

Tekelec EAGLE[®] 5

Release 41.1

Feature Notice

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

U.S. Patent Numbers:

5,008,929; 5,953,404; 6,167,129; 6,324,183; 6,327,350; 6,606,379; 6,639,981; 6,647,113; 6,662,017; 6,735,441; 6,745,041; 6,765,990; 6,795,546; 6,819,932; 6,836,477; 6,839,423; 6,885,872; 6,901,262; 6,914,973; 6,940,866; 6,944,184; 6,954,526; 6,954,794; 6,959,076; 6,965,592; 6,967,956; 6,970,542; 6,987,781; 6,987,849; 6,990,089; 6,990,347; 6,993,038; 7,002,988; 7,031,340; 7,035,239; 7,043,000; 7,043,001; 7,043,002; 7,046,667; 7,050,456; 7,050,562; 7,054,422; 7,068,773; 7,072,678; 7,075,331; 7,079,524; 7,088,728; 7,092,505; 7,108,468; 7,110,780; 7,113,581; 7,113,781; 7,117,411; 7,123,710; 7,127,057; 7,133,420; 7,136,477; 7,139,388; 7,145,875; 7,146,181; 7,155,206; 7,155,243; 7,155,505; 7,155,512; 7,181,194; 7,190,702; 7,190,772; 7,190,959; 7,197,036; 7,219,264; 7,222,192; 7,242,695; 7,254,391; 7,260,086; 7,286,516; 7,286,839; 7,295,579; 7,304,957; 7,318,091; 7,319,857; 7,327,670; 7,366,530; 7,372,953; 7,383,298; 7,401,360; 7,403,523; 7,403,537; 7,406,159; 7,439,854; 7,466,807; 7,466,815; 7,468,988; 7,502,611; 7,522,580; 7,525,997; 7,532,647; 7,554,974; 7,564,870; 7,573,905; 7,580,517; 7,606,202; 7,616,659; 7,630,211; 7,631,093; 7,633,872; 7,633,969; 7,644,215; 7,650,367; 7,675,905; 7,680,928; 7,693,066; 7,693,068; 7,701,925; 7,702,963; 7,706,343; 7,716,175; 7,720,463; 7,738,488; 7,738,489; 7,738,648; 7,742,421; 7,743,131; 7,751,836; 7,760,706; 7,760,708;

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Ordering Information

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

Table of Contents

EAGLE 5 ISS Release 41.1.....	8
Feature Content.....	8
80 SE-HSLs on E5 Cards	11
Feature Control Requirements.....	11
Hardware Requirements.....	11
Commands.....	11
Limitations.....	11
A-Port Circular Route Prevention	11
Feature Control Requirements.....	12
Hardware Requirements.....	12
Commands	12
Measurements	12
Limitations.....	12
E5-ENET SLAN to ECAP	13
E5-SLAN Throughput Throttle for ECAP Connection	13
Commands.....	13
EAGLE 5 Service Portability	13
Feature Control Requirements.....	14
Hardware Requirements.....	14
Commands.....	14
Limitations.....	15
AINPQ Service Portability	15
ATINP Service Portability	15
G-Port SRI Query for Prepaid Service Portability	15
IAR NP Service Portability	16
INP Service Portability	17
MO SMS Service Portability	17
Prepaid IDP Query Relay (IDP Relay) Service Portability	18
TIF NP Service Portability	19
EAGLE 5 SCCP Capacity Increase	20
Feature Control Requirements.....	21
Hardware Requirements.....	21
Commands.....	21
Limitations.....	21
GWS Stop Action for MTP Routed Messages	22
Feature Control Requirements.....	22
Hardware Requirements.....	23

Commands.....	23
Limitations.....	23
IDP A-Party Blacklist	24
Feature Control Requirements.....	24
Hardware Requirements.....	24
Commands.....	24
Measurements	26
Limitations	26
IDP A-Party Routing	26
Feature Control Requirements.....	27
Hardware Requirements.....	27
Commands.....	27
Measurements.....	28
Limitations.....	28
IDP Service Key Routing	28
Feature Control Requirements.....	28
Hardware Requirements.....	29
Commands.....	29
Measurements.....	29
Limitations.....	30
Info Analyzed Relay	30
Feature Control Requirements.....	30
Commands	31
Measurements.....	33
Limitations.....	33
INP Circular Route Prevention	34
Feature Control Requirements.....	34
Hardware Requirements.....	34
Commands	34
Measurements.....	35
Limitations.....	36
INP, G-port, and ATI NP Enhancements for Support of ROP	36
Feature Control Requirements	36
Hardware Requirements.....	36
Commands.....	36
Limitations.....	36
IS41 GSM Migration Support for Relaying SRI_SM to Default SMSC	37
Feature Control Requirements.....	37
Hardware Requirements.....	37
Commands.....	37
Limitations.....	37

SMSREQ Handling for Migrated or Ported Subscribers	37
Feature Control Requirements	38
Hardware Requirements.....	38
Commands.....	38
Measurements.....	38
Limitations.....	38
Support for 2800 Provisioned Links Per Node	38
Feature Control Requirements.....	39
Hardware Requirements.....	39
Commands.....	39
Limitations.....	40
Other Changes.....	40
DDB Enhancements (Robustness) Phase 2.....	40
Displaying the GTTSET Count.....	43
EAGLE LIMS should send real LINKSET names to IMF/ESP over EMP, instead of an internal index.....	43
IDPR Support for ACCgPN Conditioning Action.....	43
Number of Digits Parameters in MMS Feature.....	44
OAM Data Audit Enhancement	44
Obsolescence of the l1mode and tset Parameters.....	44
Support MTP routed SMDPP/ANLYZD with GTI=0	46
Update to the ent/chg-npp-as Commands.....	46
Update to the ent/chg/rtrv-map Commands.....	47
Update to the rept-stat-mon Command	47
Update to the rtrv-data-rtdb Command	48
Update to the rtrv-ip-host Command.....	48
Update to the rtrv-npp-srs Command.....	49
Update to the tst-msg command.....	49
Updates to the AINPQ and INP Features	50
Updates to the E5-OAM	52
Operational Changes.....	52
Unsolicited Alarm Messages.....	52
UAM Format Updates.....	54
Unsolicited Information Messages.....	54
UIM Format Updates.....	57
Error Messages.....	58
Customer Care Center.....	66
Emergency Response.....	68
Related Publications.....	69
Customer Training.....	69
Locate Product Documentation on the Customer Support Site.....	69

EAGLE 5 ISS Card Overview Table.....	70
Hardware Baseline.....	77
Glossary.....	83

List of Tables

Table 1: TPS Capacities.....	20
Table 2: Links and Cards Limits per Application.....	38
Table 3: AINPOPTS and INPOPTS Tables on Upgrade.....	50
Table 4: UAMs: Fast Copy.....	52
Table 5: UAMs: Non-feature Related.....	53
Table 6: UIMs - IAR.....	54
Table 7: UIM - IGM Support for SRI-SM NACK with Default SMSC.....	56
Table 8: UIM - INP CRP.....	56
Table 9: UIM - Service Portability.....	56
Table 10: UIM - Non-feature Related.....	56
Table 11: Error Messages: A-Port CRP.....	58
Table 12: Error Messages: GWS Stop Action for MTP Routed Messages.....	58
Table 13: Error Messages: G-Port SRI Query Service Portability.....	58
Table 14: Error Messages: IDP A-Party Blacklist.....	59
Table 15: Error Messages: IDP A-Party Routing.....	59
Table 16: Error Message: IGM enhancement for Relaying SRI_SM to the default SMSC value.....	60
Table 17: Error Messages: Info Analyzed Relay.....	60
Table 18: Error Messages: INP CRP.....	61
Table 19: Error Message: Service Portability.....	62
Table 20: Error Messages: Support for 2800 Links.....	62
Table 21: Error Messages: Non-Feature Related	62
Table 22: EAGLE 5 ISS Card Overview Table.....	70
Table 23: Hardware Baseline.....	77

EAGLE 5 ISS Release 41.1

Feature Content

Introduction

Feature notices are distributed to customers with each new release of software.

This *Feature Notice* includes a brief overview of each feature, lists new hardware required (if any), provides the hardware baseline for this release, and explains how to find the *Release Notice* and other customer documentation on the Customer Support Site.

Note: For more information on the commands that are added or enhanced to support the new features and other changes for EAGLE 5 ISS Release 42.0, refer to the *Commands Manual* for the documentation set. For additional information on Measurements, refer to the *Measurements Manual*. For additional information on alarms, refer to the *Maintenance Manual*.

Feature Notice Updates

The HIPR2 card (870-2872-01) will be available in Release 42.0. HIPR2 cards cannot be used in Release 41.1

New and Enhanced Features

- [80 SE-HSLs on E5 Cards](#)

The 80 SE-HSLs on E5 Cards feature allows quantities of 72 or 80 high speed links to be supported on HC-MIM and E5-E1T1 cards.

- [A-Port Circular Route Prevention](#)

The MNP Circular Route Prevention feature (893-0070-01) is enhanced to detect and prevent circular routes for all messages that receive A-Port service, including LOCREQ and SMSREQ messages.

- [E5-ENET SLAN to ECAP](#)

The ECAP server is enhanced to interface with E5-ENET cards as well as EDCM and EDCM-A cards.

- [E5-SLAN Throughput Throttle for ECAP Connection](#)

The TPS on E5-ENET cards can be restricted to avoid overloading the ECAP server.

- [EAGLE 5 SCCP Capacity Increase](#)

The E5-SM4G Throughput Capacity feature is enhanced to provide a quantity feature that increases the maximum TPS per E5-SM4G card to 6800 TPS. The card TPS increase results in an increase in the maximum system TPS.

- [EAGLE 5 Service Portability](#)

EAGLE 5 Service Portability allows a subscriber to keep the same phone number when switching from one type of network or service technology to another. A subscriber can remain with the same

operator but receive service from a different network technology supported by that operator. The subscriber can also move between physical networks that are operated by the same service provider.

Service Portability is supported for use with EAGLE 5 ISS EPAP-related features, as described in the following sections:

- [*AINPQ Service Portability*](#)
 - [*ATINP Service Portability*](#)
 - [*G-Port SRI Query for Prepaid Service Portability*](#)
 - [*IAR NP Service Portability*](#)
 - [*INP Service Portability*](#)
 - [*MO SMS Service Portability*](#)
 - [*Prepaid IDP Query Relay \(IDP Relay\) Service Portability*](#)
 - [*TIF NP Service Portability*](#)
-
- [*GWS Stop Action for MTP Routed Messages*](#)

The GWS Stop Action for MTP Routed Messages feature provides a new **sccp** Gateway Screening (GWS) stop action, which allows IS41-based features to process MTP-routed traffic.
 - [*IDP A-Party Blacklist*](#)

The IDP A-Party Blacklist feature enhances the Prepaid IDP Query Relay feature to provide a generic framework to support subscriber blacklisting capability with a query-based or relay-based method. The blacklist check is performed on the Calling Party (A-Party or CgPN) number in the IDP CAMEL or INAP message.
 - [*IDP A-Party Routing*](#)

The IDP A-Party Routing feature allows the A-Party CgPN to be used to route IDP or IDPSMS messages.
 - [*IDP Service Key Routing*](#)

The IDP Service Key Routing feature allows routing to occur based on the Service Key and EventType BCSM parameters in the incoming IDP or IPDSMS message.
 - [*Info Analyzed Relay*](#)

The Info Analyzed Relay features (IAR Base, IAR NP, IAR ASD, and IAR GRN) allow EAGLE 5 ISS provisioning of subscriber data to be used to screen and manipulate AnalyzedInformation messages related to ported subscribers differently than AnalyzedInformation messages related to non-porting subscribers.
 - [*INP Circular Route Prevention*](#)

The INP Circular Route Prevention feature detects and prevents circular routes for INPQ and INP MR Services.
 - [*INP, G-port, and ATI NP Enhancements for Support of ROP*](#)

The INP, G-Port, and ATINP features are enhanced to allow Small Geographic Areas (CNLs) to be grouped into Large Geographic Areas (ROPs).
 - [*IS41 GSM Migration Support for Relaying SRI_SM to Default SMSC*](#)

When an SRI_SM is received for an own-network IS41 subscriber, a configuration option specifies whether IGM responds with a Return Error message (existing function) or relays the SRI_SM message to a default IS41 SMSC.
 - [*SMSREQ Handling for Migrated or Ported Subscribers*](#)

The A-Port, IGM, MNP CRP, and MT-SMS IS41 NP features are enhanced to support MTP-routed SMSREQ messages. If feature processing does not occur, the the SMSREQ is MTP routed.

- *Support for 2800 Provisioned Links Per Node*

The Large System # Links feature is enhanced to allow up to 2800 SS7 links to be provisioned on an EAGLE 5 ISS node.

Other Changes

- *DDB Enhancements (Robustness) Phase 2*

The DDB Enhancements feature is enhanced to perform a dynamic database (DDB) checksum after any DDB variable is updated.

- *Displaying the GTTSET Count*

The output of the `ent/chg/dlt/rtrv-gttset` commands and the `rtrv-tbl-capacity` command is updated to display the number of provisioned GTTSETS.

- *EAGLE LIMS should send real LINKSET names to IMF/ESP over EMP, instead of an internal index*

Linkset names are sent over LIM cards in the Service Request message.

- *IDPR Support for ACCgPN Conditioning Action*

The Prepaid IDP Query Relay feature is enhanced to support the ACCgPN Conditioning Action.

- *Number of Digits Parameters in MMS Feature*

The number of digits in the MT-Based GSM MMS SRI_SM ACK response message can be restricted.

- *OAM Data Audit Enhancement*

The `aud-data` command is enhanced to support specific table audits and perform GPL audits on the static database.

- *Obsolescence of the l1mode and tset Parameters*

The **l1mode** and **tset** parameters are no longer supported in the linkset or signalling link commands.

- *Support MTP routed SMDPP/ANLYZD with GTI=0*

The MO SMS and IAR features can support MTP-routed SMDPP and AnalyzedInformation messages, respectively, that do not have Global Title Address Digits.

- *Update to the ent/chg-npp-as Commands*

The Conditioning Actions, Formatting Actions, and Service Actions can be provisioned using a comma-separated list.

- *Update to the ent/chg/rtrv-map Commands*

The output of the `rtrv-map` command is updated to indicate the values of the SRM and MRC fields when the Multiplicity mode has a value other than *Dominant*.

- *Update to the rept-stat-mon Command*

The output for the `rept-stat-mon` command is revised when the command is used to retrieve data for a Fast Copy subsystem.

- *Update to the rtrv-data-rtdb Command*

The `rtrv-data-rtdb` command is updated to display split data for NPANXX in the output.

- *Update to the rtrv-ip-host Command*

The `rtrv-ip-host` command is updated to document the ability to retrieve all entries in the IP Host table by entering `rtrv-ip-host:display=all`.

- [Update to the `rtrv-npp-srs` Command](#)

The output for the `rtrv-npp-srs` command is updated to display FDL instead of FDIGLEN in the header.

- [Update to the `tst-msg` command](#)

The output for the `tst-msg` command is updated to display an asterisk (*) if the FDL value in the matched NPP rule is a wildcard and to display FDL instead of FDIGLEN.

- [Updates to the AINPQ and INP Features](#)

The AINPQ and INP features are enhanced to operate independently of each other in the system.

80 SE-HSLs on E5 Cards

The 80 SE-HSLs on E5 Cards feature allows the Synchronous E1 High Speed Link (SE-HSL) feature to support quantities of 72 or 80 high speed links on HC-MIM and E5-E1T1 cards.

Feature Control Requirements

- FAK for Part Number 893-0130-10—72 SE-HSL links
- FAK for Part Number 893-0130-11—80 SE-HSL links
- After a quantity is provisioned, a lower quantity cannot be provisioned.

Hardware Requirements

Synchronous E1 high-speed links can be added to HC-MIM or E5-E1T1 cards.

Commands

The `enable/rtrv-ctrl-feat` commands are enhanced to support and display the new quantities.

Limitations

No limitations are associated with this feature.

A-Port Circular Route Prevention

The existing MNP Circular Route Prevention feature is enhanced to provide the same functions for A-Port and IS41 messages as it currently provides for G-Port and GSM messages. A-Port Circular Route Prevention (A-Port CRP) detects and prevents circular routing for all messages that receive A-Port service, including LOCREQ and SMSREQ messages. The functions help to detect circular routing that is caused by incorrect information in number portability databases in one or more networks.

On receipt of a valid IS41 message by the MNP service, the EAGLE 5 ISS determines whether a circular route is present based on the presence of a HomeRN in the called party number of the message and on the portability information in the database.

- If this called party number is a ported-out number (foreign subscriber), UIM 1256 “NP Circular Route detected” is generated and, depending on the GTT provisioning, either a UDTS is sent using SCCP information or the message is routed to a GT translated point code.
- If the number is a ported-in number (own network subscriber), the EAGLE 5 ISS relays the message directly to the HLR using the RTDB result information.

Feature Control Requirements

The GTT, A-Port, and MNP Circular Route prevention features must be enabled and turned on before circular route prevention can be performed for the A-Port feature.

Hardware Requirements

The A-Port feature requires Service Module cards (4G or higher DSM cards, E5-SM4G cards, or a mixture of both).

Commands

- `chg-measopts`—Enhanced to allow options to be changed if the A-Port feature is turned on.
- `chg-mtc-measopts`—Enhanced to allow options to be changed if the A-Port feature is turned on.
- `ent/dlt/rtrv-homern`—Enhanced to allow the command to be entered if the A-Port feature is turned on.
- `rept-ftp-meas`—Enhanced to allow measurements to be reported if the A-Port feature is turned on.
- `rept-meas`—Enhanced to allow measurements to be reported if the A-Port feature is turned on.

Measurements

The MNPCRD register, measuring the number of times a circular route is detected, is added to the per-system total (NP SYS) and per-SSP total (NP SSP) daily (MTCD) and hourly (MTCH) measurement reports. The register is supported on the OAM and on the Measurements Control Platform.

Limitations

Circular route conditions occur only for Other Licensed Operator (OLO) subscribers and not for migrated customers (who are still in their own network). Therefore, running the MNP Circular Route Prevention feature when only the IS41 GSM Migration (IGM) feature is on (A-Port or G-Port is not on) is not valid. Support for Circular Route Prevention when only the IGM feature is ON is already supported and will continue to exist only for ITU MAP messages.

E5-ENET SLAN to ECAP

The E5-ENET SLAN to ECAP feature allows the ECAP server to interface with E5-ENET cards. EDCM and EDCM-A cards continue to be supported.

E5-SLAN Throughput Throttle for ECAP Connection

The E5-SLAN Throughput Throttle for ECAP Connection feature allows the TPS on E5-ENET cards to be restricted to avoid overloading the ECAP server, which can handle a maximum of 5000 TPS.

Commands

The `ent-ip-node` command is enhanced to perform the 'throttling' function. A new `cap` parameter is used to specify the maximum percentage of Ethernet capacity for the node connection. For more information on this capability, refer to the *Commands Manual* and to the *Feature Manual - ECAP*.

EAGLE 5 Service Portability

"Service Portability" describes a special type of number portability that allows a subscriber to keep the same phone number when switching from one type of network or service technology to another within the same operator's network. Unlike traditional Number Portability, the subscriber does not move from one network operator or service provider to another. With Service Portability, the subscriber remains with the same operator, but receives service from a different network technology supported by that operator or moves from one physical network to another, with both networks operated by the same service provider.

Network nodes must be able to determine whether a message should use Service Portability or Number Portability. Operators offering Service Portability may need unique internal routing numbers (RNs), that can be used to indicate which network a subscriber belongs to, allowing network nodes to route calls and messages between the two networks.

Number Portability functions use the RN/SP Network Entity from the RTDB when formatting outgoing Called Party digits in a response or relayed message. The Service Portability (S-Port) feature allows RTDB GRN Entity digits to be used for own-network GSM and IS41 subscribers in response digit formats for any feature where Service Portability is performed. The GRN field in the RTDB is used to provision Service Portability prefixes on a per subscriber basis.

A subscriber is considered an own-network GSM subscriber if the dialed number (DN) is associated with an SP entity type in the RTDB. A subscriber is considered an own-network IS41 subscriber if the DN is associated with an RN entity type in the RTDB and the portability type (PT) is 0.

EPAP-related features that use Number Portability processing can also use Service Portability processing, as described in the following sections:

- [AINPQ Service Portability](#)
- [ATINP Service Portability](#)

- [G-Port SRI Query for Prepaid Service Portability](#)
- [IAR NP Service Portability](#)
- [INP Service Portability](#)
- [Prepaid IDP Query Relay \(IDP Relay\) Service Portability](#)
- [MO SMS Service Portability](#)
- [TIF NP Service Portability](#)

Feature Control Requirements

These feature control requirements apply to the S-Port feature and to all EPAP-related features where Service Portability can be performed.

- The S-Port feature must be enabled and turned on (FAK for part number 893-0343-01).
- The feature where Service Portability is to be performed must be enabled and turned on.

Note: Configuration options that affect Service Portability can be provisioned when the S-Port feature is enabled but not turned on. However, Service Portability processing does not occur until the S-Port feature and the feature where Service Portability is to be performed are enabled and turned on.

- A temporary FAK cannot be used to enable the S-Port feature.
- The S-Port feature can be turned off after it has been turned on.
- If the IDP A-Party Blacklist feature is enabled, then the S-Port feature cannot be enabled.

Hardware Requirements

The GTT feature and all EPAP-related features where Service Portability can be performed require Service Module cards (DSM cards with at least 4G of memory, E5-SM4G cards, or a mixture of both).

Commands

The `enable/chg/rtrv-ctrl-feat` commands are enhanced to enable, turn on, and display the status of the S-Port feature.

`rtrv-ctrl-feat`

```
rlghncxa03w 09-08-29 16:40:40 EST EAGLE 41.1.0

The following features have been permanently enabled:
Feature Name          Partnum   Status   Quantity
HC-MIM SLK Capacity   893012707 on        64
XGTT Table Expansion  893006101 on      400000
XMAP Table Expansion  893007710 on        3000
Large System # Links  893005910 on        2000
Routesets             893006403 on        8000
EAGLE5 Product        893007101 on         ----
EAGLE Product         893007201 off         ----
IP7 Product           893007301 off         ----
Network Security Enhance 893009101 off         ----
Telnet                893005701 on         ----
Service Portability    893034301 on         ----
6-Way LS on Routesets  893019801 on         ----

;
```

Limitations

No limitations are associated with this feature.

AINPQ Service Portability

Service Portability support for the AINPQ feature indicates whether Service Portability applies to ANSI-41 NPREQ messages for own-network subscribers. When Service Portability is applicable, GRN digits are used in place of RN digits in the response message.

Commands

The `chg/rtrv-ainpopts` commands are added to provision Service Portability functionality. These commands also support the independent operation of the AINPQ feature. See [Updates to the AINPQ and INP Features](#) for more information.

ATINP Service Portability

Service Portability support for the ATINP feature indicates whether Service Portability applies to ATI ACK messages for own-network subscribers. When Service Portability is applicable, and the `atiackrn=rn` parameter is provisioned, GRN digits are used to encode RN digits in the response message..

As part of the support for Service Portability, ATINP no longer considers the incoming MSISDN numbering plan; the numbering plan in the MSISDN in the ATI ACK message will be the same as the incoming MSISDN numbering plan.

Commands

The `chg/rtrv-atinpopts` commands are enhanced to provision and display Service Portability functionality.

`rtrv-atinpopts`

```
tekelecstp 09-06-04 07:55:30 EST EAGLE 41.1.0

ATINPQ OPTIONS
-----
ATIACKIMSI      = NONE
ATIACKMSISDN   = MSISDN
ATIACKRN        = RN
ATIDFLTRN      = NONE
ATIDLM          = NONE
ATINPTYPE      = ANY
ENTITYLEN      = NONE
SNAI           = NAI
SPORTTYPE      = NONE
;
```

G-Port SRI Query for Prepaid Service Portability

Service Portability support for the G-Port SRI Query for Prepaid feature allows GRN digits to be used in place of RN digits during construction of Mobile Station Routing Numbers (MSRNs).

Default Routing Number

A Default Routing Number (Default RN) is introduced for the G-Port SRI Query for Prepaid feature. The Default RN option applies to Number Portability, and can be used whether the S-Port feature is

on or off. If the S-Port feature is on, then the Default RN applies in cases where Service Portability usage of GRN does not apply for own network subscribers. If the S-Port feature is off, then Default RN digits can be used for own-network subscribers during construction of the MSRN instead of the RN/PT=0 or SP entity associated with the RTDB subscriber entry.

Commands

The `chg/rtrv-gsmopts` commands are enhanced to provision and display the Service Portability functionality and a Default RN option.

Note: As part of this feature, the `rtrv-gsmopts` command is no longer feature dependent. All parameters are always displayed in the output.

`rtrv-gsmopts`

```

tekelecstp 09-07-06 16:12:11 EST EAGLE 41.1.0
GSM OPTIONS
-----
MULTCC          = 456          MULTCC          = NONE
MULTCC          = NONE        MULTCC          = NONE
DEFMAPVR        = 1

DEFMCC          = 123         DEFMNC          = NONE
CCNC            = 12          MCCMNC         = 3456
CCNC            = 56          MCCMNC         = 9876
CCNC            = NONE        MCCMNC         = NONE

SRIDN           = SCCP        SRIDNNOTFOUND  = GTT
MSRNDIG         = RN          MSRNNAI         = 0
MSRNNP          = 0           MSISDNTRUNC    = 0
SRFADDR         = NONE        SRFNAI         = 0
SRFNP           = 0

SERVERPFX       = NONE        GSM2IS41        = NONE
MIGRPFX         = SINGLE      IS412GSM        = 67

SPORTTYPE       = NONE        DFLTRN          = NONE

EIRGRSP         = OFF         EIRRSPTYPE      = TYPE1
EIRIMSICHK      = OFF

GFLEXMAPLAYERRTG = OFF

```

IAR NP Service Portability

Service Portability support for the IAR Number Portability (IAR NP) feature allows the CDPNNP Service Action to use RTDB GRN Entity digits for own-network GSM or IS41 subscribers to populate the Numbering Plan Processor (NPP) RN Formatting Action value.

Service Portability functions are applied by the CDPNNP Service Action. The RN Formatting Action value is populated only when NPTYPE Evaluation success criteria are met when Service Portability processing is applied.

Commands

The `chg/rtrv-tatropts` commands are enhanced to provision and display the Service Portability functionality. See the [Commands](#) section for the IAR feature for an example of the `rtrv-tatropts` command output.

INP Service Portability

Service Portability support for the INP feature determines whether Service Portability applies to InitialDP messages for own-network subscribers. When Service Portability is applicable, GRN digits are used for RN digits in the response message.

The INPMR service allows modification of SCCP CdPA digits for outbound MSUs based on EPAP entity "digit action" (DA). The Entity ID digits used in formatting the SCCP CdPA digits for own-network subscriber (SP, or RN/PT=0 with either IGM or S-Port on) are determined by RTDB lookup results and feature configuration options. The digits can be GRN digits (from Service Portability support), Default Routing Number, or Entity digits.

Commands

The `chg/rtrv-inopts` commands are enhanced to provision the Service Portability functionality. An output example for `rtrv-inopts` is shown in [Updates to the AINPQ and INP Features](#), which contains additional updates to these commands.

MO SMS Service Portability

Service Portability support for the MO-based SMS features determines whether Service Portability processing applies to SMDPP or MO-FSM messages for own-network subscribers. This support applies to the MO-based IS41 SMS NP and MO-based GSM SMS NP features. When Service Portability is applied, the GRN is used to prefix the Destination address in outgoing messages.

The CDPNNP NPP Service Action verifies that RTDB lookup using the conditioned digits is successful based on the GSM or IS41 MOSMSTYPE configuration option value. Service Portability processing can populate the NPP RN Formatting Action value with the GRN digits provisioned for the dialed number (DN), populate the SP Formatting Action value with RN/SP entity digits, and populate the SRFIMSI Formatting Action value with SRFIMSI digits from the RN/SP entity. The populated values depend on RTDB lookup and configuration option values.

Default Routing Number

A Default Routing Number (Default RN) for the MO-based IS41 SMS NP and MO-based GSM SMS NP features is introduced. This number can be used if the HLR address is not applicable, and a global routing number is required instead of the SP entity digits for all own-network subscribers.

This option applies to Number Portability and can be used whether the S-Port feature is on or off. The CDPNNP NPP Service Action can use the provisioned Default RN digits to populate the RN Formatting Action value for own-network subscribers. Other Formatting Action values can be populated depending on the Default RN use and configuration option values.

SPFILL

An SPFILL option for the MO-based IS41 SMS NP and MO-based GSM SMS NP features is also introduced. This option applies to MO SMS NP functionality and can be used whether the S-Port

feature is on or off. The option applies to the handling of own network subscribers and controls whether NPP populates both SP and RN Formatting Action Values.

Commands

- `chg/rtrv-gsmsmsopts`—Enhanced to provision and display Service Portability functionality, the Default RN, and whether the NPP can populate the SP and RN entities for own-network subscribers at the same time.

`rtrv-gsmsmsopts`

```
tekelecstp 09-10-06 10:23:52 EST EAGLE 41.1.0
GSM SMS OPTIONS
-----
BPARTYGTTSN = NONE           MOSMSGTTDIG = SCCPCDPA
MOSMSTYPE   = SPRN          MOSMSNAI    = INTL
MOSMSSA     = NO            MOSMSFWD    = NO
MOSMSACLEN  = 0             MOSMSGTA    = NONE
MOSMSTCAPSEG = OFF         MOSMSDIGMAT = EXACT
SPORTTYPE   = NONE         SPFILL     = OFF
DEFRN       = NONE

MTSMSIMSI   = MCCRNDN      MTSMSNNI   = RN
MTSMSYTYPE  = RN           MTSMSACKN  = ACK
MTSMSDLTR   = NO           MTSMSDLTRV = NONE
MTSMSNAKERR = 1            MTSMSCHKSRC = NO
MTMMSYTYPE  = RN           MTMMSGTA   = NONE
MTMMSACKN   = ACK          MTMMSENTYLEN = NONE
MTMMSLEN    = NONE

IGSMSRELAY  = NO           DEFIS41SMSC = NONE
IS41SMSCGTTSN= NONE

;
```

- `chg/rtrv-is41smsopts`—Enhanced to provision and display Service Portability functionality, the Default RN, and whether the NPP can populate the SP and RN entities for own-network subscribers at the same time.

`rtrv-is41smsopts`

```
tekelecstp 09-06-20 11:49:00 EST EAGLE 41.1.0
IS41 SMS OPTIONS
-----
BPARTYGTTSN = NONE           MODAPARAM   = DA
MOIGMPFX    = IS412GSM      MOSMSACLEN  = 0
MOSMSDIGMAT = EXACT         MOSMSNAI    = NAT
MOSMSGTTDIG = SCCPCDPA     MOSMSTYPE   = ALL
SPORTTYPE   = GSM           SPFILL     = ON
DEFRN       = abcdef123456789

MTSMSACKN   = ACK           MTSMSCHKSRC = NO
MTSMSDNFMT  = RN           MTSMSDLTR   = NO
MTSMSDLTRV  = NONE         MTSMSDIGTYPE = 6
MTSMSNAKERR = 5            MTSMSPARM   = DIGIT
MTSMSESN    = NO           MTSMSSSN    = 6
MTSMSTYPE   = RN
```

Prepaid IDP Query Relay (IDP Relay) Service Portability

Service Portability support for the IDP Relay feature allows the CDPNNP Service Action to recognize own network IS41 and GSM subscribers. When Service Portability is applicable, the GRN digits can be used during execution of the Formatting Actions for the NPP rule.

SPFILL and RNSPFILL

The SPFILL and RNSPFILL configuration options are introduced for the IDP Relay feature.

The SPFILL option controls the behavior of the CDPNNP and CGPNNP Numbering Plan Processor (NPP) Service Action Handlers in the use of RTDB SP digits. The option indicates whether SP digits are used if Default RN or GRN is used for local subscribers. This option allows use of these Service Action Handlers in NPP rules containing a Formatting Action set that includes both RN and SP.

The RNSPFILL option controls the behavior of the CDPNNP and CGPNNP Service Action Handlers in the use of RTDB RN or SP digits. The option indicates whether SP digits are set to the value of the RN entity digits or the RN digits are set to the value of the SP entity digits, according to the NPTYPE and Default RN option values.

Commands

The `chg/rtrv-ttropts` commands are enhanced to provision and display Service Portability functionality and the processing options for the RN and SP entities.

`rtrv-ttropts`

```
tekelecstp 09-06-09 13:34:22 EST EAGLE 41.1.0

TTR OPTIONS
-----
CDPN DETAILS                CGPN DETAILS
NPTYPE  rnsp                CGNPTYPE  rnsp
SNAI    incoming            CGSNAI    incoming

CGPAACCK      NONINTL
DLMA          1234567890123456
DLMB          1234567890abcdef
DLMC          1234567890abcdef
DFLTRN        1234567890abcde
SPORTTYPE     all
SPFILL        on
RNSPFILL      off
;
```

TIF NP Service Portability

Service Portability support for TIF NP applies to TIF Number Portability (NP) Relay and TIF NP Release. This support determines whether the GRN from the RTDB lookup is used by the NPRELAY and the NPRLS Service Actions, respectively.

Note: The NPRELAY and NPRLS Service Actions are no longer mutually exclusive. They can be provisioned in the same Service Action set.

The TIFOPTS NPTYPE configuration parameter is expanded to two TIFOPTS parameters, NPTYPEPERLY and NPTYPEPERLS. The NPTYPEPERLY option determines the network entity type behavior for the NPRELAY Service Action and the NPTYPEPERLS option determines the network entity type behavior for the NPRLS and NPNRLS Service Action. This expansion allows configuration of the release and relay Service Actions for non-ported subscribers and ported subscribers independently.

SPFILL

An SPFILL option is introduced for the TIF NP feature. This option indicates whether SP digits are used if the Default Routing Number (Default RN) or the Generic Routing Number (GRN) is used for local subscribers. If the SPFILL option is on, then the RTDB network SP entity digits are populated. This option can be provisioned whether Service Portability is supported or not.

Commands

The `chg/rtrv-tifopts` commands are enhanced to provision and display Service Portability functionality and the entity types that are used to indicate that a successful NP lookup occurred for the NPRLS, NPNRLS, and NPRELAY Service Actions.

rtrv-tifopts

```
tekelecstp 09-06-10 12:32:21 EST EAGLE 41.1.0
Command entered at terminal #4.

TIF OPTIONS
-----
IAMCGPN      = dn
NPFLAG       = none
RCAUSENP     = 0
RCAUSEPFX   = 0
NPTYPEPRLS  = sprn
NPTYPEPRLY  = sprn
NPTYPEPCGPN = sprn
ACLEN        = 0
SPLITIAM     = none
CONDCGPN     = none
CRPREL       = 31
RNRQD        = yes
DFLTRN       = none
DLMA         = none
DLMB         = none
DLMC         = none
SNSCGPNDFLT = none
MATCHSEQ     = dn
SPORTRLS     = all
SPORTRELAY   = gsm
SPFILL       = on
RLCOPC       = off
NSADDLDATA   = yes
NSPUBLIC     = 5
;
```

EAGLE 5 SCCP Capacity Increase

The E5-SM4G Throughput Capacity feature is enhanced to support a 6800 TPS transaction rate per E5-SM4G card.

As part of this enhancement, the E5-SM4G Throughput Capacity feature is now a quantity feature. Part Number 893-0191-01 continues to support a maximum capacity of 5000 TPS per E5-SM4G card. Part Number 893-0191-02 supports 6800 TPS per E5-SM4G card.

Table 1: TPS Capacities shows the TPS capacities that are supported.

Table 1: TPS Capacities

Part Number	Maximum TPS Capacity per E5-SM4G Card	Maximum System Capacity
893-0191-01	3125	75,000 TPS with one or more EPAP-related features enabled and 24+1 cards

Part Number	Maximum TPS Capacity per E5-SM4G Card	Maximum System Capacity
	5000	150,000 TPS with no EPAP-related or ELAP-related feature traffic and 31+1 cards 120,000 TPS with G-Flex and the ANSIGFLEX STP option enabled and 24+1 cards 40,000 TPS with ELAP and 8+1 cards
893-0191-02	6800	210,800 TPS with no EPAP-related or ELAP-related feature traffic and 31+1 cards 163,200 TPS with one or more EPAP-related features enabled and 24+1 cards 54,400 TPS with ELAP and 8+1 cards

Feature Control Requirements

The E5-SM4G Throughput Capacity feature requires a FAK for the desired quantity Part Number:

- 893-0191-01—5000 TPS Capacity
- 893-0191-02—6800 TPS Capacity

If the 6800 TPS Capacity quantity is enabled, then the 5000 TPS Capacity quantity cannot be enabled.

Hardware Requirements

E5-SM4G cards must be installed in the system before either E5-SM4G Throughput Capacity quantity can be used.

Commands

- `enable/chg/rtrv-ctrl-feat`—Enhanced to support the 6800 quantity.
- `rept-stat-sccp`—Enhanced to support 6800 TPS.

Limitations

No limitations are associated with this feature.

GWS Stop Action for MTP Routed Messages

The GWS Stop Action for MTP Routed Messages feature provides a new **sccp** Gateway Screening (GWS) stop action. This stop action allows IS41-based features to process MTP-routed traffic. GWS rules are used to filter MTP-routed SCCP messages on a per linkset basis. UDT, UDTS, XUDT, and XUDTS messages are then forwarded to Service Module cards for processing.

The GWS Stop Action for MTP Routed Messages feature includes a new MTP Routed GWS Stop Action feature (Part Number 893-0356-01), which must be enabled before the **sccp** stop action can be provisioned. The feature must be turned on before message processing can occur.

As part of the GWS Stop Action for MTP Routed Message feature, the existing MTP Msgs for SCCP Apps (MTPR) feature (Part Number 893-0174-01) is enhanced to become an ON/OFF feature. The remaining functionality of the MTPR feature is not changed.

The MTPR feature takes precedence over the MTP Routed GWS Stop Action feature. If the MTPR feature is turned on, then all SCCP messages are forwarded to Service Module cards without the **sccp** GWS stop action being executed, even if the MTP Routed GWS Stop Action feature is turned on.

After provisioning, the **sccp** stop action can be used by the following features:

- A-Port
- G-Flex
- Info Analyzed Relay ASD
- Info Analyzed Relay Base
- Info Analyzed Relay GRN
- Info Analyzed Relay NP
- IS41 GSM Migration
- ITUN-ANSI SMS Conversion
- MNP Circular Route Prevention
- MO SMS ASD
- MO SMS B-Party Routing
- MO SMS GRN
- MO-based IS41 SMS NP
- MO SMS IS41-to-GSM Migration
- MTP MAP Screening
- MT-based IS41 SMS NP

Note: The A-Port, G-Flex, IS41 GSM Migration, MO SMS ASD, MO SMS B-Party Routing, MO SMS GRN, MO-based IS41 SMS NP, or MO SMS IS41-to-GSM Migration feature must be turned on before the MTPR feature can be enabled.

Feature Control Requirements

- FAK for Part Number 893-0356-01 to enable and turn on the MTP Routed GWS Stop Action feature
- The GTT feature bit must be turned on before the MTP Routed GWS Stop Action feature can be enabled.
- A temporary FAK cannot be used to enable the feature.
- The feature can be turned on and off.

- The **sccp** GWS Stop Action can be provisioned only after the feature is enabled.

Hardware Requirements

None.

Commands

- `chg/rtrv-gws-actset`—Enhanced to provision and display the status of the **sccp** GWS stop action.

`rtrv-gws-actset`

```
tekelecstp 09-06-11 16:02:09 EAGLE 41.1.0
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 sccp sccp
GWS action set table is (4 of 16) 25% full
;
```

- `enable/chg/rtrv-ctrl-feat`—Enhanced to enable, turn on, and display the status of the MTP Routed Gateway Screening Stop Action feature.

Note: This output example includes output for the MTPR and MTP Routed Gateway Screening Stop Action features.

`rtrv-ctrl-feat`

```
rlghncxa03w 09-07-16 16:40:40 EST EAGLE 41.1.0
The following features have been permanently enabled:
Feature Name Partnum Status Quantity
HC-MIM SLK Capacity 893012707 on 64
Command Class Management 893005801 on
LNP Short Message Service 893006601 on
Prepaid SMS Intercept Ph1 893006701 on
Intermed GTT Load Sharing 893006901 on
MNP Circ Route Prevent 893007001 on
XGTT Table Expansion 893006101 on 400000
XMAP Table Expansion 893007710 on 3000
Large System # Links 893005910 on 2000
Routesets 893006403 on 8000
EAGLE5 Product 893007101 on
EAGLE Product 893007201 off
IP7 Product 893007301 off
Network Security Enhance 893009101 off
Telnet 893005701 on
Port Chk for MO SMS 893009301 on
6-Way LS on Routesets 893019801 on
IS41 GSM Migration 893017301 off
MTP Msgs for SCC Apps 893017401 off
MTPRTD GWS Stop Action 893035601 on
;
```

Limitations

No limitations are associated with this feature.

IDP A-Party Blacklist

The IDP A-Party Blacklist feature enhances the Prepaid IDP Query Relay feature to provide a generic framework to support subscriber blacklisting capability that works with either a query-based or relay-based method. The feature supports the blacklist check on the Calling Party (A-Party or CgPN) number in the IDP CAMEL or INAP message.

The EAGLE receives an IDP query message destined to the EAGLE Point Code or a prepaid IDP message sent to the EAGLE Point Code for translation to prepaid SCP. MSCs are configured with a trigger point to send an IDP message for just post-paid or prepaid subscribers or for all subscribers in the network, depending on the use case for a particular operator.

The EAGLE receives the IDP message and performs the necessary discrimination and pre-processing using the current prepaid IDP Relay functions (SCCP CdPA check, CgPA check and Common Screening List SK BCSM filter). The EAGLE decodes the Calling Party Number (from the CgPN parameter) from the message. If the subscriber number is blacklisted, the number is entered with a blacklist flag and optional routing number information. If a match is found, EAGLE returns a Connect message with Routing Number (if provisioned). This Routing Number could be a service center number that receives the re-routed call and provides the necessary assistance. If the subscriber is not blacklisted, the IDP message continues normal processing (if it is prepaid IDP message), or a CONTINUE response is generated (if the blacklist query is received).

Feature Control Requirements

- FAK for Part Number 893-0332-01
- The IDP Relay feature (Part Number 893-0160-01) must be turned on before the IDP A-Party Blacklist feature can be enabled.
- The IDP A-Party Blacklist feature cannot be enabled if the Service Portability feature (Part Number 893-0343-01) is enabled.
- A temporary FAK cannot be used to enable the feature.
- The feature cannot be turned off after it is turned on.

Hardware Requirements

None.

Commands

- `chg/rtrv-ttropts`—Enhanced to support DRA formatting options.
- `enable/chg/rtrv-ctrl-feat`—Enhanced to enable, turn on and display the status of the IDP A-Party Blacklist feature.

```
rtrv-ctrl-feat
```

```
rlghncxa03w 09-06-09 16:40:40 EST EAGLE 41.1.0
```

```
The following features have been permanently enabled:
Feature Name          Partnum   Status   Quantity
HC-MIM SLK Capacity   893012707 on        64
Command Class Management 893005801 on        ----
LNP Short Message Service 893006601 on        ----
Prepaid SMS Intercept Ph1 893006701 on        ----
```

Intermed GTT Load Sharing	893006901	on	----
MNP Circ Route Prevent	893007001	on	----
XGTT Table Expansion	893006101	on	400000
XMAP Table Expansion	893007710	on	3000
Large System # Links	893005910	on	2000
Routesets	893006403	on	8000
EAGLE5 Product	893007101	on	----
EAGLE Product	893007201	off	----
IP7 Product	893007301	off	----
Network Security Enhance	893009101	off	----
Telnet	893005701	on	----
Port Chk for MO SMS	893009301	on	----
Spare Point Code Support	893013601	on	----
GSM MAP SRI Redirect	893014001	on	----
ISUP NP with EPAP	893013801	on	----
IDP Screening for Prepaid	893015501	on	----
Prepaid IDP Query Relay	893016001	on	----
G-Flex	893021901	on	----
VFLEX	893016701	on	----
ST-HSL-A SLK Capacity	893027304	on	24
IDPR ASD	893025701	on	----
IDPR GRN	893025601	on	----
IDP A-Party Blacklist	893033201	on	----
IDP A-Party Routing	893033301	on	----
IDP Service Key Routing	893033601	on	----
VGTT with 16 GTT lengths	893024801	on	----
6-Way LS on Routesets	893019801	on	----

- `ent/chg/rtrv-npp-as`—Enhanced to change the `cgpnprqd` Service Action name to `cgpnsvcrqd` (CgPN service is required) and add the `blkstrly` and `blkstqry` Service Actions.
- `ent/chg/rtrv-npp-srs`—Enhanced to support the `blkstrly` and `blkstqry` Service Actions.
- `ent/chg/dlt/rtrv-srvsel`—Enhanced to support `gti/gtia` parameters in addition to `gtii/gtin` parameters when the service is IDPR.
- `rept-ftp-meas`—Enhanced to support measurement pegs for the IDP A-Party Blacklist feature.
- `rept-meas`—Enhanced to support measurement pegs for the IDP A-Party Blacklist feature.
- `rept-stat-sccp`—Enhanced to count the TTR service pegs that are updated for IDP A-Party Blacklist. These pegs are counted under the `idpr` service. For examples of `rept-stat-sccp` output, see the [Commands](#) section for the Info Analyzed Relay feature.
- `rtrv-data-rtdb`—Enhanced to display A-Party Blacklist flags for a given DN.

Example 1 displays output when data is retrieved for a DN that is located in a non-ranged entry and is listed as an A-Party Blacklisted private number.

```
rtrv-data-rtdb:dn=123456
```

```
tekelecstp 09-06-18 07:56:48 EST EAGLE5 41.1.0

Card Loc      : 1101   Status:Coherent
DN            :      Portability Type (255)
123456       :      No portability type          Category
                                         Private
                                         A-Pty Blk
```

Example 2 displays output when data is retrieved for a DN that is located in a ranged entry and is listed as an A-Party Blacklisted public number.

```
rtrv-data-rtdb:dn=123456
```

```
tekelecstp 09-06-18 07:56:48 EST EAGLE5 41.1.0

Card Loc      : 1101   Status:Coherent
BEG DNBLK    :      END DNBLK
112233       :      4455667   Portability Type (255)
                                         Category
                                         Public
                                         A-Pty Blk
```

- `rtrv-npp-serv`—Enhanced to support the `blkstqry` and `blkstrly` Service Actions.

Measurements

New and enhanced registers are added to the existing STP SYSTOT report for the IDP A-Party Blacklist feature. These measurements are supported on the OAM and on the Measurements Control Platform.

New measurement pegs:

- IDPBKLCONN—Total number of IDP messages received that matched the blacklist criteria and for which a CONNECT response was generated.
- IDPBKLCONT—Total number of IDP messages received that did not match the blacklist criteria and resulted in a CONTINUE response.

Enhanced measurement pegs:

- IDPRMSFAIL—Total number of MSUs selected for IDPR service which fell through to GTT due to no match for IDP A-Party Blacklist query-response criteria
- IDPRMSSUCC—Number of MSUs selected for IDPR service for which the requested IDPR feature set functionalities were executed successfully

Limitations

No limitations are associated with this feature.

IDP A-Party Routing

The IDP A-Party Routing feature allows routing for IDP or IDPSMS messages to be performed using the A-Party Calling Party Number (CgPN). This feature provides a routing alternative to the existing SCCP GTA routing. A-Party routing is performed using a new CGPN Service Action and invoking new algorithms during post-NPP processing.

If successful IDP A-Party routing occurs, then an IDP or IDPSMS message is routed to an available Prepaid Server from a list of provisioned servers in the MRNSET or MAPSET load share table. If routing failure occurs, then a UDTs is sent to the originator or the message is discarded.

If all of the required data for IDP A-Party routing is not provisioned, then routing falls through to GTT routing.

Interaction with IDP Service Key Routing feature

If the IDP Service Key Routing (IDP SK Routing) or IDP A-Party Routing feature is turned on, then the system behaves as if the routing provided by that feature was the only routing option.

If both features are turned on, and the A-Party Routing Service Action is provisioned, then both features are considered for processing. The IDP A-Party Routing option is checked first. If IDP A-Party Routing is not attempted, and the IDP SK Routing option is provisioned, then IDP SK Routing is considered.

If IDP A-Party Routing is not attempted, and the IDP SK Routing option is not provisioned, then GTT routing is performed.

Whether A-Party Routing or SK Routing is attempted, once a message attempts to route, the message does not attempt any other routing method, including SCCP GTA/GTT routing. If routing fails, then the attempt is considered an IDPR routing failure, a UDTs is sent, and the message is discarded.

Note: Post-processing network conversion for IDP A-Party Routing and IDP SK Routing can only be performed for ITU-I or ITU-N network types.

Feature Control Requirements

- FAK for Part Number 893-0333-01
- The IDP Relay feature (Part Number 893-0160-01) must be turned on before the IDP A-Party Routing feature can be enabled.
- A temporary FAK cannot be used to enable the feature.
- The feature cannot be turned on and off.

Note: The IDP A-Party Routing and the IDP SK Routing features are not dependent or exclusive with each other. The features can be enabled, turned on, and used independently or together.

Hardware Requirements

None.

Commands

- `chg-ppsopts`—Enhanced to allow the command to be entered if the IDP A-Party Routing feature is turned on.
- `chg/rtrv-sccpopts`—Enhanced to support additional values for the CGPN Conditioning Action.
- `enable/chg/rtrv-ctrl-feat`—Enhanced to enable, turn on, and display the status of the IDP A-Party Routing feature. An output example for the `rtrv-ctrl-feat` command, showing the IDP A-Party Routing feature, is shown in the [Commands](#) section for the IDP A-Party Blacklist feature.
- `ent/chg/rtrv-csl`—Enhanced to support Portability Type data for the IDP A-Party Routing feature.

```
rtrv-csl:pn=893016001:list=skbcsm
tekelecstp 09-06-09 13:29:31 EST EAGLE 41.1.0

Prepaid IDP Query Relay
SK+BCSM List
DS                PT
-----
1234567890        prepaid1
1234567891        prepaid2
1234567892        prepaid3
1234567893        prepaid4
1234567894        prepaid5
1234567895        prepaid6
1234567896        prepaid7

SK+BCSM List ( 7 of 150) 5%

;

Trm(#4) GSM Enter UI command or 'exit':
```

- `ent/chg-npp-as`—Enhanced to support the CGPN Conditioning Action and Service Actions.
- `ent/chg-npp-srs`—Enhanced to support the CGPN Service Action rules.
- `rept-ftp-meas`—Enhanced to support measurement registers for the IDP A-Party Routing feature.
- `rept-meas`—Enhanced to support measurement registers for the IDP A-Party Routing feature.

Measurements

New and enhanced registers are added to the existing STP SYSTOT report and are supported on the OAM and on the Measurements Control Platform.

New Measurement Registers:

- IDPAPTYRTD—Total number of IDP or IDPSMS messages selected for the IDP A-Party Routing service and successfully routed based on A-Party PPSOPTS routing data.
- IDPAPTYGTT—Total number of IDP or IDPSMS messages selected for the IDP A-Party Routing service that fall through to GTT (with or without attempting IDP SK routing first).

Enhanced Measurement Registers

- IDPRMSFAIL—Total number of MSUs selected for the IDPR service which fell through to GTT routing due to no-match on MSISDN or insufficient data for IDP A-Party Routing.
- IDPRMSERR—Enhanced to report the total number of MSUs that were selected for the IDPR service but could not be processed due to errors in IDP A-Party Routing.

Limitations

No limitations are associated with this feature.

IDP Service Key Routing

The IDP Service Key Routing (IDP SK Routing) feature allows routing to occur based on the Service Key and EventType BCSM parameters in the incoming IDP or IPDSMS message. IDP SK routing can occur independently or can be used as a fall-through option for the IDP A-Party Routing feature. See [IDP A-Party Routing](#) for a description of the interaction between the features.

If successful IDP SK routing occurs, then an IDP or IDPSMS message is routed to an available Prepaid Server from a list of provisioned servers in the MRNSET or MAPSET load share table. If routing failure occurs, then a UDTS is sent to the originator or the message is discarded.

If all of the required data for IDP SK routing is not provisioned, then routing falls through to GTT routing.

Feature Control Requirements

- FAK for Part Number 893-0336-01
- The IDP Relay feature (Part Number 893-0160-01) must be turned on before the IDP SK Routing feature can be enabled.
- The feature cannot be enabled with a temporary FAK.
- The feature cannot be turned off after it has been turned on.

Note: The IDP A-Party Routing and the IDP SK Routing features are not dependent or exclusive with each other. The features can be enabled, turned on, and used independently or together.

Hardware Requirements

None.

Commands

- `chg/rtrv-ttropts`—Enhanced to provision and display whether IDP SK Routing occurs if IDP A-Party Routing fails.

`rtrv-ttropts`

```
tekelecstp 09-06-05 13:34:22 EST EAGLE 41.1.0

TTR OPTIONS
-----
CDPN DETAILS                CGPN DETAILS
NPTYPE  rnsp                CGNPTYPE  rnsp
SNAI    incoming           CGSNAI    incoming

CGPAACCK      NONINTL
DLMA          1234567890123456
DLMB          1234567890abcdef
DLMC          1234567890abcdef
DFLTRN        1234567890abcde
CGPNSKRTG     no
DRAFRMT       grn
DRANAI        3
;
```

- `enable/chg/rtrv-ctrl-feat`—Enhanced to enable, turn on, and display the status of the IDP SK Routing feature. An output example for the `rtrv-ctrl-feat` command, showing the IDP SK Routing feature, is shown in the [Commands](#) for the IDP A-Party Blacklist feature.
- `rept-ftp-meas`—Enhanced to support measurement registers for the IDP SK Routing feature.
- `rept-meas`—Enhanced to support measurement registers for the IDP SK Routing feature.

Measurements

New and enhanced registers are added to the existing STP SYSTOT report and are supported on the OAM and on the Measurements Control Platform.

New Measurement Registers:

- `IDPSKGTT`—Total number of IDP or IDPSMS messages selected for IDP SK Routing (without having first gone to IDP A-Party Routing) and fell through to GTT
- `IDPPTYSKR`—Total number of IDP or IDPSMS messages, selected for A-Party Routing service, fell through to IDP SK Routing, and were successfully routed based on SK/BCSM PPSOPTS data.
- `IDPSKRTD`—Total number of IDP or IDPSMS messages selected for IDP SK Routing (without having first gone to IDP A-Party Routing) and successfully routed based on SK/BCSM PPSOPTS data.

Enhanced Measurement Registers:

- `IDPRMSFAIL`—Total number of MSUs selected for IDPR service which fell through to GTT routing due to no-match on MSISDN or insufficient data for IDP SK Routing.
- `IDPRMSERR`—Enhanced to report the total number of MSUs that were selected for IDPR service but could not be processed due to errors in IDP SK Routing.

Limitations

No limitations are associated with this feature.

Info Analyzed Relay

Info Analyzed Relay (IAR) consists of four features:

- IAR Base

The IAR Base feature intercepts and processes AnalyzedInformation messages that are sent from a Mobile Switching Center (MSC) to a Service Control Point (SCP) or Services Node (SN). This feature supports the message processing functionality used by the IAR Additional Subscriber Data, IAR Generic Routing Number, and IAR Number Portability features.

- IAR Additional Subscriber Data (IAR ASD)

The IAR ASD feature allows Additional Subscriber Data lookups to be performed on AnalyzedInformation messages.

- IAR Generic Routing Number (IAR GRN)

The IAR GRN feature allows Generic Routing Number lookups to be performed on AnalyzedInformation messages.

- IAR Number Portability (IAR NP)

The IAR NP feature allows the EAGLE 5 ISS to treat messages that relate to ported subscribers differently than non-ported subscribers. This feature provides support for IAR Service Portability.

These features allow the EAGLE 5 ISS to provision subscriber data used to screen and manipulate AnalyzedInformation messages. After IAR processing, other network entities do not have to distinguish one kind of subscriber from another, but only react to message data that is already screened and manipulated by the EAGLE 5 ISS.

Feature Control Requirements

- IAR Base feature
 - FAK for Part Number 893-0342-01
 - The GTT feature must be turned on before the IAR Base feature can be enabled.
 - The STPOPTS **defcc** option must have a value other than **none** before the IAR Base feature can be enabled.
 - If the STPOPTS **ansigflex** option is set to **yes**, then the IAR Base feature cannot be enabled.
 - A temporary FAK cannot be used to enable the IAR Base feature.
 - The IAR Base feature cannot exist on the same node as the LNP features.
 - The IAR Base feature does not require EPAP.
 - Common Screening List entries for the CCNC, TRIG, and GT lists can be provisioned when the IAR Base feature is enabled.
 - Options in the TATROPTS table and the TATR-MSG table can be provisioned when the IAR Base feature is enabled.

- The IAR Base feature must be enabled or the IDPR feature must be turned on before the **ttr** Service Selector can be provisioned.
- The IAR Base feature must be enabled before the **feat=iar** option can be provisioned for the **tst-msg** command.
- The IAR Base feature cannot be turned off after it has been turned on.
- IAR NP, IAR ASD, and IAR GRN features
 - A FAK for the appropriate Part Number (IAR NP: 893-0261-01, IAR ASD: 893-0350-01, IAR GRN: 893-0351-01)
 - The IAR Base feature must be enabled before the IAR NP, IAR ASD, or IAR GRN feature can be enabled.
 - The features can be turned on and off.
 - A temporary FAK cannot be used to enable any of the features.
 - The features require EPAP.

Commands

- **chg/rtrv-npp-serv**—Enhanced to support IAR services.
- **chg/rtrv-npp-srs**—Enhanced to support IAR services.
- **chg-stpopts**—Enhanced to not allow the **defcc=none** or **ansigflex=yes** parameter to be specified if the IAR Base feature is enabled.
- **chg/rtrv-tatr-msg**—Added to support Triggerless ANSI TCAP Relay messages.

```
rtrv-tatr-msg:msgn=1
```

```
tekelecstp 09-06-26 13:46:01 EST 41.1.0
MSG = 1 ACTIVE = NO
TRIGTYPE = h'25

CGPA_GT = 2
CGPA_GT_NAI = 4 CGPA = 0123456789abcde

CDPA_GT = 2
CDPA_GT_NAI = 4 CDPA = 0123456789abcde

CGPN_NAI = 1 CGPN = 01234567890abcdef
CDPN_NAI = 1 CDPN = 01234567890abcdef

;
```

- **chg/rtrv-tatropts**—Added to support Triggerless ANSI TCAP Relay options.

```
rtrv-tatropts
```

```
tekelecstp 09-06-26 15:15:20 EST EAGLE 41.1.0

TATR OPTIONS
-----
CDNPTYPE      = rnspl
CGNPTYPE      = rnspl
CGPACCK       = nonintl
SPORTTYPE     = none
DFLTRN        = none

;
```

- **enable/chg/rtrv-ctrl feat**—Enhanced to enable, turn on and display the status of the IAR features.

rtrv-ctrl-feat

```

rlghncxa03w 09-06-09 16:40:40 EST EAGLE 41.1.0

The following features have been permanently enabled:
Feature Name          Partnum  Status  Quantity
HC-MIM SLK Capacity  893012707 on      64
Command Class Management 893005801 on      ----
LNP Short Message Service 893006601 on      ----
Prepaid SMS Intercept Ph1 893006701 on      ----
Intermed GTT Load Sharing 893006901 on      ----
MNP Circ Route Prevent  893007001 on      ----
XGTT Table Expansion    893006101 on     400000
XMAP Table Expansion    893007710 on      3000
Large System # Links    893005910 on      2000
Routesets               893006403 on      8000
EAGLE5 Product          893007101 on      ----
EAGLE Product           893007201 off     ----
IP7 Product              893007301 off     ----
Network Security Enhance 893009101 off     ----
Telnet                  893005701 on      ----
LNP ELAP Configuration  893010901 on      ----
LNP ported TNs          893011036 on     384000000
LNP ported LRNs         893010501 on      200000
LNP ported NPANXXs      893009402 on     350000
15 Minute Measurements  893012101 off     ----
EIR                     893012301 on      ----
EAGLE OA&M IP Security  893400001 off     ----
SCCP Conversion         893012001 on      ----
INP                     893017901 on      ----
Info Analyzed Relay Base 893034201 off     ----
Info Analyzed Relay NP   893026101 off     ----
Info Analyzed Relay ASD  893035001 off     ----
Info Analyzed Relay GRN  893035101 off     ----
;

```

- ent/chg/dlt-csl—Enhanced to allow the IAR Base feature to support the **ccnc** and **gt** CSLs. A new **trig** CSL is added for the IAR Base feature.

Note: The **trig** CSL is provisioned in hexadecimal.

- ent/chg/rtrv-srvsel—Enhanced to support the Triggerless TCAP Relay service.
- rept-stat-sccp—Enhanced to display IAR reports.

rept-stat-sccp

```

tekelecstp 09-07-08 13:34:22 EST EAGLE5 41.1.0
SCCP SUBSYSTEM REPORT IS-NR          Active  -----
  SCCP ALARM STATUS = No Alarms
GFLEX SERVICE REPORT IS-NR          Active  -----
  GFLEX ALARM STATUS = No Alarms
GPORT SERVICE REPORT IS-NR          Active  -----
  GPORT ALARM STATUS = No Alarms

SCCP Cards Configured=25          Cards IS-NR=25
System Daily Peak SCCP Load        15639  TPS 06-09-18 06:14:24
System Overall Peak SCCP Load       21062  TPS 06-09-15 14:24:38
System Total SCCP Capacity           21250  TPS (21250 max SCCP Capacity)
System SCCP Capacity Calc. Method (N)
System TPS Alarm Threshold           17000  TPS ( 80% System  N SCCP Capacity)

CARD  VERSION      PST          SST          AST          MSU  CPU
                                     USAGE  USAGE
-----
1217  126-030-000  IS-NR      Active      -----    100%  45%
1317  126-030-000  IS-NR      Active      -----    100%  51%
2217  126-030-000  IS-NR      Active      -----    100%  42%
3201  126-030-000  IS-NR      Active      -----     54%  25%
3203  126-030-000  IS-NR      Active      -----     55%  25%
3205  126-030-000  IS-NR      Active      -----     57%  27%
3207  126-030-000  IS-NR      Active      -----     69%  29%

```

```

3211 126-030-000 IS-NR Active ----- 85% 35%
3213 126-030-000 IS-NR Active ----- 94% 37%
3215 126-030-000 IS-NR Active ----- 86% 35%
3217 126-030-000 IS-NR Active ----- 74% 31%
4217 126-030-000 IS-NR Active ----- 64% 28%
4317 126-030-000 IS-NR Active ----- 100% 41%
5117 126-030-000 IS-NR Active ----- 100% 40%
5317 126-030-000 IS-NR Active ----- 56% 25%
6101 P 126-030-000 IS-NR Active ----- 57% 32%
6103 126-030-000 IS-NR Active ----- 63% 27%
6105 126-030-000 IS-NR Active ----- 69% 37%
6107 126-030-000 IS-NR Active ----- 66% 29%
6111 126-030-000 IS-NR Active ----- 59% 27%
6113 126-030-000 IS-NR Active ----- 55% 34%
6115 126-030-000 IS-NR Active ----- 55% 26%
6117 126-030-000 IS-NR Active ----- 54% 26%
1105 126-030-000 IS-NR Active ----- 55% 26%
1107 126-030-000 IS-NR Active ----- 55% 26%
-----
SCCP Service Average MSU Capacity = 71% Average CPU Capacity = 32%

AVERAGE CPU USAGE PER SERVICE:
GTT = 1% GFLEX = 4% GPORT = 0%
IDPR = 2%
IAR = 2%

TOTAL SERVICE STATISTICS:

SERVICE SUCCESS ERRORS FAIL REROUTE\ FORWARD TOTAL
          3510    15    0%    WARNINGS TO GTT
GTT:
GFLEX:    100043    0    0%    0 0 100043
GPORT:    312203    0    0%    15 1879 314097
IDPR:     23157    0    0%    1 23157 23157
IAR:      7680    0    0%    1 7680 7680

Command Completed.
;

```

- `tst-msg`—Enhanced to support IAR test messages.

Measurements

New registers are added to support the IAR Base feature. These registers are supported on the OAM and Measurements Control Platform.

- `IARTOTAL`—Total number of messages received by the IAR Base feature from the TTR Service Selection. This register is the total number of messages to which IAR pre-processing is applied.
- `IARFAILED`—Number of messages counted by the `IARTOTAL` register that were dismissed due to a problems reported by the UIMs specific to the IAR Base feature
- `IARPASSD`—Number of messages counted by the `IARTOTAL` register that were modified by the IAR Base feature. The IAR Base must have changed the `CdPN` parameter, `CgPN` parameter, or both.
- `IARNOTAP`—Number of messages counted by the `IARTOTAL` register that were not counted by the `IARPASSD` or `IARFAILED` registers. These messages were dismissed because the modification was not applicable.

Limitations

No limitations are associated with this feature.

INP Circular Route Prevention

The INP Circular Route Prevention feature detects and prevents circular routes for INPQ and INP MR Services. INPQ services are associated with received queries (InitialDP for INP-based queries or NPREQ for AINP-based queries) and the results are generated based on the RTDB lookup. INP MR services are associated with received INP queries that are related to the destination.

Feature Control Requirements

- A FAK for Part Number 893-0285-01
- A temporary FAK cannot be used to enable the feature.
- The INP feature (Part Number 893-0179-01) must be turned on before the INP CRP feature can be enabled.
- The INP CRP feature can be turned on and off.

Hardware Requirements

None.

Commands

- `chg/rtrv-inpopts`—Enhanced to provision and display the reason for releasing the call when an INP Circular Route is detected. An output example for `rtrv-inpopts` is shown in [Updates to the AINPQ and INP Features](#) which contains additional updates to these commands.
- `enable/chg/rtrv-ctrl feat`—Enhanced to enable, turn on, and display the status of the INP CRP feature.

`rtrv-ctrl-feat`

```
rlghncxa03w 09-06-09 16:40:40 EST EAGLE 41.1.0

The following features have been permanently enabled:
Feature Name          Partnum   Status   Quantity
HC-MIM SLK Capacity  893012707 on        64
Command Class Management 893005801 on        ----
LNP Short Message Service 893006601 on        ----
Prepaid SMS Intercept Ph1 893006701 on        ----
Intermed GTT Load Sharing 893006901 on        ----
MNP Circ Route Prevent  893007001 on        ----
XGTT Table Expansion    893006101 on       400000
XMAP Table Expansion    893007710 on        3000
Large System # Links    893005910 on        2000
Routesets               893006403 on        8000
EAGLE5 Product          893007101 on        ----
EAGLE Product           893007201 off       ----
IP7 Product             893007301 off       ----
INP                     893017901 on        ----
Network Security Enhance 893009101 off       ----
Telnet                  893005701 on        ----
Port Chk for MO SMS     893009301 on        ----
SCCP Loop Detection     893016501 off       ----
LNP ELAP Configuration  893010901 on        ----
LNP ported TNs         893011036 on      384000000
LNP ported LRNs        893010501 on       200000
LNP ported NPANXXs     893009402 on       350000
15 Minute Measurements  893012101 off       ----
EIR                     893012301 on        ----
```

```

EAGLE OA&M IP Security      893400001  off      ----
SCCP Conversion             893012001  on       ----
SE-HSL SLK Capacity        893013005  on       32
INP Circ Route Prevention  893028501  off      ----

```

```
;
```

- `rept-ftp-meas`—Enhanced to support INP CRP measurement registers.
- `rept-meas`—Enhanced to support INP CRP measurement registers.
- `rept-stat-sccp`—Enhanced to support INP CRP services.

Example 1 displays the output when the status for all services is requested.

```
rept-stat-sccp
```

```

tekelecstp 09-06-20 03:20:22 EST  EAGLE5 41.1.0
SCCP SUBSYSTEM REPORT IS-NR      Active      ----
  SCCP ALARM STATUS = No Alarms
INPQ SUBSYSTEM REPORT IS-NR      Active      ----
  INPQ:  SSN STATUS = Allowed      MATE SSN STATUS = -----
  INP ALARM STATUS = No Alarms

SCCP Cards Configured= 1          Cards IS-NR= 1
System Daily Peak SCCP Load      2          TPS 02-01-26 00:09:39
System Overall Peak SCCP Load     18         TPS 02-01-25 22:12:20
System Total SCCP Capacity        850        TPS (850   max SCCP Capacity)
System SCCP Capacity Calc. Method (N)
System TPS Alarm Threshold        680        TPS ( 80% System  N SCCP Capacity)

CARD  VERSION      PST          SST          AST          MSU  CPU
      USAGE        USAGE
-----
1101 P 075-024-000  IS-NR      Active      -----      1%   2%
-----
SCCP Service Average MSU Capacity =  1%  Average CPU Capacity =  2%

AVERAGE CPU USAGE PER SERVICE:
GTT   =  1%
INPMR =  1%  INPQ  =  1%

TOTAL SERVICE STATISTICS:

SERVICE  SUCCESS  ERRORS  FAIL  REROUTE\  FORWARD  TOTAL
          0      0      0%   WARNINGS  TO GTT
GTT:      0      2    100%   -         -         2
INPMR:    0      0     0%     2         2         2
INPQ:     7      0     0%     7         -         7

Command Completed.

```

```
;
```

- `rtrv-measopts`—Enhanced to support INP CRP measurement registers.
- `rtrv-mtc-measopts`—Enhanced to support INP CRP measurement registers.

Measurements

New registers are added to the existing per-system total and per-SSP total reports. Existing registers are also updated to support INP CRP. The measurements are supported on the Measurements Control Platform.

New Registers

- `INPMRCRD`—Total number of messages that meet the condition for circular route detection by INPMR. Used with per-SSP total.
- `INPQSCRD`—Total Number of circular routes detected by INPQS. Used with per-SSP and SYS total.

- INPQSREL—Total Number of of INAP ReleaseCall responses successfully generated due to circular route detection by INPQS. Used with per-SSP total.

Existing Register

- INPSREP—Incremented for each call that results in successful generation of a ReleaseCall message resulting from INPQ circular route detection. Used with SYS total.
- INPMRGTT—Incremented for each call that causes the message to fall through to GTT resulting from INPMR circular route detection. Used with per-SSP total.

Limitations

No limitations are associated with this feature.

INP, G-port, and ATINP Enhancements for Support of ROP

The INP, G-Port, and ATINP features are enhanced to allow Small Geographic Areas (CNLs) to be grouped into Large Geographic Areas (ROPs). This grouping simplifies the routing and allows a call to be delivered as close to the interconnection destination as possible.

ROP information is stored in the generic routing number (GRN) field. Both CNL and ROP information can be provisioned for a single subscriber entry; however, only one of the CNL or ROP fields can be selected for the outgoing message.

The G-Port SRI Query for Prepaid, AINPQ, IS41 GSM Migration (IGM), and SRI Redirect features also support ROP.

Feature Control Requirements

There are no feature control requirements identified for this feature.

Hardware Requirements

None.

Commands

The `chg/rtrv-ainpopts`, `chg/rtrv-atinpopts`, `chg/rtrv-gsmopts`, and `chg/rtrv-inpopts` commands are enhanced to provision and display GRN based values.

Limitations

No limitations are associated with this feature.

IS41 GSM Migration Support for Relaying SRI_SM to Default SMSC

When an SRI_SM message is received for an own-network IS41 subscriber (NE=RN, PT=0), a configuration option specifies whether IGM responds with a Return Error message (existing function) or relays the SRI_SM message to the default IS41 Short Message Service Center (SMSC).

The IGM enhancement to relay an SRI_SM to a specified default SMSC is available if the IS41 GSM Migration feature (IGM) is on. The enhancement provides the following new GSMSMSOPTS configuration options:

- IGMSMSRELAY— Select the existing function to send an SRI_SM with "unknown subscriber", or the new function to relay an SRI_SM to the default SMSC.
- DEFIS41SMSC—Specify the default SMSC address.
- IS41SMSCGTTSN—Specify the GTTSET where the translation for the default SMSC address is configured

If IGMSMSRELAY is NO, then IGM sends a Return Error message with error reason "Unknown Subscriber".

If IGMSMSRELAY is YES, then IGM relays the SRI-SM message to the default IS41 SMSC by performing GTT translation (found in the GTTSET) on the default SMSC address digits.

Feature Control Requirements

The IS41 GSM Migration feature (Part Number 893-0173-01) must be turned on before the IGM Support for Relaying SRI_SM to Default SMSC functionality is available in the system.

Hardware Requirements

The GTT feature and all EPAP-related features where Service Portability can be performed require Service Module cards (DSM cards with at least 4G of memory, E5-SM4G cards, or a mixture of both).

Commands

The `chg/rtrv-gsmsmsopts` commands are enhanced to provision and display whether a message is relayed to the default SMSC, the default SMSC address, and the GTTSET for default SMSC address. An output example for the `rtrv-gsmsmsopts` command is shown in the [Commands](#) section for MO SMS Service Portability.

Limitations

No limitations are associated with this feature.

SMSREQ Handling for Migrated or Ported Subscribers

The A-Port, IGM, MNP CRP, and MT-based IS41 SMS NP features are enhanced to support MTP-routed SMSREQ messages. If the SMSREQ message cannot be processed by any of these features, then the SMSREQ is MTP routed.

Feature Control Requirements

There are no feature control requirements identified for this feature.

Hardware Requirements

None.

Commands

No command changes are associated with this feature.

Measurements

The following existing per STP and per OPC measurements for the A-Port, IGM, and MT-Based IS41 SMS NP features are used for SMSREQ Handling for Migrated or Ported Subscribers:

- APSMRQREP—Number of SMSREQ messages received that result in SMSREQ ACK or SMSREQ NACK responses
- APSMRQERR—Number of SMSREQ messages received that result in error
- APSMRQRCV—Number of SMSREQ messages received into the system leading SMSREQ-based service

These measurements are supported on both the User Interface and the Measurements Platform.

Limitations

No limitations are associated with this feature.

Support for 2800 Provisioned Links Per Node

The Support for 2800 Provisioned Links per Node feature extends the Large System # Links feature to allow up to 2800 SS7 links to be provisioned on an EAGLE 5 ISS node.

Current limits on the maximum number of cards and links for each application continue to be supported as shown in [Table 2: Links and Cards Limits per Application](#).

Table 2: Links and Cards Limits per Application

Application/GPL	Maximum Number of Cards	Maximum Number of Links/Card
IPSG	100 (E5-ENET)	32
IPLIM	100 (E5-ENET)	16
IPGW	125 (E5-ENET)	1
SS7 (ANSI/ITU)	250 (E5-E1T1)	32 (E1/T1)

Application/GPL	Maximum Number of Cards	Maximum Number of Links/Card
	125 (HC-MIM) 64 (HC-MIM)	64 (E1/T1) 2 (SE-HSL)
ATM	90 (E5-ATM)	2
VSCCP	32	N/A
GLS	8	N/A
STPLAN	32	N/A

Feature Control Requirements

- The Large System # Links feature (Part Number 893-0059-11) must be enabled
- If any card other than those provided in the [Hardware Requirements](#) section is present in the system, then the feature cannot be enabled.
- This Large System # Links feature is an enable-only feature. Once enabled, the default status of the feature is ON.
- The feature cannot be turned off after it is enabled.
- A temporary FAK cannot be used to enable the feature.

Hardware Requirements

- The following cards are supported with 2800 links on an EAGLE node:
 - HC-MIM
 - E5 E1/T1
 - E5-ATM
 - E5-SM4G
 - E5-ENET
 - E5-OAM
 - HIPR
 - SLAN (SSEDCM and E5-SLAN)
 - STC (SSEDCM and E5-STC)
 - MCPM
 - IPSM/E5-IPSM
 - TSM/E5-TSM (for GLS)

If any other card is installed after the feature is enabled, then the card is auto-inhibited.

- The active and standby OAM cards must be based on E5-OAM.

Commands

- `enable/rtrv-ctrl-feat`—Enhanced to support the 2800 links per node quantity. Enabling the feature also turns the feature on.
- `ent/rept-stat/rtrv-slk`—Enhanced to support 2800 links.

- `rept-stat-sys`—Enhanced to display link status information for up to 2800 links.
- `rtrv-tbl-capacity`—Enhanced to display the link table size for up to 2800 links.

Limitations

Certain card types and link types combinations prevents achievements of 2800 links capacity. Refer to [Table 2: Links and Cards Limits per Application](#) for the current limits on card and link types.

Other Changes

The following core enhancements are introduced in Release 43.0:

DDB Enhancements (Robustness) Phase 2

Phase 2 of the DDB Enhancements feature implements a background dynamic database (DDB) checksum task that re-calculates checksums for the entry and the table after any DDB variable is updated. As in Phase 1, a quiet time requirement must be met for an audit calculation to provide a result of 'consistent' or 'inconsistent'.

The quiet time requirement is mandatory. After that check is satisfied, an additional check is performed on a per-card basis to determine whether a card's DDB checksums can be used for overall DDB checksum calculations and the determination of the DDB state.

For Phase 2, the wild write audit (WWA) runs in every time slice within the audit task. The WWA checks for checksum discrepancy for each table and table entry and revises any failed checksums. The WWA is only performed on entries that are not under modification by a DDB update.

Each card stores the last 10 entries that were updated by the WWA on that card in chronologically reverse order. These entries can be queried by the user.

Note: DDB audits are performed only on MTP cards.

Commands

- `aud-data`—Enhanced to display WWA information for the card and to allow for 'aborted' status. This command cannot be entered while in upgrade mode.
- `dbg-ddb`—Enhanced to display checksum and WWA information and to reset DDB statistics on the cards. The output for the command is also updated to increase readability.

```
dbg-ddb:loc=1104:action=disp:tbl=ls:tidx=1
```

```
tekelecstp 09-10-15 12:37:37 EST EAGLE5 41.1.0
dbg-ddb:loc=1104:action=disp:tbl=ls:tidx=1
Command entered at terminal #4.
;
tekelecstp 09-10-15 12:37:37 EST EAGLE5 41.1.0
User Message sent to location 1104.
;
tekelecstp 09-10-15 12:37:37 EST EAGLE5 41.1.0
[SeqNo: 0] [1104] [Linkset:1] Chksum h'1624 at h'28e84a (138 bytes)
Assign:1 Avail:0 APC: 001-001-002 ITUNVar:0
;
```

- `rept-stat-ddb`—Enhanced to display the exact status of an active MTP card after an audit has occurred and to allow the report to be filtered for various data.

Example 1 displays the output when a full report is requested.

```
rept-stat-ddb:display=all
```

```
tekelecstp 09-07-21 21:07:54 GMT EAGLE 41.1.0
DDB AUDIT REPORT
SYSTEM STATUS           : INCONSISTENT
ACTIVE MTP CARDS       : 21
NON RESPONDING CARDS   : 7: 1207 1208 1211 1212 2108 2111 2112
RESPONDING CARDS       : 14
CARDS WITH NO DATA    : 2
CARDS WITH DATA       : 12
CARDS FAILING QUIET PRD : 0
CARDS WITH DDB UPD IN PRG : 3
CARDS CONSIDERED FOR CKSM : 9
INCONSISTENT CARDS     : 2: 1203 2103
CONSISTENT CARDS       : 7
AUDIT START TIME       : 21/07/2009 21:02:46
QUIET PERIOD           : 600 ms

RTE      LINK SET  LINK      CM CARD  CM CLSTR  MATED APPL MTP GLOBLs
LOC      STATUS   CAUSE      IDLE     DDB UPD   ADDN'L STATUS
H'000003e8 H'000003e8 H'000003e8 H'000003e8 H'000003e8 H'000003e8 H'000003e8
1201 CONSISTENT          700      1000
H'000003e8 H'000003e8 H'000003e8 H'000003e8 H'000003e8 H'000003e8 H'000003e8
1202 CONSISTENT          700      1000
H'000007d0 H'000007d0 H'000007d0 H'000007d0 H'000007d0 H'000007d0 H'000007d0
1203 INCONSISTENT      700      1000
-----
1204 NODATA          (DDB INIT)
H'00000bb8 H'00000bb8 H'00000bb8 H'00000bb8 H'00000bb8 H'00000bb8 H'00000bb8
1205 IN UPDATE 1    (TSRC,DDB)      700      1000      (IGNORED)
H'000003e8 H'000003e8 H'000003e8 H'000003e8 H'000003e8 H'000003e8 H'000003e8
1206 CONSISTENT          700      1000
-----
1207 NORESP
-----
1208 NORESP
-----
1211 NORESP
-----
1212 NORESP
-----
H'000003e8 H'000003e8 H'000003e8 H'000003e8 H'000003e8 H'000003e8 H'000003e8
1213 CONSISTENT          700      1000
H'000003e8 H'000003e8 H'000003e8 H'000003e8 H'000003e8 ----- H'000003e8
2101 CONSISTENT          700      1000
H'000003e8 H'000003e8 H'000003e8 H'000003e8 H'000003e8 ----- H'000003e8
2102 CONSISTENT          700      1000
H'000007d0 H'000007d0 H'000007d0 H'000007d0 H'000007d0 ----- H'000007d0
2103 INCONSISTENT      700      1000      (WWA UPD=2)
-----
2104 NODATA          (DDL XLOAD)
H'00000bb8 H'00000bb8 H'00000bb8 H'00000bb8 H'00000bb8 ----- H'00000bb8
2105 IN UPDATE 2    (DDB)      700      1000      (IGNORED)
H'00000bb8 H'00000bb8 H'00000bb8 H'00000bb8 H'00000bb8 ----- H'00000bb8
2106 IN UPDATE 2    (TSRC,DDB)      700      1000      (IGNORED)
H'000003e8 H'000003e8 H'000003e8 H'000003e8 H'000003e8 ----- H'000003e8
2107 CONSISTENT          700      1000
-----
2108 NORESP
-----
2111 NORESP
-----
2112 NORESP
-----

Command Completed.
;
```

Example 2 displays the output when a brief report is requested.

```
rept-stat-ddb
```

```
tekelecstp 09-07-21 21:07:54 GMT EAGLE 41.1.0
DDB AUDIT REPORT
```

```

SYSTEM STATUS          : OK
ACTIVE MTP CARDS      : 10
NON RESPONDING CARDS  : 0
RESPONDING CARDS      : 10
CARDS WITH NO DATA   : 0
CARDS WITH DATA      : 10
CARDS FAILING QUIET PRD : 0
CARDS WITH DDB UPD IN PRG : 0
CARDS CONSIDERED FOR CKSM : 10
INCONSISTENT CARDS    : 0
CONSISTENT CARDS      : 0
AUDIT START TIME      : 21/07/2009  21:02:46
QUIET PERIOD          : 20 ms

Command Completed.
;

```

Example 3 displays the output when a filtered report is requested.

```
rept-stat-ddb:filter=incn
```

```

tekelecstp 09-07-21 21:07:54 GMT  EAGLE 41.1.0
DDB AUDIT REPORT
SYSTEM STATUS          : INCONSISTENT
ACTIVE MTP CARDS      : 21
NON RESPONDING CARDS  : 7: 1207 1208 1211 1212 2108 2111 2112
RESPONDING CARDS      : 14
CARDS WITH NO DATA   : 2
CARDS WITH DATA      : 12
CARDS FAILING QUIET PRD : 0
CARDS WITH DDB UPD IN PRG : 3
CARDS CONSIDERED FOR CKSM : 9
INCONSISTENT CARDS    : 2: 1203 2103
CONSISTENT CARDS      : 7
AUDIT START TIME      : 21/07/2009  21:02:46
QUIET PERIOD          : 600 ms

RTE      LINK SET  LINK      CM CARD  CM CLSTR  MATED APPL MTP GLOBLs
LOC      STATUS   CAUSE      IDLE     DDB UPD   ADDN'L STATUS
H'000007d0 H'000007d0 H'000007d0 H'000007d0 H'000007d0 H'000007d0 H'000007d0
1203  INCONSISTENT          700          1000
H'000007d0 H'000007d0 H'000007d0 H'000007d0 H'000007d0 ----- H'000007d0
2103  INCONSISTENT          700          1000          (WWA UPD=2)

Command Completed.
;

```

Example 4 displays the output when a card list is specified.

```
rept-stat-ddb:list=nrsp
```

```

tekelecstp 09-07-21 21:07:54 GMT  EAGLE 41.1.0
DDB AUDIT REPORT CARD LIST [ NON RESPONDING CARDS ] (6)

1207, 1208, 1211, 1212, 2108, 2111

Command Completed.
;

```

Example 5 displays the output when a different card list is specified. This example demonstrates how the responses are distributed when consecutive reports of the list criteria occur.

```
rept-stat-ddb:list=duip
```

```

tekelecstp 09-07-21 21:07:54 GMT  EAGLE 41.1.0
DDB AUDIT REPORT CARD LIST [ DDB UPDATE IN PROGRESS ] (2)

DDB UPDATES IN PROGRESS (>= 6 TIMES) (0)

DDB UPDATES IN PROGRESS (< 6 TIMES) (2)
1205, 2105

Command Completed.
;

```

Displaying the GTTSET Count

The output of the `ent-gttset`, `chg-gttset`, `dlt-gttset`, and `rtrv-gttset` commands are updated to display the number of GTTSETs that are provisioned.

```
rtrv-gttset
```

```
tekelecstp 09-08-14 12:57:51 EST EAGLE 41.1.0
GTTSN      NETDOM      NDGT
lidb       ansi           10
t800       ansi           6
s_i000     itu            15
imsi       itu            15
abcd1234   itu            12
```

```
GTT-SET table is (5 of 2000) 1% full.
```

```
;
```

The output of the `rtrv-tbl-capacity` command is updated to display the GTTSET table.

```
rtrv-tbl-capacity
```

```
tekelecstp 09-08-05 23:28:15 EST EAGLE 41.1.0
```

```
DSTN      table is (      600 of      8000) 10% full
XLIST     table is (       0 of       500)  0% full
SPC       table is (       0 of        40)  0% full
LS        table is (     512 of     1024) 50% full
SLK       table is (    1501 of    1500) 75% full
IP-LNK    table is (       0 of     512)  0% full
IP-HOST   table is (       0 of    2048)  0% full
MAP       table is (    1500 of   36000)  5% full
MRN       table is (       0 of    3000)  0% full
SCCPSRV   table is (       0 of     384)  0% full
GTA       table is (       0 of 269999)  0% full
GTT-SET   table is (      10 of    2000)  1% full
SSNSELID  table is (       0 of 100000)  0% full
SCRSET    table is (      25 of     255) 10% full
RTEKEY    table is (       0 of    1000)  0% full
APPLSOCK  table is (       0 of    4000)  0% full
AS        table is (       0 of     250)  0% full
VFLXCD   table is (       1 of    4950)  1% full
VFLXRN   table is (       1 of   10000)  1% full
VFLXVID   table is (       1 of    1000)  1% full
NPP-AS    table is (       0 of    1024)  0% full
NPP-SRS   table is (       0 of   8192)  0% full
```

```
;
```

EAGLE LIMS should send real LINKSET names to IMF/ESP over EMP, instead of an internal index

The EAGLE Monitoring Protocol (EMP) will send Linkset names over LIM cards to the Integrated Message Feeder (IMF) on the Extended Services Platform (ESP) in the Service Request message.

IDPR Support for ACCgPN Conditioning Action

The IDP Relay feature is enhanced to support the ACCgPN Conditioning Action. This Conditioning Action indicates that the Area Code needs to be extracted from the Calling Party Number (CgPN).

As part of this enhancement, the `aclen` parameter is no longer supported by the `chg-tifopts` or `rtrv-tifopts` commands. This parameter is provisioned and displayed through the `chg-sccpopts` and `rtrv-sccpopts` commands for both the TIF and IDP Relay features.

Note: If the **aclen** parameter was previously set in the `chg-tifopts` command, then that value is copied to the SCCPOPTS table during upgrade and is used as the **aclen** value until it is changed using the `chg-sccpopts` command.

```
rtrv-sccpopts
```

```
tekelecstp 09-06-15 14:07:11 EST EAGLE 41.1.0

SCCP OPTIONS
-----
CLASS1SEQ                on
CCLEN                    1
ACLEN                    3
INTLUNKNNAI              no
TGTT0                    NONE
TGTT1                    NONE
TGTTUDTKKEY              MTP
TGTTXUDTKKEY             MTP
;
```

Number of Digits Parameters in MMS Feature

Configurable options to restrict the number of digits in the MT-Based GSM MMS SRI_SM ACK response message are provided in the `chg-gsmsmsopts` command.

The **mtmmsentyn** parameter specifies the maximum number of digits that will be used from the entity value of a returned RN, SP, or SRFIMSI entity for Multimedia Message Service (MMS) processing. The **mtmmslen** parameter specifies the maximum number of digits used in the returned IMSI and/or NNI fields for MMS processing.

An example of the output for the `rtrv-gsmsmsopts` command is shown in the [Commands](#) section for the MO SMS Service Portability feature.

OAM Data Audit Enhancement

The `aud-data` command is enhanced to support specific table audits and to perform periodic GPL audits on the static databases.

Obsolescence of the **l1mode** and **tset** Parameters

Due to the obsolescence of V.35 support on the EAGLE 5 ISS, the **l1mode** and **tset** parameters are no longer supported by the `ent-slk`, `rtrv-slk`, and `rtrv-ls` commands.

Example 1 shows updated output for the `rtrv-slk` command.

```
rtrv-slk
```

```
tekelecstp 09-07-10 13:54:32 EST EAGLE 41.1.0

LOC LINK LSN          SLC TYPE      L2T   BPS   ECM   PCR   PCR
SET          BPS   ECM   N1    N2
-----
1201 A   e3m1s1    0  LIMDS0    1   56000 BASIC ----
1201 B   e3m1s2    0  LIMDS0    1   56000 BASIC ----
1202 A   e3m1s1    1  LIMDS0    1   56000 BASIC ----
1202 B   e3m1s2    1  LIMDS0    1   56000 BASIC ----
1203 A   e3m1s1    2  LIMDS0    1   56000 BASIC ----
1203 B   e3m1s2    2  LIMDS0    1   56000 BASIC ----
1204 A   e3m1s1    3  LIMDS0    1   56000 BASIC ----
1204 B   e3m1s2    3  LIMDS0    1   56000 BASIC ----
1205 A   e3m1s1    4  LIMDS0    1   56000 BASIC ----
1205 B   e3m1s2    4  LIMDS0    1   56000 BASIC ----
1206 A   e3m1s1    5  LIMDS0    1   56000 BASIC ----
1206 B   e3m1s2    5  LIMDS0    1   56000 BASIC ----
```

```

1207 A e3m1s1 6 LIMDS0 1 56000 BASIC ----
1207 B e3m1s2 6 LIMDS0 1 56000 BASIC ----
1211 A e3m2s1 0 LIMDS0 11 56000 BASIC ----
1211 B e3m2s2 0 LIMDS0 11 56000 BASIC ----
1212 A e3m2s1 1 LIMDS0 11 56000 BASIC ----
1212 B e3m2s2 1 LIMDS0 11 56000 BASIC ----
1213 A e3m2s1 2 LIMDS0 11 56000 BASIC ----
1213 B e3m2s2 2 LIMDS0 11 56000 BASIC ----
1214 A e3m2s1 3 LIMDS0 11 56000 BASIC ----
1214 B e3m2s2 3 LIMDS0 11 56000 BASIC ----
1215 A e3m2s1 4 LIMDS0 11 56000 BASIC ----
1215 B e3m2s2 4 LIMDS0 11 56000 BASIC ----
1216 A e3m2s1 5 LIMDS0 11 56000 BASIC ----
1216 B e3m2s2 5 LIMDS0 11 56000 BASIC ----
1217 A e3m2s1 6 LIMDS0 11 56000 BASIC ----
1217 B e3m2s2 6 LIMDS0 11 56000 BASIC ----

LOC LINK LSN SLC TYPE LP ATM
SET BPS TSEL VCI VPI LL
1208 A e3e4 4 LIMATM 1 1544000 LINE 5 0 0
1218 A e3e4 5 LIMATM 1 1544000 LINE 5 0 0

LOC LINK LSN SLC TYPE ANAME SLKTPS
1303 A m2pa12132 0 IPSG m2pa1303a 1000
1303 B m3ua333a 0 IPSG m3ua1303b 500
1303 A1 m3ua323a 0 IPSG m3ua1303a 1000
1303 B1 m3ua333i 0 IPSG m3ua1303b 500
1303 B2 m3ua333n 0 IPSG m3ua1303b 500
1305 A ls1305a 0 IPSG sg1305a 1000
1305 B ls1305i 0 IPSG sg1305i 500
1305 A1 ls1305a 1 IPSG a1 1000
1305 B1 ls1305i 1 IPSG a1 500
1305 B14 lsitunbb 0 IPSG a1 1000
1305 B15 lsitunaa 0 IPSG a1 1000

LOC LINK LSN SLC TYPE IPLIML2
1301 A e3e4 0 IPLIM M2PA
1301 B e3e4 2 IPLIM M2PA
1311 A e3e4a 0 IPLIM M2PA
1313 A e3e4i 0 IPLIMI M2PA

LOC LINK LSN SLC TYPE
1307 A ls1307a 0 SS7IPGW
1315 A ls1315a 0 SS7IPGW
1317 A ls1317i 0 IPGWI

SLK table is (48 of 1200) 4% full.
;

```

Example 2 shows updated output for the `rtrv-ls` command.

`rtrv-ls:lsn=ls1`

```

tekelecstp 09-07-09 00:39:45 EST EAGLE 41.1.0

LSN APCA (SS7) SCRN SET SET BEI LST LNKS ACT MES DIS SLSCI NIS
ls1 240-020-000 none 1 2 no c 8 off off off no off

SPCA CLLI TFATCABMLQ MTPRSE ASL8
-----
RANDSLS
off

IPSG IPGWAPC GTTMODE CGGTMOD
no no CdPA no

LOC LINK SLC TYPE L2T PCR PCR
SET BPS ECM N1 N2
1201 A 0 LIMDS0 1 56000 BASIC ----
1201 A3 1 LIMDS0 2 56000 BASIC ---
1202 A1 2 LIMDS0 3 56000 BASIC ---

```

```

1202 B 3 LIMDS0 4 56000 BASIC --- -----
1202 B1 4 LIMDS0 5 56000 BASIC --- -----
1202 A2 5 LIMDS0 6 56000 BASIC --- -----
1202 B2 6 LIMDS0 7 56000 BASIC --- -----
1202 B3 7 LIMDS0 8 56000 BASIC --- -----

```

```
Link set table is (51 of 1024) 5% full.
```

```
;
```

Support MTP routed SMDPP/ANLYZD with GTI=0

The Support MTP routed SMDPP/ANLYZD with GTI=0 enhancement provides support for MTP-routed SMDPP and AnalyzedInformation messages that do not have Global Title Address Digits (GTI=0 in the address indicator). AnalyzedInformation messages are processed by the IAR feature, and SMDPP messages are processed by the MO SMS features.

Called Party (CdPA) screening is performed on the messages by inspecting the Route table entry that is associated with the MTP destination point code (DPC). Processing occurs if the entry indicates that the DPC is that of a Home Service Control Point (SCP) for the IAR feature or a Home Short Message Service Center (SMSC) for the MO SMS features. Processing is based on the MAP operation code.

Commands

The `ent/chg/dlt/rtrv-dstn` commands are enhanced to provision and display whether a DPC should be considered a Home SCP or Home SMSC if the message contains GTI=0.

```
rtrv-dstn:dpc=2-2-7
```

```

tekelecstp 09-08-09 13:12:02 EST EAGLE 41.1.0

DPCA          CLLI          BEI  ELEI    ALIASI          ALIASN/N24    DMN
002-002-007  ----- no  --- -----  -----  SS7

SPCA          NCAI          RCAUSE    NPRST    SPLITIAM  HMSMSC  HMSCP
-----  ----          none      off      none      yes     yes

Destination table is (4 of 2000) 1% full
Alias table is (0 of 12000) 0% full

```

Update to the `ent/chg-npp-as` Commands

The `ent-npp-as` and `chg-npp-as` commands are updated to allow Conditioning Actions, Formatting Actions, and Service Actions to be provisioned using parameters that support a comma-separated list (**ca**, **fa**, and **sa**, respectively) or the existing individual parameters (**ca1**, **fa1**, and **sa1**, etc.) parameters.

Examples of the new format include:

```
chg-npp-as:asn=asn7:ca=ign1,ac1,cc3,sn2:fa=cc,sn,ac
```

or

```
ent-npp-as:asn=asn10:ca=cc2,ac2,snx:sa=migrate,cdpnp:fa=cc,rnospon
```

If the comma-separated list is used, then the Conditioning Actions and Formatting Actions are processed in the order that they are specified in the list. Service Actions must be specified in the list in precedence order.

The current parameter and the new parameter of the same type cannot be specified together in the command. For example, the **ca** and **ca1** parameters cannot be entered in the same command; however, the **ca** and **fa1** or **sa1** parameters can be specified together.

Update to the ent/chg/rtrv-map Commands

The rtrv-map command is updated to indicate the values of the SRM and MRC fields when the Multiplicity mode (MULT field) has a value other than *Dominant*. An asterisk in front of the SRM and MRC values indicates that this value is not applicable for the current Multiplicity mode. The SRM value is valid only when the MULT field has a value of *DOM* or *COM*. The MRC value is valid only when the MULT field has a value of *DOM*.

rtrv-map

```

spareduppc 09-08-09 12:05:28 EST EAGLE 41.1.0
PCA      Mate PCA      SSN RC MULT SRM MRC GRP NAME SSO
002-002-002      002-002-003      10 10 SHR *Y *Y ----- OFF
                                20 10 SHR *Y *Y ----- OFF

PCA      Mate PCA      SSN RC MULT SRM MRC GRP NAME SSO
003-101-001      003-001-000      10 30 DOM YES YES abcdefg OFF
                                10 40 DOM YES YES abcdefg OFF

PCI      NET  Mate PC      SSN RC MULT SRM MRC GRP NAME SSO
1-109-0      I      1-110-0      90 10 COM NO *N ----- OFF
              N      00-01-7-3-aa 90 20 COM NO *N ----- OFF
              N      01-03-2-2-aa 90 30 COM NO *N ----- OFF

PCN      Mate PCN      SSN RC MULT SRM MRC GRP NAME SSO
03-00-1-2-aa      s-09-14-5-3-ab 55 10 DOM NO NO ----- OFF
                                45 99 DOM NO NO ----- OFF

PCN      Mate PCN      SSN RC MULT SRM MRC GRP NAME SSO
12-00-7-1-aa      12-00-7-3-aa 5 10 DOM NO NO ----- OFF
                                5 20 DOM NO NO ----- OFF

PCI      Mate PCI      SSN RC MULT SRM MRC GRP NAME SSO
s-1-128-6      55 10 SOL *N *N ----- OFF

MAP table is (13 of 1024) 1% full.
    
```

The output for the ent-map and chg-map commands is updated to display a warning message for the validity of the SRM and MRC values when the **srn** or **mrc** parameter is specified.

Update to the rept-stat-mon Command

The output for the rept-stat-mon command when Fast Copy subsystem information is requested is revised to increase readability.

Example 1 displays output for the Fast Copy and EROUTE subsystems.

rept-stat-mon

```

rlghncxa03w 09-09-11 16:35:57 IST EAGLE 41.1.0
EROUTE SUBSYSTEM REPORT IS-NR      Active      -----
STC Cards Configured= 4  Cards IS-NR= 2
EISCOPY BIT = ON
System Threshold = 80% Total Capacity
System Peak EROUTE Load:      7080 Buffers/Sec
System Total EROUTE Capacity: 12000 Buffers/Sec

SYSTEM ALARM STATUS = No Alarms.

CARD  VERSION      PST      SST      AST      TVG  CPU
      USAGE      USAGE
-----
1101  052-008-000  IS-NR      Active      -----  63%  28%
1103  052-008-001  IS-NR      Active      -----  55%  28%
1105  255-255-255  OOS-MT     Isolated    -----   0%   0%
    
```

```

1205 255-255-255 OOS-MT Isolated ----- 0% 0%
-----
EROUTE Service Average TVG Capacity = 59% Average CPU Capacity = 28%

CARDS DENIED EROUTE SERVICE:

=====

FAST COPY SUBSYSTEM REPORT IS-NR Active -----
FC Cards Configured= 3 Cards IS-NR= 3
FC MODE = FCOPY
SYSTEM ALARM STATUS = No Alarms.

CARD PST SST CPU CARD FCS
-----
1201 IS-NR Active 34% ALLOWED
1202 IS-NR Active 55% ALLOWED
1203 IS-NR Active 10% ALLOWED
-----

Command Completed.
;
    
```

Example 2 displays output for the Fast Copy subsystem.

rept-stat-mon:type=fcs

```

rlghncxa03w 09-09-11 16:35:57 IST EAGLE 41.1.0
FAST COPY SUBSYSTEM REPORT IS-NR Active -----
FC Cards Configured= 3 Cards IS-NR= 3
FC MODE = FCOPY
SYSTEM ALARM STATUS = No Alarms.

CARD PST SST CPU CARD FCS
-----
1201 IS-NR Active 34% ALLOWED
1202 IS-NR Active 55% ALLOWED
1203 IS-NR Active 10% ALLOWED
-----

Command Completed.
;
    
```

Update to the rtrv-data-rtddb Command

The rtrv-data-rtddb command is enhanced to display NPANXX split data.

rtrv-data-rtddb:npanxx=919111

```

tekelecstp 09-08-30 15:37:36 EST EAGLE 41.1.0

Card Loc : 1103 Status:Coherent
Card Loc: 1103
NPANXX MR LRN
OLD 919111 yes no LA LI
NEW 918111 yes yes LA LI

Default Data
SERV TT XLAT RI PCA SSN NGT RGTA
LIDB --- DPC GT 001-001-001 --- --- no
;
    
```

Update to the rtrv-ip-host Command

The rtrv-ip-host command is updated to document the ability to retrieve all entries in the IP Host table by entering rtrv-ip-host:display=all. Entering rtrv-ip-host with no parameters retrieves the first 50 entries in the table.

Update to the rtrv-npp-srs Command

The rtrv-npp-srs command is updated to display FDL instead of FDIGLEN in as a header in the output.

rtrv-npp-srs

```
tekelecstp 09-07-02 13:57:06 EST EAGLE 41.1.0

Command entered at terminal #4.
SRVN      FPFX      FDL      FNAI  ASN
-----
nppt      a           10      intl  asn2
nppt      a           16      intl  asn3
tif2      b           12      natl  asn5

NPP-SRS table is (3 of 8192) 1% full.

;
```

Update to the tst-msg command

The output of the tst-msg command is updated to display an asterisk (*) if the FDL value in the matched NPP rule is a wildcard. The output is also updated to display FDL instead of FDIGLEN.

tst-msg

```
tekelecstp 09-08-05 18:20:46 EST EAGLE 41.1.0
tst-msg:feat=ttr:prot=ttr:msgn=1:mode=brief
Command Accepted: Test message is sent.

;

TST-MSG-RESULT
=====

MSG = 1          TCAP_TYPE = INAP

SCCP
CGPA_GT = 2
CGPA_GT_NAI = 4      CGPA = 9111111111
CDPA_GT = 2
CDPA_GT_NAI = 4      CDPA = 9818555001

TCAP
SK = 6ba1b1c1      BCSM = 02
CGPN_NAI = 4      CGPN = 919818000005
CDPN_NAI = 4      CDPN = 919818000001

CDPN NPP PROCESSING

SERVICE NAME = idprcdpn SERVICE STATUS = ON
INC DIGITS = 919818000001
NAI = 4 FNAI = intl FDL = 12

MATCHING RULE
FNAI = intl FDL = * FPFX = *
ACTION SET NAME = cdpnintl

CONDITIONING RESULT
INC DIGITS = 919818000001
COND DIGITS = 919818000001

FORMATING RESULT
OUTG DIGITS = 00910123459818000001
OUTG FNAI = intl

;

tekelecstp 09-08-05 18:20:46 EST EAGLE 41.1.0
```

```

CGPN NPP PROCESSING

SERVICE NAME = idprcgpn SERVICE STATUS = ON
INC DIGITS = 919818000005
NAI = 4 FNAI = intl FDL = 12

MATCHING RULE
FNAI = intl FDL = 12 FPFX = *
ACTION SET NAME = cgpn1

CONDITIONING RESULT
INC DIGITS = 919818000005
COND DIGITS = 919818000005

FORMATING RESULT
OUTG DIGITS = 00915432109818000005
OUTG FNAI = intl
;
    
```

Updates to the AINPQ and INP Features

The AINPQ and INP features can be provisioned and operate independently. One or both features can operate in a system. Configuration options that were common to INP and AINPQ now have separate parameters in the INPOPTS table and `chg/rtrv-inpopts` commands, and in a new AINPOPTS table and `chg/rtrv-ainpopts` commands. The INPOPTS table and the `chg/rtrv-inpopts` commands are used only for the INP feature, and the AINPOPTS table and `chg/rtrv-ainpopts` commands are used for the AINPQ feature.

During upgrade, the behavior of the AINPOPTS and INPOPTS tables varies depending on whether the AINPQ and INP features are enabled. shows the behavior of the tables.

Table 3: AINPOPTS and INPOPTS Tables on Upgrade

INP feature before upgrade	AINPQ feature before upgrade	INPOPTS table after upgrade	AINPOPTS table after upgrade	Comments
Not enabled	Not enabled	Default values	Default values	
Enabled	Not enabled	No change	Default values	
Not enabled	Enabled	Default values	Converted from pre-upgrade INPOPTS values to AINPOPTS equivalents	After upgrade, use the AINPOPTS table for the AINPQ feature
Enabled	Enabled	No change	Converted from pre-upgrade INPOPTS values to AINPOPTS equivalents	After upgrade, use the INPOPTS table for the INP feature and the AINPOPTS table for the AINPQ feature.

Default Routing Number

A Default Routing Number (Default RN) is introduced for the AINPQ and INP features. This number can be used if the HLR address is not applicable, and a global routing number is required instead of the SP entity digits for all own-network subscribers.

The Default RN option applies to Number Portability and can be used whether the S-Port feature is on or off. If the S-Port feature is on, then the Default RN applies in cases where Service Portability usage of GRN does not apply. If the S-Port feature is off, then the Default RN digits can be used for own-network subscribers instead of the SP entity digits.

Rt-on-GT CgPA

Rt-on-GT CgPA is supported for ANSI-41 NPREQ (AINPQ) and ITU INAP InitialDP (INP) queries. GTT is performed on the CgPA of the query to determine the CdPA of the response message. GTA digits must be present.

Subscriber Check

If entity type=RN/PT=0, the AINPQ or INP feature is turned on, and the IGM feature is turned on or the S-Port feature is enabled, then the subscriber is considered to be an own-network IS41 subscriber of the effective entity type SP. The SPRESTYPE configuration option value of **rrwodgts** or **rrwdgts** (AINPQ) or **connect** or **continue** (INP) determines whether the response for the message with effective entity type of SP is sent with or without routing digits.

Commands

- `chg/rtrv-ainpopts`—Added to provision and display AINPQ-specific data.

`rtrv-ainpopts`

```
rlghncxa03w 09-06-17 15:35:05 EST EAGLE 41.1.0
AINP OPTIONS
-----
NEC          = NONE
RNAIV        = FRMSG
RNP          = E164
RFMT         = RNDN
SPRESTYPE    = RRWODGTS
SPORTTYPE    = NONE
DEFRN        = NONE

DIALPFX      DLTPFX
-----
DIALNAI      SNAI
-----
;
```

- `chg/rtrv-inpopts`—Enhanced to provision and display information for the INP feature only. This information includes Default RNs and destination addresses.

`rtrv-inpopts`

```
rlghncxa03w 09-06-17 15:35:05 EST EAGLE 41.1.0
INP OPTIONS
-----
NEC          = NONE
DRANAIV      = 126
DRANP        = E164
DRA          = RNDN
SPRESTYPE    = CONTINUE
RELCAUSE     = 31
```

```

SPORTTYPE = NONE
DEFRN     = NONE

CDPNPFX   DLTPFX
-----
CDPNNAI   SNAI
-----
;
    
```

Updates to the E5-OAM

The E5-OAM hardware is enhanced to use the Credit Card USB drive for software distribution only. This drive is now used to contain the *tar.gz* file. For other purposes, the drive is read-only and is not available for any restore or backup tasks.

The E5-OAM is also enhanced to perform a restore operation when only one removable drive is available. This operation can be performed from either a local or remote site.

Commands

The `chg-db`, `chg/copy-gpl`, `chg/copy-tbl`, and `format/tst-disk` commands are enhanced to no longer use the Credit Card USB as a target device. The `usb` value in these commands can only be provisioned by Tekelec personnel. The `chg-db` command is also enhanced to add the `sloc` parameter, which specifies the location where the removable drive is inserted.

Operational Changes

Release 43.0 contains new and updated alarms and error messages for feature and non-feature items.

Unsolicited Alarm Messages

Fast Copy

Table 4: UAMs: Fast Copy

UAM	597	Format	Output Group
Action	Added in 41.1 to support the previously released Fast Copy feature		
Old data			
New data	FC System is Deactivated	FCS	MON

Non-feature Related

Table 5: UAMs: Non-feature Related

UAM	84	Format	Output Group
Action	Revised for Release 41.1		
Old data	IP Connection Unavailable	IP7, DLK, DSM, EMAP, MCPM	Link Maintenance
New data	IP Connection Unavailable	IP7CONN, DLK, DSM, EMAP, MCPM	Link Maintenance
UAM	85	Format	Output Group
Action	Revised for Release 41.1	IP7, DLK, DSM, EMAP, MCPM	
Old data	IP Connection Available	IP7, DLK, DSM, EMAP, MCPM	Link Maintenance
New data	IP Connection Available	IP7CONN, DLK, DSM, EMAP, MCPM	Link Maintenance
UAM	86	Format	Output Group
Action	Revised for Release 41.1		
Old data	IP Connection Congested	IP7, DLK, DSM, EMAP, MCPM	Link Maintenance
New data	IP Connection Congested	IP7CONN, DLK, DSM, EMAP, MCPM	Link Maintenance
UAM	87	Format	Output Group
Action	Revised for Release 41.1		
Old data	IP Connection manually removed	IP7, DLK, DSM, EMAP, MCPM	Link Maintenance
New data	IP Connection manually removed	IP7CONN, DLK, DSM, EMAP, MCPM	Link Maintenance
UAM	535	Format	Output Group
Action	Revised for Release 41.1		
Old data	IP Connection Restricted	IP7	LINK_MAINT
New data	IP Connection Restricted	IP7CONN	LINK_MAINT
UAM	536	Format	Output Group
Action	Revised for Release 41.1		

Old data	IP Connection Excess Retransmits	IP7	LINK_MAINT
New data	IP Connection Excess Retransmits	IP7CONN	LINK_MAINT

Deleted UAMs

UAMs deleted for 41.1:

- 157
- 158
- 221
- 556
- 557
- 558
- 560

UAM Format Updates

IP7

The IP7 UAM format is revised for Release 41.1.

```
1234567890123456789012345678901234567890123456789012345678901234567890
  xxxx.yyyy zz IP7 yyyyyyyyyyyyyyyy text
                ALARM INHIBIT LEVEL: XXXX(optional field)
                ALARM INHIBIT LEVEL: XXXX Expires: yy/mm/dd hh:mm
(optional field)
```

IP7CONN

The IP7CONN UAM format is added for Release 41.1

```
1234567890123456789012345678901234567890123456789012345678901234567890
  xxxx.yyyy zz IP7CONN yyyyyyyyyyyyyyyy text
                ALARM INHIBIT LEVEL: XXXX(optional field)
                ALARM INHIBIT LEVEL: XXXX Expires: yy/mm/dd hh:mm (optional
field)
```

Unsolicited Information Messages

IAR

Table 6: UIMs - IAR

UIM	1020	Format	Output Group
Action	Added for IAR		
Old data			

New data	IARCDPN NPP Service is off	I1	GTT
UIM	1021	Format	Output Group
Action	Added for IAR		
Old data			
New data	IARCGPN NPP Service is off	I1	GTT
UIM	1427	Format	Output Group
Action	Added for IAR		
Old data			
New data	IAR CdPN parameter invalid or not found	I1	GTT
UIM	1428	Format	Output Group
Action	Added for IAR		
Old data			
New data	IAR CgPN parameter invalid or not found	I1	GTT
UIM	1429	Format	Output Group
Action	Added for IAR		
Old data			
New data	IAR TRIGTYPE invalid or not found	I1	GTT
UIM	1430	Format	Output Group
Action	Added for IAR		
Old data			
New data	IAR CdPN parameter encoding failed	I1	GTT
UIM	1431	Format	Output Group
Action	Added for IAR		
Old data			
New data	IAR CgPN parameter encoding failed	I1	GTT

IGM Support for SRI-SM NACK with Default SMSC

Table 7: UIM - IGM Support for SRI-SM NACK with Default SMSC

UIM	1432	Format	Output Group
Action	Added for IGM Support for SRI-SM NACK with Default SMSC		
Old Data			
New Data	IGM Relay Failed - Bad IS41SMSC Xlation	I43	GTT

INP CRP

Table 8: UIM - INP CRP

UIM	1256	Format	Output Group
Action	Revised for INP CRP		
Old data	MNP Circular Route detected		
New data	NP Circular Route detected	I43	APPLICATION SUBSYSTEM

Service Portability

Table 9: UIM - Service Portability

UIM	1426	Format	Output Group
Action	Added for Service Portability		
Old data			
New data	S-Port: Missing GRN for srvc prtd subs	I13 I15	APSS

Non-feature Related

Table 10: UIM - Non-feature Related

UIM	1187	Format	Output Group
Action	Revised for Release 41.1		
Old data	GPL Table Checksum Mismatch		

New data	Table Checksum Mismatch	I57	SYS_MAINT
----------	-------------------------	-----	-----------

UIM Format Updates

I13

```

1          2          3          4          5          6          7          8
1234567890123456789012345678901234567890123456789012345678901234567890
xxxx.xxxx  CARD cccc,ppp INFO      `text'
          SIO=xx   OPC=&&-###-###-###   DPC=&&-###-###-###
          CDPA: SSN=### TT=###
          CGPA: SSN=### TT=###
          CLASS=###   MSG TYPE=##
          DATA=xx xx xx
                xx xx xx xx xx xx xx xx xx xx xx xx
                xx xx xx xx xx xx xx
          LSN=[lnkset ]
    
```

or

```

1          2          3          4          5          6          7          8
1234567890123456789012345678901234567890123456789012345678901234567890
xxxx.xxxx  CARD cccc,ppp INFO      `text'
          SIO=xx   OPC=&&-###-###-###   DPC=&&-###-###-###
          CDPA: SSN=### TT=###
          CGPA: SSN=### TT=###
          CLASS=###   MSG TYPE=##
          INCM DN: xxxxxxxxxxxxxxxxxxxxxxxxx
          COND DN: xxxxxxxxxxxxxxxxxxxxxxxxx
          LSN=[lnkset ]
    
```

I15

```

1          2          3          4          5          6          7          8
1234567890123456789012345678901234567890123456789012345678901234567890
xxxx.xxxx  CARD cccc,ppp INFO      `text'
          SIO=xx   OPC=&&-###-###-###   DPC=&&-###-###-###
          DATA=xx xx xx
                xx xx xx xx xx xx xx xx xx xx xx xx
                xx xx xx xx xx
          LSN=[lnkset ]
    
```

or

```

1          2          3          4          5          6          7          8
1234567890123456789012345678901234567890123456789012345678901234567890
xxxx.xxxx  CARD cccc,ppp INFO      `text'
          SIO=xx   OPC=&&-###-###-###   DPC=&&-###-###-###
          INCM DN: xxxxxxxxxxxxxxxxxxxxxxxxx
          COND DN: xxxxxxxxxxxxxxxxxxxxxxxxx
          LSN=[lnkset ]
    
```

Error Messages

Error Messages: A-Port CRP

Table 11: Error Messages: A-Port CRP

Response ID Code	Error Message	New?	Used by Command
E3631	Incompatible Feature/Option status	N	chg-measopts chg-mtc-measopts rept-ftp-meas rept-meas
E4080	INP/AINPQ, GPORT, APORT or VFLEX feature must be on	N	ent/dlt-homern

GWS Stop Action for MTP Routed Messages

Table 12: Error Messages: GWS Stop Action for MTP Routed Messages

Response ID Code	Error Message	New?	Used by Command
E5095	SCCP and CNCF cannot be in the same action set.	Y	chg-gws-actset
E5174	MTP routed GWS Stop Action feature must be enabled	Y	chg-gws-actset

G-Port SRI Query Service Portability

Table 13: Error Messages: G-Port SRI Query Service Portability

Response ID Code	Error Message	New?	Used by Command
E3216	G-Port SRI Query for Prepaid feature is not enabled	N	chg-gsmopts
E3631	Incompatible Feature/Option status	N	chg-gsmopts
E4771	GFLEX/GPORT must be ON or IGM/MT-Based GSM SMS NP must be enabled	N	chg-gsmopts

Response ID Code	Error Message	New?	Used by Command
E4928	S-Port and SRI Query for Prepaid features must be enabled.	N	chg-gsmopts

IDP A-Party Blacklist

Table 14: Error Messages: IDP A-Party Blacklist

Response ID Code	Error Message	New?	Used by Command
E4737	IDP A-Party Blacklist feature must be enabled	Y	ent/chg-npp-srs
E4738	IDP A-Party Blacklist Query mutually exclusive with all SAs	Y	ent/chg-npp-srs
E4739	DRAFRMT contains CC so DRANAI must be 4 (INTL)	Y	chg-ttropts
E4927	S-Port feature exclusive of A-Party Blacklist feature	Y	enable-ctrl-feat
E5024	Prepaid IDP Query Relay feature must be activated	N	enable-ctrl-feat

IDP A-Party Routing

Table 15: Error Messages: IDP A-Party Routing

Response ID Code	Error Message	New?	Used by Command
E4734	IDP A-Party Routing feature must be enabled	Y	ent/chg-npp-srs
E4735	Both IDP A-Party & SK Routing features must be enabled	Y	chg-ttropts
E4736	ACCGPN and CCCGPN CAs are mutually exclusive	Y	ent/chg-npp-srs

IGM enhancement for Relaying SRI_SM to the default SMSC value

Table 16: Error Message: IGM enhancement for Relaying SRI_SM to the default SMSC value

Response ID Code	Error Message	New?	Used by Command
E3561	GTT Set specified by GTT Set Name/index does not exist	N	chg-gsmsmsopts
E4929	IS41 GSM Migration feature must be turned on.	N	chg-gsmsmsopts
E4930	DEFIS41SMSC must not be none when IGMSMSRELAY is yes.	Y	chg-gsmsmsopts
E5081	IS41SMSCGTTSN can not be none, if DEFIS41SMSC is not none.	Y	chg-gsmsmsopts

Info Analyzed Relay

Table 17: Error Messages: Info Analyzed Relay

Response ID Code	Error Message	New?	Used by Command
E2136	At least one optional parameter is required	N	chg-tatropts chg-tatr-msg
E4295	The FEATURE/ANSIGFLEX option combination is invalid	N	chg-ctrl-feat
E4500	IDPR must be ON or IAR Base must be enabled when SERV=TTR	N	ent/chg/rtrv-srvsel
E4505	Service parameters not supported when SERV=IDPR or TTR	N	ent/chg/rtrv-srvsel
E4618	STPOPTS DefCC must not be NONE	N	enable-ctrl-feat
E4819	Failure reading TSTMSG Table	N	chg/rtrv-tatr-msg tst-msg

Response ID Code	Error Message	New?	Used by Command
E4820	Failure reading EGLEOPTS Table	N	chg/rtrv-tatropts
E4842	Cannot set DefCC to NONE, if IDPR or IAR Base feature is ON	N	chg-stpopts
E4953	RESET is mutually exclusive with any other parameter	N	chg-tatr-msg
E5024	Prepaid IDP Query Relay feature must be activated	N	ent/chg/rtrv-srvsel
E5150	Info Analyzed Relay Base feature must be enabled	Y	chg-tatr-msg chg-tatropts enable-ctrl-feat ent/chg-npp-srs tst-msg
E5152	Info Analyzed Relay NP feature must be enabled	Y	ent/chg-npp-srs
E5153	Info Analyzed Relay ASD feature must be enabled	Y	ent/chg-npp-srs
E5154	Info Analyzed Relay GRN feature must be enabled	Y	ent/chg-npp-srs
E5156	IAR NP and Service Portability features must be enabled	Y	chg-tatropts

INP CRP

Table 18: Error Messages: INP CRP

Response ID Code	Error Message	New?	Used by Command
E5032	INP CRP feature must be enabled	Y	chg-inpopts
E5033	INP feature must be ON	Y	enable-ctrl-feat

Service Portability

Table 19: Error Message: Service Portability

Response ID Code	Error Message	New?	Used by Command
E4926	Service Portability feature must be enabled	Y	chg-ainpopts chg-atinpopts chg-gsmsmsopts chg-inpopts chg-is41smsopts chg-tifopts chg-ttropts

Support for 2800 Links

Table 20: Error Messages: Support for 2800 Links

Response ID Code	Error Message	New?	Used by Command
E3409	Max number combined LSLs and HSLs already entered	N	ent-slk
E4581	Unsupported Hardware is equipped in the system	N	enable-ctrl-feat

Non-Feature Related

Table 21: Error Messages: Non-Feature Related

Response ID Code	Error Message	New?	Used by Command
E2017	<parm_desc> is out of range, <min>..<max> - <parm>	N	enable/chg-ctrl-feat
E2025	Invalid card location	N	chg-db rtrv-data-rtdb
E2045	<parm_desc> num digits incorrect, min <min> max <max> - <parm>	N	chg-ainpopts
E2084	A-Port, or IGM must be turned ON	N	ent-srvsel

Response ID Code	Error Message	New?	Used by Command
E2085	A-Port, G-Port or IGM must be turned ON	N	ent/chg-srvsel
E2086	GTT must be turned ON for A-Port	N	enable-ctrl-feat
E2087	GTT must be turned ON for G-Port	N	enable-ctrl-feat
E2088	GTT must be turned ON for IGM	N	enable-ctrl-feat
E2112	At least one parameter must be changed	N	chg-ainpopts
E2155	Invalid parameter combination specified	N	aud-data ent/chg-npp-as
E2160	Measurements collect must be off	N	copy-disk
E2238	The GPL type entered is not currently supported	N	act/chg/rept-stat-gpl rtrv-gpl rtrv-stp
E2317	Invalid table Id	N	aud-data
E2395	Removable DB levels don't match, must specify sloc parameter	N	chg-db
E2609	Only one optional parameter may be specified	N	rtrv-gserv-data
E2814	GPORT invalid if APORT or IGM is enabled	N	chg-srvsel
E2999	Failed reading the MRN table	N	chg-ppsopts
E3295	DEBUG must be ON	N	disp-tbl set-lba set-tbl
E3500	GFLEX feature must be ON	N	chg-gsmopts chg-sid enable-ctrl-feat

Response ID Code	Error Message	New?	Used by Command
			chg-stpopts ent/chg/rtrv-srvsel
E3557	EGTT must be ON before this command can be entered	N	chg-gsmsmsopts
E3690	QH cannot be specified unless 15 min meas is turned ON	N	rept-ftp-meas rept-meas
E3697	15-minute measurement feature must be ON	N	chg-measopts
E3710	APPL not valid for command	N	rept-meas
E3967	E5IS must be ON	N	chg/rtrv-eisopts chg/rtrv-netopts
E3968	Invalid hardware for E5IS COPY to be ON	N	chg-eisopts
E3989	GPORT feature must be ON when (N)SERV=GPORT	N	ent/chg/rtrv-srvsel
E3991	GPORT feature must be ON	N	enable/chg-ctrl-feat chg-gsmopts chg-prefix
E4005	Either INP/AINPQ/GPORT must be ON or TINP must be enabled	N	ent/dlt/rtrv-homern rept-ftp-meas rept-meas
E4100	LNP feature must be ON before LNP ELAP Config can be ON	N	chg-ctrl-feat
E4502	GTT must be ON before IDPR can be enabled	N	chg-feat
E4546	GTT must be ON before IDPS can be enabled	N	chg-feat enable-ctrl-feat

Response ID Code	Error Message	New?	Used by Command
E4702	MNP SMS must be ON or MO/MT SMS feature must be enabled	N	ent-home-smsc
E4786	Max 25 FPFX single digit wildcard chars '?' per NPP service	Y	ent-npp-srs
E4821	CDPNNAI and CGPNNAI must be specified with TCAPTYPE	N	chg-ttr-msg
E4881	Action Set does not exist	N	chg-npp-as
E4929	IS41 GSM Migration feature must be turned ON.	N	chg-gsmsmsopts
E4930	IGSMSRELAY cannot be yes, if DEFIS41SMSC is none	N	chg-gsmsmsopts
E4995	GTT Set is being referred in GSM/IS41 SMSOPTS	N	dlt-gttset
E5058	VGTT must be ON before enabling VGTT with 16 GTT lengths	N	enable-ctrl-feat
E5096	Origin Based SCCP Routing feature must be ON.	Y	chg-sccpopts ent/chg-ls
E5097	RNP and RNPV must not be specified together	Y	chg-ainpopts
E5098	RNAI and RNAIV must not be specified together	Y	chg-ainpopts
E5104	DIALPFX must be specified	Y	chg-ainpopts
E5157	DIALPFX must not be NONE	Y	chg-ainpopts
E5160	DIALNAI and SNAI must be specified together	Y	chg-ainpopts
E5163	RFMT with NEC and NEC=NONE combination not allowed	Y	chg-ainpopts

Response ID Code	Error Message	New?	Used by Command
E5164	NDIALPFX doesn't exist in AINPOPTS Table	Y	chg-ainpopts
E5165	DIALPFX doesn't exist in AINPOPTS Table	Y	chg-ainpopts
E5166	Maximum number of DIALPFXs already provisioned	Y	chg-ainpopts
E5167	DIALNAI doesn't exist in AINPOPTS Table	Y	chg-ainpopts
E5168	Maximum Number of DIALNAIs already provisioned	Y	chg-ainpopts
E5169	DLTPFX must not be specified, when NDIALPFX is NONE	Y	chg-ainpopts
E5194	INP feature must be enabled	Y	chg-inpopts
E5195	AINPQ feature must be enabled	Y	chg-ainpopts

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

- **Caribbean 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 the installed equipment that severely affects service, traffic, or maintenance capabilities, and requires immediate corrective action. Critical situations affect service and/or system operation resulting in one or several of these situations:

- 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.

Customer Training

Tekelec offers a variety of technical training courses designed to provide the knowledge and experience required to properly provision, administer, operate, and maintain Tekelec products. To enroll in any of the courses or for schedule information, contact the Tekelec Training Center at (919) 460-3064 or E-mail training@tekelec.com.

A complete list and schedule of open enrollment can be found at www.tekelec.com.

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**.

EAGLE 5 ISS Card Overview Table

The EAGLE 5 ISS Card Overview table is a resource table that provides an overview of information for cards that can be provisioned in the EAGLE 5 ISS. For a detailed description of supported hardware, see the [Hardware Baseline](#).

This table lists the following card information:

- The name of the card on the card label
- The card part number
- The provisioned card type
- The number of shelf slots that the card occupies (1 or 2)
- The number of physical ports on the card
- The maximum number of links that can be assigned to the card
- The GPLs and applications that can run on the card

Table 22: EAGLE 5 ISS Card Overview Table

Card Name as shown on card label	Part Number	Provisioned Card Type	Per Card Slots/Ports		Links per Card	Card GPLs	Card Applications
DCM	870-1945-01 870-1945-02 870-1945-03 870-1984-01 (DCMX)	dcm	2	2	1 IP Service	bpdc vwslan	stplan
				2	2	bpdc iplim iplimi	iplim iplimi
				2	1	bpdc ss7ipgw ipgwi	ss7ipgw ipgwi
	stc	2	2	2 IP Service	bpdc eroute	eroute	
EDCM (SSEDCM)	870-2372-01 870-2372-08 870-2372-13^	dcm	1	2	1 IP Service	bpdc vwslan	stplan
					8	bpdc	iplim

Card Name as shown on card label	Part Number	Provisioned Card Type	Per Card Slots/Ports		Links per Card	Card GPLs	Card Applications
						iplim iplimi	iplimi
						1	bpdc ss7ipgw ipgwi
	870-2372-01	stc	1	2	2 IP Service	bpdc eroute	eroute
EDCM-A (SSEDCM)	870-2508-01	dcm	1	2	1 IP Service	bpdc vwslan	stplan
	870-2508-02^	stc	1	2	2 IP Service	bpdc eroute	eroute
DSM†	1 GB MEM 870-1984-02 870-1984-08 870-1984-09 870-1984-15^ 870-1984-17^ 2 GB MEM 870-1984-03 4 GB MEM 870-1984-05 870-1984-06 870-1984-07 870-1984-13^ 870-1984-16^	dsm	2	2	2 IP service	bpdc vsccp gls	vsccp

Card Name as shown on card label	Part Number	Provisioned Card Type	Per Card Slots/Ports		Links per Card	Card GPLs	Card Applications
DSM-1G	870-2371-02 870-2371-06 870-2371-08 870-2371-13^	ipsm	1	2 (use only A)	1 IP service	bpdc ips	ips
EDSM-2G*	870-2372-03 870-2372-07 870-2372-09 870-2372-14^ 870-2372-15^	mcpcm	1	2 (use only A)	1 IP service	bpdc bpdc2 mcp	mcp
E1/T1 MIM++	870-2198-01 870-2198-02 870-2198-03 870-2198-04 870-2198-07^	lime1 limt1 limch	1	2	8	ss7ml bpmplt	ss7ansi ccs7itu
E1-ATM	870-2455-01 870-2455-02 870-2455-03 870-2455-05^	lime1atm	1	2	1	atmitu bphcap bphcapt	atmitu
E5-ATM	870-1872-01^ 870-1872-02^	limatm lime1atm	2	2	2	atmhc blbepm blcpld bldiag6 blvxw6 imtpci	atmansi atmitu
E5-E1T1	870-1873-02 870-1873-03^ 870-1873-04^	lime1 limt1	1	8	32	ss7hc blbepm bldiag6	ss7ansi ccs7itu

Card Name as shown on card label	Part Number	Provisioned Card Type	Per Card Slots/Ports		Links per Card	Card GPLs	Card Applications
		lime1 (for SE-HSL)	1	8	1	blvxw6 imtpci	ccs7itu
		limt1 (for ST-HSL-A)	1	8	1	pldpmc1 blcpld	ss7ansi
E5-ENET	870-2212-02 870-2212-03^ 870-2212-04^ 870-2212-05^	dcm	1	2	16	bldiag6 blbepm iplhc imtpci blvxw6 blcpld	iplim iplimi
			1	2	1	bldiag6 blbepm ipghc imtpci blvxw6 blcpld	ss7ipgw ipgwi
		1	2	2 IP Service	slanhc bldiag6 blbepm blvxw6 blcpld imtpci	stplan	
		stc	1	2	2 IP Service	erthc bldiag6 blbepm blvxw6 imtpci blcpld	eroute

Card Name as shown on card label	Part Number	Provisioned Card Type	Per Card Slots/Ports		Links per Card	Card GPLs	Card Applications
		enet	1	2	32	ipsg bidiag6 blbepm blvxw6 blcpld imtpci	ipsg
E5-IPSM	870-2877-01^ 870-2877-02^	ipsm	1	2 (use only A)	1 IP service	ipshc imtpci blcpld blvxw6 bldiag6 blbepm	ips
E5-MASP	870-2903-01^	N/A	2	2	N/A	oamhc blmcap	oam
E5-MDAL	870-2900-01^	N/A	2	N/A	N/A	N/A	N/A
E5-SM4G	870-2860-01^ 870-2860-02^	dsm	2	2	2 IP Service	sccphc imtpci blcpld blvxw6 bldiag6 blbsmg	vsccp
E5-TSM	870-2943-03^	tsm	1	1	N/A	glshc blbepm blcpld bldiags6 blvxw6 imtpci	gls

Card Name as shown on card label	Part Number	Provisioned Card Type	Per Card Slots/Ports		Links per Card	Card GPLs	Card Applications
GPSM-II	870-2360-01 870-2360-05 870-2360-06 870-2360-08^ 870-2360-09^	N/A	1	N/A	N/A	eoam bpdcn bpdcn2	oam
HC-MIMH	870-2671-01	lime1 limt1	2	8	64	ss7hc blbios	ss7ansi ccs7itu
	870-2671-02 870-2671-03^	lime1 (for SE-HSL)	2	8	2	blcpld blvxw6 bldiag6 pldpnc1 imtpci	ccs7itu
HIPR	870-2574-01 870-2574-02^	N/A	1	N/A	N/A	hipr	hipr
HMUX	870-1965-01 870-1965-03^	N/A	1	N/A	N/A	bphmux	bphmux
LIM-ATM	870-1293-02 870-1293-03 870-1293-06 870-1293-07 870-1293-08 870-1293-10 870-1293-13^	limatm	1	2	1	atmansi bphcap bphcapt	atmansi
MDAL	870-0773-04 870-0773-05 870-0773-06 870-0773-08	N/A	2	N/A	N/A	N/A	N/A

Card Name as shown on card label	Part Number	Provisioned Card Type	Per Card Slots/Ports		Links per Card	Card GPLs	Card Applications
	870-0773-09^ 870-0773-10^						
MPL	870-2061-01 870-2061-03 870-2061-04 870-2061-06^	limds0	1	2	8	bpmpl ss7ml	ss7ansi
TDM	870-0774-10 870-0774-11	N/A	1	N/A	N/A	N/A	N/A
TDM-GTI	870-0774-15 870-0774-18^	N/A	1	N/A	N/A	N/A	N/A
TSM-256	870-1289-02 870-1289-03 870-1289-04 870-1289-06^ 870-1289-07^	tsm	1	N/A	N/A	gls imt	gls
TSM-512	870-1290-02 870-1290-03 870-1290-04	tsm	1	N/A	N/A	gls imt	gls
TSM-768	870-1291-02 870-1291-03 870-1291-04	tsm	1	N/A	N/A	gls imt	gls
TSM-1024	870-1292-02 870-1292-03 870-1292-04	tsm	1	N/A	N/A	gls imt	gls
*Although the system allows 250 MCPM cards, practical usage is 2.							

Card Name as shown on card label	Part Number	Provisioned Card Type	Per Card Slots/Ports	Links per Card	Card GPLs	Card Applications
<p>†DSM or E5-SM4G cards are required for the LNP, 50,000 GTT, or EPAP-related features. For more information about turning these features on, refer to the appropriate manual.</p> <p>††For the E1 or T1 interface, an SS7 application (SS7ANSI or CCS7ITU) can be assigned to these cards.</p> <p>For more information on the E1 or T1 interface go to Chapter 3 “System Administration Procedures” in the Database Administration Manual - SS7.</p> <p>^This part number is the ROHS equivalent of the immediately preceding part number.</p>						

Hardware Baseline

The Hardware Baseline for EAGLE 5 ISS Release 41.1 is shown in the following table.

Table 23: Hardware Baseline

Component	Part Number	ROHS Number (if applicable)	Required for
Control Shelf	870-2321-02 Rev A	870-2321-08 Rev A	HMUX
	870-2321-04 Rev A		HMUX, Standard Frame
	870-2377-01 Rev A	870-2377-02 Rev A	HMUX, Heavy Duty Frame
Control Shelf Backplane	870-0775-03 Rev E		
Extension Shelf	870-2378-01 Rev A	870-2378-02 Rev A	Heavy Duty Frame
	870-0776-02 Rev C		Standard Frame
	870-0776-03 Rev D		
	870-0776-06 Rev A		
	870-0776-07 Rev A		
	870-0776-08 Rev A or 870-0776-11 Rev A		
Air Management Card	870-1824-01 Rev A	870-1824-02 Rev A	Shelves with Fan Assembly
DCM	870-1945-01 Rev A or		

Component	Part Number	ROHS Number (if applicable)	Required for
	870-1945-02 Rev A or		
	870-1945-03 Rev A		
DCMX	870-1984-01 Rev A		
EDCM (single slot)	870-2372-01 Rev E or		
	870-2372-08 Rev A	870-2372-13 Rev A	
EDCM-A (single slot)	870-2508-01 Rev A	870-2508-02 Rev A	
DSM, 1GB MEM	870-1984-02 Rev A or		
	870-1984-08 Rev A or		
	870-1984-09 Rev A	870-1984-15 Rev A 870-1984-17 Rev A	
DSM, 2GB MEM	870-1984-03 Rev A		
DSM, 4GB MEM	870-1984-05 Rev A		Heavy Duty Frame
	870-1984-06 Rev A or		
	870-1984-07 Rev A	870-1984-13 Rev A 870-1984-16 Rev A	
DSM-1G	870-2371-02 Rev A		
	870-2371-06 Rev A		
	870-2371-08 Rev A or	870-2371-13 Rev A	
EDSM-2G (MCPM)	870-2372-03 Rev A		
	870-2372-07 Rev A		
	870-2372-09 Rev A or	870-2372-14 Rev A	
		870-2372-15 Rev A	
E1/T1 MIM	870-2198-01 Rev G or		
	870-2198-02 Rev A or		
	870-2198-03 Rev A or		
	870-2198-04 Rev A	870-2198-07 Rev A	
E1-ATM	870-2455-01 Rev B		
	870-2455-02 Rev B		
	870-2455-03 Rev A	87-02455-05 Rev A	
E5-ATM		870-1872-01 Rev A	

Component	Part Number	ROHS Number (if applicable)	Required for
		870-1872-02 Rev A	
E5-ATM Adapter		830-1342-05	
E5-E1T1	870-1873-02 Rev A	870-1873-03 Rev A	
		870-1873-04 Rev A	
E5-ENET	870-2212-02 Rev A	870-2212-03 Rev A	
		870-2212-04 Rev A	
		870-2212-05 Rev A	
E5-IPSM		870-2877-01 Rev A	
		870-2877-02 Rev A	
E5-MASP		870-2903-01 Rev C	
E5-MDAL		870-2900-01 Rev A	
E5-SM4G		870-2860-01 Rev F	
		870-2860-02 Rev A	
E5-TSM		870-2943-03 Rev A	
FAP	870-1606-01 Rev A or		Standard frame or standard frame with HC-MIMs
	870-1606-02 Rev A	870-1606-05 Rev A	
	870-2320-01 Rev A	870-2320-03 Rev A	Heavy duty frame or heavy duty frame with HC-MIMs
	870-1823-01 Rev B	870-2804-01 Rev B	
FAP-CF/EF	870-0243-08 Rev C		
FAP-MISC	870-0243-09 Rev C		
FAP Fuse and Alarm Panel	870-2804-01 Rev A		
Fast Copy Adapter Upper		830-1343-01 Rev A	
Fast Copy Adapter Lower		830-1343-02 Rev A	
GPSM-II	870-2360-01 Rev E		
	870-2360-05 Rev A		
	870-2360-06 Rev A	870-2360-08 Rev A	

Component	Part Number	ROHS Number (if applicable)	Required for
		870-2360-09 Rev A	
HC-MIM	870-2671-01 Rev P or		
	870-2671-02 Rev B	870-2671-03 Rev A	
HIPR	870-2574-01 Rev D	870-2574-02 Rev A	
High-speed Fiber Channel Cable		830-1344-xx	
HMUX	870-1965-01 Rev A	870-1965-03 Rev A	
LIM-ATM	870-1293-02 Rev A or		
	870-1293-03 Rev A or		
	870-1293-06 Rev A or		
	870-1293-07 Rev A or		
	870-1293-08 Rev B or		
	870-1293-10 Rev A or	870-1293-13 Rev A	
MDAL	870-0773-04 Rev B or		
	870-0773-05 Rev A or		
	870-0773-06 Rev A or		
	870-0773-08 Rev A	870-0773-09 Rev A	
		870-0773-10 Rev A	
MPL	870-2061-01 Rev A or		
	870-2061-03 Rev A or		
	870-2061-04 Rev A	870-2061-06 Rev A	
MPS DC Frame Assembly	890-1843-01 Rev C	890-1843-02 Rev A	
MPS in Heavy Duty Frame	890-1801-01 Rev E	890-1801-02 Rev A	
TDM	870-0774-10 Rev A or		
	870-0774-11 Rev A		Rev C required if installed in a system with more than 11 shelves
TDM GTI	870-0774-15 Rev B	870-0774-18 Rev A	
TSM-256	870-1289-02 Rev A or		

Component	Part Number	ROHS Number (if applicable)	Required for
	870-1289-03 Rev A or		
	870-1289-04 Rev A	870-1289-06 Rev A 870-1289-07 Rev A	
TSM-512	870-1290-02 Rev A or		
	870-1290-03 Rev A or		
	870-1290-04 Rev A		
TSM-768	870-1291-02 Rev A or		
	870-1291-03 Rev A or		
	870-1291-04 Rev A		
TSM-1024	870-1292-02 Rev A or		
	870-1292-03 Rev A or		
	870-1292-04 Rev A		
Single EOAP	890-1050-03 Rev H		
Dual EOAP	890-1050-01 Rev K		
Kit E1	890-1037-01 Rev A	890-1037-06 Rev A	
Kit, Holdover Clock Assy	890-1013-01 Rev A		
Fan Assy (Standard Frame)	890-1038-01 Rev D		
Fan Assy (Shelves with HC-MIM cards)	890-0001-01 Rev A or		
	890-0001-02 Rev A	890-0001-04 Rev A	
T1000 Application Server	870-2640-01 Rev F	870-2640-03 Rev A	
Dual Port G-Bit E-Net Card	870-2706-02 Rev B	870-2706-04 Rev A	T1000 Application Server
Modem Card	870-2707-01 Rev B	870-2707-02 Rev A	T1000 Application Server
Quad Serial Exp. Card	870-2708-01 Rev B	870-2708-02 Rev A	T1000 Application Server
120 GB Hard Drive Assy	870-2721-02 Rev B	870-2721-04 Rev A	T1000 Application Server
T1100 (Application Server - DC)	870-2754-01 Rev P or	870-1893-03 Rev A	
	870-2807-01 Rev A		

Component	Part Number	ROHS Number (if applicable)	Required for
Dual Port Ethernet	870-2706-02 Rev A	870-2706-04 Rev A	T1100 (Application Server - DC)
Hard Disc Drive - 250 GB SATA	870-2787-01 Rev B	870-2787-02 Rev A	T1100 (Application Server - DC)
2 GB RAM Kit	870-2833-01 Rev C	870-2833-02 Rev A	T1100 (Application Server - DC)

Glossary

A

AINPQ	ANSI-41 INP Query
ASD	<p>Additional Subscriber Data</p> <p>Additional data that is associated with a subscriber (DN) or a range of subscribers.</p>
ATM	<p>Asynchronous Transfer Mode</p> <p>A packet-oriented transfer mode that uses an asynchronous time division multiplexing technique to multiplex information flow in fixed blocks, called cells.</p> <p>A high-bandwidth, low-delay switching, and multiplexing technology to support applications that include high-speed data, local area network interconnection, multimedia application and imaging, and residential applications such as video telephony and other information-based services.</p>

C

CCS7ITU	The application for the ITU SS7 signaling links that is used with card types <code>limds0</code> , <code>limch</code> , <code>lime1</code> , and <code>limt1</code> .
CdPA	<p>Called Party Address</p> <p>The field in the SCCP portion of the MSU that contains the additional addressing information of the destination of the MSU. Gateway screening uses this additional information to determine if MSUs that contain the DPC in the routing label and the subsystem number in the called party address portion of</p>

C

the MSU are allowed in the network where the EAGLE 5 ISS is located.

CgPA

Calling Party Address

The point code and subsystem number that originated the MSU. This point code and subsystem number are contained in the calling party address in the SCCP portion of the signaling information field of the MSU. Gateway screening uses this information to determine if MSUs that contain this point code and subsystem number are allowed in the network where the EAGLE 5 ISS is located.

CgPN

Calling party number

The field in the TCAP portion of the MSU that contains the additional addressing information of the origination of the MSU.

CNL

Small Geographic Area

CRP

Circular Route Prevention

An MNP, INP, or A-Port feature that detects instances of circular routing caused by incorrect information in one or more of the network number portability databases. If a circular route has been detected, a message will be generated by the EAGLE 5 ISS and returned to the originator.

D

DA

Destination Address

Digit Action

DCM

Database Communication Module

D

The DCM provides IP connectivity for applications. Connection to a host is achieved through an ethernet LAN using the TCP/IP protocol.

DDB

Dynamic Database

DN

Directory number

A DN can refer to any mobile or wireline subscriber number, and can include MSISDN, MDN, MIN, or the wireline Dialed Number.

DSM

Database Service Module.

The DSM provides large capacity SCCP/database functionality. The DSM is an application card that supports network specific functions such as EAGLE Provisioning Application Processor (EPAP), Global System for Mobile Communications (GSM), EAGLE Local Number Portability (ELAP), and interface to Local Service Management System (LSMS).

E

E1

The European equivalent of T1 that transmits digital data over a telephone network at 2.048 Mbps.

E5-E1T1

EPM-based E1/T1 Multi-Channel Interface Module

An EPM-based card that provides E1 and T1 connectivity. The E5 indicates the card is for existing EAGLE 5 control and extension shelves. E1T1 is an abbreviation for the ITU E1 and ANSI T1 interfaces. Thus the nomenclature defines the shelves where the card can be used

E

and the physical interface that it provides.

E5-ENET

EPM-based Ethernet card

A high capacity single-slot IP signaling card (EPM card plus Gig Ethernet PMC cards).

EDCM

Enhanced Database Communication Module

EMP

EAGLE Monitoring Protocol

ESP

Expanded Services Platform

The Sentinel system with the hardware and software platform that provides the interface to the Integrated EAGLE and Sentinel monitoring system. The ESP hardware and software platform runs on the model 120 server.

F

FAK

Feature Access Key

The feature access key allows the user to enable a controlled feature in the system by entering either a permanent feature access key or a temporary feature access key. The feature access key is supplied by Tekelec.

G

GB

Gigabyte — 1,073,741,824 bytes

GRN

Generic Routing Number

GTT

Global Title Translation

G

A feature of the signaling connection control part (SCCP) of the SS7 protocol that the EAGLE 5 ISS uses to determine which service database to send the query message when an MSU enters the EAGLE 5 ISS and more information is needed to route the MSU. These service databases also verify calling card numbers and credit card numbers. The service databases are identified in the SS7 network by a point code and a subsystem number.

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.

HC-MIM**H****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**

H

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).

HLR Home Location Register

HMUX High-Speed Multiplexer

A card that supports the requirements for up to 1500 links, allowing communication on IMT buses between cards, shelves and frames. HMUX cards interface to 16 serial links, creating a ring from a series of point to point links. Each HMUX card provides a bypass multiplexer to maintain the ring's integrity as cards are removed and inserted into an operational shelf.

High-Speed IMT Multiplexer, a replacement card for the IPMX.

I

IAR Info Analyzed Relay

IAM Reject

IGM See IS41 GSM Migration

IMF Integrated Message Feeder

The IMF sits on the EAGLE and replicates the signaling data that is processed through the EAGLE to send to an off-board processor (the IXP in the case of IAS). Because it

I

replicates the data (and doesn't introduce a new element in the path) it does not introduce any delay to the signaling and it does not create a separate footprint for a "probe" system.

INP

INAP-based Number Portability

Tekelec's INP can be deployed as a stand-alone or an integrated signal transfer point/number portability solution. With Tekelec's stand-alone NP server, no network reconfiguration is required to implement number portability. The NP server delivers a much greater signaling capability than the conventional SCP-based approach.

Intelligent Network (IN) Portability

IP

Internet Protocol

IP specifies the format of packets, also called datagrams, and the addressing scheme. The network layer for the TCP/IP protocol suite widely used on Ethernet networks, defined in STD 5, RFC 791. IP is a connectionless, best-effort packet switching protocol. It provides packet routing, fragmentation and re-assembly through the data link layer.

ISS

Integrated Signaling System

L

LIM-ATM

A link interface module (LIM) with the ATM interface.

LNP

Local Number Portability

M

M

MDAL	Maintenance Disk and Alarm
MIM	Multi-Channel Interface Module
MNP	Mobile Number Portability
MPL	Multi-port LIM
MSC	Mobile Switching Center
MSRN	Mobile Station Roaming Number
MSU	<p>Message Signal Unit</p> <p>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. The message contains the following information:</p> <ul style="list-style-type: none">• 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

M

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.

N

NP Number Plan

NPP Numbering Plan Processor
Provides the flexible service application behavior that satisfies the needs of customers resident in complex signaling networks. It is used for number conditioning, RTDB lookup, and outgoing number formatting.

O

OLO Other Licensed Operator

R

RN Routing Number

ROP Large Geographic Area (Groups of CNLs)

RTDB Real Time Database

S

SCP Service Control Point
Service Control Points (SCP) are network intelligence centers where databases or call processing information is stored. The primary function of SCPs is to respond to queries from other SPs by retrieving the requested information from the appropriate database, and sending

S

it back to the originator of the request.

Secure Copy

SE-HSL

Synchronous E1 High Speed Link

Format for E1 high-speed signaling links where time-slot 0 is used for framing and error control. The remainder of bandwidth, equivalent to 31 channels of 64Kbps data, is used as a single data link yielding a total capacity of 1.984 Mbps. Also known as Unchannelized E1.

SMSC

Short Message Service Center

SN

service node

S-Port

Service Portability

A number portability extension which allows a subscriber to retain the same subscriber number when moving from one network type or service technology to another within the network of a single operator. Service Portability provides different routing number digits for formats that require routing numbers. Service Portability does not affect message flows.

SP

Signaling Point

A set of signaling equipment represented by a unique point code within an SS7 domain.

SS7

Signaling System #7

SS7ANSI

SS7 ANSI

S

An application used by the LIM cards and the E1/T1 MIM card for the MTP functionality.

SSEDCM

Single Slot Enhanced Data Communications Module

T

T1

Transmission Level 1

A T1 interface terminates or distributes T1 facility signals for the purpose of processing the SS7 signaling links carried by the E1 carrier.

A leased-line connection capable of carrying data at 1,544,000 bits-per-second.

TDM

Terminal Disk Module
Time Division Multiplexing

TDM-GTI

TDM Global Timing Interface

TPS

Transactions Per Second

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).

W

WWA

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