Allowed OPC Screen*
- *Changing a Blocked OPC Screen*
- *Changing an Allowed SIO Screen*
- *Changing an Allowed DPC Screen*

1. Display the blocked DPC screens in the database using the `rtrv-scr-blkdpc` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = BLOCKED DPC

SR    REF  RULES
IEC   YES     6
WRD2  YES     1
WRD3  NO      4
WRD4  YES     9
```

   From the `rtrv-scr-blkdpc` output, display the blocked DPC screen you wish to remove using the `rtrv-scr-blkdpc` command with the screening reference name. For this example, enter this command.

   `rtrv-scr-blkdpc:sr=iec`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = BLOCKED DPC
SR    NI       NC       NCM      NSFI    NSR/ACT
IEC   240      001      010      FAIL    ------
IEC   241      010      *        FAIL    ------
SR      NPC                      NSFI    NSR/ACT
IEC     00235                    FAIL    ------
SR      ZONE   AREA     ID       NSFI    NSR/ACT
IEC     1      003      4        FAIL    ------
IEC     1      003      5        FAIL    ------
IEC     C      C        C        CGPA    cg01
```

2. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen being removed is not referenced by other screens in the database.

   If the screen being removed is referenced by other screens, perform the procedures shown in the *Gateway Screening Configuration Procedures* section to change the NSFI of those screens to reference other screens or change the NSFI of these screens to STOP.

3. Remove the blocked DPC screen from the database using the `dlt-scr-blkdpc` command with the screening reference name shown in the `rtrv-scr-blkdpc` output in step 1 and with the point code parameter values (`ni`, `nc`, `ncm`, or `zone`, `area`, `id`, `npc`, `msa`, `ssa`, or `sp`) of the screen being removed from the database. The values for these parameters must be entered exactly as shown in the `rtrv-scr-blkdpc` output.

   To remove an entry containing either an ITU-I or a 14-bit ITU-N spare point code, the `pcst=s` parameter must be specified with the `dlt-scr-blkdpc` command.

   To remove an entry containing either an ITU-I or a 14-bit ITU-N non-spare point code, the `pcst` parameter does not have to be specified with the `dlt-scr-blkdpc` command. If the `pcst` parameter is specified, the value must be `none`.

The `pcst` parameter cannot be used with the `zone=c` or the `npc=c` parameters.

For this example, enter this command.

```
dlt-scr-blkdpc:sr=iec:ni=240:nc=001:ncm=010
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
DLT-SCR-BLKDPC: SCREEN SET AFFECTED - IEC 25% FULL
DLT-SCR-BLKDPC: MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-scr-blkdpc` command with the screening reference name used in step 3.

   For this example, enter this command.

   ```
   rtrv-scr-blkdpc:sr=iec
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:27:30 GMT  EAGLE5 36.0.0
   SCREEN = BLOCKED DPC
   SR    NI       NC       NCM      NSFI    NSR/ACT
   IEC   241      010      *        FAIL    ------

   SR      NPC                      NSFI    NSR/ACT
   IEC     00235                    FAIL    ------

   SR      ZONE   AREA     ID       NSFI    NSR/ACT
   IEC     1      003      4        FAIL    ------
   IEC     1      003      5        FAIL    ------
   IEC     C      C        C        CGPA    cg01
   ```

   If the screen removed in step 3 was the last screen contained in the specified screening reference, the screening reference is removed from the database. The following message is displayed.

   ```
   E2573 Cmd Rej: SR or NSR does not reference an existing SR
   ```

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

   The following 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.
   ```

Changing a Blocked DPC Screen

This procedure is used to change the attributes of a blocked destination point code (DPC) screen in the database using the `chg-scr-blkdpc` command. The parameters used by the `chg-scr-blkdpc` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure is used to change the point code 003-003-003 for the blocked DPC screen `gw12` to 230-230-230.

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

If the current `ni`, `nc`, and `ncm` are equal to the character `"c"`, only the next screening function identifier and next screening reference can be changed. The next screening function identifier cannot be equal to `fail`. If the next screening function identifier is not equal to `stop`, the next screening reference must be specified. Otherwise, only the blocked DPC can be changed.

The blocked DPC screen can reference one of the following screens.

- Allowed Affected Destination Field
- Allowed CGPA
- Allowed ISUP

Verifying the Gateway Screening Configuration

Enter the following commands to verify that these screens are in the database.

- `rtrv-scr-destfld:all=yes`
- `rtrv-scr-cgpa:all=yes`
- `rtrv-scr-isup:all=yes`

Gateway Screening Configuration Procedures

If the desired screen is not in the database, perform one of these procedures to add the desired screen to the database or change an existing screen in the database.

- *Adding an Allowed Affected Destination Field Screen*
- *Adding an Allowed Calling Party Address Screen*
- *Adding an Allowed ISUP Message Type Screen*
- *Changing an Allowed Affected Destination Field Screen*
- *Changing an Allowed Calling Party Address Screen*
- *Changing an Allowed ISUP Message Type Screen*

If the NSFI is `stop`, the screening of the message will stop at the specified blocked DPC screen. If the NSFI is either `cgpa`, `destfld`, or `isup`, then any message containing a point code that is not listed in the blocked DPC screen with a NSFI equal to `fail`, will continue to be screened with either the allowed CGPA, allowed DESTFLD, or allowed ISUP screen. All subsequent entries for that screening reference must contain a numeric point code value, the NSFI must be equal to `fail`, and the `nsr` parameter cannot be specified. Any message that contains a DPC in the blocked DPC screen with the NSFI equal to `fail` will be rejected from the network and the screening process is stopped.

The `pcst` or `npcst` parameters, specifying whether or not the ITU-I or 14-bit ITU-N point code is a spare point code, cannot be used with the `zone=c` or `npc=c` parameters.

Specifying a Range of Values

A range of values can be specified for the point code parameters `ni`, `nc`, or `ncm`.

If a range of values is specified for any of these parameters, and the value of the other parameters match existing values for the screening reference name, the range of values for the point code parameter cannot include any values for that parameter that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NI       NC       NCM      NSFI    NSR/ACT
SCR1  C        C        C        CGPA    cg01
SCR1  240      001      010      FAIL    ------
SCR1  241      010      020      FAIL    ------
```

Another entry for screening reference `scr1` with the `ni` value of 240 and the `nc` value of 001 cannot be specified if the range of values for the `ncm` parameter includes the value 010.

The ANSI point code parameter values can be specified as a single value, a range of values, or with an asterisk (*). The asterisk specifies all possible values for the `ni`, `nc`, and `ncm` parameters. *Table 51: Valid Value Combinations for ANSI Point Code Parameters* shows the valid combinations of these parameter values.

Table 51: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk
Range of Values	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

A range of values can also be specified for an ITU-I or 24-bit ITU-N point code parameter using a combination of asterisks (*) and single values for the point code parameters. *Table 52: Valid Value Combinations for ITU-I Point Code Parameters* shows the valid combinations of the ITU-I parameter values. *Table 53: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 52: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk

ZONE	AREA	ID
Asterisk	Asterisk	Asterisk

Table 53: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

1. Display the blocked DPC screens in the database using the `rtrv-scr-blkdpc` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = BLOCKED DPC
SR    REF  RULES
GW12  YES     2
IEC   YES     6
WRD2  YES     1
WRD3  NO      4
WRD4  YES     9
```

   From the `rtrv-scr-blkdpc` output, display the blocked DPC screen you wish to change using the `rtrv-scr-blkdpc` command with the screening reference name. For this example, enter this command.

   `rtrv-scr-blkdpc:sr=gw12`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = BLOCKED DPC
SR    NI       NC       NCM      NSFI    NSR/ACT
GW12  C        C        C        CGPA    GW14
GW12  003      003      003      FAIL    ------
```

   If a gateway screening stop action set is to be assigned to the blocked DPC screen being changed in the database, go to step 2.

   Step 2 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen being changed in this procedure is STOP. If the NSFI of the screen will be changed to STOP, but a gateway screening stop action set name will not be assigned to the screen, skip steps 2 and 3 and go to step 4. If the NSFI of the screen will not be STOP, skip step 2 and go to step 3.

2. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

   If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

   Note: If the NSFI of the screen being changed in this procedure will be STOP or FAIL, or if the NSFI of the screen is not being changed, skip step 3 and go to step 4.

3. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 5 is in the database.

   If the desired screen is not in the database, go to one of the procedures shown in the *Gateway Screening Configuration Procedures* section to add the desired screen to the database or change an existing screen in the database.

   Note: If any of these conditions apply to this procedure, skip this step and go to step 5:

   - The point code in the screen is not being changed.
   - The screen being changed contains either an ANSI or 24-bit ITU-N point code.
   - The ITU-I or 14-bit ITU-N non-spare point code in the screen is not being changed to an ITU-I or 14-bit ITU-N spare point code.
   - The point code in the screen is an ITU-I or 14-bit ITU-N spare point code or the screening reference contains other screens with ITU-I or 14-bit ITU-N spare point codes.

4. Display the status of the ITU National and International Spare Point Code Support feature by entering the `rtrv-ctrl-feat` command with the ITU National and International Spare Point Code Support feature part number.

   Enter this command.

   `rtrv-ctrl-feat:partnum=893013601`

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum   Status Quantity
Spare Point Code Support  893013601 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 ITU National and International Spare Point Code Support feature is enabled, go to step 5.

If the ITU National and International Spare Point Code Support feature is not enabled, perform the "Activating the ITU National and International Spare Point Code Support Feature" procedure in the Database *Administration Manual - SS7* to enable the ITU National and International Spare Point Code Support feature as required. After the feature has been enabled, go to step 5.

5. Change the attributes of a blocked DPC screen using the `chg-scr-blkdpc` command.

   If a gateway screening stop action is to be assigned to the blocked DPC screen being changed, enter the `chg-scr-blkdpc` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 2.

   The current values for the `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, and `sp` parameters must be entered exactly as shown in the `rtrv-scr-blkdpc` output in step 1.

   The following list contains the values for the `nni`, `nnc`, `nncm`, `nzone`, `narea`, `nid`, `nnpc`, `nmsa`, `nssa`, and `nsp` parameters:

   - nni – 0 - 255, c, or an asterisk (*)
   - nnc – 0 - 255, c, or an asterisk (*)
   - nncm – 0 - 255, c, or an asterisk (*)
   - nzone – 0 - 7, c, or an asterisk (*)
   - narea – 0 - 255, c, or an asterisk (*)
   - nid – 0 - 7, c, or an asterisk (*)
   - nnpc – 1 - 16383, c, or an asterisk (*)
   - nmsa – 0 - 255, c, or an asterisk (*)
   - nssa – 0 - 255, c, or an asterisk (*)
   - nsp – 0 - 255, c, or an asterisk (*)

   A range of values can be specified for the `nni`, `nnc`, and `nncm` parameters. See the *"Specifying a Range of Values"* section for more information on how the asterisk and a range of values are used for the `nni`, `nnc`, and `nncm` parameters.

   To change an ITU-I or 14-bit ITU-N spare point code to a non-spare point code, both the `pcst=s` and `npcst=none` parameters must be specified with the `chg-scr-blkdpc` command.

   To change an ITU-I or 14-bit ITU-N non-spare point code to a spare point code, the `npcst=s` parameter must be specified with the `chg-scr-blkdpc` command. The `pcst` parameter does not have to be specified.

   If the current point code in the screen being changed is either an ITU-I or 14-bit ITU-N spare point code, the `pcst=s` parameter must be specified with the `chg-scr-blkdpc` command.

   If the current point code in the screen being changed is either an ITU-I or 14-bit ITU-N non-spare point code, the `pcst` parameter does not have to be specified with the `chg-scr-blkdpc` command. If the `pcst` parameter is specified for a screen containing either an ITU-I or 14-bit ITU-N non-spare point code, the `pcst` parameter value must be `none`.

The `pcst` or `npcst` parameters cannot be used with the `zone=c` or `npc=c` parameters.

For this example, enter this command.

```
chg-scr-blkdpc:sr=gw12:ni=003:nc=003:ncm=003:nni=230:nnc=230 :nncm=230
```

The following messages appear.

```
rlghncxa03w 06-10-25 15:27:30 GMT  EAGLE5 36.0.0
CHG-SCR-BLKDPC: SCREEN SET AFFECTED - GW12  1% FULL
CHG-SCR-BLKDPC: MASP A - COMPLTD
```

6. Verify the changes using the `rtrv-scr-blkdpc` command with the screening reference name used in step 5.

   For this example, enter this command.

   ```
   rtrv-scr-blkdpc:sr=gw12
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
   SCREEN = BLOCKED DPC
   SR    NI       NC       NCM      NSFI    NSR/ACT
   GW12  C        C        C        CGPA    GW14
   GW12  230      230      230      FAIL    ------
   ```

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

   The following 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.
   ```

Chapter 9

Allowed Destination Point Code (DPC) Screen Configuration

Topics:

Chapter 9, Allowed Destination Point Code (DPC) Screen Configuration, contains the procedures necessary to configure allowed destination point code screens.

Introduction

The allowed destination point code (DPC) screen identifies a set of DPC's that are allowed to receive SS7 messages from another network. The gray shaded areas in *Figure 25: Allowed DPC Screening Functions* shows the fields of the SS7 message that are checked by the allowed DPC screening function.

Gateway Screening Actions

If a match is not found, the message is discarded.

If a match is found, the `nsfi` is examined to determine the next step in the screening process. If the `nsfi` value is any value other than `stop`, the next screening reference (`nsr`) is identified and the screening process continues to the next screen identified by the `nsfi` and `nsr` parameter values.

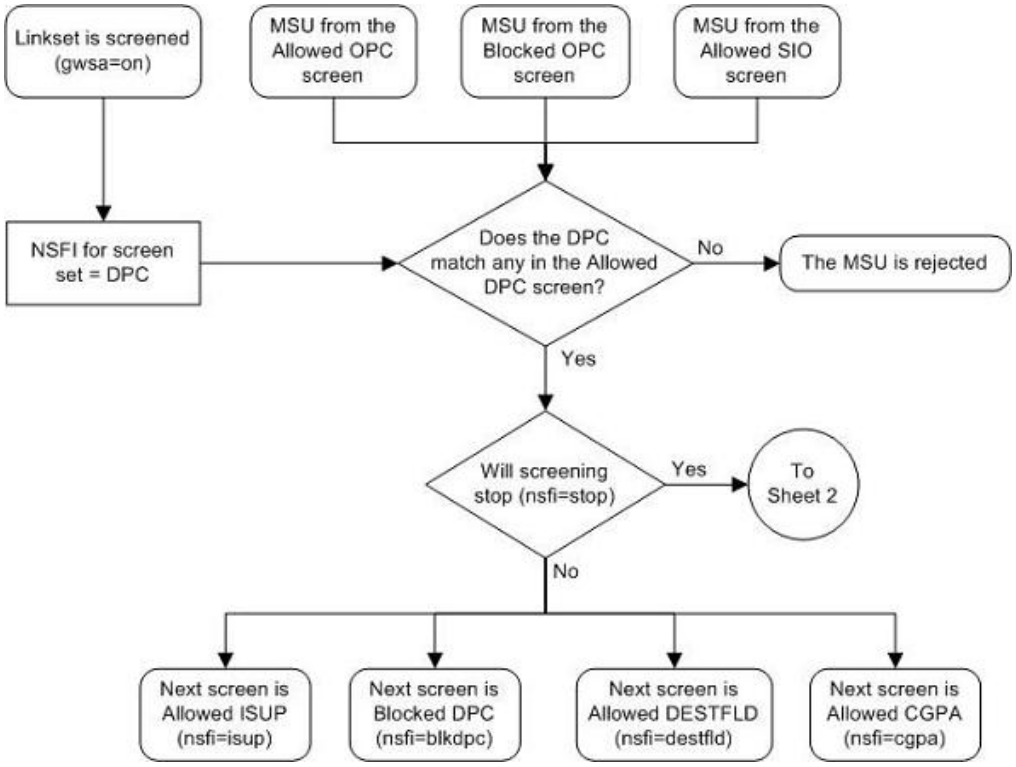
If the `nsfi` is equal to `stop`, the screening process stops and the message is processed. If a gateway screening stop action set is specified with the screen, shown by the `actname` parameter value, the message is processed according to the gateway screening stop actions that are assigned to the gateway screening stop action set.

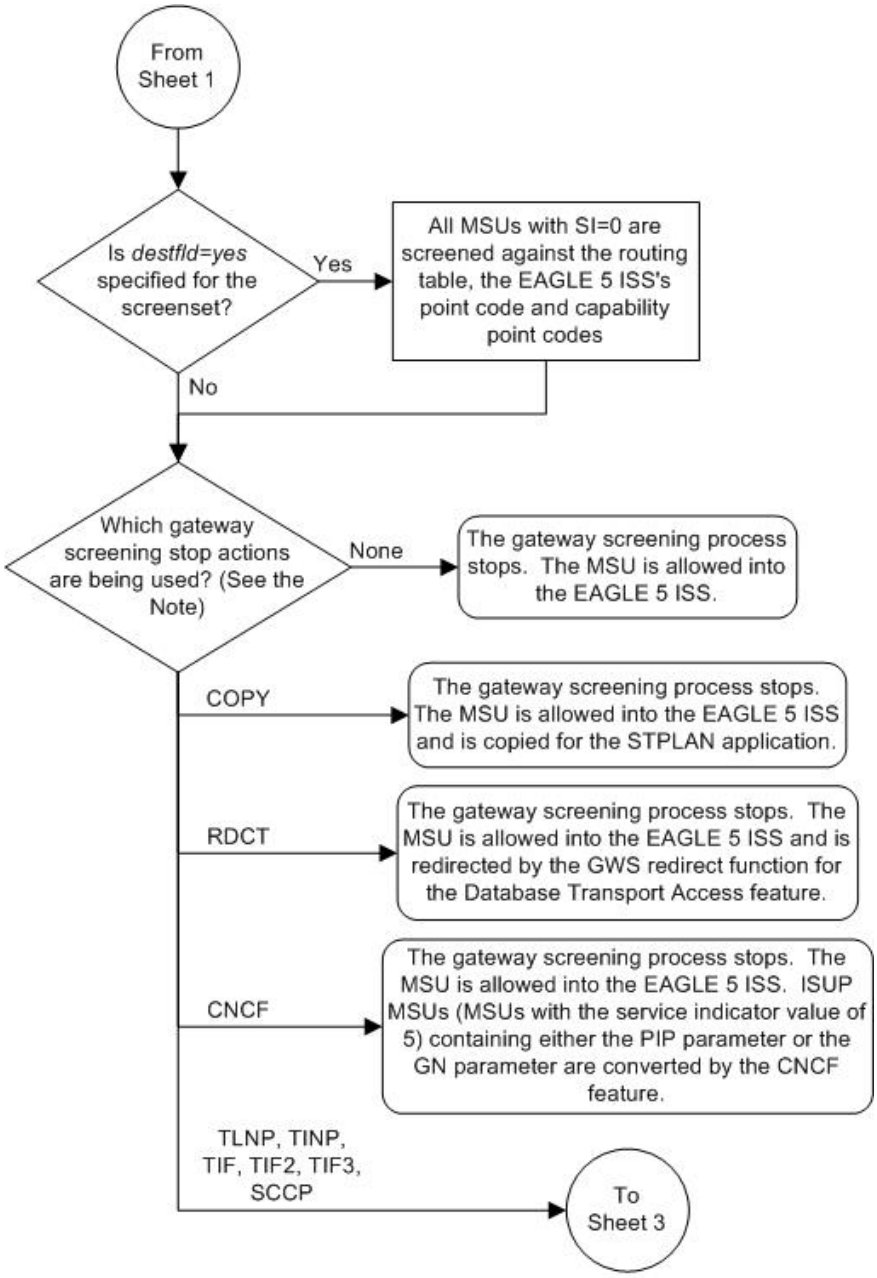
- If the `copy` gateway screening stop action is specified, the message is processed and a copy of the message is sent by the STPLAN feature to an external application.
- If the `rdct` (redirect) gateway screening stop action is specified,the message is diverted from the original destination and sent to another destination with the Database Transport Access feature, specified by global title translation, for further processing.
- If the `cncf` gateway screening stop action is specified, the PIP parameter in the incoming ISUP IAM message is converted to the GN parameter. The GN parameter in the incoming ISUP IAM message is converted to the PIP parameter. The message is then sent to the node specified by the DPC in the routing label in the message. For more information on the Calling Name Conversion Facility feature, see *Calling Name Conversion Facility (CNCF) Configuration*.
- If the `tlnp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are processed either by the ISUP NP with EPAP feature (if the ISUP NP with EPAP feature is enabled and turned on) or by the Triggerless LNP feature (if the Triggerless LNP feature is turned on). The ISUP NP with EPAP feature is discussed in more detail in the *Feature Manual - G-Port*. The Triggerless LNP feature is discussed in more detail in the *LNP Feature Activation Guide*.
- If the `tinp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are intercepted by the Triggerless ISUP based Number Portability (TINP) feature and converted to include the routing number (RN) if the call is to a ported number. The TINP feature is discussed in more detail in the *Feature Manual - G-Port*.
- If the `tif`, `tif2`, or `tif3` gateway screening stop actions are specified, TIF processing is applied to the message.
- If the `sccp` gateway screening stop action is specified, MTP routed SCCP UDT/XUDT are forwarded to the service modules for further processing.

Allowed DPC Screening Actions

Figure 24: Allowed DPC Screening Actions shows the screening actions of the allowed DPC screen.

Figure 24: Allowed DPC Screening Actions


Linkset is screened (gwsa=on)
MSU from the Allowed OPC screen
MSU from the Blocked OPC screen
MSU from the Allowed SIO screen
NSFI for screen set = DPC
Does the DPC match any in the Allowed DPC screen?
No
The MSU is rejected
Yes
Will screening stop (nsfi=stop)
Yes
To Sheet 2
No
Next screen is Allowed ISUP (nsfi=isup)
Next screen is Blocked DPC (nsfi=blkdpc)
Next screen is Allowed DESTFLD (nsfi=destfld)
Next screen is Allowed CGPA (nsfi=cgpa)


From Sheet 1
Is destfld=yes specified for the screenset?
Yes
All MSUs with SI=0 are screened against the routing table, the EAGLE 5 ISS's point code and capability point codes
No
Which gateway screening stop actions are being used? (See the Note)
None
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS.
COPY
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is copied for the STPLAN application.
RDCT
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is redirected by the GWS redirect function for the Database Transport Access feature.
CNCF
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS. ISUP MSUs (MSUs with the service indicator value of 5) containing either the PIP parameter or the GN parameter are converted by the CNCF feature.
TLNP, TINP, TIF, TIF2, TIF3, SCCP
To Sheet 3
Note: Combinations of the gateway screening stop actions shown on Sheets 2 and 3 may be assigned to a gateway screening stop action set. Refer to the Configuring Gateway Screening Stop Action Sets and the Configuring TLNP Gateway Screening Stop Action Sets procedures in Chapter 2 of this manual for the combinations that can be used.

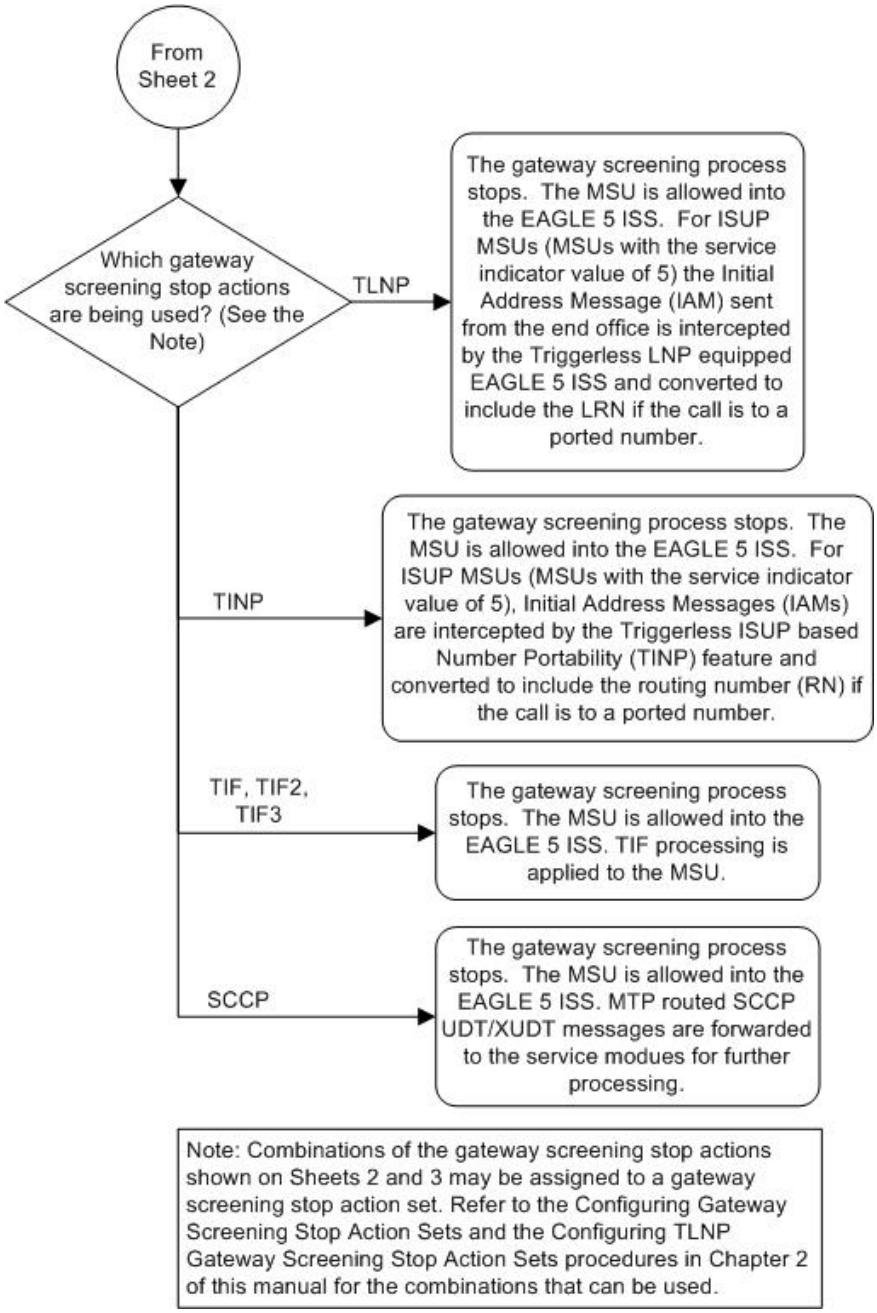
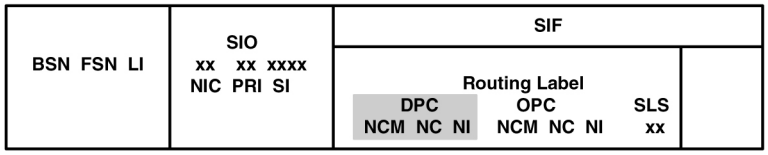
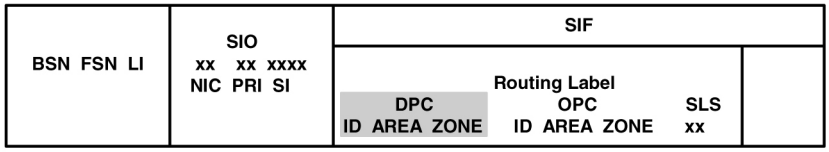


Figure 25: Allowed DPC Screening Functions

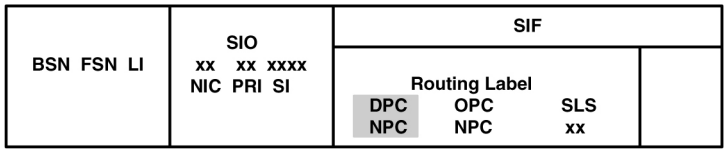
ANSI MSU (ANSI Message Signal Unit)



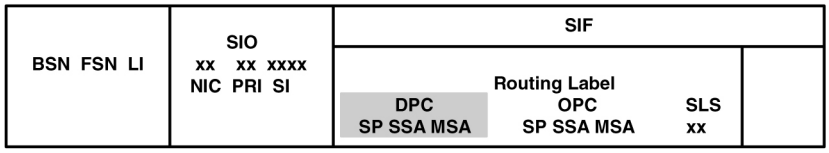
ITU-I MSU (ITU International Message Signal Unit)



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



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



Adding an Allowed DPC Screen

This procedure is used to add an allowed destination point code (DPC) screen to the database using the `ent-scr-dpc` command. The parameters used by the `ent-scr-dpc` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The examples in this procedure are used to add the allowed DPC screen data shown in *Table 54: Example Gateway Screening Allowed DPC Configuration Table* and based on the example configurations shown in *Figure 5: Gateway Screening Configuration - Example 1*, *Figure 7: Gateway Screening Configuration - Example 3*, and *Figure 11: Gateway Screening Configuration - Example 7*.

Table 54: Example Gateway Screening Allowed DPC Configuration Table

Screening Reference	NI	NC	NCM	NSFI	NSR
gws9	003	003	003	blkdpc	gw12
iec	070	070	025&&135	blkdpc	gws9
isp2	073	200	059	isup	isp2
tup1	050	034	049	isup	tup1

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The allowed DPC screen can reference one of the following screens.

- Blocked DPC
- Allowed Affected Destination Field
- Allowed CGPA
- Allowed ISUP

Verifying the Gateway Screening Configuration

Enter the following commands to verify that these screens are in the database.

- `rtrv-scr-blkdpc:all=yes`
- `rtrv-scr-destfld:all=yes`
- `rtrv-scr-cgpa:all=yes`
- `rtrv-scr-isup:all=yes`

Gateway Screening Configuration Procedures

If the desired screen is not in the database, perform one of these procedures to add the desired screen to the database or change an existing screen in the database.

- *Adding a Blocked DPC Screen*
- *Adding an Allowed Affected Destination Field Screen*
- *Adding an Allowed Calling Party Address Screen*
- *Adding an Allowed ISUP Message Type Screen*
- *Changing a Blocked DPC Screen*
- *Changing an Allowed Affected Destination Field Screen*
- *Changing an Allowed Calling Party Address Screen*
- *Changing an Allowed ISUP Message Type Screen*

Specifying a Range of Values

A range of values can be specified for the point code parameters `ni`, `nc`, or `ncm`.

If a range of values is specified for any of these parameters, and the value of the other parameters match existing values for the screening reference name, the range of values for the point code parameter

cannot include any values for that parameter that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NI       NC       NCM      NSFI    NSR/ACT
SCR1  240      001      010      CGPA    ------
SCR1  241      010      020      STOP    ------
```

Another entry for screening reference `scr1` with the `ni` value of 240 and the `nc` value of 001 cannot be specified if the range of values for the `ncm` parameter includes the value 010.

The ANSI point code parameter values can be specified as a single value, a range of values, or with an asterisk (*). The asterisk specifies all possible values for the `ni`, `nc`, and `ncm` parameters. *Table 55: Valid Value Combinations for ANSI Point Code Parameters* shows the valid combinations of these parameter values.

Table 55: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk
Range of Values	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

A range of values can also be specified for an ITU-I or 24-bit ITU-N point code parameter using a combination of asterisks (*) and single values for the point code parameters. *Table 56: Valid Value Combinations for ITU-I Point Code Parameters* shows the valid combinations of the ITU-I parameter values. *Table 57: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 56: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk

ZONE	AREA	ID
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 57: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

1. Verify that the gateway screening feature is on, by entering the `rtrv-feat` command.

   If the gateway screening feature is on, the `GWS` 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*.

   If the gateway screening feature is on, shown by the entry `GWS = on` in the `rtrv-feat` command output, skip step 2, and go to step 3.

2. Turn the gateway screening feature on by entering this command.

   ```
   chg-feat:gws=on
   ```

   Note: Once the gateway screening feature is turned on with the `chg-feat` command, it cannot be turned off.

   Note: The gateway screening feature must be purchased before you turn this feature on with the `chg-feat` command. If you are not sure if you have purchased the gateway screening feature, contact your Tekelec Sales Representative or Account Representative.

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

   ```
   rlghncxa03w 06-10-28 11:43:04 GMT EAGLE5 36.0.0
   CHG-FEAT: MASP A - COMPLTD
   ```

3. Display all allowed DPC screens in the database using the `rtrv-scr-dpc` command.

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
   SCREEN = ALLOWED DPC
   SR    REF  RULES
   IEC   YES     6
   ```

```
WRD2  YES     1
WRD4  YES     9
```

If the screening reference names that you wish to add with this procedure are not shown in the `rtrv-scr-dpc` command output, go to step 2. For this example, the screening reference names are not shown. If these screening reference names are shown in the `rtrv-scr-dpc` command output, make sure the screening data you wish to enter is not already in the database by entering the `rtrv-scr-dpc` command with the screening reference name. For example, enter the `rtrv-scr-dpc:sr=iec` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED DPC
SR    NI       NC       NCM      NSFI    NSR/ACT
IEC   240      001      010      STOP    ------
IEC   241      010      *        CGPA    cg04
SR      NPC                     NSFI    NSR/ACT
IEC     00235                   CGPA    cg04
IEC     00240                   CGPA    cg01
SR      ZONE   AREA     ID       NSFI    NSR/ACT
IEC     1      003      4        BLKDPC  blk1
IEC     1      003      5        STOP    ------
```

If a gateway screening stop action set is to be assigned to the allowed DPC screen being added to the database, go to step 4.

Step 4 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen being added in this procedure is STOP. If the NSFI of the new screen will be STOP, but a gateway screening stop action set name will not be assigned to the new screen, skip steps 4, 5, and 6 and go to step 7. If the NSFI of the new screen is not STOP, skip step 4 and 5, and go to step 6.

4. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:27:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

   If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

   Note: If the gateway screening stop action set being assigned to the Allowed DPC screen does not contain the redirect stop action, skip step 5 and go to step 6.

5. Verify the EAGLE 5 ISS's point code by entering the `rtrv-sid` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT  EAGLE5 36.0.0
PCA              PCI              PCN           CLLI            PCTYPE
100-100-100      3-75-7           7-9-8-1       rlghncxa03w     OTHER

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

CPCA (LNP)
005-005-002       005-005-004       005-005-005      006-006-006

CPCI
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
```

CAUTION: Redirecting SLTA/SLTM messages prevents SLTA/SLTM messages from being returned to the EAGLE 5 ISS. The signaling link carrying these messages will fail if these messages are not returned to the EAGLE 5 ISS. To prevent SLTA/SLTM messages from being redirected, gateway screening stop action sets containing the redirect stop action should not be assigned to Allowed DPC screens containing the EAGLE 5 ISS's point code.

Note: If the NSFI of the screen being added in this procedure is STOP, skip step 6 and go to step 7.

6. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 8 is in the database.

   If the desired screen is not in the database, perform one of the procedures shown in the *Gateway Screening Configuration Procedures* section to add the desired screen to the database or change an existing screen in the database.

   Note: If the point code being added in this procedure is not an ITU-I or 14-bit ITU-N spare point code, continue the procedure with step 8.

   Note: If the point code being added in this procedure is an ITU-I or 14-bit ITU-N spare point code and the screening reference contains ITU-I or 14-bit ITU-N spare point codes, continue the procedure with step 8.

7. Display the status of the ITU National and International Spare Point Code Support feature by entering the `rtrv-ctrl-feat` command with the ITU National and International Spare Point Code Support feature part number.

   Enter this command.

   `rtrv-ctrl-feat:partnum=893013601`

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum   Status Quantity
```

```
Spare Point Code Support  893013601 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 ITU National and International Spare Point Code Support feature is enabled, go to step 8.

If the ITU National and International Spare Point Code Support feature is not enabled, perform the "Activating the ITU National and International Spare Point Code Support Feature" procedure in the Database *Administration Manual* - SS7 to enable the ITU National and International Spare Point Code Support feature as required. After the feature has been enabled, go to step 8.

8. Add a new allowed DPC screen to the database using the `ent-scr-dpc` command.

   If a gateway screening stop action is to be assigned to the allowed DPC screen being added, enter the `ent-scr-dpc` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 4.

   CAUTION: Redirecting SLTA/SLTM messages prevents SLTA/SLTM messages from being returned to the EAGLE 5 ISS. The signaling link carrying these messages will fail if these messages are not returned to the EAGLE 5 ISS. To prevent SLTA/SLTM messages from being redirected, gateway screening stop action sets containing the redirect stop action should not be assigned to Allowed DPC screens containing the EAGLE 5 ISS's point code, shown in step 5.

   The following list contains the values for `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, and `sp` parameters:

   - ni – 0 - 255 or an asterisk (*)
   - nc – 0 - 255 or an asterisk (*)
   - ncm – 0 - 255 or an asterisk (*)
   - zone – 0 - 7 or an asterisk (*)
   - area – 0 - 255 or an asterisk (*)
   - id – 0 - 7 or an asterisk (*)
   - npc – 1 - 16383 or an asterisk (*)
   - msa – 0 - 255 or an asterisk (*)
   - ssa – 0 - 255 or an asterisk (*)
   - sp – 0 - 255 or an asterisk (*)

   A range of values can be specified for the `ni`, `nc`, and `ncm` parameters. See the *"Specifying a Range of Values"* section for more information on how the asterisk and a range of values are used for the `ni`, `nc`, and `ncm` parameters. To add a spare point code to the allowed DPC screen, the `pcst=s` parameter must be specified.

   To add a non-spare point code to the allowed DPC screen, the `pcst` parameter does not have to be specified. If the `pcst` parameter is specified for a screen containing an ITU-I or 14-bit ITU-N non-spare point code, the value must be `none`.

   For this example, enter these commands.

```
ent-scr-dpc:sr=gws9:ni=003:nc=003:ncm=003:nsfi=blkdpc:nsr=gw12
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
ENT-SCR-DPC:  SCREEN SET AFFECTED - GWS9  1% FULL
ENT-SCR-DPC:  MASP A - COMPLTD
```

```
ent-scr-dpc:sr=isp2:ni=073:nc=200:ncm=059:nsfi=isup:nsr=isp2
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
ENT-SCR-DPC:  SCREEN SET AFFECTED - ISP2  1% FULL
ENT-SCR-DPC:  MASP A - COMPLTD
```

```
ent-scr-dpc:sr=tup1:ni=050:nc=034:ncm=059:nsfi=isup:nsr=tup1
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
ENT-SCR-DPC:  SCREEN SET AFFECTED - TUP1  1% FULL
ENT-SCR-DPC:  MASP A - COMPLTD
```

```
ent-scr-dpc:sr=iec:ni=070:nc=070:ncm=025&&135:nsfi=blkdpc :nsr=gws9
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
ENT-SCR-DPC:  SCREEN SET AFFECTED - IEC  1% FULL
ENT-SCR-DPC:  MASP A - COMPLTD
```

9. Verify the changes using the `rtrv-scr-dpc` command with the screening reference name used in step 8.

   For this example, enter these commands.

   ```
   rtrv-scr-dpc:sr=gws9
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED DPC
   SR    NI       NC       NCM      NSFI    NSR/ACT
   GWS9  003      003      003      BLKDPC  GW12
   ```

   ```
   rtrv-scr-dpc:sr=iec
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:31:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED DPC
   SR    NI       NC       NCM      NSFI    NSR/ACT
   IEC   070      070      025&&135 BLKDPC  GWS9
   ```

   ```
   rtrv-scr-dpc:sr=isp2
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:31:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED DPC
   ```

```
SR    NI       NC       NCM      NSFI    NSR/ACT
ISP2  073      200      059      ISUP    ISP2
```

`rtrv-scr-dpc:sr=tup1`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:31:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED DPC
SR    NI       NC       NCM      NSFI    NSR/ACT
TUP1  050      034      049      ISUP    TUP1
```

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

    The following 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.
```

Removing an Allowed DPC Screen

This procedure is used to remove an allowed destination point code (DPC) screen from the database using the `dlt-scr-dpc` command. The parameters used by the `dlt-scr-dpc` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure removes the allowed DPC screen `gws9` from the database.

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The allowed DPC screen can be referenced by one of the following screens.

- Screen Set
- Allowed OPC
- Blocked OPC
- Allowed SIO

Verifying the Gateway Screening Configuration

Enter the following commands to verify that none of these screens reference the allowed DPC screen being removed from the database.

- `rtrv-scrset:nsfi=dpc`
- `rtrv-scr-opc:nsfi=dpc`
- `rtrv-scr-blkopc:nsfi=dpc`
- `rtrv-scr-sio:nsfi=dpc`

Gateway Screening Configuration Procedures

To change the NSFI of any of these screens, perform one of these procedures.

- *Changing a Screen Set*

- *Changing an Allowed OPC Screen*
- *Changing a Blocked OPC Screen*
- *Changing an Allowed SIO Screen*

1. Display the allowed DPC screens in the database using the `rtrv-scr-dpc` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED DPC

SR    REF  RULES
GWS9  YES     1
IEC   YES     6
ISP2  YES     1
TUP1  YES     1
WRD2  YES     1
WRD4  YES     9
```

   From the `rtrv-scr-dpc` output, display the allowed DPC screen you wish to remove using the `rtrv-scr-dpc` command with the screening reference name. For this example, enter this command.

   `rtrv-scr-dpc:sr=gws9`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED DPC
SR    NI       NC       NCM      NSFI    NSR/ACT
GWS9  003      003      003      BLKDPC  GW12
```

2. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen being removed is not referenced by other screens in the database.

   If the screen being removed is referenced by other screens, perform the procedures shown in the *Gateway Screening Configuration Procedures* section to change the NSFI of those screens to reference other screens or change the NSFI of these screens to STOP.

3. Remove the allowed DPC screen from the database using the `dlt-scr-dpc` command with the screening reference name shown in the `rtrv-scr-dpc` output in step 1 and with the point code parameter values (`ni`, `nc`, `ncm`, or `zone`, `area`, `id`, or `npc`, or `msa`, `ssa`, `sp`) of the screen being removed from the database.

   The values for these parameters must be entered exactly as shown in the `rtrv-scr-dpc` output.

   To remove an entry containing either an ITU-I or a 14-bit ITU-N spare point code, the `pcst=s` parameter must be specified with the `dlt-scr-dpc` command.

   To remove an entry containing either an ITU-I or a 14-bit ITU-N non-spare point code, the `pcst` parameter does not have to be specified with the `dlt-scr-dpc` command. If the `pcst` parameter is specified, the value must be `none`.

   For this example, enter this command.

   `dlt-scr-dpc:sr=gws9:ni=003:nc=003:ncm=003`

   A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
DLT-SCR-DPC:  SCREEN SET AFFECTED - GWS9  0% FULL
DLT-SCR-DPC:  MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-scr-dpc` command with the screening reference name used in step 3.

   For this example, enter this command.

   ```
   rtrv-scr-dpc:sr=gws9
   ```

   The following is an example of the possible output.

   ```
   E2573 Cmd Rej: SR or NSR does not reference an existing SR
   ```

   This message shows that the specified screening reference name is not in the database and the action of the `dlt-scr-dpc` command in step 3 was successful. If the specified screening reference name contained more than one entry when the `dlt-scr-dpc` command was executed in step 3, the `rtrv-scr-dpc:sr=` command output would show the remaining entries in the screening reference instead of error message E2573.

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

   The following 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.
   ```

Changing an Allowed DPC Screen

This procedure is used to change the attributes of an allowed destination point code (DPC) screen in the database using the `chg-scr-dpc` command. The parameters used by the `chg-scr-dpc` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure change point code in the allowed DPC screen `gws9` to 009-009-009 and change the `nsfi` to `stop`.

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The allowed DPC screen can reference one of the following screens.

- Blocked DPC
- Allowed Affected Destination Field
- Allowed CGPA
- Allowed ISUP Message Type

Verifying the Gateway Screening Configuration

Enter the following commands to verify that these screens are in the database.

- `rtrv-scr-blkdpc:all=yes`
- `rtrv-scr-destfld:all=yes`
- `rtrv-scr-cgpa:all=yes`

- `rtrv-scr-isup:all=yes`

Gateway Screening Configuration Procedures

If the desired screen is not in the database, perform one of these procedures to add the desired screen to the database or change an existing screen in the database.

- *Adding a Blocked DPC Screen*
- *Adding an Allowed Affected Destination Field Screen*
- *Adding an Allowed Calling Party Address Screen*
- *Adding an Allowed ISUP Message Type Screen*
- *Changing a Blocked DPC Screen*
- *Changing an Allowed Affected Destination Field Screen*
- *Changing an Allowed Calling Party Address Screen*
- *Changing an Allowed ISUP Message Type Screen*

Specifying a Range of Values

A range of values can be specified for the point code parameters `ni`, `nc`, or `ncm`.

If a range of values is specified for any of these parameters, and the value of the other parameters match existing values for the screening reference name, the range of values for the point code parameter cannot include any values for that parameter that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NI       NC       NCM      NSFI    NSR/ACT
SCR1  240      001      010      CGPA    ------
SCR1  241      010      020      STOP    ------
```

Another entry for screening reference `scr1` with the `ni` value of 240 and the `nc` value of 001 cannot be specified if the range of values for the `ncm` parameter includes the value 010.

The ANSI point code parameter values can be specified as a single value, a range of values, or with an asterisk (*). The asterisk specifies all possible values for the `ni`, `nc`, and `ncm` parameters. *Table 58: Valid Value Combinations for ANSI Point Code Parameters* shows the valid combinations of these parameter values.

Table 58: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk

NI	NC	NCM
Range of Values	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

A range of values can also be specified for an ITU-I or 24-bit ITU-N point code parameter using a combination of asterisks (*) and single values for the point code parameters. *Table 59: Valid Value Combinations for ITU-I Point Code Parameters* shows the valid combinations of the ITU-I parameter values. *Table 60: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 59: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 60: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

1. Display the allowed DPC screens in the database using the `rtrv-scr-dpc` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED DPC
SR    REF  RULES
GWS9  YES     1
IEC   YES     6
ISP2  YES     1
TUP1  YES     1
```

```
WRD2  YES     1
WRD4  YES     9
```

From the `rtrv-scr-dpc` output, display the allowed DPC screen you wish to remove using the `rtrv-scr-dpc` command with the screening reference name. For this example, enter this command.

`rtrv-scr-dpc:sr=gws9`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED DPC
SR    NI       NC       NCM      NSFI    NSR/ACT
GWS9  003      003      003      BLKDPC  GW12
```

If a gateway screening stop action set is to be assigned to the allowed DPC screen being changed in the database, go to step 2.

Step 2 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen being changed in this procedure is STOP. If the NSFI of the screen will be changed to STOP, but a gateway screening stop action set name will not be assigned to the screen, skip steps 2, 3 , and 4, and go to step 5. If the NSFI of the screen will not be STOP, skip step 2 and 3, and go to step 4.

2. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

   If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

   Note: If the gateway screening stop action set being assigned to the Allowed DPC screen does not contain the redirect stop action, skip step 3 and go to step 4.

3. Verify the EAGLE 5 ISS's point code by entering the `rtrv-sid` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT  EAGLE5 36.0.0
PCA              PCI              PCN           CLLI             PCTYPE
100-100-100      3-75-7           7-9-8-1       rlghncxa03w      OTHER

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
```

```
CPCA (LNP)
005-005-002       005-005-004       005-005-005       006-006-006

CPCI
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
```

CAUTION: Redirecting SLTA/SLTM messages prevents SLTA/SLTM messages from being returned to the EAGLE 5 ISS. The signaling link carrying these messages will fail if these messages are not returned to the EAGLE 5 ISS. To prevent SLTA/SLTM messages from being redirected, gateway screening stop action sets containing the redirect stop action should not be assigned to Allowed DPC screens containing the EAGLE 5 ISS's point code.

Note: If the NSFI of the screen being changed in this procedure will be STOP, or if the NSFI of the screen is not being changed, skip step 4 and go to step 5.

4. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 6 is in the database.

   If the desired screen is not in the database, perform one of the procedures shown in the *Gateway Screening Configuration Procedures* section to add the desired screen to the database or change an existing screen in the database.

   Note: If any of these conditions apply to this procedure, skip step 5 and go to step 6:

   - The point code in the screen is not being changed.
   - The screen being changed contains either an ANSI or 24-bit ITU-N point code.
   - The ITU-I or 14-bit ITU-N non-spare point code in the screen is not being changed to an ITU-I or 14-bit ITU-N spare point code.
   - The point code in the screen is an ITU-I or 14-bit ITU-N spare point code or the screening reference contains other screens with ITU-I or 14-bit ITU-N spare point codes.

5. Display the status of the ITU National and International Spare Point Code Support feature by entering the `rtrv-ctrl-feat` command with the ITU National and International Spare Point Code Support feature part number.

   Enter this command.

   `rtrv-ctrl-feat:partnum=893013601`

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum   Status Quantity
Spare Point Code Support  893013601 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 ITU National and International Spare Point Code Support feature is enabled, go to step 6.

If the ITU National and International Spare Point Code Support feature is not enabled, perform the "Activating the ITU National and International Spare Point Code Support Feature" procedure in the Database *Administration Manual* - SS7 to enable the ITU National and International Spare Point Code Support feature as required. After the feature has been enabled, go to step 6.

6. Change the attributes of an allowed DPC screen using the `chg-scr-dpc` command.

   If a gateway screening stop action is to be assigned to the allowed DPC screen being changed, enter the `chg-scr-dpc` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 2.

   CAUTION: Redirecting SLTA/SLTM messages prevents SLTA/SLTM messages from being returned to the EAGLE 5 ISS. The signaling link carrying these messages will fail if these messages are not returned to the EAGLE 5 ISS. To prevent SLTA/SLTM messages from being redirected, gateway screening stop action sets containing the redirect stop action should not be assigned to Allowed DPC screens containing the EAGLE 5 ISS's point code, shown in step 3.

   The current values for the `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, and `sp` parameters must be entered exactly as shown in the `rtrv-scr-dpc` output in step 1.

   The following list contains the values for the `nni`, `nnc`, `nncm`, `nzone`, `narea`, `nid`, `nnpc`, `nmsa`, `nssa`, and `nsp` parameters:

   - nni - 0-255 or an asterisk (*)
   - nnc - 0-255 or an asterisk (*)
   - nncm - 0-255 or an asterisk (*)
   - nzone - 0-7 or an asterisk (*)
   - narea - 0-255 or an asterisk (*)
   - nid - 0-7 or an asterisk (*)
   - nnpc - 1 - 16383 or an asterisk (*)
   - nmsa - 0-255 or an asterisk (*)
   - nssa - 0-255 or an asterisk (*)
   - nsp - 0-255 or an asterisk (*)

   A range of values can be specified for the `nni`, `nnc`, and `nncm` parameters. See the *"Specifying a Range of Values"* section for more information on how the asterisk and a range of values are used for the `nni`, `nnc`, and `nncm` parameters.

   To change an ITU-I or 14-bit ITU-N spare point code to a non-spare point code, both the `pcst=s` and `npcst=none` parameters must be specified with the `chg-scr-dpc` command.

   To change an ITU-I or 14-bit ITU-N non-spare point code to a spare point code, the `npcst=s` parameter must be specified with the `chg-scr-dpc` command. The `pcst` parameter does not have to be specified.

   If the current point code in the screen being changed is either an ITU-I or 14-bit ITU-N spare point code, the `pcst=s` parameter must be specified with the `chg-scr-dpc` command.

If the current point code in the screen being changed is either an ITU-I or 14-bit ITU-N non-spare point code, the `pcst` parameter does not have to be specified with the `chg-scr-dpc` command. If the `pcst` parameter is specified for a screen containing either an ITU-I or 14-bit ITU-N non-spare point code, the `pcst` parameter value must be `none`.

For this example, enter this command.

```
chg-scr-dpc:sr=gws9:ni=003:nc=003:ncm=003:nni=009:nnc=009
:nncm=009:nsfi=stop
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:27:30 GMT  EAGLE5 36.0.0
CHG-SCR-DPC:  SCREEN SET AFFECTED - GWS9  1% FULL
CHG-SCR-DPC:  MASP A - COMPLTD
```

7. Verify the changes using the `rtrv-scr-dpc` command with the screening reference name used in step 6.

   For this example, enter this command.

   ```
   rtrv-scr-dpc:sr=gws9
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED DPC
   SR    NI       NC       NCM      NSFI    NSR/ACT
   GWS9  009      009      009      STOP    ------
   ```

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

   The following 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.
   ```

Chapter 10

Allowed Signaling Information Octet (SIO) Screen Configuration

Topics:

Chapter 10, Allowed Signaling Information Octet (SIO) Screen Configuration, contains the procedures necessary to configure allowed signaling information octet screens.

Introduction

The allowed signaling information octet (SIO) screen identifies the type of MSUs (ISUP, TCAP, etc.) that are allowed into the network. The gray shaded areas in *Figure 27: Allowed SIO Screening Function* shows the fields of the SS7 message that are checked by the allowed SIO screening function.

Gateway Screening Actions

If a match is not found, the message is discarded.

If a match is found, the `nsfi` is examined to determine the next step in the screening process. If the `nsfi` value is any value other than `stop`, the next screening reference (`nsr`) is identified and the screening process continues to the next screen identified by the `nsfi` and `nsr` parameter values.

If the `nsfi` is equal to `stop`, the screening process stops and the message is processed. If a gateway screening stop action set is specified with the screen, shown by the `actname` parameter value, the message is processed according to the gateway screening stop actions that are assigned to the gateway screening stop action set.

- If the `copy` gateway screening stop action is specified, the message is processed and a copy of the message is sent by the STPLAN feature to an external application.
- If the `rdct` (redirect) gateway screening stop action is specified,the message is diverted from the original destination and sent to another destination with the Database Transport Access feature, specified by global title translation, for further processing.
- If the `cncf` gateway screening stop action is specified, the PIP parameter in the incoming ISUP IAM message is converted to the GN parameter. The GN parameter in the incoming ISUP IAM message is converted to the PIP parameter. The message is then sent to the node specified by the DPC in the routing label in the message. For more information on the Calling Name Conversion Facility feature, see *Calling Name Conversion Facility (CNCF) Configuration*.
- If the `tlnp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are processed either by the ISUP NP with EPAP feature (if the ISUP NP with EPAP feature is enabled and turned on) or by the Triggerless LNP feature (if the Triggerless LNP feature is turned on). The ISUP NP with EPAP feature is discussed in more detail in the *Feature Manual - G-Port*. The Triggerless LNP feature is discussed in more detail in the *LNP Feature Activation Guide*.
- If the `tinp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are intercepted by the Triggerless ISUP based Number Portability (TINP) feature and converted to include the routing number (RN) if the call is to a ported number. The TINP feature is discussed in more detail in the *Feature Manual - G-Port*.
- If the `tif`, `tif2`, or `tif3` gateway screening stop actions are specified, TIF processing is applied to the message.
- If the `sccp` gateway screening stop action is specified, MTP routed SCCP UDT/XUDT are forwarded to the service modules for further processing.

Allowed SIO Screening Actions

The value of the `nsfi` parameter is based on the value of the service indicator (`si`) parameter. *Table 61: Valid Parameter Combinations for the Allowed SIO Screening Function* shows the valid combinations of `nsfi` values and service indicator values.

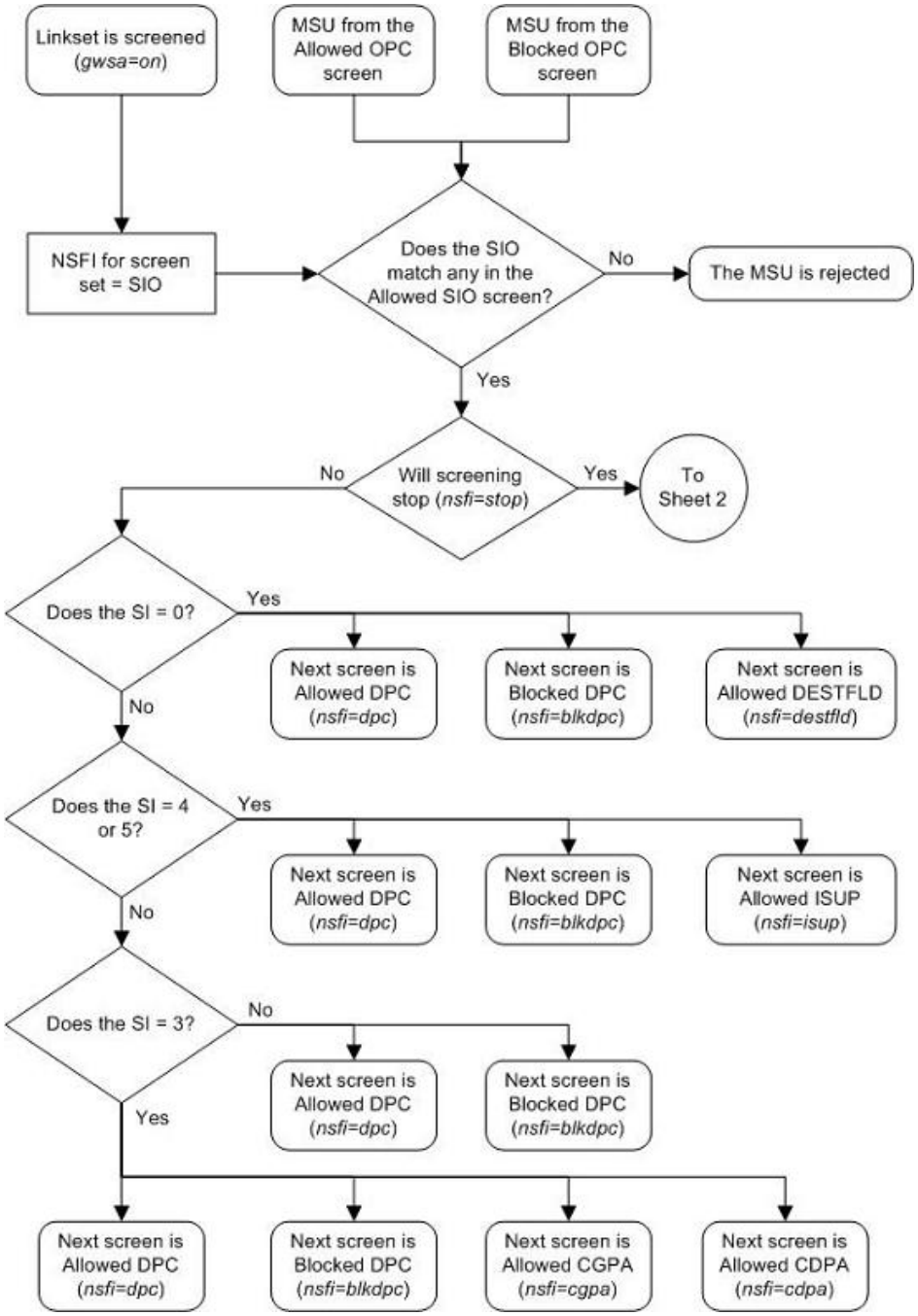
Table 61: Valid Parameter Combinations for the Allowed SIO Screening Function

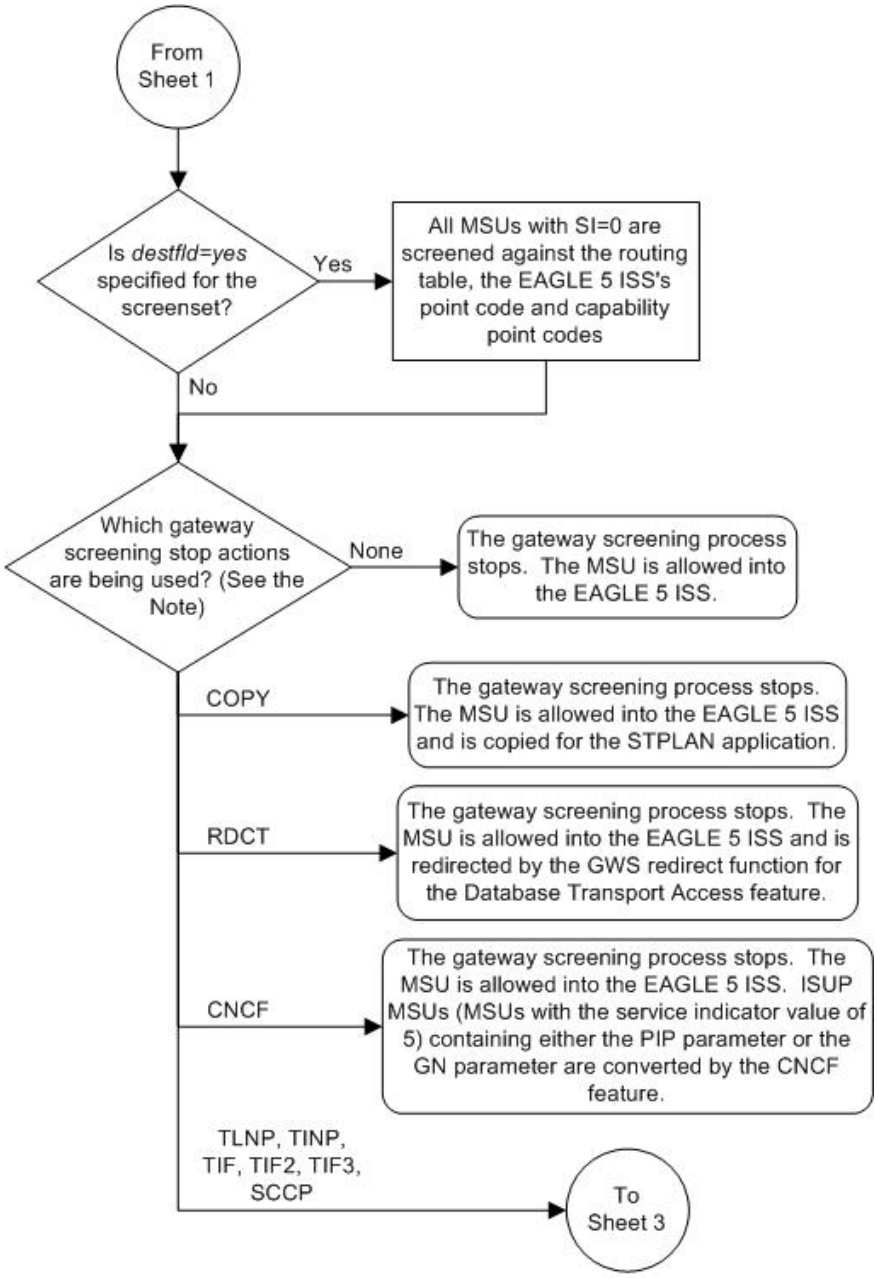
Service Indicator (SI) Values	Nest Screening Function Identifier (NSFI) Values
0	DPC, BLKDPC, DESTFLD
3	DPC, BLKDPC, CGPA, CDPA
4, 5	DPC, BLKDPC, ISUP
All other values (1, 2, 6-15)	DPC, BLKDPC

Messages containing the service indicator value 4 are TUP messages, and messages containing the service indicator value 5 are ISUP messages. Both types of messages are screened using the allowed ISUP screen. TUP messages can be screened for point codes, after the SIO screen, with the allowed and blocked DPC screens. However, if the screen set does not contain an allowed SIO screen that screens for TUP messages (messages with the service indicator value of 4), the message will be treated by the allowed ISUP message type screen as an ISUP message, even if the message contains the service indicator value of 4.

Figure 26: Allowed SIO Screening Actions shows the screening actions of the allowed SIO screen.

Figure 26: Allowed SIO Screening Actions


Linkset is screened (gwsa=on)
MSU from the Allowed OPC screen
MSU from the Blocked OPC screen
NSFI for screen set = SIO
Does the SIO match any in the Allowed SIO screen?
No
The MSU is rejected
Yes
No
Will screening stop (nsfi=stop)
Yes
To Sheet 2
Does the SI = 0?
Yes
Next screen is Allowed DPC (nsfi=dpc)
Next screen is Blocked DPC (nsfi=blkdpc)
Next screen is Allowed DESTFLD (nsfi=destfld)
No
Does the SI = 4 or 5?
Yes
Next screen is Allowed DPC (nsfi=dpc)
Next screen is Blocked DPC (nsfi=blkdpc)
Next screen is Allowed ISUP (nsfi=isup)
No
Does the SI = 3?
No
Next screen is Allowed DPC (nsfi=dpc)
Next screen is Blocked DPC (nsfi=blkdpc)
Yes
Next screen is Allowed DPC (nsfi=dpc)
Next screen is Blocked DPC (nsfi=blkdpc)
Next screen is Allowed CGPA (nsfi=cgpa)
Next screen is Allowed CDPA (nsfi=cdpa)


From Sheet 1
Is destfld=yes specified for the screenset?
Yes
All MSUs with SI=0 are screened against the routing table, the EAGLE 5 ISS's point code and capability point codes
No
Which gateway screening stop actions are being used? (See the Note)
None
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS.
COPY
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is copied for the STPLAN application.
RDCT
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is redirected by the GWS redirect function for the Database Transport Access feature.
CNCF
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS. ISUP MSUs (MSUs with the service indicator value of 5) containing either the PIP parameter or the GN parameter are converted by the CNCF feature.
TLNP, TINP, TIF, TIF2, TIF3, SCCP
To Sheet 3
Note: Combinations of the gateway screening stop actions shown on Sheets 2 and 3 may be assigned to a gateway screening stop action set. Refer to the Configuring Gateway Screening Stop Action Sets and the Configuring TLNP Gateway Screening Stop Action Sets procedures in Chapter 2 of this manual for the combinations that can be used.

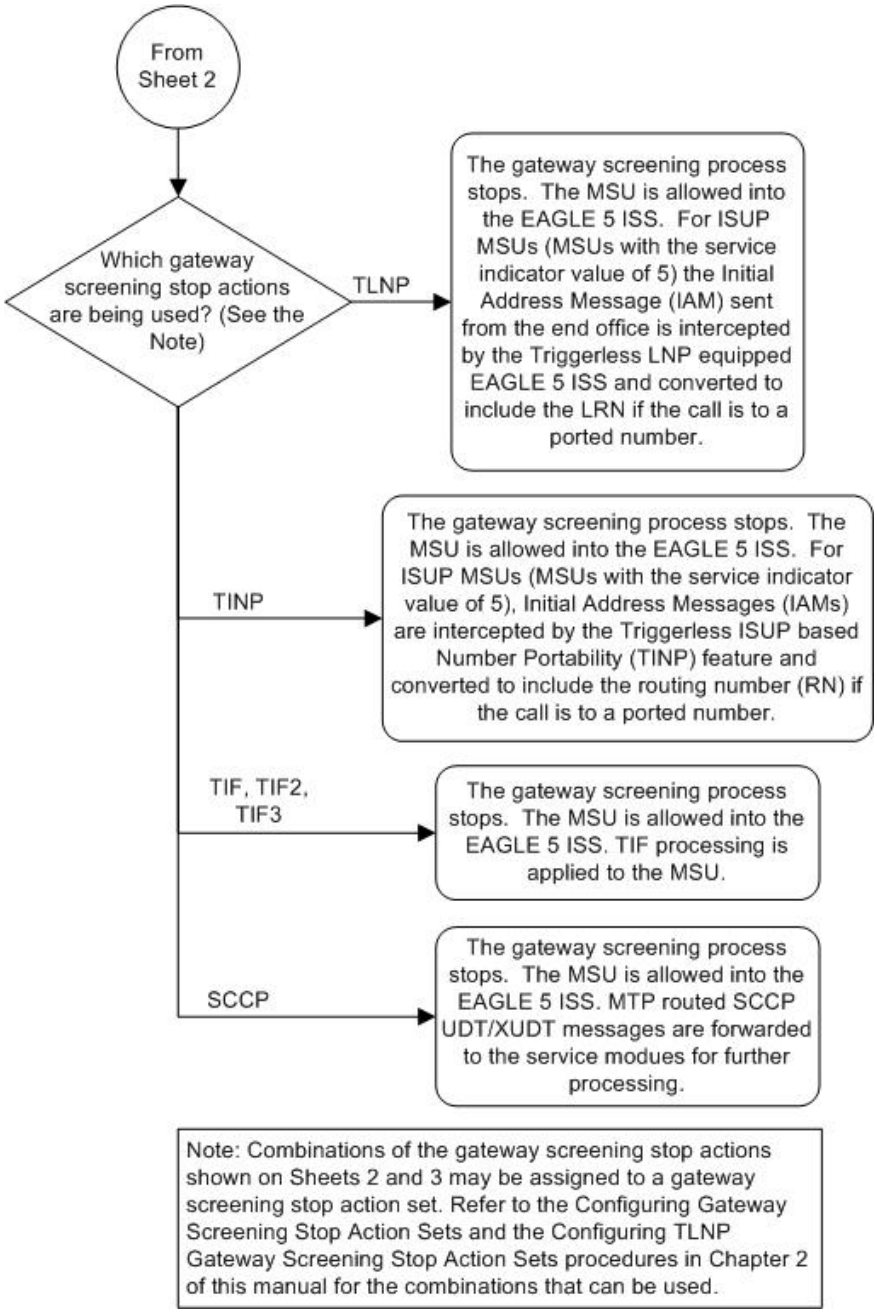
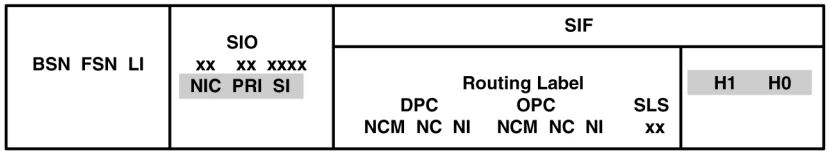
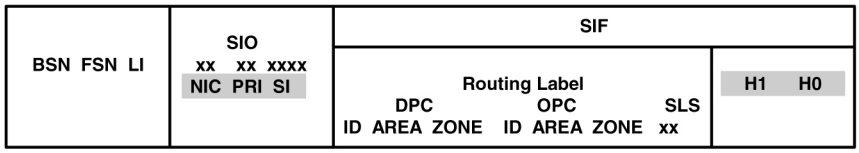


Figure 27: Allowed SIO Screening Function

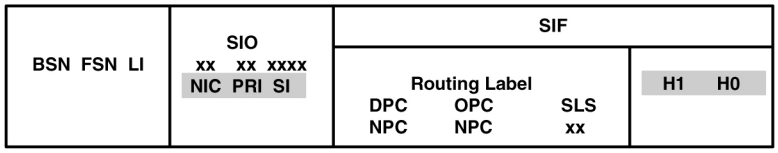
ANSI MSU (ANSI Message Signal Unit)



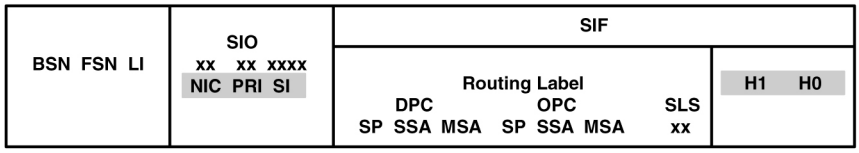
ITU-I MSU (ITU International Message Signal Unit)



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



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



Adding an Allowed SIO Screen

This procedure is used to add an allowed signaling information octet (SIO) screen to the database using the `ent-scr-sio` command. The parameters used by the `ent-scr-sio` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The examples in this procedure are used to add the allowed SIO screen data shown in *Table 62: Example Gateway Screening Allowed SIO Configuration Table* and based on the example configurations shown in *Figure 6: Gateway Screening Configuration - Example 2*, *Figure 8: Gateway Screening Configuration - Example 4*, *Figure 9: Gateway Screening Configuration - Example 5*, *Figure 10: Gateway Screening Configuration - Example 6*, and *Figure 11: Gateway Screening Configuration - Example 7*.

Table 62: Example Gateway Screening Allowed SIO Configuration Table

Screening Reference	NIC	SI	H0	H1	PRI	NSFI	NSR
fld4	2	0	4	5	3	destfld	fld5
iec	2	3	--	--	1&&3	cgpa	gw11
ls02	2	3	--	--	3	cdpa	ls03
isp1	2	5	--	--	3	isup	isp1
tup1	2	4	--	--	3	dpc	tup1
tup1	2	5	--	--	3	dpc	isp2

The allowed SIO screen can reference one of the following screens.

- Allowed DPC
- Blocked DPC
- Allowed Affected Destination Field
- Allowed ISUP Message Type
- Allowed CGPA
- Allowed CDPA

Verifying the Gateway Screening Configuration

Enter the following commands to verify that these screens are in the database.

- `rtrv-scr-dpc:all=yes`
- `rtrv-scr-blkdpc:all=yes`
- `rtrv-scr-destfld:all=yes`
- `rtrv-scr-isup:all=yes`
- `rtrv-scr-cgpa:all=yes`
- `rtrv-scr-cdpa:all=yes`

Gateway Screening Configuration Procedures

If the desired screen is not in the database, perform one of these procedures to add the desired screen to the database or change an existing screen in the database.

- *Adding an Allowed DPC Screen*
- *Adding a Blocked DPC Screen*
- *Adding an Allowed Affected Destination Field Screen*
- *Adding an Allowed ISUP Message Type Screen*
- *Adding an Allowed Calling Party Address Screen*
- *Adding an Allowed Called Party Address Screen*
- *Changing an Allowed DPC Screen*

- *Changing a Blocked DPC Screen*
- *Changing an Allowed Affected Destination Field Screen*
- *Changing an Allowed ISUP Message Type Screen*
- *Changing an Allowed Calling Party Address Screen*
- *Changing an Allowed Called Party Address Screen*

Specifying a Range of Values

A range of values can be specified for the `pri`, `h0`, and `h1` parameters. If a range of values is specified for any of these parameters and the `nic` and `si` values in the screening reference name are not changed, the range of values for the `pri`, `h0`, or `h1` parameters cannot include any values that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NIC  PRI  SI  H0     H1     NSFI    NSR/ACT
SCR1  2    3    1    4      5     DPC     LS03
SCR1  2    2    1    2      7     BLKDPC  LS04
```

Another entry for screening reference `scr1` with the same `nic` and `si` values cannot be specified if:

- The range of values for the `pri` parameter includes the values 2 or 3
- The range of values for the `h0` parameter includes the values 2 or 4
- The range of values for the `h1` parameter includes the values 5 or 7.

Specifying H0 and H1 Values

The `h0` and `h1` values must be specified if the `si` value is 0, 1, or 2. If the `si` value is 3 through 15, the `h0` and `h1` parameters cannot be specified.

The `h0` and `h1` parameters must be specified if either parameter is specified.

The H0 and H1 heading code values can be a single value, a range of values with the beginning and end of the range separated by double ampersands (for example, a range of values from 2 to 9, 2&&9), or with an asterisk (*). The asterisk specifies all possible values for the `h0` and `h1` parameters. *Table 63: Valid Value Combinations for H0 and H1 Parameters* shows the valid combinations of these parameter values.

Table 63: Valid Value Combinations for H0 and H1 Parameters

H0	H1
Single Value	Single Value
Single Value	Range of Values
Single Value	Asterisk
Range of Values	Asterisk
Asterisk	Asterisk

1. Verify that the gateway screening feature is on, by entering the `rtrv-feat` command.

If the gateway screening feature is on, the GWS 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*.

If the gateway screening feature is on, shown by the entry GWS = on in the rtrv-feat command output, skip step 2, and go to step 3.

2. Turn the gateway screening feature on by entering this command.

   chg-feat:gws=on

   Note: Once the gateway screening feature is turned on with the chg-feat command, it cannot be turned off.

   The gateway screening feature must be purchased before you turn this feature on with the chg-feat command. If you are not sure if you have purchased the gateway screening feature, contact your Tekelec Sales Representative or Account Representative.

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

```
rlghncxa03w 06-10-28 11:43:04 GMT EAGLE5 36.0.0
CHG-FEAT: MASP A - COMPLTD
```

3. Display all allowed SIO screens in the database using the rtrv-scr-sio command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED SIO
SR    REF  RULES
IEC   YES     5
WRD2  YES     1
WRD4  YES     9
```

   If the screening reference names that you wish to add with this procedure are not shown in the rtrv-scr-sio command output, go to either steps 4 or 5.

   Step 4 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen being added in this procedure is STOP. If the NSFI of the new screen will be STOP, but a gateway screening stop action set name will not be assigned to the new screen, skip steps 4 and 5 and go to step 6. If the NSFI of the new screen is not STOP, skip step 4 and go to step 5.

   If these screening reference names are shown in the rtrv-scr-sio command output, make sure the screening data you wish to enter is not already in the database by entering the rtrv-scr-sio command with the screening reference name. In this example, screen iec will have new data added to it. For this example, enter the rtrv-scr-sio:sr=iec command. The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED SIO
SR    NIC  PRI  SI  H0     H1     NSFI    NSR/ACT
IEC   2    0&&3 0   0      0      BLKDPC  WDB2
IEC   2    0&&2 0   1      1      DPC     WDB3
IEC   2    0&&1 0   2      2      STOP    ------
IEC   2    0&&3 4   --     --     STOP    ------
IEC   2    0&&2 1   *      *      DPC     WDB3
```

4. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:27:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

   If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

   Note: If the NSFI of the screen being added in this procedure is STOP, skip step 5 and go to step 6.

5. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 6 is in the database.

   If the desired screen is not in the database, perform one of the procedures shown in the *Gateway Screening Configuration Procedures* section to add the desired screen to the database or change an existing screen in the database.

6. Add a new allowed SIO screen to the database using the `ent-scr-sio` command.

   If a gateway screening stop action set is to be assigned to the new allowed SIO screen, enter the `ent-scr-sio` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 4.

   CAUTION: Redirecting SLTA/SLTM messages prevents SLTA/SLTM messages from being returned to the EAGLE 5 ISS. The signaling link carrying these messages will fail if these messages are not returned to the EAGLE 5 ISS. To prevent SLTA/SLTM messages from being redirected, gateway screening stop action sets containing the redirect stop action should not be assigned to Allowed SIO screens containing the service indicator values 1 (SI=1) or 2 (SI=2).

   The following list contains the values for `nic`, `si`, `pri`, `h0` and `h1` parameters:

   - nic – 0 - 3, or an asterisk (*)
   - si – 0 - 15
   - pri – 0 - 3, or an asterisk (*)
   - h0 – 0 - 15, or an asterisk (*)
   - h1 – 0 - 15, or an asterisk (*)

   A range of values can be specified for the `pri`, `h0`, and `h1` parameters. See the *"Specifying a Range of Values"* section for more information. See the *"Specifying H0 and H1 Values"* section for information on how the asterisk and a range of values are used for the `h0` and `h1` parameters.

The value of the `nsfi` parameter is based on the value of the service indicator (`si`) parameter. *Table 61: Valid Parameter Combinations for the Allowed SIO Screening Function* shows the valid combinations of `nsfi` values and service indicator values. For this example, enter these commands.

```
ent-scr-sio:sr=fld4:nic=2:si=0:h0=4:h1=5:pri=3:nsfi=destfld :nsr=fld5
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
ENT-SCR-SIO: MASP A - COMPLTD
```

```
ent-scr-sio:sr=iec:nic=2:si=3:pri=1&&3:nsfi=cgpa:nsr=gw11
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
ENT-SCR-SIO: MASP A - COMPLTD
```

```
ent-scr-sio:sr=ls02:nic=2:si=3:pri=3:nsfi=cdpa:nsr=ls03
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
ENT-SCR-SIO: MASP A - COMPLTD
```

```
ent-scr-sio:sr=isp1:nic=2:si=5:pri=3:nsfi=isup:nsr=isp1
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
ENT-SCR-SIO: MASP A - COMPLTD
```

```
ent-scr-sio:sr=tup1:nic=2:si=4:pri=3:nsfi=dpc:nsr=tup1
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
ENT-SCR-SIO: MASP A - COMPLTD
```

```
ent-scr-sio:sr=tup1:nic=2:si=5:pri=3:nsfi=dpc:nsr=isp2
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
ENT-SCR-SIO: MASP A - COMPLTD
```

7. Verify the changes using the `rtrv-scr-sio` command with the screening reference name used in step 6.

   For this example, enter these commands.

   ```
   rtrv-scr-sio:sr=iec
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:31:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED SIO
   SR    NIC  PRI  SI  H0     H1     NSFI    NSR/ACT
   IEC   2    0&&3 0   0      0      BLKDPC  WDB2
   IEC   2    0&&2 0   1      1      DPC     WDB3
   IEC   2    0&&1 0   2      2      STOP    ------
   IEC   2    0&&3 4   --     --     STOP    ------
   ```

```
IEC   2    0&&2 1   *      *      DPC     WDB3
IEC   2    1&&3 3   --     --     CGPA    GW11
```

`rtrv-scr-sio:sr=ls02`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:32:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED SIO
SR    NIC  PRI  SI  H0     H1     NSFI    NSR/ACT
LS02  2    3    3   --     --     CDPA    LS03
```

`rtrv-scr-sio:sr=fld4`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:33:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED SIO
SR    NIC  PRI  SI  H0     H1     NSFI    NSR/ACT
FLD4  2    3    0   4      5      DESTFLD FDL5
```

`rtrv-scr-sio:sr=isp1`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:33:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED SIO
SR    NIC  PRI  SI  H0     H1     NSFI    NSR/ACT
isp1  2    3    5   --     --     ISUP    isp1
```

`rtrv-scr-sio:sr=tup1`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:33:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED SIO
SR    NIC  PRI  SI  H0     H1     NSFI    NSR/ACT
tup1  2    3    4   --     --     DPC     tup1
tup1  2    3    5   --     --     ISUP    isp2
```

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

   The following 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.
```

Removing an Allowed SIO Screen

This procedure is used to remove an allowed signaling information octet (SIO) screen from the database using the `dlt-scr-sio` command. The parameters used by the `dlt-scr-sio` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure removes the allowed SIO screen `ls02` from the database.

The allowed SIO screen can be referenced by one of the following screens.

- Screen Set
- Allowed OPC
- Blocked OPC

Verifying the Gateway Screening Configuration

Enter the following commands to verify that none of these screens reference the allowed SIO screen being removed from the database.

- `rtrv-scrset:nsfi=sio`
- `rtrv-scr-opc:nsfi=sio`
- `rtrv-scr-blkopc:nsfi=sio`

Gateway Screening Configuration Procedures

To change the NSFI of any of these screens, perform one of these procedures.

- *Changing a Screen Set*
- *Changing an Allowed OPC Screen*
- *Changing a Blocked OPC Screen*

1. Display the allowed SIO screens in the database using the `rtrv-scr-sio` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED SIO

SR    REF  RULES
IEC   YES     6
ISP1  YES     1
WRD2  YES     1
WRD4  YES     9
LS02  YES     1
TUP1  YES     2
```

   From the `rtrv-scr-sio` output, display the allowed SIO screen you wish to remove using the `rtrv-scr-sio` command with the screening reference name. For this example, enter this command.

```
rtrv-scr-sio:sr=ls02
```

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED SIO
SR    NIC  PRI  SI  H0     H1     NSFI    NSR/ACT
LS02  2    3    3   --     --     CDPA    LS03
```

2. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen being removed is not referenced by other screens in the database.

   If the screen being removed is referenced by other screens, perform the procedures shown in the *Gateway Screening Configuration Procedures* to change the NSFI of those screens to reference other screens or change the NSFI of these screens to STOP.

3. Remove the allowed SIO to the database using the `dlt-scr-sio` command.

The `dlt-scr-sio` command must be entered with these parameters: `sr`, `nic`, `si`, `pri`. The values for these parameters must be entered exactly as shown in the `rtrv-scr-sio` output in step 1. If the screen being removed has values for the `h0` and `h1` parameters, these values must be entered with the other parameter values. If the screen being removed contains dashes for the `h0` and `h1` parameters, the `h0` and `h1` parameters cannot be specified with the `dlt-scr-sio` command. For this example, enter this command.

```
dlt-scr-sio:sr=ls02:nic=2:si=3:pri=3
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
DLT-SCR-SIO:  SCREEN SET AFFECTED - LS02  0% FULL
DLT-SCR-SIO:  MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-scr-sio` command with the screening reference name used in step 3.

   For this example, enter this command.

   ```
   rtrv-scr-sio:sr=ls02
   ```

   The following is an example of the possible output.

   ```
   E2573 Cmd Rej: SR or NSR does not reference an existing SR
   ```

   This message shows that the specified screening reference name is not in the database and the action of the `dlt-scr-sio` command in step 3 was successful. If the specified screening reference name contained more than one entry when the `dlt-scr-sio` command was executed in step 3, the `rtrv-scr-sio:sr=` command output would show the remaining entries in the screening reference instead of error message E2573.

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

   The following 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.
   ```

Changing an Allowed SIO Screen

This procedure is used to change the attributes of an allowed signaling information octet (SIO) screen in the database using the `chg-scr-sio` command. The parameters used by the `chg-scr-sio` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure change the allowed SIO screen `ls02` to an `nic` of 2, an `si` of 14, and an `nsfi` is stop.

The allowed SIO screen can reference one of the following screens.

- Allowed DPC

- Blocked DPC
- Allowed Affected Destination Field
- Allowed ISUP
- Allowed CGPA
- Allowed CDPA

Verifying the Gateway Screening Configuration

Enter the following commands to verify that these screens are in the database.

- `rtrv-scr-dpc:all=yes`
- `rtrv-scr-blkdpc:all=yes`
- `rtrv-scr-destfld:all=yes`
- `rtrv-scr-isup:all=yes`
- `rtrv-scr-cgpa:all=yes`
- `rtrv-scr-cdpa:all=yes`

Gateway Screening Configuration Procedures

If the desired screen is not in the database, perform one of these procedures to add the desired screen to the database or change an existing screen in the database.

- *Adding an Allowed DPC Screen*
- *Adding a Blocked DPC Screen*
- *Adding an Allowed Affected Destination Field Screen*
- *Adding an Allowed ISUP Message Type Screen*
- *Adding an Allowed Calling Party Address Screen*
- *Adding an Allowed Called Party Address Screen*
- *Changing an Allowed DPC Screen*
- *Changing a Blocked DPC Screen*
- *Changing an Allowed Affected Destination Field Screen*
- *Changing an Allowed ISUP Message Type Screen*
- *Changing an Allowed Calling Party Address Screen*
- *Changing an Allowed Called Party Address Screen*

The new values for the network indicator code, service indicator, priority, and heading codes being changed in the allowed SIO screen cannot be in that screen.

Specifying a Range of Values

A range of values can be specified for the `pri`, `h0`, and `h1` parameters. If a range of values is specified for any of these parameters and the `nic` and `si` values in the screening reference name are not changed, the range of values for the `pri`, `h0`, or `h1` parameters cannot include any values that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NIC  PRI  SI  H0     H1     NSFI    NSR/ACT
SCR1  2    3    1    4      5     DPC     LS03
SCR1  2    2    1    2      7     BLKDPC  LS04
```

Another entry for screening reference `scr1` with the same `nic` and `si` values cannot be specified if:

- The range of values for the `pri` parameter includes the values 2 or 3

- The range of values for the h0 parameter includes the values 2 or 4
- The range of values for the h1 parameter includes the values 5 or 7.

Changing H0 and H1 Values

The h0 and h1 values must be specified if the si value is 0, 1, or 2. If the si value is 3 through 15, the h0 and h1 parameters cannot be specified.

The nh0 and nh1 values must be specified if the nsi value is 0, 1, or 2. If the nsi value is 3 through 15, the nh0 and nh1 parameters cannot be specified.

The h0 and h1 parameters must be specified if either parameter is specified.

The nh0 and nh1 parameters must be specified if either parameter is specified.

The H0 and H1 heading code values can be a single value, a range of values with the beginning and end of the range separated by double ampersands (for example, a range of values from 2 to 9, 2&&9), or with an asterisk (*). The asterisk specifies all possible values for the h0 and h1 parameters. *Table 64: Valid Value Combinations for H0 and H1 Parameters* shows the valid combinations of these parameter values.

Table 64: Valid Value Combinations for H0 and H1 Parameters

H0	H1
Single Value	Single Value
Single Value	Range of Values
Single Value	Asterisk
Range of Values	Asterisk
Asterisk	Asterisk

1. Display the allowed SIO screens in the database using the rtrv-scr-sio command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED SIO
SR    REF  RULES
IEC   YES     6
ISP1  YES     1
WRD2  YES     1
WRD4  YES     9
LS02  YES     1
TUP1  YES     2
```

   From the rtrv-scr-sio output, display the allowed SIO screen you wish to change using the rtrv-scr-sio command with the screening reference name. For this example, enter this command.

   rtrv-scr-sio:sr=ls02

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED SIO
SR    NIC  PRI  SI  H0     H1     NSFI    NSR/ACT
LS02  2    3    3   --     --     CDPA    LS03
```

If a gateway screening stop action set is to be assigned to the allowed SIO screen being changed in the database, go to step 2.

Step 2 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen being changed in this procedure is STOP. If the NSFI of the screen will be changed to STOP, but a gateway screening stop action set name will not be assigned to the screen, skip steps 2 and 3 and go to step 4. If the NSFI of the screen will not be STOP, skip step 2 and go to step 3.

2. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

   If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

   Note: If the NSFI of the screen being changed in this procedure will be STOP, or if the NSFI of the screen is not being changed, skip step 3 and go to step 4.

3. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 4 is in the database.

   If the desired screen is not in the database, perform one of the procedures shown in the *Gateway Screening Configuration Procedures* section to add the desired screen to the database or change an existing screen in the database.

4. Change the attributes of an allowed SIO screen using the `chg-scr-sio` command.

   If a gateway screening stop action is to be assigned to the allowed SIO screen being changed, enter the `chg-scr-sio` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 2.

CAUTION: Redirecting SLTA/SLTM messages prevents SLTA/SLTM messages from being returned to the EAGLE 5 ISS. The signaling link carrying these messages will fail if these messages are not returned to the EAGLE 5 ISS. To prevent SLTA/SLTM messages from being redirected, gateway screening stop action sets containing the

redirect stop action should not be assigned to Allowed SIO screens containing the service indicator values 1 (SI=1) or 2 (SI=2).

The current values for the `nic`, `si`, `pri`, `h0` and `h1` parameters must be entered in the `chg-scr-sio` command exactly as shown in the `rtrv-scr-sio` output in step 1.

The following list contains the values for `nnic`, `nsi`, `npri`, `nh0` and `nh1` parameters:

- nnic – 0 - 3, or an asterisk (*)
- nsi – 0 - 15
- npri – 0 - 3, or an asterisk (*)
- nh0 – 0 - 15, or an asterisk (*)
- nh1 – 0 - 15, or an asterisk (*)

A range of values can be specified for the `npri`, `nh0`, and `nh1` parameters. See the *"Specifying a Range of Values"* section for more information. See the *"Changing H0 and H1 Values"* section for information on how the asterisk and a range of values are used for the `nh0` and `nh1` parameters.

The value of the `nsfi` parameter is based on the value of the service indicator (`si`) parameter. *Table 61: Valid Parameter Combinations for the Allowed SIO Screening Function* shows the valid combinations of `nsfi` values and service indicator values.

For this example, enter this command.

```
chg-scr-sio:sr=ls02:nic=2:si=3:pri=3:nsi=14:nsfi=stop
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:27:30 GMT  EAGLE5 36.0.0
CHG-SCR-SIO:  SCREEN SET AFFECTED - LS02  1% FULL
CHG-SCR-SIO:  MASP A - COMPLTD
```

5. Verify the changes using the `rtrv-scr-sio` command with the screening reference name used in step 4.

   For this example, enter this command.

   ```
   rtrv-scr-sio:sr=ls02
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED SIO
   SR    NIC  PRI  SI  H0     H1     NSFI    NSR/ACT
   LS02  2    3    14  --     --     STOP     ------
   ```

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

   The following 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.
   ```

Chapter 11

Blocked Originating Point Code (BLKOPC) Screen Configuration

Topics:

Chapter 11, Blocked Originating Point Code (BLKOPC) Screen Configuration, contains the procedures necessary to configure blocked originating point code screens.

Introduction

The blocked OPC screen identifies OPC's that are not allowed to send SS7 messages into the network. The gray shaded areas in *Figure 29: Blocked OPC Screening Functions* shows the fields of the SS7 message that are checked by the blocked OPC screening function.

Gateway Screening Actions

If a match is found, the `nsfi` is equal to `fail`, the message is discarded and no further screening takes place.

If a match is not found, the `nsfi` is examined to determine the next step in the screening process. If the `nsfi` value is any value other than `stop`, the next screening reference (`nsr`) is identified and the screening process continues to the next screen identified by the `nsfi` and `nsr` parameter values.

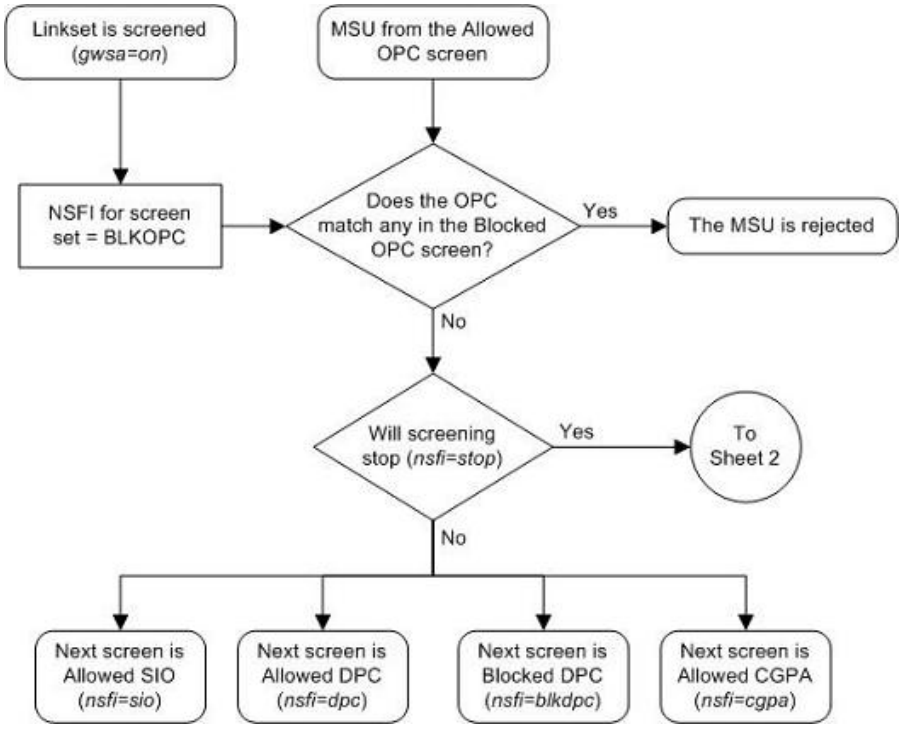
If the `nsfi` is equal to `stop`, the screening process stops and the message is processed. If a gateway screening stop action set is specified with the screen, shown by the `actname` parameter value, the message is processed according to the gateway screening stop actions that are assigned to the gateway screening stop action set.

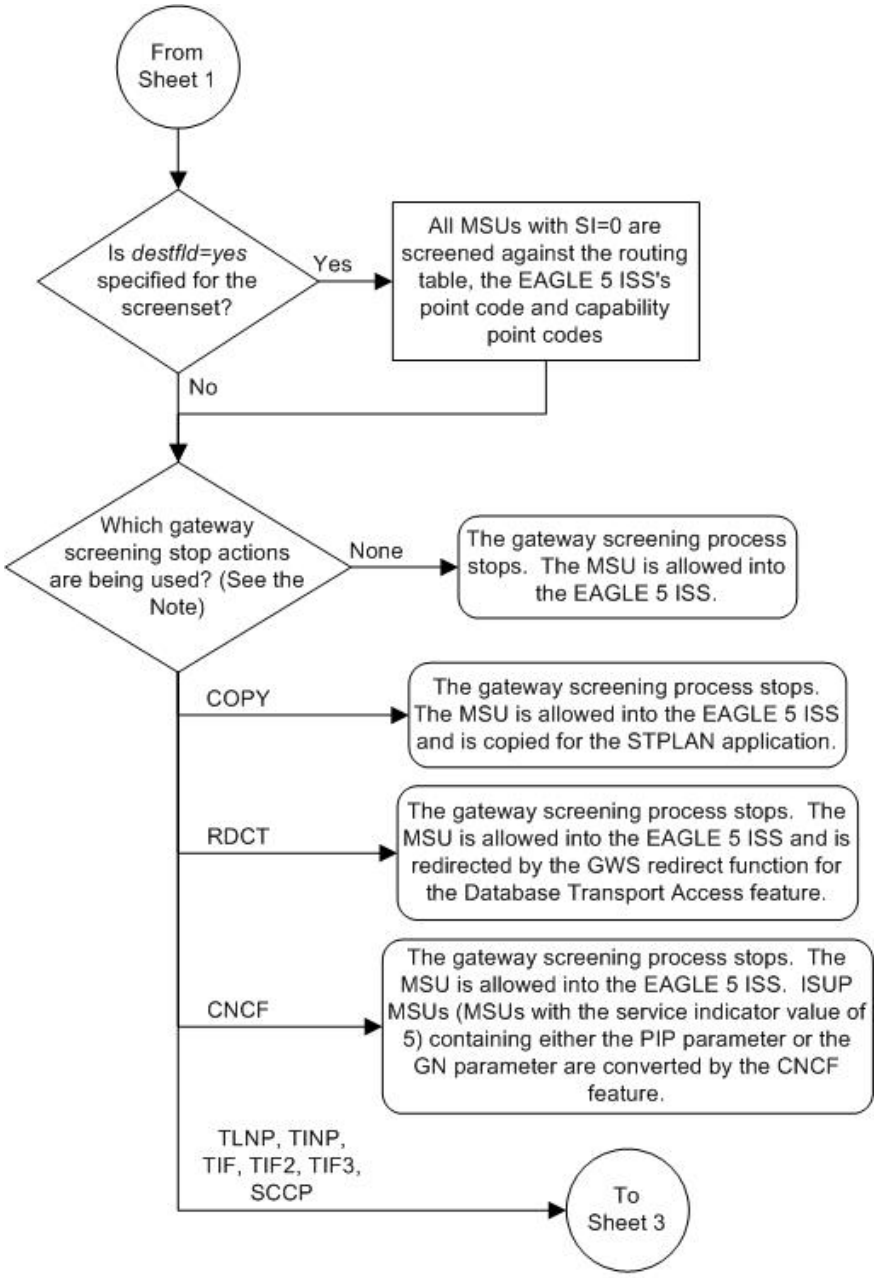
- If the `copy` gateway screening stop action is specified, the message is processed and a copy of the message is sent by the STPLAN feature to an external application.
- If the `rdct` (redirect) gateway screening stop action is specified,the message is diverted from the original destination and sent to another destination with the Database Transport Access feature, specified by global title translation, for further processing.
- If the `cncf` gateway screening stop action is specified, the PIP parameter in the incoming ISUP IAM message is converted to the GN parameter. The GN parameter in the incoming ISUP IAM message is converted to the PIP parameter. The message is then sent to the node specified by the DPC in the routing label in the message. For more information on the Calling Name Conversion Facility feature, see *Calling Name Conversion Facility (CNCF) Configuration*.
- If the `tlnp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are processed either by the ISUP NP with EPAP feature (if the ISUP NP with EPAP feature is enabled and turned on) or by the Triggerless LNP feature (if the Triggerless LNP feature is turned on). The ISUP NP with EPAP feature is discussed in more detail in the *Feature Manual - G-Port*. The Triggerless LNP feature is discussed in more detail in the *LNP Feature Activation Guide*.
- If the `tinp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are intercepted by the Triggerless ISUP based Number Portability (TINP) feature and converted to include the routing number (RN) if the call is to a ported number. The TINP feature is discussed in more detail in the *Feature Manual - G-Port*.
- If the `tif`, `tif2`, or `tif3` gateway screening stop actions are specified, TIF processing is applied to the message.
- If the `sccp` gateway screening stop action is specified, MTP routed SCCP UDT/XUDT are forwarded to the service modules for further processing.

Blocked OPC Screening Actions

Figure 28: Blocked OPC Screening Actions shows the screening actions of the blocked OPC screen.

Figure 28: Blocked OPC Screening Actions


Linkset is screened (gwsa=on)
MSU from the Allowed OPC screen
NSFI for screen set = BLKOPC
Does the OPC match any in the Blocked OPC screen?
Yes
The MSU is rejected
No
Will screening stop (nsfi=stop)
Yes
To Sheet 2
No
Next screen is Allowed SIO (nsfi=sio)
Next screen is Allowed DPC (nsfi=dpc)
Next screen is Blocked DPC (nsfi=blkdpc)
Next screen is Allowed CGPA (nsfi=cgpa)


From Sheet 1
Is destfld=yes specified for the screenset?
Yes
All MSUs with SI=0 are screened against the routing table, the EAGLE 5 ISS's point code and capability point codes
No
Which gateway screening stop actions are being used? (See the Note)
None
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS.
COPY
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is copied for the STPLAN application.
RDCT
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is redirected by the GWS redirect function for the Database Transport Access feature.
CNCF
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS. ISUP MSUs (MSUs with the service indicator value of 5) containing either the PIP parameter or the GN parameter are converted by the CNCF feature.
TLNP, TINP, TIF, TIF2, TIF3, SCCP
To Sheet 3
Note: Combinations of the gateway screening stop actions shown on Sheets 2 and 3 may be assigned to a gateway screening stop action set. Refer to the Configuring Gateway Screening Stop Action Sets and the Configuring TLNP Gateway Screening Stop Action Sets procedures in Chapter 2 of this manual for the combinations that can be used.

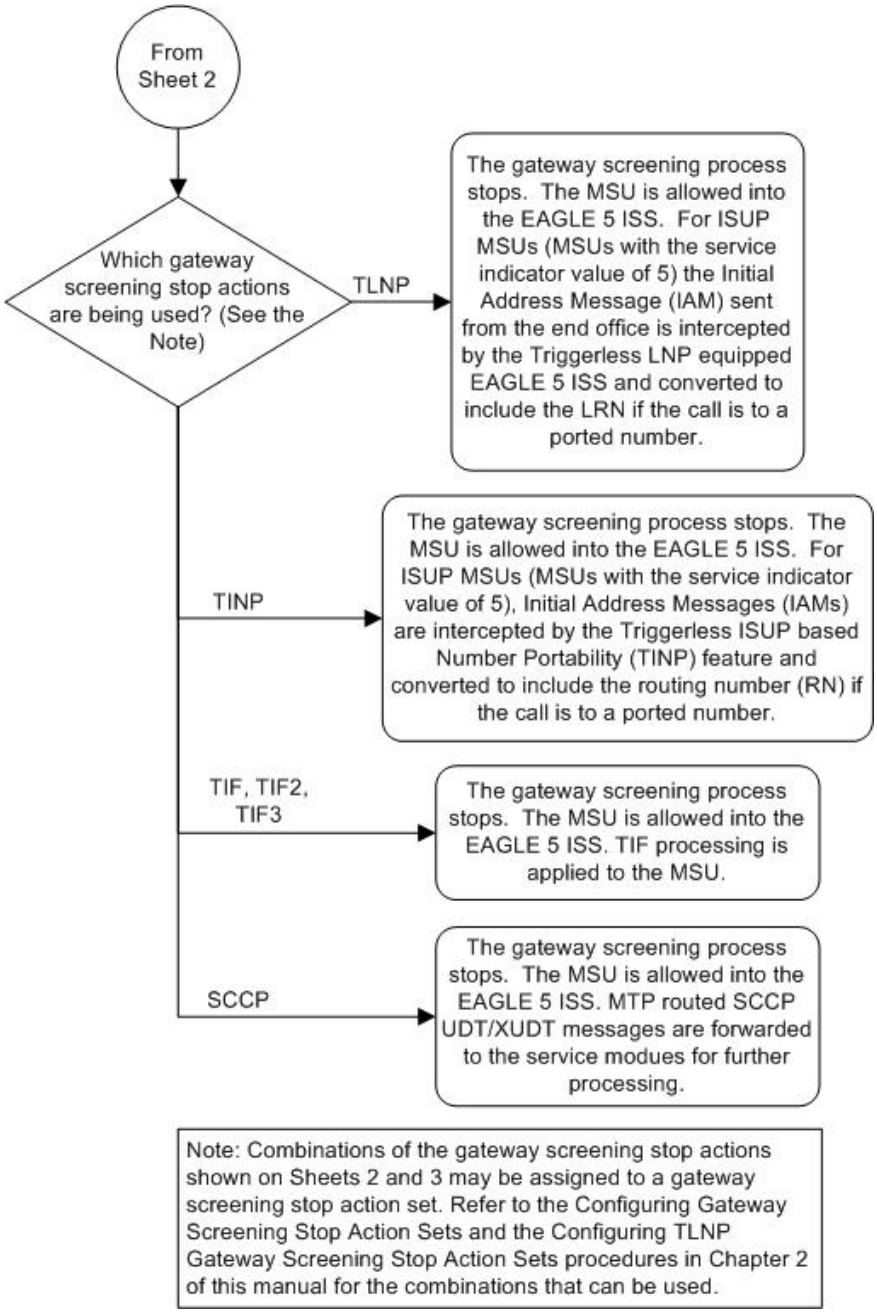
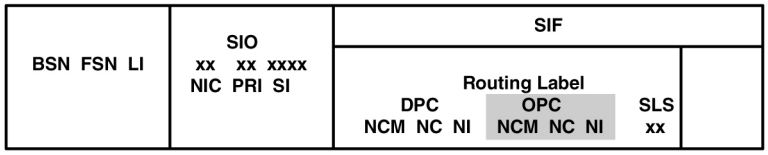
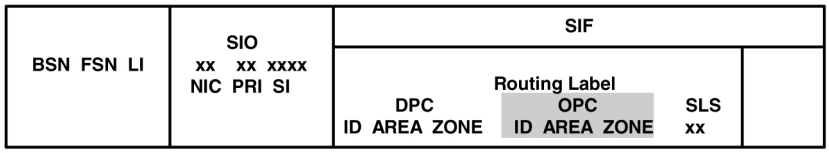


Figure 29: Blocked OPC Screening Functions

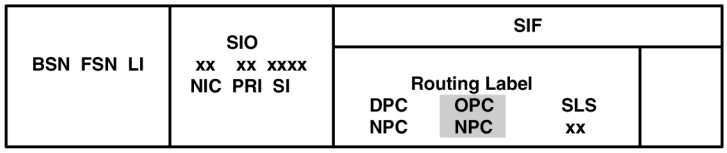
ANSI MSU (ANSI Message Signal Unit)



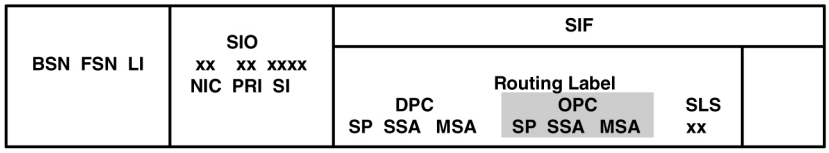
ITU-I MSU (ITU International Message Signal Unit)



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



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



Adding a Blocked OPC Screen

This procedure is used to add a blocked originating point code (OPC) screen to the database using the `ent-scr-blkopc` command. The parameters used by the `ent-scr-blkopc` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The examples in this procedure are used to add the blocked OPC screen data shown in *Table 65: Example Gateway Screening Blocked OPC Configuration Table* and based on the example configurations shown in *Figure 5: Gateway Screening Configuration - Example 1*, *Figure 6: Gateway Screening Configuration - Example 2*, and *Figure 9: Gateway Screening Configuration - Example 5*.

Table 65: Example Gateway Screening Blocked OPC Configuration Table

Screening Reference	ZONE	AREA	ID	NSFI	NSR

gws5	C	C	C	sio	iec
gws5	4	250	3	fail	----
Screening Reference	**NI**	**NC**	**NCM**	**NSFI**	**NSR**
fld3	C	C	C	sio	fld4
fld3	020	020	020	fail	----
gws3	C	C	C	dpc	gws9
gws3	001	002	002	fail	----
isp1	C	C	C	sio	isp1
isp1	025	025	025	fail	----

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The blocked OPC screen can reference one of the following screens.

- Allowed SIO
- Allowed DPC
- Blocked DPC
- Allowed CGPA

Verifying the Gateway Screening Configuration

Enter the following commands to verify that these screens are in the database.

- `rtrv-scr-sio:all=yes`
- `rtrv-scr-dpc:all=yes`
- `rtrv-scr-blkdpc:all=yes`
- `rtrv-scr-cgpa:all=yes`

Gateway Screening Configuration Procedures

If the desired screen is not in the database, perform one of the following procedures to add the desired screen to the database or change an existing screen in the database.

- *Adding an Allowed SIO Screen*
- *Adding an Allowed DPC Screen*
- *Adding a Blocked DPC Screen*
- *Adding an Allowed Calling Party Address Screen*
- *Changing an Allowed SIO Screen*
- *Changing an Allowed DPC Screen*
- *Changing a Blocked DPC Screen*
- *Changing an Allowed Calling Party Address Screen*

For the first entry for a specific screening reference, the value for the point code must be `c`, and the NSFI must be either `stop`, `sio`, `dpc`, `blkdpc`, or `cgpa`. If the NSFI is `stop`, the screening of the message will stop at the specified blocked OPC screen. If the NSFI is either `sio`, `dpc`, `blkdpc`, or

cgpa, then any message containing a point code that is not listed in the blocked OPC screen with a NSFI equal to fail, will continue to be screened with either the allowed SIO, allowed DPC, blocked DPC, or the allowed CGPA screen.

All subsequent entries for that screening reference must contain a numeric point code value, the NSFI must be equal to fail, and the nsr parameter cannot be specified. Any message that contains an OPC in the blocked OPC screen with the NSFI equal to fail will be rejected from the network and the screening process is stopped.

The pcst parameter, specifying whether or not the ITU-I or 14-bit ITU-N point code is a spare point code, cannot be used with the zone=c or npc=c parameters.

Specifying a Range of Values

A range of values can be specified for the point code parameters ni, nc, or ncm.

If a range of values is specified for any of these parameters, and the value of the other parameters match existing values for the screening reference name, the range of values for the point code parameter cannot include any values for that parameter that are currently provisioned for the screening reference name.

For example, screening reference name scr1 contains these entries:

```
SR    NI       NC       NCM      NSFI    NSR/ACT
SCR1  240      001      010      FAIL    ------
SCR1  241      010      020      FAIL    ------
```

Another entry for screening reference scr1 with the ni value of 240 and the nc value of 001 cannot be specified if the range of values for the ncm parameter includes the value 010.

The ANSI point code parameter values can be specified as a single value, a range of values, or with an asterisk (*). The asterisk specifies all possible values for the ni, nc, and ncm parameters. *Table 66: Valid Value Combinations for ANSI Point Code Parameters* shows the valid combinations of these parameter values.

Table 66: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk
Range of Values	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

A range of values can also be specified for an ITU-I or 24-bit ITU-N point code parameter using a combination of asterisks (*) and single values for the point code parameters. *Table 67: Valid Value Combinations for ITU-I Point Code Parameters* shows the valid combinations of the ITU-I parameter values. *Table 68: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 67: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 68: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

1. Verify that the gateway screening feature is on, by entering the `rtrv-feat` command.

   If the gateway screening feature is on, the `GWS` 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*.

   If the gateway screening feature is on, shown by the entry `GWS = on` in the `rtrv-feat` command output, skip step 2, and go to step 3.

2. Turn the gateway screening feature on by entering this command.

   ```
   chg-feat:gws=on
   ```

   Note: Once the gateway screening feature is turned on with the `chg-feat` command, it cannot be turned off.

   The gateway screening feature must be purchased before you turn this feature on with the `chg-feat` command. If you are not sure if you have purchased the gateway screening feature, contact your Tekelec Sales Representative or Account Representative.

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

   ```
   rlghncxa03w 06-10-28 11:43:04 GMT EAGLE5 36.0.0
   CHG-FEAT: MASP A - COMPLTD
   ```

3. Display all blocked OPC screens in the database using the `rtrv-scr-blkopc` command.

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
   SCREEN = BLOCKED OPC
   SR    REF  RULES
   IEC   YES     2
   ```

```
WRD2  YES     1
WRD4  YES     9
```

If the screening reference names that you wish to add with this procedure are not shown in the `rtrv-scr-blkopc` command output, go to step 4. For this example, the screening reference names are not shown. If these screening reference names are shown in the `rtrv-scr-blkopc` command output, make sure the screening data you wish to enter is not already in the database by entering the `rtrv-scr-blkopc` command with the screening reference name. For example, enter the `rtrv-scr-blkopc:sr=iec` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
SCREEN = BLOCKED OPC
SR    NI       NC       NCM      NSFI    NSR/ACT
IEC   240      001      010      FAIL    ------
IEC   241      010      *        FAIL    ------

SR      ZONE   AREA     ID       NSFI    NSR/ACT
IEC     1      003      4        FAIL    ------
IEC     1      003      5        FAIL    ------

SR    NI       NC       NCM      NSFI    NSR/ACT
IEC   C        C        C        STOP    CR
SR      NPC                     NSFI    NSR
IEC     00235                   FAIL    ------

SR    NI       NC       NCM      NSFI    NSR/ACT
WRD2  243      015      001      STOP    ------
WRD2  243      105      002      FAIL    ------
WRD2  C        C        C        STOP    ------
```

If a gateway screening stop action set is to be assigned to the blocked OPC screen being added to the database, go to step 4.

Step 4 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen being added in this procedure is STOP. If the NSFI of the new screen will be STOP, but a gateway screening stop action set name will not be assigned to the new screen, skip steps 4 and 5 and go to step 6. If the NSFI of the new screen is not STOP, skip step 4 and go to step 5.

4. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:28:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

Note: If the NSFI of the screen being added in this procedure is STOP or FAIL, skip step 5 and go to step 6.

5. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 7 is in the database.

   If the desired screen is not in the database, perform one of the procedures shown in the *Gateway Screening Configuration Procedures* section to add the desired screen to the database or change an existing screen in the database.

6. Display the status of the ITU National and International Spare Point Code Support feature by entering the `rtrv-ctrl-feat` command with the ITU National and International Spare Point Code Support feature part number.

   Note: If the point code being added in this procedure is not an ITU-I or 14-bit ITU-N spare point code, skip this step and to step 7.

   Note: If the point code being added in this procedure is an ITU-I or 14-bit ITU-N spare point code and the screening reference contains ITU-I or 14-bit ITU-N spare point codes, skip this step and go to step 7.

   Enter this command.

   ```
   rtrv-ctrl-feat:partnum=893013601
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
   The following features have been permanently enabled:

   Feature Name              Partnum   Status Quantity
   Spare Point Code Support  893013601 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 ITU National and International Spare Point Code Support feature is enabled, go to step 7.

   If the ITU National and International Spare Point Code Support feature is not enabled, perform the "Activating the ITU National and International Spare Point Code Support Feature" procedure in the Database *Administration Manual - SS7* to enable the ITU National and International Spare Point Code Support feature as required. After the feature has been enabled, go to step 7.

7. Add a new blocked OPC screen to the database using the `ent-scr-blkopc` command.

   If a gateway screening stop action is to be assigned to the blocked OPC screen being changed, enter the `ent-scr-blkopc` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 4. The following list contains the values for `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, and `sp` parameters:

   - ni – 0 - 255, c, or an asterisk (*)
   - nc – 0 - 255, c, or an asterisk (*)

- ncm – 0 - 255, c, or an asterisk (*)
- zone – 0 - 7, c, or an asterisk (*)
- area – 0 - 255, c, or an asterisk (*)
- id – 0 - 7, c, or an asterisk (*)
- npc – 1 - 16383, c, or an asterisk (*)
- msa – 0 - 255, c, or an asterisk (*)
- ssa – 0 - 255, c, or an asterisk (*)
- sp – 0 - 255, c, or an asterisk (*)

A range of values can be specified for the `ni`, `nc`, and `ncm` parameters. See the *"Specifying a Range of Values"* section for more information on how the asterisk and a range of values are used for the `ni`, `nc`, and `ncm` parameters.

To add a spare point code to the blocked OPC screen, the `pcst=s` parameter must be specified. To add a non-spare point code to the blocked OPC screen, the `pcst` parameter does not have to be specified. If the `pcst` parameter is specified for a screen containing an ITU-I or 14-bit ITU-N non-spare point code, the value must be `none`. The `pcst` parameter cannot be used with the `zone=c` or `npc=c` parameters.

For this example, enter these commands.

```
ent-scr-blkopc:sr=gws5:zone=c:area=c:id=c:nsfi=sio:nsr=iec
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
ENT-SCR-BLKOPC: SCREEN SET AFFECTED - GWS5  1% FULL
ENT-SCR-BLKOPC: MASP A - COMPLTD
```

```
ent-scr-blkopc:sr=gws5:zone=4:area=250:id=3:nsfi=fail
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
ENT-SCR-BLKOPC: SCREEN SET AFFECTED - GWS5  1% FULL
ENT-SCR-BLKOPC: MASP A - COMPLTD
```

```
ent-scr-blkopc:sr=gws3:ni=c:nc=c:ncm=c:nsfi=dpc:nsr=gws9
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:31:30 GMT  EAGLE5 36.0.0
ENT-SCR-BLKOPC: SCREEN SET AFFECTED - GWS7  1% FULL
ENT-SCR-BLKOPC: MASP A - COMPLTD
```

```
ent-scr-blkopc:sr=gws3:ni=001:nc=002:ncm=002:nsfi=fail
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:32:30 GMT  EAGLE5 36.0.0
ENT-SCR-BLKOPC: SCREEN SET AFFECTED - GWS7  1% FULL
ENT-SCR-BLKOPC: MASP A - COMPLTD
```

```
ent-scr-blkopc:sr=fld3:ni=c:nc=c:ncm=c:nsfi=sio:nsr=fld4
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:33:30 GMT  EAGLE5 36.0.0
```

```
ENT-SCR-BLKOPC: SCREEN SET AFFECTED - FLD3  1% FULL
ENT-SCR-BLKOPC: MASP A - COMPLTD
```

`ent-scr-blkopc:sr=fld3:ni=020:nc=020:ncm=020:nsfi=fail`

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:34:30 GMT  EAGLE5 36.0.0
ENT-SCR-BLKOPC: SCREEN SET AFFECTED - FLD3  1% FULL
ENT-SCR-BLKOPC: MASP A - COMPLTD
```

`ent-scr-blkopc:sr=isp1:ni=c:nc=c:ncm=c:nsfi=sio:nsr=isp1`

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:33:30 GMT  EAGLE5 36.0.0
ENT-SCR-BLKOPC: SCREEN SET AFFECTED - ISP1  1% FULL
ENT-SCR-BLKOPC: MASP A - COMPLTD
```

`ent-scr-blkopc:sr=isp1:ni=025:nc=025:ncm=025:nsfi=fail`

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:34:30 GMT  EAGLE5 36.0.0
ENT-SCR-BLKOPC: SCREEN SET AFFECTED - ISP1  1% FULL
ENT-SCR-BLKOPC: MASP A - COMPLTD
```

8. Verify the changes using the `rtrv-scr-blkopc` command with the screening reference name used in step 7. For this example, enter these commands.

`rtrv-scr-blkopc:sr=gws5`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:35:30 GMT  EAGLE5 36.0.0
SCREEN = BLOCKED OPC
SR      ZONE   AREA     ID       NSFI    NSR/ACT
GWS5    4      250      3        FAIL    ------
GWS5    C      C        C        SIO     IEC
```

`rtrv-scr-blkopc:sr=gws3`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = BLOCKED OPC
SR    NI       NC       NCM      NSFI    NSR/ACT
GWS3  002      002      002      FAIL    ------
GWS3  C        C        C        DPC     GWS9
```

`rtrv-scr-blkopc:sr=fld3`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:36:30 GMT  EAGLE5 36.0.0
SCREEN = BLOCKED OPC
SR    NI       NC       NCM      NSFI    NSR/ACT
FLD3  020      020      020      FAIL    ------
FLD3  C        C        C        DPC     FLD4
```

`rtrv-scr-blkopc:sr=isp1`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:36:30 GMT  EAGLE5 36.0.0
SCREEN = BLOCKED OPC
SR    NI       NC       NCM      NSFI    NSR/ACT
ISP1  025      025      025      FAIL    ------
ISP1  C        C        C        SIO     ISP1
```

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

   The following 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.
```

Removing a Blocked OPC Screen

This procedure is used to remove a blocked originating point code (OPC) screen from the database using the `dlt-scr-blkopc` command. The parameters used by the `dlt-scr-blkopc` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure removes the blocked OPC screen `iec` with the point code 240-001-010 from the database.

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The `c-c-c` entry cannot be removed from the blocked OPC screen unless all other entries in the blocked OPC screen have been removed. The `c-c-c` entry cannot be removed from the blocked OPC screen if other screens reference the blocked OPC screen. If the last entry (`c-c-c`) in the blocked OPC screen is removed, the blocked OPC screen is removed. The blocked OPC screen can be referenced by one of the following screens.

- Screen Set
- Allowed OPC

Verifying the Gateway Screening Configuration

Enter the following commands to verify that none of these screens reference the blocked OPC screen being removed from the database.

- `rtrv-scrset:nsfi=blkopc`
- `rtrv-scr-opc:nsfi=blkopc`

Gateway Screening Configuration Procedures

To change the NSFI of any of these screens, perform one of these procedures.

- *Changing a Screen Set*
- *Changing an Allowed OPC Screen*

1. Display the blocked OPC screens in the database using the `rtrv-scr-blkopc` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = BLOCKED DPC

SR    REF  RULES
IEC   YES     6
ISP1  YES     2
WRD2  YES     2
WRD3  NO      4
WRD4  YES     9
```

   From the `rtrv-scr-blkopc` output, display the blocked OPC screen you wish to remove using the `rtrv-scr-blkopc` command with the screening reference name. For this example, enter this command.

   `rtrv-scr-blkopc:sr=iec`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = BLOCKED OPC
SR    NI       NC       NCM      NSFI    NSR/ACT
IEC   240      001      010      FAIL    ------
IEC   241      010      *        FAIL    ------
SR      ZONE   AREA     ID       NSFI    NSR/ACT
IEC     1      003      4        FAIL    ------
IEC     1      003      5        FAIL    ------
SR    NI       NC       NCM      NSFI    NSR/ACT
IEC   C        C        C        CGPA    cg01
SR      NPC                      NSFI    NSR
IEC     00235                    FAIL    ------
```

2. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen being removed is not referenced by other screens in the database.

   If the screen being removed is referenced by other screens, perform the procedures shown in the *Gateway Screening Configuration Procedures* section to change the NSFI of those screens to reference other screens or change the NSFI of these screens to STOP.

3. Remove the blocked OPC screen from the database using the `dlt-scr-blkopc` command with the screening reference name shown in the `rtrv-scr-blkopc` output in step 1 and with the point code parameter values (`ni`, `nc`, `ncm`, or `zone`, `area`, `id`, or `npc`, `msa`, `ssa`, `sp`) of the screen being removed from the database.

   The values for these parameters must be entered exactly as shown in the `rtrv-scr-blkopc` output.

   To remove an entry containing either an ITU-I or a 14-bit ITU-N spare point code, the `pcst=s` parameter must be specified with the `dlt-scr-blkopc` command.

   To remove an entry containing either an ITU-I or a 14-bit ITU-N non-spare point code, the `pcst` parameter does not have to be specified with the `dlt-scr-blkopc` command. If the `pcst` parameter is specified, the value must be `none`.

   The `pcst` parameter cannot be used with the `zone=c` or the `npc=c` parameters.

   For this example, enter this command.

```
dlt-scr-blkopc:sr=iec:ni=240:nc=001:ncm=010
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
DLT-SCR-BLKOPC: SCREEN SET AFFECTED - IEC   2% FULL
DLT-SCR-BLKOPC: MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-scr-blkopc` command with the screening reference name used in step 3.

   For this example, enter this command.

   ```
   rtrv-scr-blkopc:sr=iec
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:27:30 GMT EAGLE5 36.0.0
   SCREEN = BLOCKED OPC
   SR    NI       NC       NCM      NSFI    NSR/ACT
   IEC   241      010      *        FAIL    ------
   SR      ZONE   AREA     ID       NSFI    NSR/ACT
   IEC     1      003      4        FAIL    ------
   IEC     1      003      5        FAIL    ------
   SR    NI       NC       NCM      NSFI    NSR/ACT
   IEC   C        C        C        CGPA    cg01
   SR      NPC                      NSFI    NSR
   IEC     00235                    FAIL    ------
   ```

   If the screen removed in step 3 was the last screen contained in the specified screening reference, the screening reference is removed from the database. The following message is displayed.

   ```
   E2573 Cmd Rej: SR or NSR does not reference an existing SR
   ```

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

   The following 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.
   ```

Changing a Blocked OPC Screen

This procedure is used to change the attributes of a blocked originating point code (OPC) screen in the database using the `chg-scr-blkopc` command. The parameters used by the `chg-scr-blkopc` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure is used to change the point code 002-002-002 for the blocked OPC screen `gws7` to 230-230-230.

Note: If you using multiple-part ITU national point codes with gateway screening, *14-Bit ITU National Point Code Formats* section.

If the current ni, nc, and ncm are equal to the character " c ", only the next screening function identifier and next screening reference can be changed. The next screening function identifier cannot be equal to fail. If the next screening function identifier is not equal to stop, the next screening reference must be specified. Otherwise, only the point code can be changed.

The blocked OPC screen can reference one of the following screens.

- Allowed SIO
- Allowed DPC
- Blocked DPC
- Allowed CGPA

Verifying the Gateway Screening Configuration

Enter the following commands to verify that these screens are in the database.

- rtrv-scr-sio:all=yes
- rtrv-scr-dpc:all=yes
- rtrv-scr-blkdpc:all=yes
- rtrv-scr-cgpa:all=yes

Gateway Screening Configuration Procedures

If the desired screen is not in the database, perform one of these procedures to add the desired screen to the database.

- *Adding an Allowed SIO Screen*
- *Adding an Allowed DPC Screen*
- *Adding a Blocked DPC Screen*
- *Adding an Allowed Calling Party Address Screen*
- *Changing an Allowed SIO Screen*
- *Changing an Allowed DPC Screen*
- *Changing a Blocked DPC Screen*
- *Changing an Allowed Calling Party Address Screen*

For the first entry for a specific screening reference, the value for the point code must be c, and the NSFI must be either stop, sio, dpc, blkdpc, or cgpa. If the NSFI is stop, the screening of the message will stop at the specified blocked OPC screen. If the NSFI is either sio, dpc, blkdpc, or cgpa, then any message containing a point code that is not listed in the blocked OPC screen with a NSFI equal to fail, will continue to be screened with either the allowed SIO, allowed DPC, blocked DPC, or the allowed CGPA screen.

All subsequent entries for that screening reference must contain a numeric point code value, the NSFI must be equal to fail, and the nsr parameter cannot be specified. Any message that contains an OPC in the blocked OPC screen with the NSFI equal to fail will be rejected from the network and the screening process is stopped.

The pcst or npcst parameters, specifying whether or not the ITU-I or 14-bit ITU-N point code is a spare point code, cannot be used with the zone=c or npc=c parameters.

Specifying a Range of Values

A range of values can be specified for the point code parameters ni, nc, or ncm.

If a range of values is specified for any of these parameters, and the value of the other parameters match existing values for the screening reference name, the range of values for the point code parameter

cannot include any values for that parameter that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NI       NC       NCM      NSFI    NSR/ACT
SCR1  240      001      010      FAIL    ------
SCR1  241      010      020      FAIL    ------
```

Another entry for screening reference `scr1` with the `ni` value of 240 and the `nc` value of 001 cannot be specified if the range of values for the `ncm` parameter includes the value 010.

The ANSI point code parameter values can be specified as a single value, a range of values, or with an asterisk (*). The asterisk specifies all possible values for the `ni`, `nc`, and `ncm` parameters. *Table 69: Valid Value Combinations for ANSI Point Code Parameters* shows the valid combinations of these parameter values.

Table 69: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk
Range of Values	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

A range of values can also be specified for an ITU-I or 24-bit ITU-N point code parameter using a combination of asterisks (*) and single values for the point code parameters. *Table 70: Valid Value Combinations for ITU-I Point Code Parameters* shows the valid combinations of the ITU-I parameter values. *Table 71: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 70: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk

ZONE	AREA	ID
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 71: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

1. Display the blocked OPC screens in the database using the `rtrv-scr-blkopc` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = BLOCKED OPC
SR    REF  RULES
GWS7  YES     2
IEC   YES     6
ISP1  YES     2
WRD2  YES     2
WRD3  NO      4
WRD4  YES    10
```

   From the `rtrv-scr-blkopc` output, display the blocked OPC screen you wish to change using the `rtrv-scr-blkopc` command with the screening reference name. For this example, enter this command.

   `rtrv-scr-blkopc:sr=gws7`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = BLOCKED OPC
SR    NI       NC       NCM      NSFI    NSR/ACT
GWS7  002      002      002      FAIL    ------
GWS7  C        C        C        DPC     GWS9
```

   If a gateway screening stop action set is to be assigned to the blocked OPC screen being changed in the database, go to step 2.

   Step 2 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen being changed in this procedure is STOP. If the NSFI of the screen will be changed to STOP, but a gateway screening stop action

set name will not be assigned to the screen, skip steps 2 and 3 and go to step 4. If the NSFI of the screen will not be STOP, skip step 2 and go to step 3.

2. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

   If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

   Note: If the NSFI of the screen being changed in this procedure will be STOP or FAIL, or if the NSFI of the screen is not being changed, skip step 3 and go to step 4.

3. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 5 is in the database.

   If the desired screen is not in the database, perform one of the procedures shown in the *Gateway Screening Configuration Procedures* section to add the desired screen to the database or change an existing screen in the database.

   Note: If any of these conditions apply to this procedure, skip this step and go to step 5:

   - The point code in the screen is not being changed.
   - The screen being changed contains either an ANSI or 24-bit ITU-N point code.
   - The ITU-I or 14-bit ITU-N non-spare point code in the screen is not being changed to an ITU-I or 14-bit ITU-N spare point code.
   - The point code in the screen is an ITU-I or 14-bit ITU-N spare point code or the screening reference contains other screens with ITU-I or 14-bit ITU-N spare point codes.

4. Display the status of the ITU National and International Spare Point Code Support feature by entering the `rtrv-ctrl-feat` command with the ITU National and International Spare Point Code Support feature part number.

   Enter this command.

```
rtrv-ctrl-feat:partnum=893013601
```

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum   Status Quantity
Spare Point Code Support  893013601 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 ITU National and International Spare Point Code Support feature is enabled, go to step 5.

If the ITU National and International Spare Point Code Support feature is not enabled, perform the "Activating the ITU National and International Spare Point Code Support Feature" procedure in the Database *Administration Manual - SS7* to enable the ITU National and International Spare Point Code Support feature as required. After the feature has been enabled, go to step 5.

5. Change the attributes of the blocked OPC screen using the `chg-scr-blkopc` command.

   If a gateway screening stop action is to be assigned to the blocked OPC screen being changed, enter the `chg-scr-blkopc` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 2.

   The current values for the `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, and `sp` parameters must be entered exactly as shown in the `rtrv-scr-blkopc` output in step 1.

   The following list contains the values for the `nni`, `nnc`, `nncm`, `nzone`, `narea`, `nid`, `nnpc`, `nmsa`, `nssa`, and `nsp` parameters:

   - nni – 0 - 255, c, or an asterisk (*)
   - nnc – 0 - 255, c, or an asterisk (*)
   - nncm – 0 - 255, c, or an asterisk (*)
   - nzone – 0 - 7, c, or an asterisk (*)
   - narea – 0 - 255, c, or an asterisk (*)
   - nid – 0 - 7, c, or an asterisk (*)
   - nnpc – 1 - 16383, c, or an asterisk (*)
   - nmsa – 0 - 255, c, or an asterisk (*)
   - nssa – 0 - 255, c, or an asterisk (*)
   - nsp – 0 - 255, c, or an asterisk (*)

   A range of values can be specified for the `nni`, `nnc`, and `nncm` parameters. See the *"Specifying a Range of Values"* section for more information on how the asterisk and a range of values are used for the `nni`, `nnc`, and `nncm` parameters.

   To change an ITU-I or 14-bit ITU-N spare point code to a non-spare point code, both the `pcst=s` and `npcst=none` parameters must be specified with the `chg-scr-blkopc` command.

   To change an ITU-I or 14-bit ITU-N non-spare point code to a spare point code, the `npcst=s` parameter must be specified with the `chg-scr-blkopc` command. The `pcst` parameter does not have to be specified.

   If the current point code in the screen being changed is either an ITU-I or 14-bit ITU-N spare point code, the `pcst=s` parameter must be specified with the `chg-scr-blkopc` command.

   If the current point code in the screen being changed is either an ITU-I or 14-bit ITU-N non-spare point code, the `pcst` parameter does not have to be specified with the `chg-scr-blkopc` command.

If the pcst parameter is specified for a screen containing either an ITU-I or 14-bit ITU-N non-spare point code, the pcst parameter value must be none.

The pcst or npcst parameters cannot be used with the zone=c or npc=c parameters.

For this example, enter this command.

```
chg-scr-blkopc:sr=gws7:ni=002:nc=002:ncm=002:nni=230:nnc=230 :nncm=230
```

The following messages appear.

```
rlghncxa03w 06-10-25 15:27:30 GMT  EAGLE5 36.0.0
CHG-SCR-BLKOPC: SCREEN SET AFFECTED - GWS7  1% FULL
CHG-SCR-BLKOPC: MASP A - COMPLTD
```

Note: Verify the changes using the rtrv-scr-blkopc command with the screening reference name used in step 5. For this example, enter this command.

```
rtrv-scr-blkopc:sr=gws7
```

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
SCREEN = BLOCKED OPC
SR    NI       NC       NCM      NSFI    NSR/ACT
GWS7  230      230      230      FAIL    ------
GWS7  C        C        C        DPC     GWS9
```

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

   The following 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.
```

Chapter 12

Allowed Originating Point Code (OPC) Screen Configuration

Topics:

Chapter 12, Allowed Originating Point Code (OPC) Screen Configuration, contains the procedures necessary to configure allowed originating point code screens.

Introduction

The allowed originating point code (OPC) screen identifies a set of OPC's that are allowed to send SS7 messages into the network. The gray shaded areas in *Figure 31: Allowed OPC Screening Functions* shows the fields of the SS7 message that are checked by the allowed OPC screening function.

Gateway Screening Actions

If a match is not found, the message is discarded.

If a match is found, the `nsfi` is examined to determine the next step in the screening process. If the `nsfi` value is any value other than `stop`, the next screening reference (`nsr`) is identified and the screening process continues to the next screen identified by the `nsfi` and `nsr` parameter values.

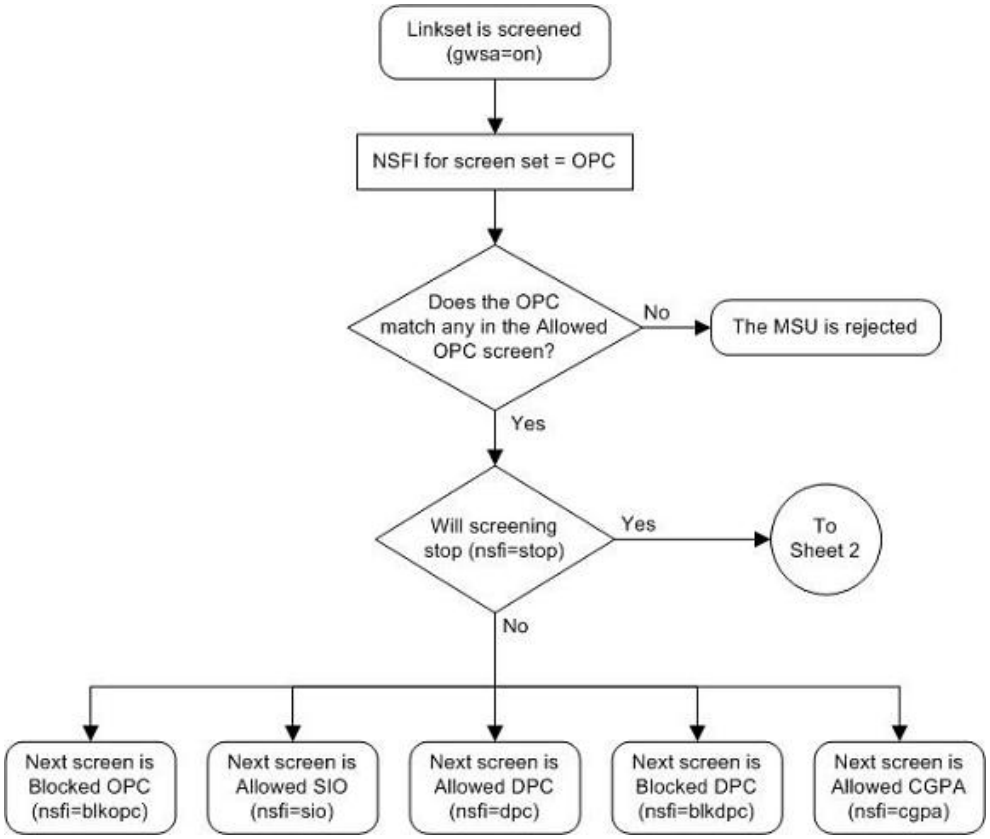
If the `nsfi` is equal to `stop`, the screening process stops and the message is processed. If a gateway screening stop action set is specified with the screen, shown by the `actname` parameter value, the message is processed according to the gateway screening stop actions that are assigned to the gateway screening stop action set.

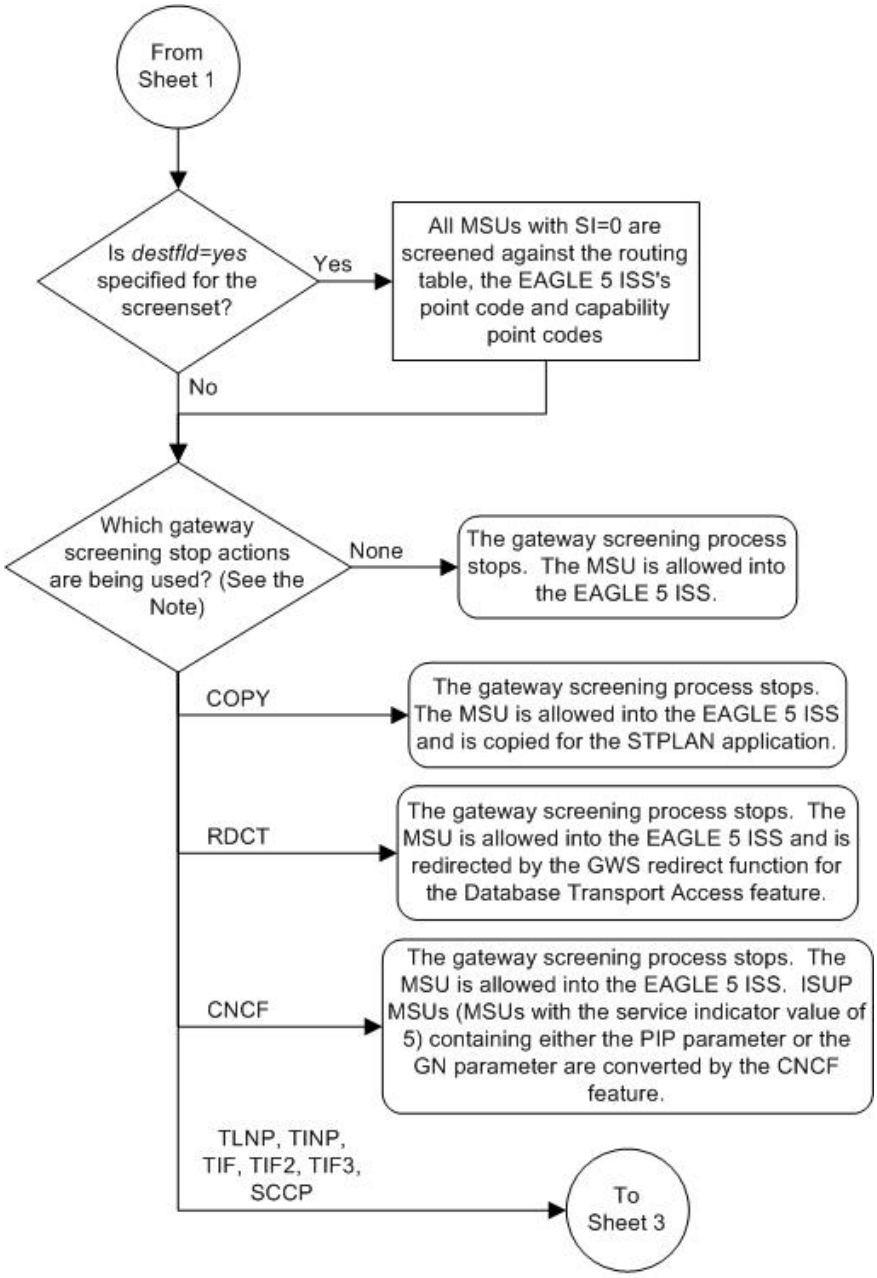
- If the `copy` gateway screening stop action is specified, the message is processed and a copy of the message is sent by the STPLAN feature to an external application.
- If the `rdct` (redirect) gateway screening stop action is specified,the message is diverted from the original destination and sent to another destination with the Database Transport Access feature, specified by global title translation, for further processing.
- If the `cncf` gateway screening stop action is specified, the PIP parameter in the incoming ISUP IAM message is converted to the GN parameter. The GN parameter in the incoming ISUP IAM message is converted to the PIP parameter. The message is then sent to the node specified by the DPC in the routing label in the message. For more information on the Calling Name Conversion Facility feature, see *Calling Name Conversion Facility (CNCF) Configuration*.
- If the `tlnp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are processed either by the ISUP NP with EPAP feature (if the ISUP NP with EPAP feature is enabled and turned on) or by the Triggerless LNP feature (if the Triggerless LNP feature is turned on). The ISUP NP with EPAP feature is discussed in more detail in the *Feature Manual - G-Port*. The Triggerless LNP feature is discussed in more detail in the *LNP Feature Activation Guide*.
- If the `tinp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are intercepted by the Triggerless ISUP based Number Portability (TINP) feature and converted to include the routing number (RN) if the call is to a ported number. The TINP feature is discussed in more detail in the *Feature Manual - G-Port*.
- If the `tif`, `tif2`, or `tif3` gateway screening stop actions are specified, TIF processing is applied to the message.
- If the `sccp` gateway screening stop action is specified, MTP routed SCCP UDT/XUDT are forwarded to the service modules for further processing.

Allowed OPC Screening Actions

Figure 30: Allowed OPC Screening Actions shows the screening actions of the allowed OPC screen.

Figure 30: Allowed OPC Screening Actions


Linkset is screened (gwsa=on)
NSFI for screen set = OPC
Does the OPC match any in the Allowed OPC screen?
No
The MSU is rejected
Yes
Will screening stop (nsfi=stop)
Yes
To Sheet 2
No
Next screen is Blocked OPC (nsfi=blkopc)
Next screen is Allowed SIO (nsfi=sio)
Next screen is Allowed DPC (nsfi=dpc)
Next screen is Blocked DPC (nsfi=blkdpc)
Next screen is Allowed CGPA (nsfi=cgpa)


From Sheet 1
Is destfld=yes specified for the screenset?
Yes
All MSUs with SI=0 are screened against the routing table, the EAGLE 5 ISS's point code and capability point codes
No
Which gateway screening stop actions are being used? (See the Note)
None
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS.
COPY
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is copied for the STPLAN application.
RDCT
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is redirected by the GWS redirect function for the Database Transport Access feature.
CNCF
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS. ISUP MSUs (MSUs with the service indicator value of 5) containing either the PIP parameter or the GN parameter are converted by the CNCF feature.
TLNP, TINP, TIF, TIF2, TIF3, SCCP
To Sheet 3
Note: Combinations of the gateway screening stop actions shown on Sheets 2 and 3 may be assigned to a gateway screening stop action set. Refer to the Configuring Gateway Screening Stop Action Sets and the Configuring TLNP Gateway Screening Stop Action Sets procedures in Chapter 2 of this manual for the combinations that can be used.

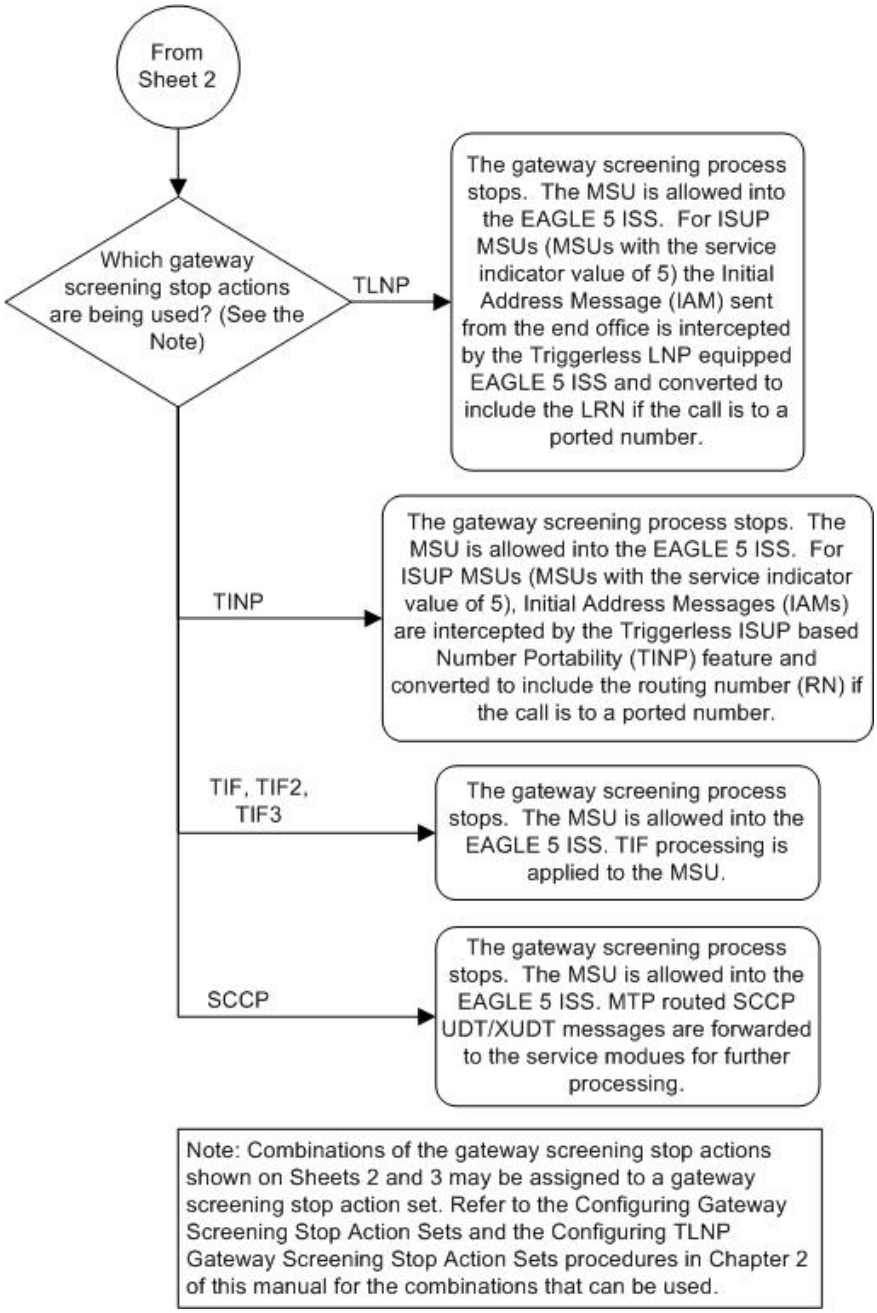
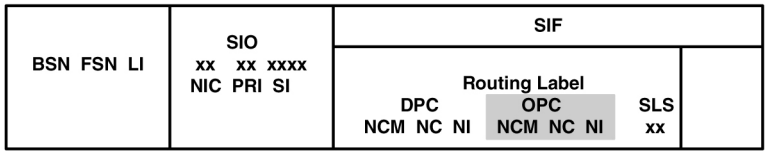
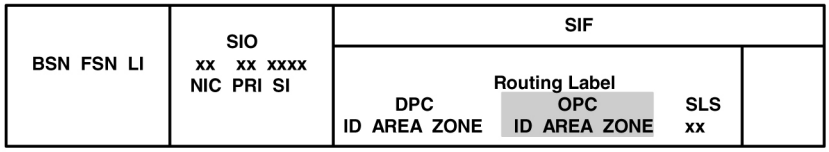


Figure 31: Allowed OPC Screening Functions

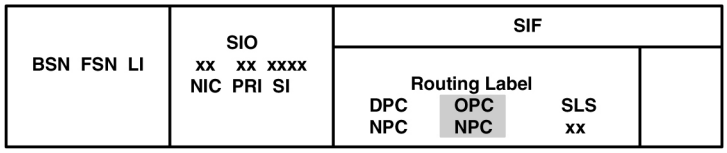
ANSI MSU (ANSI Message Signal Unit)



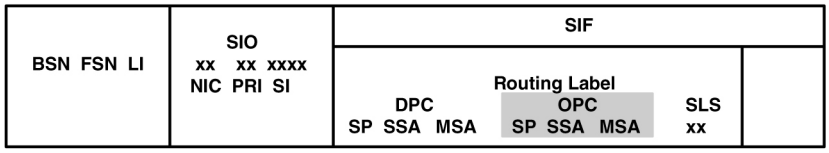
ITU-I MSU (ITU International Message Signal Unit)



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



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



Adding an Allowed OPC Screen

This procedure is used to add an allowed originating point code (OPC) screen to the database using the `ent-scr-opc` command. The parameters used by the `ent-scr-opc` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The examples in this procedure are used to add the allowed OPC screen data shown in *Table 72: Example Gateway Screening Allowed OPC Configuration Table* and based on the example configurations shown in *Figure 5: Gateway Screening Configuration - Example 1*, *Figure 9: Gateway Screening Configuration - Example 5*, and *Figure 11: Gateway Screening Configuration - Example 7*.

Table 72: Example Gateway Screening Allowed OPC Configuration Table

Screening Reference	NI	NC	NCM	NSFI	NSR
gws4	001	001	001	blkopc	gws3
fld2	010	010	010	blkopc	fld3
isp1	015	015	015	blkopc	isp1
tup1	017	017	017	sio	tup1

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The allowed OPC screen can reference one of the following screens.

- Blocked OPC
- Allowed SIO
- Allowed DPC
- Blocked DPC
- Allowed CGPA

Verifying the Gateway Screening Configuration

Enter the following commands to verify that these screens are in the database.

- `rtrv-scr-blkopc:all=yes`
- `rtrv-scr-sio:all=yes`
- `rtrv-scr-dpc:all=yes`
- `rtrv-scr-blkdpc:all=yes`
- `rtrv-scr-cgpa:all=yes`

Gateway Screening Configuration Procedures

If the desired screen is not in the database, perform one of these procedures to add the desired screen to the database or change an existing screen in the database.

- *Adding a Blocked OPC Screen*
- *Adding an Allowed SIO Screen*
- *Adding an Allowed DPC Screen*
- *Adding a Blocked DPC Screen*
- *Adding an Allowed Calling Party Address Screen*
- *Changing a Blocked OPC Screen*
- *Changing an Allowed SIO Screen*
- *Changing an Allowed DPC Screen*
- *Changing a Blocked DPC Screen*
- *Changing an Allowed Calling Party Address Screen*

Specifying a Range of Values

A range of values can be specified for the point code parameters `ni`, `nc`, or `ncm`.

If a range of values is specified for any of these parameters, and the value of the other parameters match existing values for the screening reference name, the range of values for the point code parameter cannot include any values for that parameter that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NI       NC       NCM      NSFI    NSR/ACT
SCR1  240      001      010      CGPA    ------
SCR1  241      010      020      STOP    ------
```

Another entry for screening reference `scr1` with the `ni` value of 240 and the `nc` value of 001 cannot be specified if the range of values for the `ncm` parameter includes the value 010.

The ANSI point code parameter values can be specified as a single value, a range of values, or with an asterisk (*). The asterisk specifies all possible values for the `ni`, `nc`, and `ncm` parameters. *Table 73: Valid Value Combinations for ANSI Point Code Parameters* shows the valid combinations of these parameter values.

Table 73: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk
Range of Values	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

A range of values can also be specified for an ITU-I or 24-bit ITU-N point code parameter using a combination of asterisks (*) and single values for the point code parameters. *Table 74: Valid Value Combinations for ITU-I Point Code Parameters* shows the valid combinations of the ITU-I parameter values. *Table 75: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 74: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 75: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

1. Verify that the gateway screening feature is on, by entering the `rtrv-feat` command.

   If the gateway screening feature is on, the `GWS` 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*.

   If the gateway screening feature is on, shown by the entry `GWS = on` in the `rtrv-feat` command output, skip step 2, and go to step 3.

2. Turn the gateway screening feature on by entering this command.

   `chg-feat:gws=on`

   Note: Once the gateway screening feature is turned on with the `chg-feat` command, it cannot be turned off.

   Note: The gateway screening feature must be purchased before you turn this feature on with the `chg-feat` command. If you are not sure if you have purchased the gateway screening feature, contact your Tekelec Sales Representative or Account Representative.

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

```
rlghncxa03w 06-10-28 11:43:04 GMT EAGLE5 36.0.0
CHG-FEAT: MASP A - COMPLTD
```

3. Display all allowed OPC screens in the database using the `rtrv-scr-opc` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED OPC
SR    REF  RULES
IEC   YES     2
WRD2  YES     1
WRD4  YES     9
```

   If the screening reference names that you wish to add with this procedure are not shown in the `rtrv-scr-opc` command output, go to step 4. For this example, the screening reference names are not shown. If these screening reference names are shown in the `rtrv-scr-opc` command output, make sure the screening data you wish to enter is not already in the database by entering the `rtrv-scr-opc` command with the screening reference name. For example, enter the `rtrv-scr-opc:sr=iec` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED OPC
SR    NI       NC       NCM      NSFI    NSR/ACT
IEC   240      001      010      STOP    ------
IEC   241      010      *        CGPA    cg04

SR      NPC                      NSFI    NSR/ACT
IEC     00235                    CGPA    cg04
IEC     00240                    CGPA    cg01

SR      ZONE   AREA     ID       NSFI    NSR/ACT
IEC     1      003      4        BLKOPC  blk1
IEC     1      003      5        STOP    ------
```

   If a gateway screening stop action set is to be assigned to the allowed OPC screen being added to the database, go to step 4.

   Step 4 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen being added in this procedure is STOP. If the NSFI of the new screen will be STOP, but a gateway screening stop action set name will not be assigned to the new screen, skip steps 4, 5, and 6, and go to step 7. If the NSFI of the new screen is not STOP, skip steps 4 and 5, and go to step 6.

4. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:27:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct
```

```
GWS action set table is (7 of 16) 44% full
```

If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

Note: If the gateway screening stop action set being assigned to the Allowed OPC screen does not contain the redirect stop action, skip step 5 and go to step 6.

5. Verify the point codes of adjacent nodes by entering the `rtrv-ls` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 36.0.0
                                L3T SLT              GWS GWS GWS
LSN          APCA    (SS7)  SCRN  SET SET BEI LST LNKS ACT MES DIS SLSCI NIS
e1e2         001-207-000    none  1   1   no  B   6    off off off no    off
ls1305       000-005-000    none  1   1   no  A   1    off off off no    off
ls1307       000-007-000    none  1   1   no  A   1    off off off no    off
e1m1s1       001-001-001    none  1   1   no  A   7    off off off no    off
e1m1s2       001-001-002    none  1   1   no  A   7    off off off no    off

                                L3T SLT              GWS GWS GWS
LSN          APCI    (SS7)  SCRN  SET SET BEI LST LNKS ACT MES DIS SLSCI NIS
e1e2i        1-207-0        none  1   1   no  B   4    off off off ---   on
ls1315       0-015-0        none  1   1   no  A   1    off off off ---   off
ls1317       0-017-0        none  1   1   no  A   1    off off off ---   on
e1m2s1       1-011-1        none  1   1   no  A   7    off off off ---   off
e1m2s2       1-011-2        none  1   1   no  A   7    off off off ---   off

Link set table is (10 of 1024) 1% full.
```

CAUTION: Redirecting SLTA/SLTM messages prevents SLTA/SLTM messages from being returned to the EAGLE 5 ISS. The signaling link carrying these messages will fail if these messages are not returned to the EAGLE 5 ISS. To prevent SLTA/SLTM messages from being redirected, gateway screening stop action sets containing the redirect stop action should not be assigned to Allowed OPC screens containing the adjacent point code of a linkset.

Note: If the NSFI of the screen being added in this procedure is STOP, skip step 6 and go to step 7.

6. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 8 is in the database.

   If the desired screen is not in the database, perform one of the procedures shown in the *Gateway Screening Configuration Procedures* section to add the desired screen to the database or change an existing screen in the database.

   Note: If the point code being added in this procedure is not an ITU-I or 14-bit ITU-N spare point code, skip step 7 and to step 8.

   Note: If the point code being added in this procedure is an ITU-I or 14-bit ITU-N spare point code and the screening reference contains ITU-I or 14-bit ITU-N spare point codes, skip step 7 and go to step 8.

7. Display the status of the ITU National and International Spare Point Code Support feature by entering the `rtrv-ctrl-feat` command with the ITU National and International Spare Point Code Support feature part number.

   Enter this command.

   ```
   rtrv-ctrl-feat:partnum=893013601
   ```

   This is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
   The following features have been permanently enabled:

   Feature Name              Partnum   Status Quantity
   Spare Point Code Support  893013601 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 ITU National and International Spare Point Code Support feature is enabled, go to step 8.

   If the ITU National and International Spare Point Code Support feature is not enabled, perform the "Activating the ITU National and International Spare Point Code Support Feature" procedure in the Database *Administration Manual* - SS7 to enable the ITU National and International Spare Point Code Support feature as required. After the feature has been enabled, go to step 8.

8. Add a new allowed OPC screen to the database using the `ent-scr-opc` command.

   If a gateway screening stop action is to be assigned to the allowed OPC screen being changed, enter the `ent-scr-opc` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 4.

   CAUTION: Redirecting SLTA/SLTM messages prevents SLTA/SLTM messages from being returned to the EAGLE 5 ISS. The signaling link carrying these messages will fail if these messages are not returned to the EAGLE 5 ISS. To prevent SLTA/SLTM messages from being redirected, gateway screening stop action sets containing the redirect stop action should not be assigned to Allowed OPC screens containing the adjacent point code of a linkset, shown in step 5.

   The following list contains the values for `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, and `sp` parameters:

   - ni – 0 - 255 or an asterisk (*)
   - nc – 0 - 255 or an asterisk (*)
   - ncm – 0 - 255 or an asterisk (*)
   - zone – 0 - 7 or an asterisk (*)
   - area – 0 - 255 or an asterisk (*)
   - id – 0 - 7 or an asterisk (*)
   - npc – 1 - 16383 or an asterisk (*)
   - msa – 0 - 255 or an asterisk (*)

- ssa – 0 - 255 or an asterisk (*)
- sp – 0 - 255 or an asterisk (*)

A range of values can be specified for the `ni`, `nc`, and `ncm` parameters. See the *"Specifying a Range of Values"* section for more information on how the asterisk and a range of values are used for the `ni`, `nc`, and `ncm` parameters.

To add a spare point code to the allowed OPC screen, the `pcst=s` parameter must be specified. To add a non-spare point code to the allowed OPC screen, the `pcst` parameter does not have to be specified. If the `pcst` parameter is specified for a screen containing an ITU-I or 14-bit ITU-N non-spare point code, the value must be `none`.

For this example, enter these commands.

```
ent-scr-opc:sr=gws4:ni=001:nc=001:ncm=001:nsfi=blkopc:nsr=gws3
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
ENT-SCR-OPC: SCREEN SET AFFECTED - GWS4  1% FULL
ENT-SCR-OPC: MASP A - COMPLTD
```

```
ent-scr-opc:sr=fld2:ni=010:nc=010:ncm=010:nsfi=blkopc:nsr=fld3
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
ENT-SCR-OPC: SCREEN SET AFFECTED - FLD2  1% FULL
ENT-SCR-OPC: MASP A - COMPLTD
```

```
ent-scr-opc:sr=isp1:ni=015:nc=015:ncm=015:nsfi=blkopc:nsr=isp1
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
ENT-SCR-OPC: SCREEN SET AFFECTED - ISP1  1% FULL
ENT-SCR-OPC: MASP A - COMPLTD
```

```
ent-scr-opc:sr=tup1:ni=017:nc=017:ncm=017:nsfi=sio:nsr=tup1
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
ENT-SCR-OPC: SCREEN SET AFFECTED - TUP1  1% FULL
ENT-SCR-OPC: MASP A - COMPLTD
```

9. Verify the changes using the `rtrv-scr-opc` command with the screening reference name used in step 8.

   For this example, enter these commands.

   ```
   rtrv-scr-opc:sr=gws4
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED OPC
   SR    NI       NC       NCM      NSFI    NSR/ACT
   GWS4  001      001      001      BLKOPC  GWS3
   ```

   ```
   rtrv-scr-opc:sr=fld2
   ```

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:31:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED OPC
SR    NI       NC       NCM      NSFI    NSR/ACT
FLD2  010      010      010      BLKOPC  FLD3
```

`rtrv-scr-opc:sr=isp1`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:31:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED OPC
SR    NI       NC       NCM      NSFI    NSR/ACT
ISP1  015      015      015      BLKOPC  ISP1
```

`rtrv-scr-opc:sr=tup1`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:31:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED OPC
SR    NI       NC       NCM      NSFI    NSR/ACT
TUP1  017      017      017      SIO     TUP1
```

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

    The following 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.
```

Removing an Allowed OPC Screen

This procedure is used to remove an allowed originating point code (OPC) screen from the database using the `dlt-scr-opc` command. The parameters used by the `dlt-scr-opc` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure removes the allowed OPC screen `gws4` from the database.

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The allowed OPC screen can only be referenced by a screen set.

Enter the `rtrv-scrset:nsfi=opc` command to verify that none of the screen sets reference the allowed OPC screen being removed from the database.

To change the NSFI of any of the screen sets, perform the *Changing a Screen Set* procedure.

1. Display the allowed OPC screens in the database using the `rtrv-scr-opc` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED OPC

SR    REF  RULES
GWS4  YES     1
IEC   YES     6
ISP1  YES     1
TUP1  YES     1
WRD2  YES     1
WRD4  YES     9
```

From the `rtrv-scr-opc` output, display the allowed OPC screen you wish to remove using the `rtrv-scr-opc` command with the screening reference name. For this example, enter this command.

`rtrv-scr-opc:sr=gws4`

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED OPC
SR    NI       NC       NCM      NSFI    NSR/ACT
GWS4  001      001      001      BLKOPC  GWS7
```

2. Enter the `rtrv-scrset:nsfi=opc` command to verify that none of the screen sets reference the allowed OPC screen being removed from the database.

   To change the NSFI of any of the screen sets, perform the *Changing a Screen Set* procedure.

3. Remove the allowed OPC screen from the database using the `dlt-scr-opc` command with the screening reference name shown in the `rtrv-scr-opc` output in step 1 and with the point code parameter values (`ni`, `nc`, `ncm`, or `zone`, `area`, `id`, or `npc`, or `msa`, `ssa`, `sp`) of the screen being removed from the database. The values for these parameters must be entered exactly as shown in the `rtrv-scr-opc` output.

   To remove an entry containing either an ITU-I or a 14-bit ITU-N spare point code, the `pcst=s` parameter must be specified with the `dlt-scr-opc` command.

   To remove an entry containing either an ITU-I or a 14-bit ITU-N non-spare point code, the `pcst` parameter does not have to be specified with the `dlt-scr-opc` command. If the `pcst` parameter is specified, the value must be `none`.

   For this example, enter this command.

   `dlt-scr-opc:sr=gws4:ni=001:nc=001:ncm=001`

   A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
DLT-SCR-OPC: SCREEN SET AFFECTED - GWS4  0% FULL
DLT-SCR-OPC: MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-scr-opc` command with the screening reference name used in step 3.

   For this example, enter this command.

   `rtrv-scr-opc:sr=gws4`

The following is an example of the possible output.

```
E2573 Cmd Rej: SR or NSR does not reference an existing SR
```

This message shows that the specified screening reference name is not in the database and the action of the `dlt-scr-opc` command in step 3 was successful. If the specified screening reference name contained more than one entry when the `dlt-scr-opc` command was executed in step 3, the `rtrv-scr-opc:sr=` command output would show the remaining entries in the screening reference instead of error message E2573.

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

   The following 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.
```

Changing an Allowed OPC Screen

This procedure is used to change the attributes of an allowed originating point code (OPC) screen in the database using the `chg-scr-opc` command. The parameters used by the `chg-scr-opc` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure is used to change the point code for the allowed OPC screen `wrd2` to 230-230-230, the NSFI to `blkopc`, and the NSR to `wrd6`.

Note: If you using multiple-part ITU national point codes with gateway screening, see the *14-Bit ITU National Point Code Formats* section.

The allowed OPC screen can reference one of the following screens.

- Blocked OPC
- Allowed SIO
- Allowed DPC
- Blocked DPC
- Allowed CGPA

Verifying the Gateway Screening Configuration

Enter the following commands to verify that these screens are in the database.

- `rtrv-scr-blkopc:all=yes`
- `rtrv-scr-sio:all=yes`
- `rtrv-scr-dpc:all=yes`
- `rtrv-scr-blkdpc:all=yes`
- `rtrv-scr-cgpa:all=yes`

Gateway Screening Configuration Procedures

If the desired screen is not in the database, perform one of these procedures to add the desired screen to the database or change an existing screen in the database.

- *Adding a Blocked OPC Screen*
- *Adding an Allowed SIO Screen*
- *Adding an Allowed DPC Screen*
- *Adding a Blocked DPC Screen*
- *Adding an Allowed Calling Party Address Screen*
- *Changing a Blocked OPC Screen*
- *Changing an Allowed SIO Screen*
- *Changing an Allowed DPC Screen*
- *Changing a Blocked DPC Screen*
- *Changing an Allowed Calling Party Address Screen*

Specifying a Range of Values

A range of values can be specified for the point code parameters `ni`, `nc`, or `ncm`.

If a range of values is specified for any of these parameters, and the value of the other parameters match existing values for the screening reference name, the range of values for the point code parameter cannot include any values for that parameter that are currently provisioned for the screening reference name.

For example, screening reference name `scr1` contains these entries:

```
SR    NI       NC       NCM      NSFI    NSR/ACT
SCR1  240      001      010      CGPA    ------
SCR1  241      010      020      STOP    ------
```

Another entry for screening reference `scr1` with the `ni` value of 240 and the `nc` value of 001 cannot be specified if the range of values for the `ncm` parameter includes the value 010.

The ANSI point code parameter values can be specified as a single value, a range of values, or with an asterisk (*). The asterisk specifies all possible values for the `ni`, `nc`, and `ncm` parameters. *Table 76: Valid Value Combinations for ANSI Point Code Parameters* shows the valid combinations of these parameter values.

Table 76: Valid Value Combinations for ANSI Point Code Parameters

NI	NC	NCM
Single Value	Single Value	Single Value
Single Value	Single Value	Range of Values
Single Value	Single Value	Asterisk
Single Value	Range of Values	Asterisk
Single Value	Asterisk	Asterisk

NI	NC	NCM
Range of Values	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

A range of values can also be specified for an ITU-I or 24-bit ITU-N point code parameter using a combination of asterisks (*) and single values for the point code parameters. *Table 77: Valid Value Combinations for ITU-I Point Code Parameters* shows the valid combinations of the ITU-I parameter values. *Table 78: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters* shows the valid combinations of the 24-bit ITU-N parameter values.

Table 77: Valid Value Combinations for ITU-I Point Code Parameters

ZONE	AREA	ID
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

Table 78: Valid Value Combinations for 24-Bit ITU-N Point Code Parameters

MSA	SSA	SP
Single Value	Single Value	Single Value
Single Value	Single Value	Asterisk
Single Value	Asterisk	Asterisk
Asterisk	Asterisk	Asterisk

1. Display the allowed OPC screens in the database using the `rtrv-scr-opc` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED DPC
SR    REF  RULES
GWS4  YES     1
IEC   YES     6
ISP1  YES     1
TUP1  YES     1
```

```
WRD2  YES     1
WRD4  YES     9
```

From the `rtrv-scr-opc` output, display the allowed OPC screen you wish to remove using the `rtrv-scr-opc` command with the screening reference name. For this example, enter this command.

```
rtrv-scr-opc:sr=wrd2
```

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED OPC
SR    NI       NC       NCM      NSFI    NSR/ACT
WRD2  243      015      001      STOP    ------
```

If a gateway screening stop action set is to be assigned to the allowed OPC screen being changed in the database, go to step 2.

Step 2 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen being changed in this procedure is STOP. If the NSFI of the screen will be changed to STOP, but a gateway screening stop action set name will not be assigned to the screen, skip steps 2, 3, and 4 and go to step 5. If the NSFI of the screen will not be STOP, skip step 2 and 3, and go to step 4.

2. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

Note: If the gateway screening stop action set being assigned to the Allowed OPC screen does not contain the redirect stop action, skip step 3 and go to step 4.

3. Verify the point codes of adjacent nodes by entering the `rtrv-ls` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-10 11:43:04 GMT EAGLE5 36.0.0
                              L3T SLT              GWS GWS GWS
LSN          APCA   (SS7)  SCRN  SET SET BEI LST LNKS ACT MES DIS SLSCI NIS
e1e2         001-207-000   none  1   1   no  B   6    off off off no    off
ls1305       000-005-000   none  1   1   no  A   1    off off off no    off
ls1307       000-007-000   none  1   1   no  A   1    off off off no    off
e1m1s1       001-001-001   none  1   1   no  A   7    off off off no    off
e1m1s2       001-001-002   none  1   1   no  A   7    off off off no    off
```

```
                                L3T SLT             GWS GWS GWS
LSN          APCI   (SS7)  SCRN  SET SET BEI LST LNKS ACT MES DIS SLSCI NIS
e1e2i        1-207-0       none  1   1   no  B   4    off off off ---   on
ls1315       0-015-0       none  1   1   no  A   1    off off off ---   off
ls1317       0-017-0       none  1   1   no  A   1    off off off ---   on
e1m2s1       1-011-1       none  1   1   no  A   7    off off off ---   off
e1m2s2       1-011-2       none  1   1   no  A   7    off off off ---   off

Link set table is (10 of 1024) 1% full.
```

CAUTION: Redirecting SLTA/SLTM messages prevents SLTA/SLTM messages from being returned to the EAGLE 5 ISS. The signaling link carrying these messages will fail if these messages are not returned to the EAGLE 5 ISS. To prevent SLTA/SLTM messages from being redirected, gateway screening stop action sets containing the redirect stop action should not be assigned to Allowed OPC screens containing the adjacent point code of a linkset.

Note: If the NSFI of the screen being changed in this procedure will be STOP, or if the NSFI of the screen is not being changed, skip step 4 and go to step 5.

4. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 6 is in the database.

   If the desired screen is not in the database, perform one of the procedures shown in the *Gateway Screening Configuration Procedures* section to add the desired screen to the database or change an existing screen in the database.

   Note: If any of these conditions apply to this procedure, skip this step and go to step 6:

   - The point code in the screen is not being changed.
   - The screen being changed contains either an ANSI or 24-bit ITU-N point code.
   - The ITU-I or 14-bit ITU-N non-spare point code in the screen is not being changed to an ITU-I or 14-bit ITU-N spare point code.
   - The point code in the screen is an ITU-I or 14-bit ITU-N spare point code or the screening reference contains other screens with ITU-I or 14-bit ITU-N spare point codes.

5. Display the status of the ITU National and International Spare Point Code Support feature by entering the `rtrv-ctrl-feat` command with the ITU National and International Spare Point Code Support feature part number.

   Enter this command.

   `rtrv-ctrl-feat:partnum=893013601`

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
The following features have been permanently enabled:

Feature Name              Partnum   Status Quantity
Spare Point Code Support  893013601 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 ITU National and International Spare Point Code Support feature is enabled, go to step 6.

If the ITU National and International Spare Point Code Support feature is not enabled, perform the "Activating the ITU National and International Spare Point Code Support Feature" procedure in the Database *Administration Manual* - SS7 to enable the ITU National and International Spare Point Code Support feature as required. After the feature has been enabled, go to step 6.

6. Change the attributes for the allowed OPC using the `chg-scr-opc` command.

   If a gateway screening stop action is to be assigned to the allowed OPC screen being changed, enter the `chg-scr-opc` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 2.

   CAUTION: Redirecting SLTA/SLTM messages prevents SLTA/SLTM messages from being returned to the EAGLE 5 ISS. The signaling link carrying these messages will fail if these messages are not returned to the EAGLE 5 ISS. To prevent SLTA/SLTM messages from being redirected, gateway screening stop action sets containing the redirect stop action should not be assigned to Allowed OPC screens containing the adjacent point code of a linkset, shown in step 3.

   The current values for the `ni`, `nc`, `ncm`, `zone`, `area`, `id`, `npc`, `msa`, `ssa`, and `sp` parameters must be entered exactly as shown in the `rtrv-scr-opc` output in step 1.

   The following list contains the values for the `nni`, `nnc`, `nncm`, `nzone`, `narea`, `nid`, and `nnpc` parameters:

   - nni – 0 - 255 or an asterisk (*)
   - nnc – 0 - 255 or an asterisk (*)
   - nncm – 0 - 255 or an asterisk (*)
   - nzone – 0 - 7 or an asterisk (*)
   - narea – 0 - 255 or an asterisk (*)
   - nid – 0 - 7 or an asterisk (*)
   - nnpc – 1 - 16383 or an asterisk (*)
   - nmsa – 0 - 255 or an asterisk (*)
   - nssa – 0 - 255 or an asterisk (*)
   - nsp – 0 - 255 or an asterisk (*)

   A range of values can be specified for the `nni`, `nnc`, and `nncm` parameters. See the *"Specifying a Range of Values"* section for more information on how the asterisk and a range of values are used for the `nni`, `nnc`, and `nncm` parameters.

   To change an ITU-I or 14-bit ITU-N spare point code to a non-spare point code, both the `pcst=s` and `npcst=none` parameters must be specified with the `chg-scr-opc` command.

   To change an ITU-I or 14-bit ITU-N non-spare point code to a spare point code, the `npcst=s` parameter must be specified with the `chg-scr-opc` command. The `pcst` parameter does not have to be specified.

   If the current point code in the screen being changed is either an ITU-I or 14-bit ITU-N spare point code, the `pcst=s` parameter must be specified with the `chg-scr-opc` command.

If the current point code in the screen being changed is either an ITU-I or 14-bit ITU-N non-spare point code, the `pcst` parameter does not have to be specified with the `chg-scr-opc` command. If the `pcst` parameter is specified for a screen containing either an ITU-I or 14-bit ITU-N non-spare point code, the `pcst` parameter value must be `none`.

For this example, enter this command.

```
chg-scr-opc:sr=wrd2:ni=243:nc=015:ncm=001:nni=230:nc=230
:ncm=230:nsfi=blkopc:nsr=wrd6
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:27:30 GMT  EAGLE5 36.0.0
CHG-SCR-OPC: SCREEN SET AFFECTED - WRD2  1% FULL
CHG-SCR-OPC: MASP A - COMPLTD
```

7. Verify the changes using the `rtrv-scr-opc` command with the screening reference name used in step 6.

   For this example, enter this command.

   ```
   rtrv-scr-opc:sr=wrd2
   ```

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:28:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED OPC
   SR    NI       NC       NCM      NSFI    NSR/ACT
   WRD2  230      230      230      BLKOPC  WRD6
   ```

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

   The following 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.
   ```

Chapter 13

Screen Set Configuration

Topics:

Chapter 13, Screen Set Configuration, contains the procedures necessary to configure screen sets.

Introduction

A screen set is a gateway screening table containing a list of rules, or screening references. The screening references indicate the screening action that is to be performed on a message in a specific linkset. These screening references are configured in *Allowed Affected Point Code (AFTPC) Screen Configuration* through *Allowed Originating Point Code (OPC) Screen Configuration*. The screen set is assigned to a linkset. When the `gwsa=on` linkset parameter is specified for a specific linkset, all the messages on that linkset will be screened by the gateway screening feature based on the screening references contained in the screen set. For more information of the linkset parameters used for the gateway screening feature, go to the *Gateway Screening States* section, or to the `ent-ls` or `chg-ls` command descriptions in the *Commands Manual*.

Automatic Destination Field Screening

Network management messages can be screened automatically by gateway screening without configuring an Allowed Affected Destination Field screen. The `destfld=yes` parameter specified with the `ent-scrset` or `chg-scrset` commands turns on automatic screening of the affected destination point code (see *Figure 21: Allowed Affected Destination Field Screening Function*) in the network management messages. Network management messages contain the value 0 in the service indicator field of the SIO. The network management messages are screened against the routing table, the EAGLE 5 ISS's point code, and capability point codes. If the affected destination point code matches the EAGLE 5 ISS's point code, capability point codes, or point codes in the routing table, the message is allowed into the EAGLE 5 ISS. The automatic screening is applied after the last screen in the screening process, containing the `nsfi=stop` parameter, for that screen set.

These network management messages are automatically screened by gateway screening: TFP, TFA, TFR, TFC, UPU, SRST (RSP, RSR). All other network management messages are allowed into the EAGLE 5 ISS.

Adding a Screen Set

This procedure is used to add a screen set to the database using the `ent-scrset` command. The parameters used by the `ent-scrset` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

A maximum of 255 screen sets can be configured in the database. If the database contains 255 screen sets, any attempt to add another screen set with the `ent-scrset` command will be rejected. If the database contains 255 screen sets, and you wish to add another screen set, a current screen set must be removed or changed. To remove a screen set, perform the *Removing a Screen Set* procedure. To change an existing screen set, perform the *Changing a Screen Set* procedure.

The examples in this procedure are used to add the screen set data shown in *Table 79: Example Gateway Screening Screen Set Configuration Table* and based on the example configurations shown in *Figure 5:*

Gateway Screening Configuration - Example 1 through *Figure 11: Gateway Screening Configuration - Example 7*.

Table 79: Example Gateway Screening Screen Set Configuration Table

Screen Set Name	Next Screening Function Identifier	Next Screening Reference	DESTFLD
gws1	opc	gws4	No
gws2	blkopc	gws5	No
ls01	sio	ls02	Yes
wrd1	dpc	iec	Yes
fld1	opc	fld2	No
isp1	opc	isp1	No
tup1	opc	tup1	No

The screen set can reference one of the following screens.

- Allowed OPC
- Blocked OPC
- Allowed SIO
- Allowed DPC
- Blocked DPC

Verifying the Gateway Screening Configuration

Enter the following commands to verify that these screens are in the database.

- `rtrv-scr-opc:all=yes`
- `rtrv-scr-blkopc:all=yes`
- `rtrv-scr-sio:all=yes`
- `rtrv-scr-dpc:all=yes`
- `rtrv-scr-blkdpc:all=yes`

Gateway Screening Configuration Procedures

If the desired screen is not in the database, perform one of these procedures to add the desired screen to the database or change an existing screen in the database.

- *Adding an Allowed OPC Screen*
- *Adding a Blocked OPC Screen*
- *Adding an Allowed SIO Screen*
- *Adding an Allowed DPC Screen*
- *Adding a Blocked DPC Screen*
- *Changing an Allowed OPC Screen*
- *Changing a Blocked OPC Screen*
- *Changing an Allowed SIO Screen*
- *Changing an Allowed DPC Screen*
- *Changing a Blocked DPC Screen*

1. Verify that the gateway screening feature is on, by entering the `rtrv-feat` command.

   If the gateway screening feature is on, the `GWS` 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*.

   If the gateway screening feature is on, shown by the entry `GWS = on` in the `rtrv-feat` command output, skip step 2, and go to step 3.

2. Turn the gateway screening feature on by entering this command.

   `chg-feat:gws=on`

   Note: Once the gateway screening feature is turned on with the `chg-feat` command, it cannot be turned off.

   The gateway screening feature must be purchased before you turn this feature on with the `chg-feat` command. If you are not sure if you have purchased the gateway screening feature, contact your Tekelec Sales Representative or Account Representative.

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

```
rlghncxa03w 06-10-28 11:43:04 GMT EAGLE5 36.0.0
CHG-FEAT: MASP A - COMPLTD
```

3. Display all the screen sets in the database using the `rtrv-scrset` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
ENTIRE GWS DATABASE IS 1% FULL
CDPA + AFTPC TABLES ARE 1% FULL
THERE ARE 248 SCREEN SETS AVAILABLE

THE FOLLOWING ARE OVER 80% FULL:
SCRN  NSFI    NSR/ACT  FULL  RULES  TABLES  DESTFLD

SCRN  NSFI    NSR/ACT  FULL  RULES  TABLES  DESTFLD
ss01  OPC     opc1      51%  2075   22      YES
ss02  OPC     opc2       2%    75   22      YES
ss03  OPC     opc3       2%    75   22      YES
ss04  OPC     opc1      51%  2075   22      NO
ss07  OPC     opc1      51%  2075   22      YES
ss09  OPC     opc1      51%  2075   22      NO
ss28  OPC     opc1      51%  2075   22      YES
```

   If a gateway screening stop action set is to be assigned to the screen set being added to the database, go to step 4.

   Step 4 verifies the gateway screening stop action set names in the database. The gateway screening stop action set names are assigned only if the NSFI of the screen set being added in this procedure is STOP. If the NSFI of the new screen set will be STOP, but a gateway screening stop action set name will not be assigned to the new screen set, skip steps 4 and 5 and go to step 6. If the NSFI of the new screen set is not STOP, skip step 4 and go to step 5.

4. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct
GWS action set table is (7 of 16) 44% full
```

If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

Note: If the NSFI of the screen set being added in this procedure is STOP, skip step 5 and go to step 6.

5. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 6 is in the database.

   If the desired screen is not in the database, perform one of the procedures shown in the *Gateway Screening Configuration Procedures* section to add the desired screen to the database or change an existing screen in the database.

6. Add a new screen set to the database using the `ent-scrset` command.

   If a gateway screening stop action is to be assigned to the screen set being added, enter the `ent-scrset` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 4.

   For this example, enter these commands.

   ```
   ent-scrset:scrn=gws1:nsfi=opc:nsr=gws4:destfld=no
   ```

   A message similar to the following should appear.

   ```
   rlghncxa03w 06-10-25 15:27:30 GMT EAGLE5 36.0.0
   ENT-SCRSET: SCREEN SET AFFECTED - GWS1  1% FULL
   ENT-SCRSET: MASP A - COMPLTD
   ```

   ```
   ent-scrset:scrn=gws2:nsfi=blkopc:nsr=gws5:destfld=no
   ```

   A message similar to the following should appear.

   ```
   rlghncxa03w 06-10-25 15:28:30 GMT EAGLE5 36.0.0
   ENT-SCRSET: SCREEN SET AFFECTED - GWS2  1% FULL
   ENT-SCRSET: MASP A - COMPLTD
   ```

   ```
   ent-scrset:scrn=ls01:nsfi=sio:nsr=ls02:destfld=yes
   ```

   A message similar to the following should appear.

   ```
   rlghncxa03w 06-10-25 15:29:30 GMT EAGLE5 36.0.0
   ```

```
ENT-SCRSET: SCREEN SET AFFECTED - LS01  1% FULL
ENT-SCRSET: MASP A - COMPLTD
```

`ent-scrset:scrn=wrd1:nsfi=dpc:nsr=iec:destfld=yes`

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:30:30 GMT EAGLE5 36.0.0
ENT-SCRSET: SCREEN SET AFFECTED - WRD1  1% FULL
ENT-SCRSET: MASP A - COMPLTD
```

`ent-scrset:scrn=fld1:nsfi=opc:nsr=fld2:destfld=no`

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:31:30 GMT EAGLE5 36.0.0
ENT-SCRSET: SCREEN SET AFFECTED - FLD1  1% FULL
ENT-SCRSET: MASP A - COMPLTD
```

`ent-scrset:scrn=isp1:nsfi=opc:nsr=isp1:destfld=no`

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:31:30 GMT EAGLE5 36.0.0
ENT-SCRSET: SCREEN SET AFFECTED - ISP1  1% FULL
ENT-SCRSET: MASP A - COMPLTD
```

`ent-scrset:scrn=tup1:nsfi=opc:nsr=tup1:destfld=no`

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:31:30 GMT EAGLE5 36.0.0
ENT-SCRSET: SCREEN SET AFFECTED - TUP1  1% FULL
ENT-SCRSET: MASP A - COMPLTD
```

7. Verify the changes using the `rtrv-scrset` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:32:30 GMT EAGLE5 36.0.0
ENTIRE GWS DATABASE IS 1% FULL
CDPA + AFTPC TABLES ARE 1% FULL
THERE ARE 242 SCREEN SETS AVAILABLE

THE FOLLOWING ARE OVER 80% FULL:
SCRN  NSFI    NSR/ACT  FULL  RULES  TABLES  DESTFLD

SCRN  NSFI    NSR/ACT  FULL  RULES  TABLES  DESTFLD
fld1  OPC     fld2       1%     5   4       NO
gws1  OPC     gws4       1%     9   7       NO
gws2  BLKOPC  gws5       1%     5   4       NO
isp1  OPC     isp1       1%     6   4       NO
ls01  SIO     ls02       1%     3   3       YES
ss01  OPC     opc1      51%  2075   22      YES
ss02  OPC     opc2       2%    75   22      YES
ss03  OPC     opc3       2%    75   22      YES
ss04  OPC     opc1      51%  2075   22      NO
ss07  OPC     opc1      51%  2075   22      YES
ss09  OPC     opc1      51%  2075   22      NO
ss28  OPC     opc1      51%  2075   22      YES
tup1  OPC     tup1       1%     8   5       NO
wrd1  DPC     iec        1%     6   5       YES
```

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

   The following 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.
```

Removing a Screen Set

This procedure is used to remove a screen set from the database using the `dlt-scrset` command. The parameters used by the `dlt-scrset` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure removes the screen set `gws1` from the database.

1. Display all screen sets in the database using the `rtrv-scrset` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
ENTIRE GWS DATABASE IS 1% FULL
CDPA + AFTPC TABLES ARE 1% FULL
THERE ARE 242 SCREEN SETS AVAILABLE

THE FOLLOWING ARE OVER 80% FULL:
SCRN  NSFI    NSR/ACT  FULL  RULES  TABLES  DESTFLD

SCRN  NSFI    NSR/ACT  FULL  RULES  TABLES  DESTFLD
fld1  OPC     fld2       1%     5   4       NO
gws1  OPC     gws4       1%     9   7       NO
gws2  BLKOPC  gws5       1%     5   4       NO
isp1  OPC     isp1       1%     6   4       NO
ls01  SIO     ls02       1%     3   3       YES
ss01  OPC     opc1      51%  2075   22      YES
ss02  OPC     opc2       2%    75   22      YES
ss03  OPC     opc3       2%    75   22      YES
ss04  OPC     opc1      51%  2075   22      NO
ss07  OPC     opc1      51%  2075   22      YES
ss09  OPC     opc1      51%  2075   22      NO
ss28  OPC     opc1      51%  2075   22      YES
tup1  OPC     tup1       1%     8   5       NO
wrd1  DPC     iec        1%     6   5       YES
```

2. The screen set to be removed cannot be referenced by a linkset.

   To verify this, enter the `rtrv-ls` command. If the output shows a reference to the screen set to be removed, perform the Changing an SS7 Linkset procedure in the Database *Administration Manual – SS7* and change the `scrn` parameter to reference another screen set, or to `none` to remove the reference to the screen set.

3. Remove the screen set from the database using the `dlt-scrset` command.

   For this example, enter this command.

```
dlt-scrset:scrn=gws1
```

A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
DLT-SCRSET: SCREEN SET AFFECTED - GWS1  0% FULL
DLT-SCRSET: MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-scrset` command with the screen set name used in step 3.

   For this example, enter this command.

   ```
   rtrv-scrset:scrn=gws1
   ```

   The following is an example of the possible output.

   ```
   E2573 Cmd Rej: SR or NSR does not reference an existing SR
   ```

   This message shows that the specified screen set name is not in the database and the action of the `dlt-scrset` command in step 3 was successful.

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

   The following 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.
   ```

Changing a Screen Set

This procedure is used to change the attributes of a screen set in the database using the `chg-scrset` command. The parameters used by the `chg-scrset` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure is used to change screen set `ls01` to screen set `ls05` with the `nsfi=blkopc` and `nsr=ls08`.

If the screen set name is being changed, the new screen set name cannot already exist in the database.

The screen set can reference one of the following screens.

- Allowed OPC
- Blocked OPC
- Allowed SIO
- Allowed DPC
- Blocked DPC

Verifying the Gateway Screening Configuration

Enter the following commands to verify that these screens are in the database.

- `rtrv-scr-opc:all=yes`

- `rtrv-scr-blkopc:all=yes`
- `rtrv-scr-sio:all=yes`
- `rtrv-scr-dpc:all=yes`
- `rtrv-scr-blkdpc:all=yes`

Gateway Screening Configuration Procedures

If the desired screen is not in the database, perform one of the following procedures to add the desired screen to the database or change an existing screen in the database.

- *Adding an Allowed OPC Screen*
- *Adding a Blocked OPC Screen*
- *Adding an Allowed SIO Screen*
- *Adding an Allowed DPC Screen*
- *Adding a Blocked DPC Screen*
- *Changing an Allowed OPC Screen*
- *Changing a Blocked OPC Screen*
- *Changing an Allowed SIO Screen*
- *Changing an Allowed DPC Screen*
- *Changing a Blocked DPC Screen*

1. Display all screen sets in the database using the `rtrv-scrset` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
ENTIRE GWS DATABASE IS 1% FULL
CDPA + AFTPC TABLES ARE 1% FULL
THERE ARE 242 SCREEN SETS AVAILABLE

THE FOLLOWING ARE OVER 80% FULL:
SCRN  NSFI    NSR/ACT  FULL  RULES  TABLES  DESTFLD

SCRN  NSFI    NSR/ACT  FULL  RULES  TABLES  DESTFLD
fld1  OPC     fld2       1%     5   4       NO
gws1  OPC     gws4       1%     9   7       NO
gws2  BLKOPC  gws5       1%     5   4       NO
isp1  OPC     isp1       1%     6   4       NO
ls01  SIO     ls02       1%     3   3       YES
ss01  OPC     opc1      51%  2075   22      YES
ss02  OPC     opc2       2%    75   22      YES
ss03  OPC     opc3       2%    75   22      YES
ss04  OPC     opc1      51%  2075   22      NO
ss07  OPC     opc1      51%  2075   22      YES
ss09  OPC     opc1      51%  2075   22      NO
ss28  OPC     opc1      51%  2075   22      YES
tup1  OPC     tup1       1%     8   5       NO
wrd1  DPC     iec        1%     6   5       YES
```

2. The screen set being changed cannot be referenced by a linkset.

   To verify this, enter the `rtrv-ls` command. If the output shows a reference to the screen set to be removed, perform the Changing an SS7 Linkset procedure in the Database *Administration Manual – SS7* and change the `scrn` parameter to reference another screen set, or to `none` to remove the reference to the screen set.

   Note: If a new gateway screening stop action set will not be assigned to the screen set being changed, skip step 3 and go to step 4.

3. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

   If the required gateway screening stop action set is not in the database, go to the *Configuring Gateway Screening Stop Action Sets* procedure and configure the required gateway screening stop action set.

   Note: If the NSFI of the screen set being changed in this procedure will be STOP, or if the NSFI of the screen set is not being changed, skip step 4 and go to step 5.

4. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen that will be specified by the NSFI/NSR parameter combination in step 5 is in the database.

   If the desired screen is not in the database, perform one of the procedures shown in the *Gateway Screening Configuration Procedures* section to add the desired screen to the database or change an existing screen in the database.

5. Change the attributes of a screen set using the `chg-scrset` command.

   If a gateway screening stop action is to be assigned to the screen set being changed, enter the `chg-scrset` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 2.

   For this example, enter this command.

   `chg-scrset:scrn=ls01:nscrn=ls05:nsfi=blkopc:nsr=ls08`

   A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:27:30 GMT EAGLE5 36.0.0
CHG-SCRSET: SCREEN SET AFFECTED - LS01  1% FULL
CHG-SCRSET: MASP A - COMPLTD
```

6. Verify the changes using the `rtrv-scrset` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:28:30 GMT EAGLE5 36.0.0
ENTIRE GWS DATABASE IS 1% FULL
CDPA + AFTPC TABLES ARE 1% FULL
THERE ARE 242 SCREEN SETS AVAILABLE

THE FOLLOWING ARE OVER 80% FULL:
SCRN  NSFI    NSR/ACT  FULL  RULES  TABLES  DESTFLD
```

```
SCRN  NSFI    NSR/ACT  FULL  RULES  TABLES  DESTFLD
fld1  OPC     fld2       1%     5   4       NO
gws1  OPC     gws4       1%     9   7       NO
gws2  BLKOPC  gws5       1%     5   4       NO
isp1  OPC     isp1       1%     6   4       NO
ls05  BLKOPC  ls08       3%    45   14      YES
ss01  OPC     opc1      51%  2075   22      YES
ss02  OPC     opc2       2%    75   22      YES
ss03  OPC     opc3       2%    75   22      YES
ss04  OPC     opc1      51%  2075   22      NO
ss07  OPC     opc1      51%  2075   22      YES
ss09  OPC     opc1      51%  2075   22      NO
ss28  OPC     opc1      51%  2075   22      YES
tup1  OPC     tup1       1%     8   5       NO
wrd1  DPC     iec        1%     6   5       YES
```

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

   The following 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.
```

Chapter
14

Calling Name Conversion Facility (CNCF) Configuration

Topics:

Chapter 14, Calling Name Conversion Facility (CNCF) Configuration, contains a description of the Calling Name Conversion Facility feature the procedure necessary to configure this feature.

Introduction

This feature provides a conversion of ISUP IAM messages using two versions of calling name identification presentation (CNIP) for calling name information delivery. One version of the CNIP uses the non-standard proprietary ISUP party information (PIP) parameter. The other version uses the ANSI standard ISUP generic name (GN) parameter. The conversion will either replace the PIP parameter with the GN parameter or the GN parameter with the PIP parameter in the ISUP IAM message.

The gateway screening feature is used to select the ISUP messages that are converted. The incoming messages are selected based on the OPC and DPC in the routing label of the message, and the message type in the service information octet. The message type is defined by the value of the service indicator (SI) field of the SIO. ISUP messages contain the value 5 in the service indicator field of the SIO. Screening rules for Allowed OPC, Allowed DPC, and the Allowed SIO entities must be configured in the database for this feature.

This feature is an optional feature and must be turned on with the `chg-feat` command and the `cncf=on` parameter. The `rtrv-feat` command can be used to verify if this feature is on or not. This feature applies to only ANSI networks.

Figure 32: PIP/GN Parameter Conversion shows an example network which contains these two separate ISUP versions. Based on this example, *Table 80: ISUP IAM Message Conversion Examples* shows when the ISUP IAM message conversion by the CNCF feature occurs.

Figure 32: PIP/GN Parameter Conversion

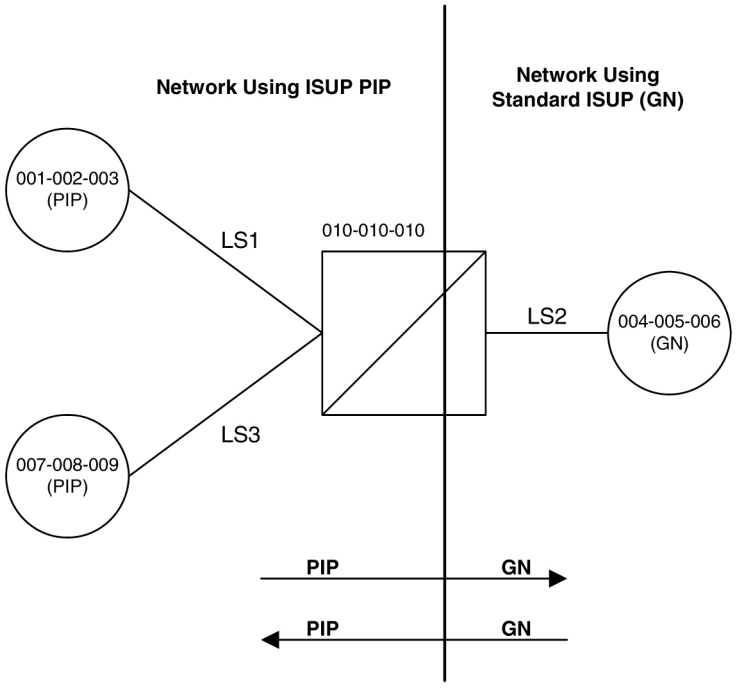


Table 80: ISUP IAM Message Conversion Examples

Origination Point Code	Destination Point Code	ISUP IAM Message Conversion
001-002-003	004-005-006	Yes
001-002-003	007-008-009	No
004-005-006	001-002-003	Yes
004-005-006	007-008-009	Yes
007-008-009	001-002-003	No
007-008-009	004-005-006	Yes

Great care must be taken when configuring the gateway screening rules for this feature. The CNCF feature has no way to validate the gateway screening rules to detect errors in converting messages between compatible networks. For example, using the example network in *Figure 32: PIP/GN Parameter Conversion*, the ISUP IAM message traffic from node 001-002-003 to node 007-008-009 does not need to be converted because they are using the same calling name delivery parameter, PIP. If the gateway screening rules are not carefully configured, these messages could be converted when they do not need to be.

No measurements are collected showing the number of MSUs converted by this feature.

If both the `COPY` and `CNCF` gateway screening stop actions are specified as the stop actions for the gateway screening process, the MSU is converted by the CNCF feature, then copied for the STPLAN feature.

If both the `RDCT` and `CNCF` gateway screening stop actions are specified as the stop actions for the gateway screening process, the MSU is converted by the CNCF feature, then redirected for the DTA feature.

If there are multiple PIP parameters or GN parameters with calling name information within a single ISUP IAM, only the first occurrence of the parameter in the ISUP IAM message is converted.

Only GN IAM messages containing calling name information (Type of Name = Calling Name, Presentation = Allowed, Parameter Length >1) are converted to PIP IAM messages.

Only PIP IAM messages containing Calling Name Information (Sub-Parameter Code = Name Information, Name Element Indicator = Calling Party) are converted to GN IAM messages.

If the received IAM message contains both a GN and a PIP parameter with calling name information, the GN parameter is retransmitted and the PIP parameter is deleted.

Any MSU that is not converted is simply retransmitted. These MSUs include non-ISUP MSUs, non-IAM MSUs, and any IAM MSU received that doesn't contain either a GN or PIP parameter.

If the PIP parameter contains other information in addition to the calling party name information, only a GN parameter containing calling party name information is generated.

The linkset being screened for this feature should not contain C links (`lst=c` parameter of the `ent-ls` and `chg-ls` commands). This would result in the double conversion of the ISUP IAM messages.

Configuring the EAGLE 5 ISS for the CNCF Feature

To configure the EAGLE 5 ISS for the CNCF feature, gateway screening rules for Allowed OPC, Allowed DPC, and the Allowed SIO entities must be configured in the database for this feature. The last entity in the screening process (`nsfi=stop`) must have a gateway screening stop action set containing the `CNCF` gateway screening stop action.

The allowed OPC screening rules must contain the OPCs that the ISUP IAM messages are being sent from.

The allowed DPC screening rules must contain the DPCs that the ISUP IAM messages are being sent to.

The allowed SIO screening rules must contain the ISUP message type, defined by the `si=5` parameter.

The CNCF feature must be turned on. Before the CNCF feature can be turned on, the gateway screening feature must be on. This can be verified with the `rtrv-feat` command.

The examples in this procedure are based on these figures and tables.

- *Figure 33: CNCF Gateway Screening Configuration - Example 1*
- *Figure 34: CNCF Gateway Screening Configuration - Example 2*
- *Figure 35: CNCF Gateway Screening Configuration - Example 3*
- *Figure 36: CNCF Gateway Screening Configuration - Example 4*
- *Table 80: ISUP IAM Message Conversion Examples*
- *Table 81: Example Gateway Screening Allowed DPC Configuration Table for the CNCF Feature*
- *Table 82: Example Gateway Screening Allowed SIO Configuration Table for the CNCF Feature*
- *Table 83: Example Gateway Screening Allowed OPC Configuration Table for the CNCF Feature*
- *Table 84: Example Gateway Screening Screen Set Configuration Table for the CNCF Feature*
- *Table 85: Linkset Configuration Table for the CNCF Feature*

Figure 33: CNCF Gateway Screening Configuration - Example 1

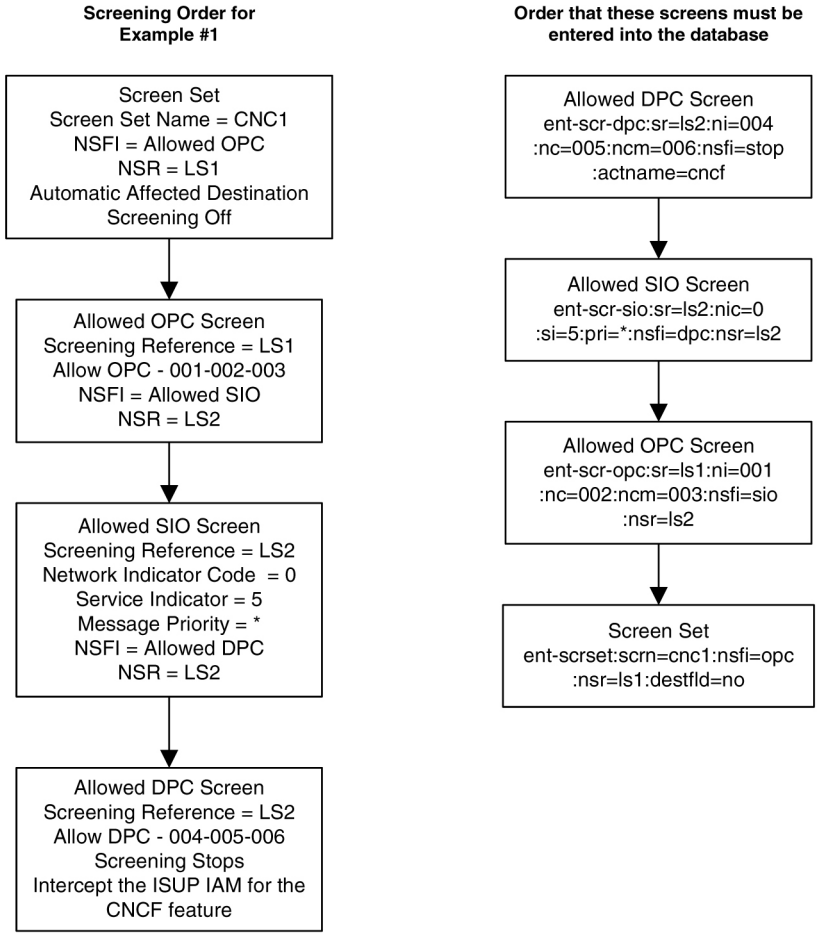


Figure 34: CNCF Gateway Screening Configuration - Example 2

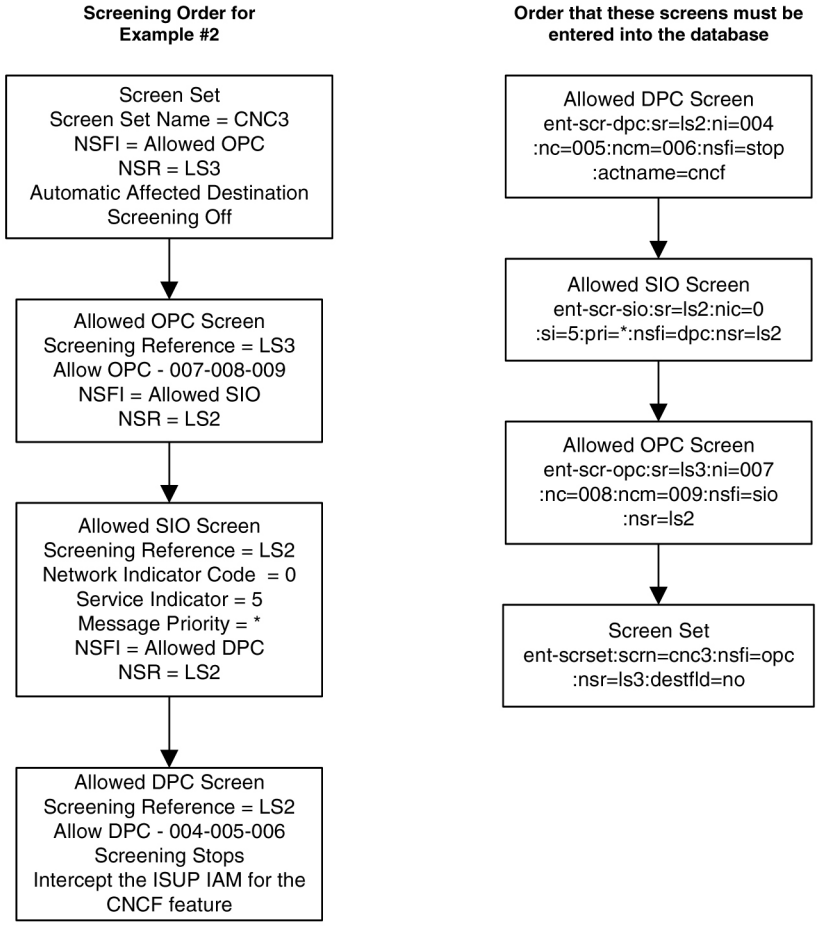


Figure 35: CNCF Gateway Screening Configuration - Example 3

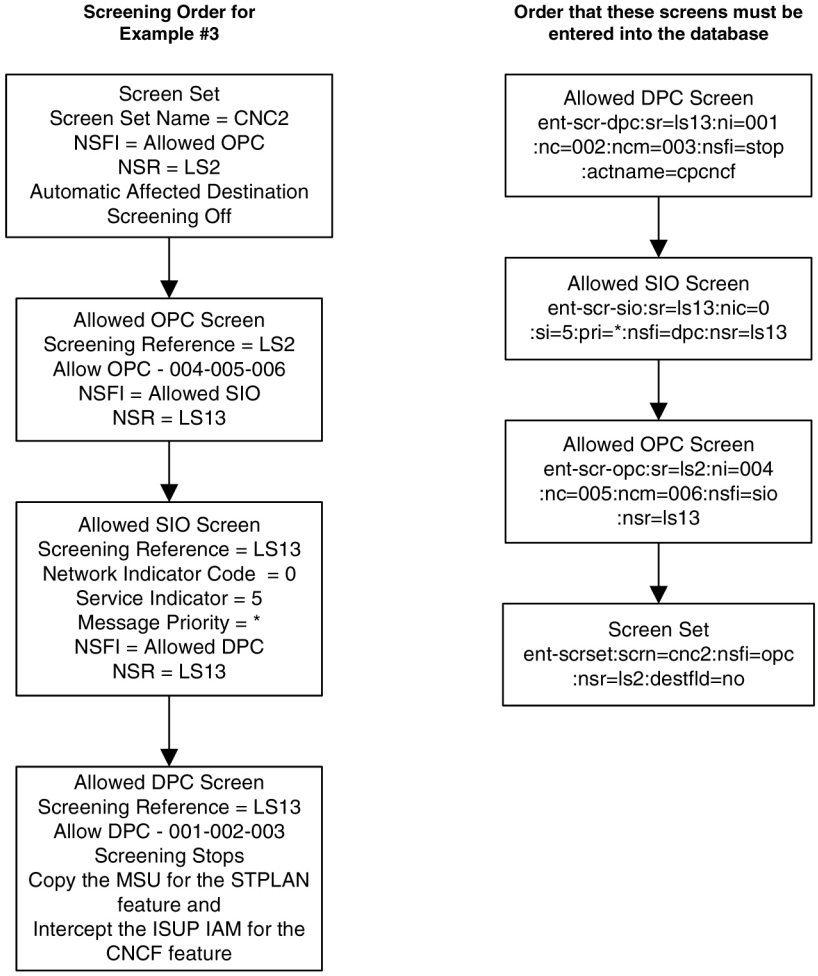
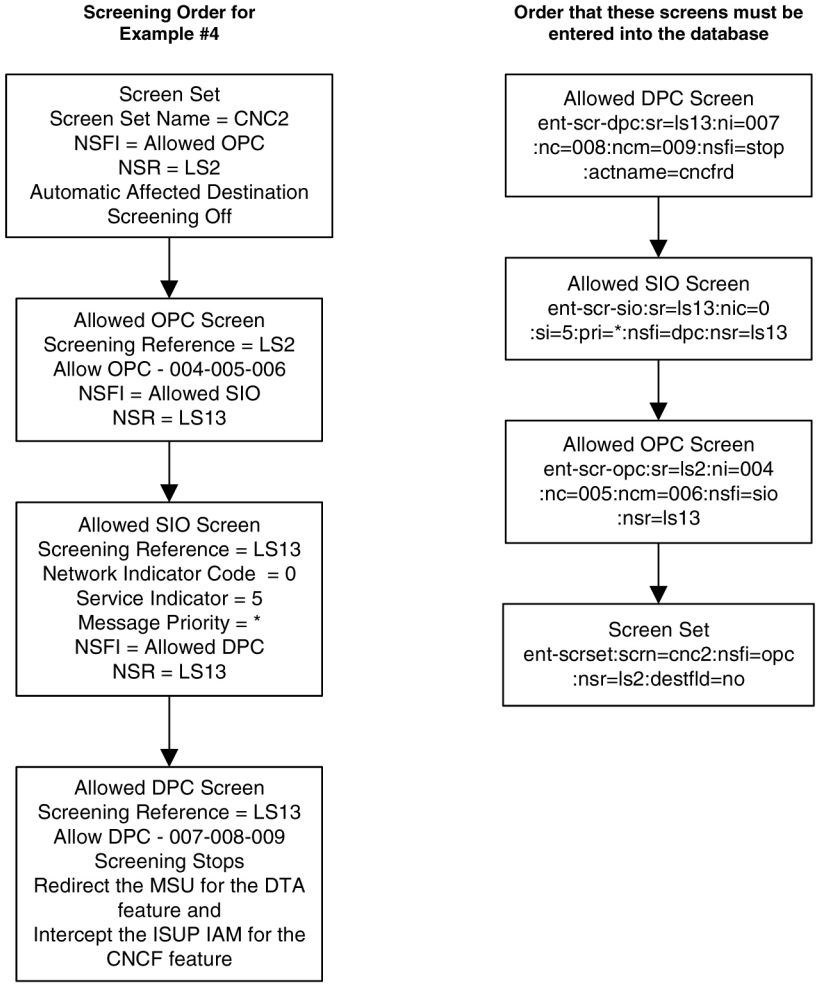


Figure 36: CNCF Gateway Screening Configuration - Example 4



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. Verify that the gateway screening and the calling name conversion facility features are on, by entering the `rtrv-feat` command.

If the gateway screening feature is on, the GWS field should be set to on. If the calling name conversion facility feature is on, the CNCF field should be set to on. For this example, the gateway screening and the calling name conversion facility features are 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*.

If both features are on, go to step 4. If the gateway screening feature is on, but the calling name conversion facility feature is off, go to step 3. If the gateway screening feature is off, go to step 2.

2. If the gateway screening feature is not on, shown by the GWS = off entry in the rtrv-feat command output in step 1, turn the gateway screening feature on by entering this command.

   chg-feat:gws=on

   Note: Once the gateway screening feature is turned on with the chg-feat command, it cannot be turned off.

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

```
rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
CHG-FEAT: MASP A - COMPLTD
```

3. If the calling name conversion facility feature is not on, shown by the CNCF = off entry in the rtrv-feat command output in step 1, turn the calling name conversion facility feature on by entering this command.

   chg-feat:cncf=on

   Note: Once the calling name conversion facility feature is turned on with the chg-feat command, it cannot be turned off.

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

```
rlghncxa03w 06-10-25 15:27:30 GMT EAGLE5 36.0.0
CHG-FEAT: MASP A - COMPLTD
```

4. Display the gateway screening stop action sets in the database with the rtrv-gws-actset command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:28:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

   If the cncf gateway screening stop action is not shown in the rtrv-gws-actset command output, perform the *Configuring Gateway Screening Stop Action Sets* procedure to create a new

gateway screening stop action set containing the `cncf` gateway screening stop action, or change an existing gateway screening stop action set to contain the `cncf` gateway screening stop action.

5. Display all allowed DPC screens in the database using the `rtrv-scr-dpc` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:29:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED DPC
SR    REF  RULES
IEC   YES     2
WRD2  YES     1
WRD4  YES     9
```

   If the necessary screening reference name is shown in the `rtrv-scr-dpc` command output, make sure the screening data you wish to enter is not already in the database by entering the `rtrv-scr-dpc` command with the screening reference name. For example, enter the `rtrv-scr-dpc:sr=iec` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED DPC
SR    NI       NC       NCM      NSFI    NSR/ACT
IEC   240      001      010      STOP    ------
IEC   241      010      *        CGPA    cg04
SR      NPC                      NSFI    NSR/ACT
IEC     00235                    CGPA    cg04
IEC     00240                    CGPA    cg01
SR      ZONE   AREA     ID       NSFI    NSR/ACT
IEC     1      003      4        BLKDPC  blk1
IEC     1      003      5        STOP    ------
```

6. If the required screen is not in the database, perform the *Adding an Allowed DPC Screen* procedure to add the required allowed DPC screen.

   For this example, enter the screening information in *Table 81: Example Gateway Screening Allowed DPC Configuration Table for the CNCF Feature*.

Table 81: Example Gateway Screening Allowed DPC Configuration Table for the CNCF Feature

Screening Reference	NI	NC	NCM	NSFI	ACTNAME*
ls2	004	005	006	Stop	CNCF
ls13	001	002	003	Stop	CPCNCF
ls13	007	008	009	Stop	CNCFRD
* The value of the `actname` parameter is shown in the `rtrv-gws-actset` command output example shown in step 4.					

   If you wish to change an existing allowed DPC screen, instead of adding a new allowed DPC screen, perform the *Changing an Allowed DPC Screen* procedure to change an existing allowed DPC screen.

For this example, change the screens with the screening information in *Table 81: Example Gateway Screening Allowed DPC Configuration Table for the CNCF Feature*.

7. Display all allowed SIO screens in the database using the `rtrv-scr-sio` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:31:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED SIO
SR    REF  RULES
IEC   YES     2
WRD2  YES     1
WRD4  YES     9
```

   If the necessary screening reference name is shown in the `rtrv-scr-sio` command output, make sure the screening data you wish to enter is not already in the database by entering the `rtrv-scr-sio` command with the screening reference name. For example, enter the `rtrv-scr-sio:sr=iec` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:32:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED SIO
SR    NIC  PRI  SI  H0     H1     NSFI    NSR/ACT
IEC   2    0&&3 0   0      0      BLKDPC  WDB2
IEC   2    0&&2 0   1      1      DPC     WDB3
IEC   2    0&&1 0   2      2      STOP    ------
IEC   2    0&&3 4   --     --     STOP    ------
IEC   2    0&&2 1   *      *      DPC     WDB3
```

8. If the required screen is not in the database, perform the *Adding an Allowed SIO Screen* procedure to add the required allowed SIO screen.

   For this example, enter the screening information in *Table 82: Example Gateway Screening Allowed SIO Configuration Table for the CNCF Feature*.

   Table 82: Example Gateway Screening Allowed SIO Configuration Table for the CNCF Feature

Screening Reference	NIC	SI	H0	H1	PRI	NSFI	NSR
ls2	0	5	--	--	*	dpc	ls2
ls13	0	5	--	--	*	dpc	ls13

   If you wish to change an existing allowed SIO screen, instead of adding a new allowed SIO screen, perform the *Changing an Allowed SIO Screen* procedure to change an existing allowed SIO screen. For this example, change the screens with the screening information in *Table 82: Example Gateway Screening Allowed SIO Configuration Table for the CNCF Feature*.

9. Display all allowed OPC screens in the database using the `rtrv-scr-opc` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:33:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED OPC
SR    REF  RULES
```

```
IEC   YES     2
WRD2  YES     1
WRD4  YES     9
```

If the necessary screening reference name is shown in the `rtrv-scr-opc` command output, make sure the screening data you wish to enter is not already in the database by entering the `rtrv-scr-opc` command with the screening reference name. For example, enter the `rtrv-scr-opc:sr=iec` command.

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:34:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED OPC
SR    NI       NC       NCM      NSFI    NSR/ACT
IEC   240      001      010      STOP    ------
IEC   241      010      *        CGPA    cg04
SR      NPC                      NSFI    NSR/ACT
IEC     00235                    CGPA    cg04
IEC     00240                    CGPA    cg01
SR      ZONE   AREA     ID       NSFI    NSR/ACT
IEC     1      003      4        BLKOPC  blk1
IEC     1      003      5        STOP    ------
```

10. If the required screen is not in the database, perform the *Adding an Allowed OPC Screen* procedure to add the required allowed OPC screen.

    For this example, enter the screening information in *Table 83: Example Gateway Screening Allowed OPC Configuration Table for the CNCF Feature*.

    Table 83: Example Gateway Screening Allowed OPC Configuration Table for the CNCF Feature

Screening Reference	NI	NC	NCM	NSFI	NSR
ls1	001	002	003	sio	ls2
ls2	004	005	006	sio	ls13
ls3	007	008	009	sio	ls2

    If you wish to change an existing allowed OPC screen, instead of adding a new allowed OPC screen, perform the *Changing an Allowed OPC Screen* procedure to change an existing allowed OPC screen. For this example, change the screens with the screening information in *Table 83: Example Gateway Screening Allowed OPC Configuration Table for the CNCF Feature*.

11. Display all the screen sets in the database using the `rtrv-scrset` command.

    The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:35:30 GMT EAGLE5 36.0.0
ENTIRE GWS DATABASE IS 1% FULL
CDPA + AFTPC TABLES ARE 1% FULL
THERE ARE 248 SCREEN SETS AVAILABLE

THE FOLLOWING ARE OVER 80% FULL:
SCRN  NSFI    NSR/ACT  FULL  RULES  TABLES  DESTFLD
```

```
SCRN  NSFI    NSR/ACT  FULL  RULES  TABLES  DESTFLD
ss01  OPC     opc1      51%  2075   22      YES
ss02  OPC     opc2       2%    75   22      YES
ss03  OPC     opc3       2%    75   22      YES
ss04  OPC     opc1      51%  2075   22      NO
ss07  OPC     opc1      51%  2075   22      YES
ss09  OPC     opc1      51%  2075   22      NO
ss28  OPC     opc1      51%  2075   22      YES
```

12. If the required screen set is not in the database, perform the *Adding a Screen Set* procedure to add the required screen set.

    For this example, enter the screening information in *Table 84: Example Gateway Screening Screen Set Configuration Table for the CNCF Feature*.

    Table 84: Example Gateway Screening Screen Set Configuration Table for the CNCF Feature

Screen Set Name	Next Screening Function Identifier	Next Screening Reference	DESTFLD
cnc1	opc	ls1	No
cnc2	opc	ls2	No
cnc3	opc	ls3	No

    If you wish to change an existing screen set, instead of adding a new screen set, perform the *Changing a Screen Set* procedure to change an existing screen set. For this example, change the screen sets with the screening information in *Table 84: Example Gateway Screening Screen Set Configuration Table for the CNCF Feature*.

13. Display the current linkset configuration using the `rtrv-ls` command.

    This is an example of the possible output.

```
rlghncxa03w 09-05-25 15:36:30 GMT EAGLE5 41.0.0

                                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

                                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 ( 9 of 1024)  1% full
```

14. If the required linkset is not in the database, perform the Adding an SS7 Linkset in the Database *Administration Manual – SS7* to add the required linkset.

    For this example, enter the linkset information in *Table 85: Linkset Configuration Table for the CNCF Feature*.

    Table 85: Linkset Configuration Table for the CNCF Feature

Linkset Name	Linkset APC	# LINKS	LST	GWSA	GWSM	SCRN
ls1	001-002-003	2	B	on	off	cnc1
ls2	004-005-006	2	B	on	off	cnc2
ls3	007-008-009	2	B	on	off	cnc3

    If you wish to change an existing linkset, instead of adding a new linkset, perform the Changing an SS7 Linkset procedure in the *Database Administration Manual – SS7* to change an existing linkset. For this example, change the linksets with the information in *Table 85: Linkset Configuration Table for the CNCF Feature*.

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

    The following 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.
```

Chapter 15

Allowed ISUP Message Type Screen Configuration

Topics:

Chapter 15, Allowed ISUP Message Type Screen Configuration, contains the procedures necessary to configure allowed ISUP message type screens.

Introduction

The ISUP Message Type screen identifies which ISUP messages, using the ISUP message type, that are allowed into the EAGLE 5 ISS. The gray shaded areas in *Figure 38: Allowed ISUP Message Type Screening Function* shows the fields of the SS7 message that are checked by the ISUP Message Type screening function.

Gateway Screening Actions

The Gateway Screening process stops with this screen. The `nsfi` parameter value can only be `stop`.

If a match is not found, the message is discarded.

If a match is found, the message is processed. If a gateway screening stop action set is specified with the screen, shown by the `actname` parameter value, the message is processed according to the gateway screening stop actions that are assigned to the gateway screening stop action set.

- If the `copy` gateway screening stop action is specified, the message is processed and a copy of the message is sent by the STPLAN feature to an external application.
- If the `rdct` (redirect) gateway screening stop action is specified,the message is diverted from the original destination and sent to another destination with the Database Transport Access feature, specified by global title translation, for further processing.
- If the `cncf` gateway screening stop action is specified, the PIP parameter in the incoming ISUP IAM message is converted to the GN parameter. The GN parameter in the incoming ISUP IAM message is converted to the PIP parameter. The message is then sent to the node specified by the DPC in the routing label in the message. For more information on the Calling Name Conversion Facility feature, see *Calling Name Conversion Facility (CNCF) Configuration*.
- If the `tlnp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are processed either by the ISUP NP with EPAP feature (if the ISUP NP with EPAP feature is enabled and turned on) or by the Triggerless LNP feature (if the Triggerless LNP feature is turned on). The ISUP NP with EPAP feature is discussed in more detail in the *Feature Manual - G-Port*. The Triggerless LNP feature is discussed in more detail in the *LNP Feature Activation Guide*.
- If the `tinp` gateway screening stop action is specified, ISUP IAMs that pass gateway screening are intercepted by the Triggerless ISUP based Number Portability (TINP) feature and converted to include the routing number (RN) if the call is to a ported number. The TINP feature is discussed in more detail in the *Feature Manual - G-Port*.
- If the `tif`, `tif2`, or `tif3` gateway screening stop actions are specified, TIF processing is applied to the message.
- If the `sccp` gateway screening stop action is specified, MTP routed SCCP UDT/XUDT are forwarded to the service modules for further processing.

TUP Message Screening

TUP messages are screened using the Allowed ISUP Message Type screen. The TUP protocol is an obsolete predecessor to the ISUP protocol that remains in use in some areas. To screen for TUP messages, a screen set must be defined to screen for messages containing the service indicator value of 4. This is accomplished by defining an allowed SIO screen in the screen set containing the `si=4` parameter.

Since both ISUP and TUP messages are screened using the allowed ISUP message type screen, it is recommended that the screen set contain an allowed SIO screen to screen for ISUP messages, messages

containing the service indicator value of 5. Each of these entries in the allowed SIO screen should have separate next screening functions. This allows the screening rules after the allowed SIO screen to have two separate streams, one that ends with screening ISUP messages, the other that ends with screening TUP messages.

The TUP messages can be screened for point codes before the allowed SIO screen with the allowed and blocked OPC screens, and after the SIO screen with the allowed and blocked DPC screens. However, if the screen set does not contain an allowed SIO screen that screens for TUP messages (messages with the service indicator value of 4), the message will be treated by the allowed ISUP message type screen as an ISUP message.

The following commands show how a screen set can be provisioned to screen for TUP and ISUP messages.

```
ent-scr-isup:sr=is01:isupmt=10:nsfi=stop

ent-scr-isup:sr=tu01:tupmt=1:nsfi=stop

ent-scr-dpc:sr=dpc4:ni=1:nc=2:ncm=3:nsfi=isup:nsr=tu01

ent-scr-dpc:sr=dpc5:ni=7:nc=1:ncm=0:nsfi=isup:nsr=is01

ent-scr-sio:sr=si02:nic=2:pri=0:si=4:nsfi=dpc:nsr=dpc4

ent-scr-sio:sr=si02:nic=2:pri=0:si=5:nsfi=dpc:nsr=dpc5

ent-scrset:scrn=ist2:nsr=si02:nsfi=sio
```

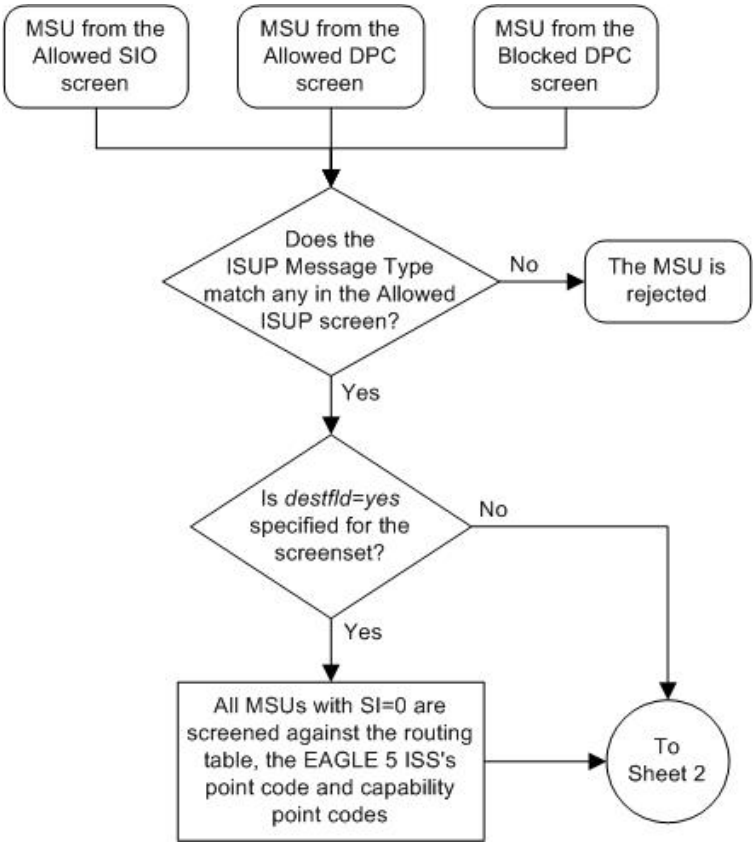
In this example screen set configuration, messages are screened by the allowed SIO screen `si02` for either ISUP or TUP messages. ISUP messages are further screened by the allowed DPC screen `dpc5` and TUP messages are screened by the allowed DPC screen `dpc4`. The ISUP messages containing the ANSI point code 001-002-003 are passed onto the allowed ISUP screen `is01`. The TUP messages containing the ANSI point code 007-001-000 are passed onto the allowed ISUP screen `tu01`.

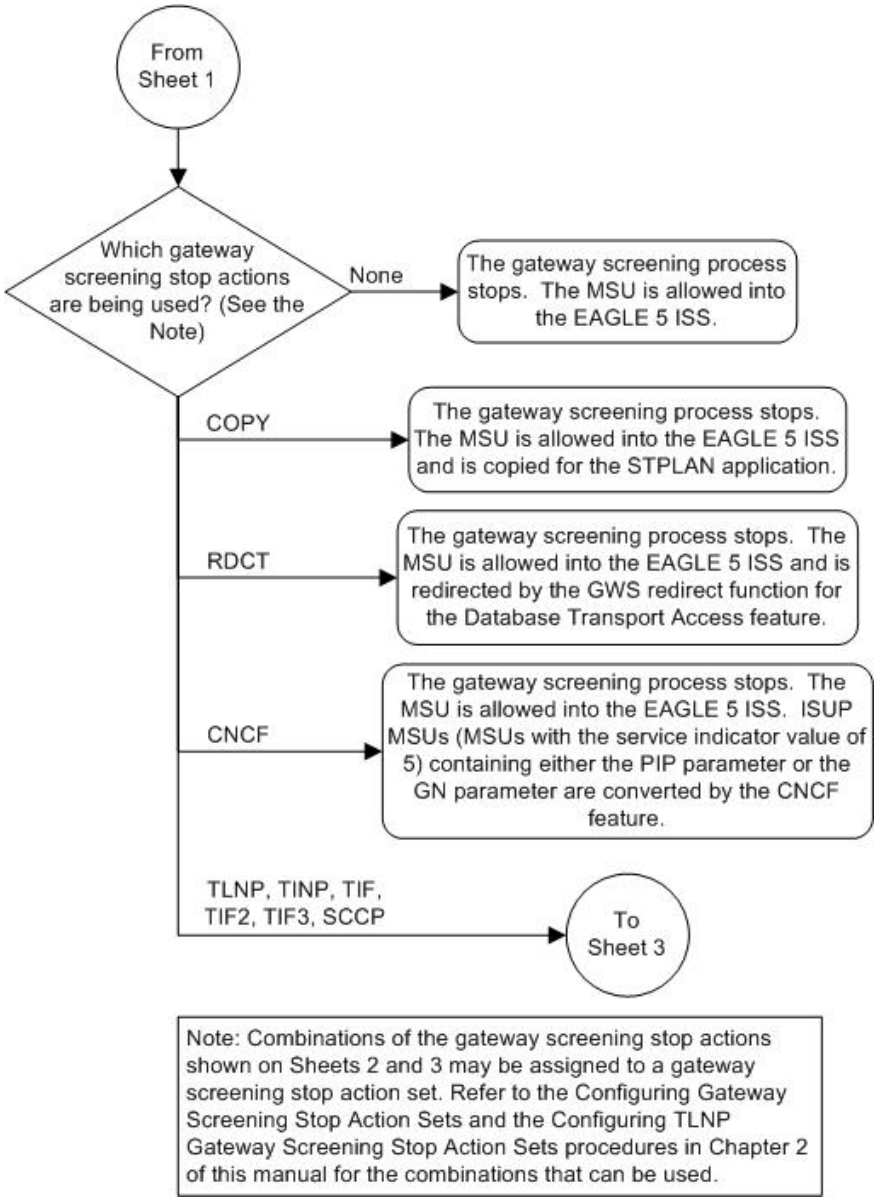
Note: The gateway screening rules are entered in reverse of the order that the screening process takes place.

Allowed ISUP Message Type Screening Actions

Figure 37: Allowed ISUP Message Type Screening Actions shows the screening actions of the allowed ISUP message type screen.

Figure 37: Allowed ISUP Message Type Screening Actions


MSU from the Allowed SIO screen
MSU from the Allowed DPC screen
MSU from the Blocked DPC screen
Does the ISUP Message Type match any in the Allowed ISUP screen?
No
The MSU is rejected
Yes
Is destfld=yes specified for the screenset?
No
Yes
All MSUs with SI=0 are screened against the routing table, the EAGLE 5 ISS's point code and capability point codes
To Sheet 2


From Sheet 1
Which gateway screening stop actions are being used? (See the Note)
None
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS.
COPY
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is copied for the STPLAN application.
RDCT
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS and is redirected by the GWS redirect function for the Database Transport Access feature.
CNCF
The gateway screening process stops. The MSU is allowed into the EAGLE 5 ISS. ISUP MSUs (MSUs with the service indicator value of 5) containing either the PIP parameter or the GN parameter are converted by the CNCF feature.
TLNP, TINP, TIF, TIF2, TIF3, SCCP
To Sheet 3
Note: Combinations of the gateway screening stop actions shown on Sheets 2 and 3 may be assigned to a gateway screening stop action set. Refer to the Configuring Gateway Screening Stop Action Sets and the Configuring TLNP Gateway Screening Stop Action Sets procedures in Chapter 2 of this manual for the combinations that can be used.

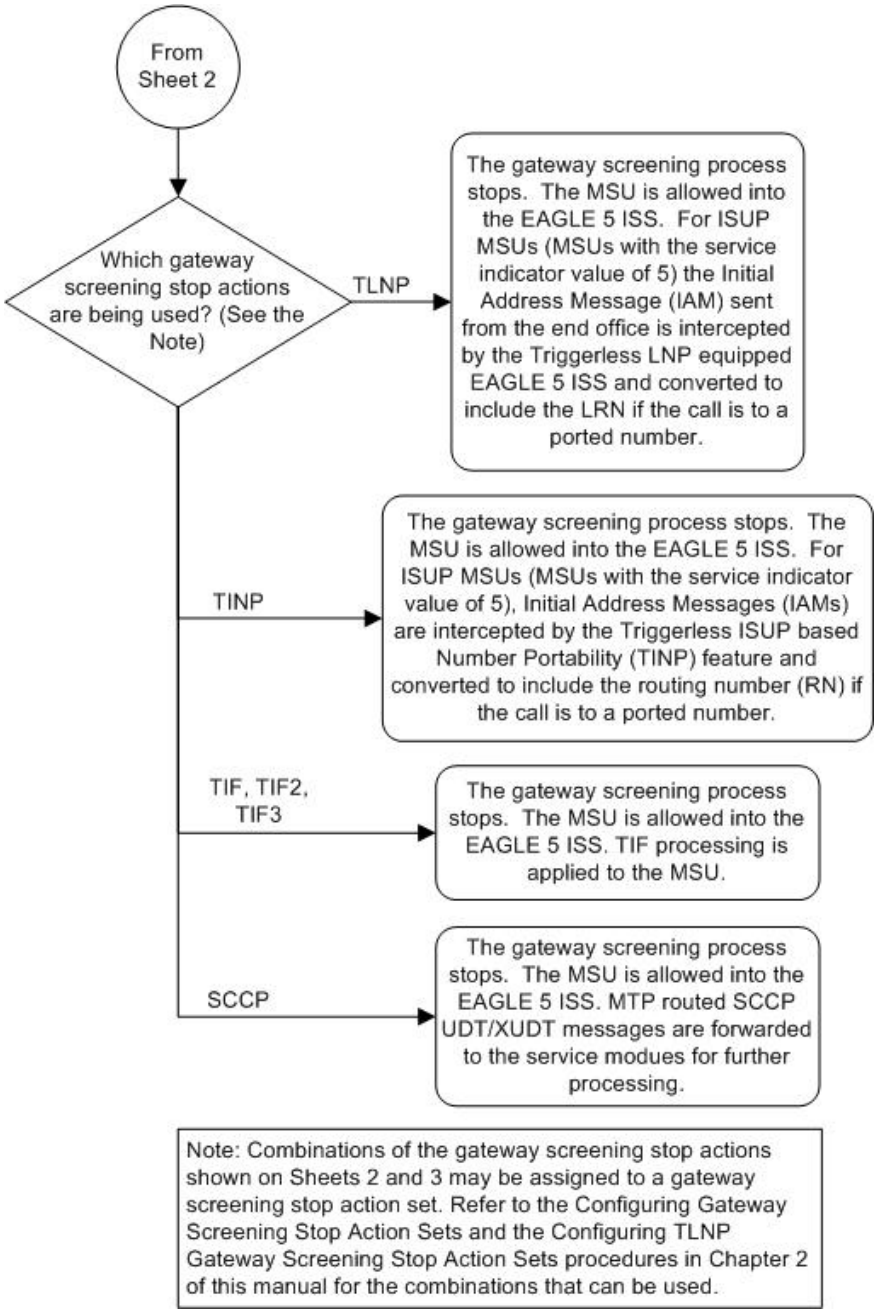


Figure 38: Allowed ISUP Message Type Screening Function

ANSI MSU (ANSI Message Signal Unit)

BSN FSN LI	SIO xx xx xxxx NIC PRI SI	SIF				
		Routing Label DPC NCM NC NI	OPC NCM NC NI	SLS xx	CIC Code	ISUP Message Type	ISUP Data

ITU-I MSU (ITU International Message Signal Unit)

BSN FSN LI	SIO xx xx xxxx NIC PRI SI	SIF				
		Routing Label DPC ID AREA ZONE	OPC ID AREA ZONE	SLS xx	CIC Code	ISUP Message Type	ISUP Data

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 NPC	OPC NPC	SLS xx	CIC Code	ISUP Message Type	ISUP Data

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 SP SSA MSA	OPC SP SSA MSA	SLS xx	CIC Code	ISUP Message Type	ISUP Data

Adding an Allowed ISUP Message Type Screen

This procedure is used to add an allowed ISUP message type (ISUP) screen to the database using the `ent-scr-isup` command. The parameters used by the `ent-scr-isup` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

Since both ISUP and TUP messages are screened by the allowed ISUP message type screen, the `ent-scr-isup` command contains a parameter for the ISUP message type (`isupmt`) and a parameter for the TUP message type (`tupmt`). Only one of these parameters can be specified for the allowed ISUP screen being entered into the database. The `isupmt` parameter should be specified in screen sets that contain allowed SIO screens that are screening messages for the service indicator value of 5 (SI=5). The `tupmt` parameter should be specified in screen sets that contain allowed SIO screens that are screening messages for the service indicator value of 4 (SI=4). If you wish to screen for TUP messages, make sure that the screen set being configured contains an allowed SIO screen that screens messages for the service indicator value of 4 (SI=4). If you do not do this, the EAGLE 5 ISS will treat the message as an ISUP message, even if the message contains the service indicator value of 4.

The examples in this procedure are used to add the allowed ISUP screen data shown in *Table 86: Example Gateway Screening Allowed ISUP Configuration Table* and based on the example configuration shown in *Figure 10: Gateway Screening Configuration - Example 6* and *Figure 11: Gateway Screening Configuration - Example 7*.

Table 86: Example Gateway Screening Allowed ISUP Configuration Table

Screening Reference	ISUPMT	NSFI	ACTNAME
isp1	135	stop	CR
isp2	139	stop	CR
Screening Reference	TUPMT	NSFI	ACTNAME
tup1	100	stop	CR

1. Verify that the gateway screening feature is on, by entering the `rtrv-feat` command.

   If the gateway screening feature is on, the `GWS` 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*.

   If the gateway screening feature is on, shown by the entry `GWS = on` in the `rtrv-feat` command output, skip step 2, and go to step 3.

2. Turn the gateway screening feature on by entering this command.

   `chg-feat:gws=on`

   Note: Once the gateway screening feature is turned on with the `chg-feat` command, it cannot be turned off.

   The gateway screening feature must be purchased before you turn this feature on with the `chg-feat` command. If you are not sure if you have purchased the gateway screening feature, contact your Tekelec Sales Representative or Account Representative.

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

   ```
   rlghncxa03w 06-10-28 11:43:04 GMT EAGLE5 36.0.0
   CHG-FEAT: MASP A - COMPLTD
   ```

3. Display all allowed ISUP screens in the database using the `rtrv-scr-isup` command.

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
   SCREEN = ALLOWED ISUP
   SR    REF  RULES
   IEC   YES     2
   WRD2  YES     1
   WRD4  YES     1
   ```

   If the screening reference names that you wish to add with this procedure are not shown in the `rtrv-scr-isup` command output, go to step 4. For this example, the screening reference names are not shown. If these screening reference names are shown in the `rtrv-scr-isup` command output, make sure the screening data you wish to enter is not already in the database by entering

the `rtrv-scr-isup` command with the screening reference name. For example, enter the `rtrv-scr-isup:sr=iec` command. The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED ISUP
SR   ISUPMT/   NSFI    NSR/ACT
     TUPMT
iec  100       STOP    cr
iec  197       STOP    cr
```

If a gateway screening stop action set is to be assigned to the allowed ISUP screen being added to the database, go to step 4. Otherwise, go to step 5.

4. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

```
rlghncxa03w 06-10-25 15:28:30 GMT EAGLE5 36.0.0
ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

   If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

5. Add a new allowed ISUP screen to the database using the `ent-scr-isup` command.

   For this example, enter this command.

   `ent-scr-isup:sr=isp1:isupmt=135:nsfi=stop:actname=cr`

   A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
ENT-SCR-ISUP: SCREEN SET AFFECTED - ISP1  1% FULL
ENT-SCR-ISUP: MASP A - COMPLTD
```

   `ent-scr-isup:sr=isp2:isupmt=139:nsfi=stop:actname=cr`

   A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
ENT-SCR-ISUP: SCREEN SET AFFECTED - ISP2  1% FULL
ENT-SCR-ISUP: MASP A - COMPLTD
```

   `ent-scr-isup:sr=tup1:tupmt=100:nsfi=stop:actname=cr`

   A message similar to the following should appear.

```
rlghncxa03w 06-10-25 15:29:30 GMT  EAGLE5 36.0.0
```

```
ENT-SCR-ISUP: SCREEN SET AFFECTED - TUP1  1% FULL
ENT-SCR-ISUP: MASP A - COMPLTD
```

If a gateway screening stop action is to be assigned to the allowed ISUP screen being changed, enter the `ent-scr-isup` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 4. The `isupmt` or `tupmt` parameters can have these values: 0 - 255, or an asterisk (*). A range of ISUP or TUP message types can be specified with the `ent-scr-isup` command. If a range of ISUP message types is specified, the range of ISUP message types cannot include any ISUP message types that are currently provisioned for the screening reference name. If a range of TUP message types is specified, the range of TUP message types cannot include any TUP message types that are currently provisioned for the screening reference name. For example, screening reference name `scr1` contains these entries:

```
SR   ISUPMT/   NSFI    NSR/ACT
     TUPMT
scr1 115       STOP    cr
scr1 203       STOP    cr
```

Another entry for screening reference `scr1` cannot be specified if the range of ISUP message types includes the values 115 and 203.

6. Verify the changes using the `rtrv-scr-isup` command with the screening reference name used in step 5.

   For this example, enter this command.

   `rtrv-scr-isup:sr=isp1`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED ISUP
SR   ISUPMT/   NSFI    NSR/ACT
     TUPMT
isp1 135       STOP    cr
```

   `rtrv-scr-isup:sr=isp2`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED ISUP
SR   ISUPMT/   NSFI    NSR/ACT
     TUPMT
isp2 139       STOP    cr
```

   `rtrv-scr-isup:sr=tup1`

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED ISUP
SR   ISUPMT/   NSFI    NSR/ACT
     TUPMT
tup1 100       STOP    cr
```

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

The following 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.
```

Removing an Allowed ISUP Message Type Screen

This procedure is used to remove an allowed ISUP message type (ISUP) screen from the database using the `dlt-scr-isup` command. The parameters used by the `dlt-scr-isup` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

Since both ISUP and TUP messages are screened by the allowed ISUP message type screen, the `dlt-scr-isup` command contains a parameter for the ISUP message type (`isupmt`) and a parameter for the TUP message type (`tupmt`). Only one of these parameters can be specified for the allowed ISUP screen being removed from the database.

The example in this procedure removes the allowed ISUP screen `isp2` from the database.

The allowed ISUP screen can be referenced by one of the following screens.

- Allowed SIO
- Allowed DPC
- Blocked DPC

Verifying the Gateway Screening Configuration

Enter the following commands to verify that none of these screens reference the allowed ISUP screen being removed from the database.

- `rtrv-scr-sio:nsfi=isup`
- `rtrv-scr-dpc:nsfi=isup`
- `rtrv-scr-blkdpc:nsfi=isup`

Gateway Screening Configuration Procedures

To change the NSFI of any of these screens, perform to one of these procedures.

- *Changing an Allowed SIO Screen*
- *Changing an Allowed DPC Screen*
- *Changing a Blocked DPC Screen*

1. Display the allowed ISUP screens in the database using the `rtrv-scr-isup` command.

   The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
SCREEN = ALLOWED ISUP
SR    REF  RULES
IEC   YES     2
ISP1  YES     1
ISP2  YES     2
```

```
TUP1  YES     1
WRD2  YES     1
WRD4  YES     1
```

From the `rtrv-scr-isup` output, display the allowed ISUP screen you wish to remove using the `rtrv-scr-isup` command with the screening reference name. For this example, enter this command.

```
rtrv-scr-isup:sr=isp2
```

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED ISUP
SR   ISUPMT/   NSFI    NSR/ACT
     TUPMT
isp2 055       STOP    cr
```

2. Enter the commands in the *Verifying the Gateway Screening Configuration* section to verify that the screen being removed is not referenced by other screens in the database.

   If the screen being removed is referenced by other screens, perform the procedures shown in the *Gateway Screening Configuration Procedures* section to change the NSFI of those screens to reference other screens or change the NSFI of these screens to STOP.

3. Remove the allowed ISUP screen from the database using the `dlt-scr-isup` command.

   The current value of the `isupmt` parameter must be entered exactly as shown in the `rtrv-scr-isup` output in step 1. For this example, enter this command.

   ```
   dlt-scr-isup:sr=isp2:isupmt=055
   ```

   A message similar to the following should appear.

   ```
   rlghncxa03w 06-10-25 15:26:30 GMT  EAGLE5 36.0.0
   DLT-SCR-ISUP: SCREEN SET AFFECTED - FLD5  0% FULL
   DLT-SCR-ISUP: MASP A - COMPLTD
   ```

4. Verify the changes using the `rtrv-scr-isup` command with the screening reference name used in step 3.

   For this example, enter this command.

   ```
   rtrv-scr-isup:sr=isp2
   ```

   The following is an example of the possible output.

   ```
   E2573 Cmd Rej: SR or NSR does not reference an existing SR
   ```

   This message shows that the specified screening reference name is not in the database and the action of the `dlt-scr-isup` command in step 3 was successful. If the specified screening reference name contained more than one entry when the `dlt-scr-isup` command was executed in step 3, the `rtrv-scr-isup:sr=` command output would show the remaining entries in the screening reference instead of error message E2573.

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

   The following 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.
```

Changing an Allowed ISUP Message Type Screen

This procedure is used to change the attributes of an allowed ISUP message type (ISUP) screen in the database using the `chg-scr-isup` command. The parameters used by the `chg-scr-isup` command are shown in the *Gateway Screening Attributes* section. The general rules that apply to configuring gateway screening entities are shown in the *Gateway Screening Configuration* section.

The example in this procedure is used to change the ISUP message type 135 for the allowed ISUP screen `isp1` to 075 and to redirect the MSU for the DTA feature.

1. Display the allowed ISUP screens in the database using the `rtrv-scr-isup` command.

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:25:30 GMT EAGLE5 36.0.0
   SCREEN = ALLOWED ISUP
   SR    REF  RULES
   IEC   YES     2
   ISP1  YES     3
   ISP2  YES     2
   TUP1  YES     1
   WRD2  YES     1
   WRD4  YES     1
   ```

   From the `rtrv-scr-isup` output, display the allowed ISUP screen you wish to remove using the `rtrv-scr-isup` command with the screening reference name. For this example, enter this command.

   `rtrv-scr-isup:sr=isp1`

   The following is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
   SCREEN = ALLOWED ISUP
   SR   ISUPMT/   NSFI    NSR/ACT
        TUPMT
   isp1 002       STOP    copy
   isp1 089       STOP    ------
   isp1 135       STOP    cr
   ```

   If a gateway screening stop action set is to be assigned to the allowed ISUP screen being changed in the database, go to step 2.

   Step 2 verifies the gateway screening stop action set names in the database. If a gateway screening stop action set name will not be assigned to the screen, skip step 2 and go to step 3.

2. Display the gateway screening stop action sets in the database with the `rtrv-gws-actset` command.

   This is an example of the possible output.

   ```
   rlghncxa03w 06-10-25 15:26:30 GMT EAGLE5 36.0.0
   ACT  ACT    ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT  ACT
   ```

```
ID   NAME   1    2    3    4    5    6    7    8    9    10
--   ------ ---- ---- ---- ---- ---- ---- ---- ---- ---- ----
1    copy   copy
2    rdct   rdct
3    cr     copy rdct
4    cncf   cncf
5    cpcncf copy cncf
6    cncfrd cncf rdct
7    cpcfrd copy cncf rdct

GWS action set table is (7 of 16) 44% full
```

If the required gateway screening stop action set is not in the database, perform the *Configuring Gateway Screening Stop Action Sets* procedure to configure the required gateway screening stop action set.

3. Change the attributes of an allowed ISUP screen using the `chg-scr-isup` command.

   If a gateway screening stop action is to be assigned to the allowed ISUP screen being changed, enter the `chg-scr-isup` command with the `nsfi=stop` parameter and the `actname` parameter with the name of a gateway screening stop action set shown in the output of the `rtrv-gws-actset` command executed in step 2.

   The value of the `isupmt` or `tupmt` parameter must be entered exactly as shown in the `rtrv-scr-isup` output in step 1.

   The `nisupmt` or `ntupmt` parameter can have these values: 0 - 255, or an asterisk (*).

   A range of ISUP or TUP message types can be specified with the `chg-scr-isup` command. If a range of ISUP message types is specified, the range of ISUP message types cannot include any ISUP message types that are currently provisioned for the screening reference name. If a range of TUP message types is specified, the range of TUP message types cannot include any TUP message types that are currently provisioned for the screening reference name.

   For example, screening reference name `scr1` contains these entries:

```
SR   ISUPMT/   NSFI    NSR/ACT
     TUPMT
scr1 115       STOP    cr
scr1 203       STOP    cr
```

   Another entry for screening reference `scr1` cannot be specified if the range of ISUP message types includes the values 115 and 203. For this example, enter this command.

   ```
   chg-scr-isup:sr=isp1:isupmt=135:nisupmt=075:actname=rdct
   ```

   The following messages appear.

```
rlghncxa03w 06-10-25 15:27:30 GMT  EAGLE5 36.0.0
CHG-SCR-ISUP: SCREEN SET AFFECTED - ISP1  1% FULL
CHG-SCR-ISUP: MASP A - COMPLTD
```

4. Verify the changes using the `rtrv-scr-isup` command with screening reference name used in step 3.

   For this example, enter this command.

   ```
   rtrv-scr-isup:sr=isp1
   ```

The following is an example of the possible output.

```
rlghncxa03w 06-10-25 15:30:30 GMT  EAGLE5 36.0.0
SCREEN = ALLOWED ISUP
SR   ISUPMT/   NSFI    NSR/ACT
     TUPMT
isp1 002       STOP    copy
isp1 075       STOP    rdct
isp1 089       STOP    ------
```

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

   The following 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.
```

Glossary

A

ACT	Activate
AFTPC	Affected Point Code The point code in subsystem-prohibited (SSP), subsystem-status-test (SST), and subsystem-allowed (SSA) SCCP management messages used by gateway screening to determine if the messages containing these point codes are allowed in to the network. This point code is in the SCMG Data (SCCP Management) portion of the signaling information field in the MSU.
Allowed Affected Destination Field	The gateway screening entity that identifies the point code in the affected destination field (the concerned signaling point code) of incoming MTP network management messages from another network that are allowed into the EAGLE 5 ISS. Messages containing the specified point code are allowed into the network.
Allowed AFTPC	The gateway screening entity that identifies the messages containing a specific affected point code. Messages containing the specified affected point code are allowed into the network.
Allowed DPC	The gateway screening entity that identifies the destination point codes that are allowed to receive SS7 messages from the EAGLE 5 ISS. Messages containing the specified destination point codes go on to the

A

	next step in the gateway screening process, or are allowed into the network if the gateway screening process stops with this entity.
Allowed ISUP	The gateway screening entity that identifies the ISUP or TUP message types that are allowed into the network.
Allowed OPC	The gateway screening entity that identifies the originating point codes that are allowed to send SS7 messages into the network. Messages containing the specified originating point codes go on to the next step in the gateway screening process, or are allowed into the network if the gateway screening process stops with this entity.
Allowed SIO	The gateway screening entity that identifies the type of MSUs (ISUP, TUP, TCAP, and so forth) that are allowed into the network. The message type is determined by the network indicator code (NIC), priority (PRI), and service indicator (SI) fields of the signaling information octet (SIO) field in the MSU, and the H0 and H1 heading codes of the signaling information field of the MSU. Messages containing the specified message type go on to the next step in the gateway screening process, or are allowed into the network if the gateway screening process stops with this entity.
Allowed TT	The gateway screening entity that identifies the SCCP messages that have a specified translation type value in the called party address. SCCP messages containing specified

A

translation type in the called party address go on to the next step in the gateway screening process, or are allowed into the network if the gateway screening process stops with this entity.

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.

APC

Adjacent Point Code

The point code that identifies a node adjacent to the EAGLE 5 ISS. This term is used in link sets and routes.

B

BLKDPC

Blocked Destination Point Code

The point code that the gateway screening uses to keep MSUs bound for a specific point code out of the network where the EAGLE 5 ISS is located. This point code is in the routing label portion of the signaling information field in the MSU. Messages that do not contain the specified destination point code go on to the next step in the gateway screening process, or are allowed into the network if the gateway screening process stops with this entity.

BLKOPC

Blocked Originating Point Code

B

The point code that gateway screening uses to keep MSUs coming from a specific point code out of the network where the EAGLE 5 ISS is located. This point code is in the routing label portion of the signaling information field in the MSU. Messages that do not contain the specified originating point code go on to the next step in the gateway screening process, or are allowed into the network if the gateway screening process stops with this entity.

C

CNCF — Calling Name Conversion Facility

CNCF provides a conversion of ISUP IAM messages using calling name identification presentation (CNIP) for calling name information delivery. CNIP uses either non-standard proprietary ISUP party information (PIP) parameter or ANSI standard ISUP generic name (GN) parameter.

CNIP — Calling Name Identification Presentation

control cards — Cards that occupy slots 1113 through 1118 of the control shelf on an EAGLE 5 ISS and perform OAM, TDM, and database functions for the EAGLE 5 ISS. The legacy set consists of the single-slot GPSM-II card running the OAM application and EOAM GPL, the single-slot TDM card, and the dual-slot MDAL card. The E5-based set consists of the dual-slot E5-MASP card (the E5-MCAP module and the E5-TDM module) and the dual-slot E5-MDAL card.

C

CR	Cluster Routing Connection Request
credit card drive	Flash memory credit card-shaped drive used in the flush-mounted USB port on an E5-MCAP card for upgrade; it could be used for disaster recovery.

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.
DESTFLD	The point code in the affected destination field (the concerned signaling point code) of incoming MTP network management messages from another network that are allowed into the EAGLE 5 ISS.
Destination	The node to which the signaling link traffic is routed. This destination is identified by a point code, either a full point code or a cluster point code.
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.

D

DTA	Database Transport Access A feature in the EAGLE 5 ISS that encapsulates specific MSUs into the data portion of SCCP within a new SS7 MSU and sends the new MSU to the destination using global title translation. The EAGLE 5 ISS uses gateway screening to determine which MSUs are used by the DTA feature.

E

E5-MASP card	E5-based dual-slot card that consists of the E5-MCAP module (occupies slot 1113 and slot 1115) and the E5-TDM module (occupies slot 1114 and slot 1116) in an EAGLE 5 ISS control shelf. Used when the E5-MDAL card is used.
E5-MCAP card	The module contains the Communications Processor and Applications Processor and provides connections to the IMT bus. Controls the maintenance and database administration activity and performs both application and communication processing. Runs the OAM application and OAMHC GPL. Occupies slot 1113 and slot 1115 in an EAGLE 5 ISS control shelf. Used when the E5-MDAL card is used. Contains two USB ports.
E5-MDAL card	The E5 MDAL card processes alarm requests, provides general purpose relays, and provides fan control. Occupies slots 1117 and 1118 in an EAGLE 5 ISS Control Shelf. Used with E5-MASP cards. Does NOT contain a drive for removable cartridges.

E

E5-TDM card	The E5-TDM card provides the EAGLE 5 ISS with 16 ports for user terminals, contains fixed disk storage and distributes Composite Clocks and High Speed Master clocks throughout the EAGLE 5 ISS. Occupies slot 1114 and slot 1116 in an EAGLE 5 ISS Control Shelf. Used when the E5-MDAL card is used.
EPAP	EAGLE Provisioning Application Processor

F

fixed disk drive	Hard drive on the TDM card and the E5-TDM card.
flush-mounted USB port	USB port on the E5-MCAP card; used with credit card flash memory drives for upgrades and could be used for disaster recovery.
FR	Family of Requirement

G

GLS	Generic Loading Services An application that is used by the TSM cards for downloading gateway screening to LIM cards.
GN	Generic Name
GPL	Generic Program Load Software that allows the various features in the system to work. GPLs and applications are not the same software.

G

G-Port	GSM Mobile Number Portability A feature that provides mobile subscribers the ability to change the GSM subscription network within a portability cluster, while retaining their original MSISDN(s).
GPSM-II card	General Purpose Service Module II Contains the communications processor and applications processor and provides connections to the Interprocessor Message Transport (IMT) bus. The GPSM-II card can run on the OAM, IPS, or MCP applications. This card runs various GPLs and applications in the EAGLE 5 ISS. As a control card, it runs the OAM application and EOAM GPL. Used when the legacy TDM card and MDAL card are used.
GT	Global Title Routing Indicator
GWS	Gateway Screening Used at gateway STPs to limit access into the network to authorized users. A gateway STP performs inter-network routing and gateway screening functions. GWS controls access to nonhome SS7 networks. Only an MSU that matches predefined criteria in the EAGLE 5 ISS's database is allowed to enter the EAGLE 5 ISS.
GWSA	Gateway Screening Action Gateway Screening Application
GWSD	Gateway Screening Message Discard

G

GWSM
: Gateway Screening Messages

  Gateway Screening Mode

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 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).

I

IAM
: Initial Address Message

ID
: Identity, identifier

IEC
: International Escape Code

I

ISS	Integrated Signaling System
ISUP	ISDN User Part
ITU	International Telecommunications Union

L

latched USB port	On the E5-MCAP card, a USB port with a lockable latch. Used with removable media (flash memory ”thumb” drives) to install and back up customer data.
LIM	Link Interface Module Provides access to remote SS7, IP and other network elements, such as a Signaling Control Point (SCP) through a variety of signaling interfaces (DS0, MPL, E1/T1 MIM, LIM-ATM, E1-ATM, IPLIMx, IPGWx). The LIMs consist of a main assembly and possibly, an interface appliqué board. These appliqués provide level one and some level two functionality on SS7 signaling links.
Link	Signaling Link Signaling Link Carries signaling within a Link Set using a specific Association. A Link can belong to only one Link Set and one Association. There is generally one Link per Association in a Link Set.
LNP	Local Number Portability
LST	Link Set Type

M

MAS	Maintenance and Administration Subsystem A set of cards located in the Control Shelf, used to provide a central management point for the EAGLE 5 ISS. The MAS provides user interface, maintenance communication, peripheral services, alarm processing, system disk interface, and measurements using the following three subassemblies: GPSM-II, TDM, and MDAL.
MASP	Maintenance and Administration Subsystem Processor The Maintenance and Administration Subsystem Processor (MASP) function is a logical pairing of the GPSM-II card and the TDM card. The GPSM-II card is connected to the TDM card by means of an Extended Bus Interface (EBI) local bus. The MDAL card contains the removable cartridge drive and alarm logic. There is only one MDAL card in the Maintenance and Administration Subsystem (MAS) and it is shared between the two MASPs.
MSA	Metropolitan Statistical Areas Main Signaling Area
MSU	Message Signal 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 connection between themselves.

M

	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.

N

NC	Network Cluster Network Code Not Compliant
NCM	Network Cluster Member
NI	Network Indicator

N

NIC	Network Identifier Code Network Information Center Network Interface Card Computer hardware that enables computers to communicate with one another over a computer network. Also called a network card or a network adapter.
NP	Number Plan
NPC	National Point Code
NSR	Next Screening Reference

O

OPC	Originating Point Code

P

PIP	Party Information Parameter
PRI	Primary Rate Interface Primary Rate ISDN Priority

R

removable cartridge	MO cartridge used in the drive on the legacy MDAL card.
removable cartridge drive	Media drive for removable MO cartridges on the legacy MDAL card.
removable media	Flash memory or “thumb” drives used in the latched USB port on an

R

	E5-MCAP card for installation and backup of customer data.
RI	Routing Indicator
RN	Routing Number
RSP	Remote Signaling Point Represents an SS7 network node (point code) that signaling must be sent to. An RSP has an SS7 domain (ANSI, ITUI, ITUN), a point code, and an optional Adjacent Server Group. Remote Signaling Point A logical element that represents a unique point code within a particular SS7 domain with which the SS7 application's Local Signaling Point interacts.
RSR	Reset Request Route Set Test – Restricted message

S

SCCP	Signaling Connection Control Part
SCMG	SCCP Management SCMG manages the status of subsystems and SCCP-capable signaling points (SPs). It maintains the status of remote SCCP SPs and that of local subsystems.
SCP	Service Control Point Service Control Points (SCP) are network intelligence centers where databases or call processing information is stored. The primary

S

	function of SCPs is to respond to queries from other SPs by retrieving the requested information from the appropriate database, and sending it back to the originator of the request.
	Secure Copy
SCR	service-configuration request
Screen Set	A gateway screening table containing a list of rules, or screening references. The screening references indicate the screening action that is to be performed on a message in a specific linkset.
Screening Reference	The name of each entry in the gateway screening tables. Combined with the next screening function identifier (NSFI), it uniquely defines a screening table. This field is used with all screening functions except the screen set screening function.
SCRN	Screen Set Name
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.
SIF	Service Information Field
	MTP Service Information Field is the payload field of an SS7 MSU header. The first byte of the SIF is

S

	the start of the MTP3 routing label. For MTP3-variant networks, the maximum SIF size is 272 bytes. For MTP3b-variant networks, the maximum SIF size is 4095 bytes.
SI	Service Indicator
SIF	Signaling Information Field
SIO	Service Information Octet. The network indicator code (NIC), priority (PRI), and service indicator (SI) in the SIO field in the message signaling unit (MSU). This information identifies the type of MSU (ISUP, TCAP, and so forth) that is allowed in the network where the EAGLE 5 ISS is located.
SLTA	Signaling Link Test Acknowledgment
SLTM	Signal Link Test Message
SP	Signaling Point A set of signaling equipment represented by a unique point code within an SS7 domain.
Spare Point Code	The EAGLE ITU International/National Spare Point Code feature allows a network operator to use the same Point Codes across two networks (either ITU-I or ITU-N). The feature also enables National and National Spare traffic to be routed over the same linkset. The EAGLE uses the MSU Network Indicator (NI) to differentiate the

	same point code of one network from the other. In accordance with the SS7 standard, unique Network Indicator values are defined for Point Code types ITU-I, ITU-N, ITU-I Spare, and ITU-N Spare.
SR	Screening Reference
SS7	Signaling System #7
SSA	Subsystem Allowed
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 assigned to 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.
SSP	Subsystem Prohibited network management message. Subsystem Prohibited SCCP (SCMG) management message. (CER)
SST	Secondary State The secondary state of the specified entity. Subsystem Status Test network management message.
STPLAN	Signaling Transfer Point Local Area Network

S

	The application used by the SLAN card and E5-SLAN card to support the STP LAN feature. This application does not support 24-bit ITU-N point codes.

T

TCAP	Transaction Capabilities Application Part
TDM	Terminal Disk Module Time Division Multiplexing
TFA	TransFer Allowed (Msg)
TFC	Transfer Control TransFer Controlled (Msg) Transfer Congested
TFP	TransFer Prohibited (Msg) A procedure included in the signaling route management (functionality) used to inform a signaling point of the unavailability of a signaling route.
TFR	Transfer Restricted
TIF	Triggerless ISUP Framework
TINP	Triggerless ISUP based Number Portability
TLNP	Triggerless LNP
Translation Type	See TT.

T

Triggerless LNP	A feature that gives service providers a method to route calls to ported numbers without having to upgrade their signaling switch (end office or mobile switching center) software. This feature uses the gateway screening stop action TLNP to intercept through-switched ISUP messages on the LIM.
TSM	Translation Services Module Provides translation capability and Global Title Translation (GTT) implementation for the Local Number Portability (LNP) function and is used for downloading gateway screening tables to link interface modules (LIMs).
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 indicates which Global Title Translation table determines the routing to a particular service database.
TUP	Telephone User Part

U

UAM	Unsolicited Alarm Message A message sent to a user interface whenever there is a fault that is service-affecting or when a previous problem is corrected. Each message has a trouble code and text associated with the trouble condition.
UDT	Unitdata Transfer

U

UDTS	Unitdata Transfer Service An error response to a UDT message.
UIM	Unsolicited Information Message A message sent to a user interface whenever there is a fault that is not service-affecting or when a previous problem is corrected. Each message has a trouble code and text associated with the trouble condition.
UPU	User Part Unavailable An MTP3 management message.
USB port	Receptacle for flash memory drives on personal computers. On the E5-MDAL card, a flush-mounted USB port used with credit card flash memory drives for upgrade. On the E5-MCAP card, a latched USB port for use with flash memory ”thumb” drives for installation and backup of customer data.

X

XUDT	Extended User Data
XUDTS	Extended Unitdata Service message An error response to an XUDT message.