

*EAGLE[®] Provisioning Application
Processor (EPAP)
Release 12.0 Feature Notice*

Feature Notice

910-5417-001 Revision A

January 2009



Copyright 2009 Tekelec
All Rights Reserved.
Printed in U.S.A.

Notice

Information in this documentation is subject to change without notice. Unauthorized use, copying, or translation of this documentation can result in civil or criminal penalties.

Any export of Tekelec products is subject to the export controls of the United States and the other countries where Tekelec has operations.

No part of this documentation may be reproduced, translated, or transmitted in any form or by any means, electronic or mechanical, including photocopying or recording, for any purpose without the express written permission of an authorized representative of Tekelec.

Other product names used herein are for identification purposes only, and may be trademarks of their respective companies.

RoHS 5/6 - As of July 1, 2006, all products that comprise new installations shipped to European Union member countries will comply with the EU Directive 2002/95/EC "RoHS" (Restriction of Hazardous Substances). The exemption for lead-based solder described in the Annex will be exercised. RoHS 5/6 compliant components will have unique part numbers as reflected in the associated hardware and installation manuals.

WEEE - All products shipped to European Union member countries comply with the EU Directive 2002/96/EC, Waste Electronic and Electrical Equipment. All components that are WEEE compliant will be appropriately marked. For more information regarding Tekelec's WEEE program, contact your sales representative.

Trademarks

The Tekelec logo, EAGLE, G-Flex, G-Port, IP7, IP7 Edge, and IP7 Secure Gateway are registered trademarks of Tekelec. TekServer, A-Port, EAGLE 5 ISS, and V-FLEX are trademarks of Tekelec. All other trademarks are the property of their respective owners.

Patents

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

U.S. Patent Numbers:

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

Foreign Patent Numbers:

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

Ordering Information

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

Table of Contents

Feature Notice	FN-1
Introduction	FN-1
New Features for EPAP 12.0	FN-1
Important Operational Changes	FN-1
Compatibility	FN-1
120 Million EPAP DN/IMSI Entries	FN-2
Hardware Requirements	FN-2
Limitations	FN-2
Alarms	FN-3
Feature Control Requirements	FN-3
Additional Subscriber Data (CNL & Triggerless Equal Access)	FN-3
Hardware Requirements	FN-4
Limitations	FN-4
PDBA Changes	FN-4
Structure of Associated Subscriber Data	FN-5
PDBA-RTDB Interface	FN-5
Commands	FN-6
Performance	FN-8
Feature Control Requirements	FN-8
Related Publications	FN-8
Locate Product Documentation on the Customer Support Site	FN-8
Customer Training	FN-8
Customer Care Center	FN-8
Tekelec - Global	FN-9
Emergency Response	FN-11
Glossary	Glossary-1
Index	Index-1

List of Tables

Table 1-1. Compatibility Matrix - EPAP 12.0..... FN-2

Table 1-2. PDB dn_asd Table Structure..... FN-5

Table 1-3. PDB dnb_asd Table Structure..... FN-5

Table 1-4. PDB ASD Table Structure..... FN-5

Table 1-5. ASD Values..... FN-5

Table 1-6. PDBA-to-RTDB Package Payload Type..... FN-5

Table 1-7. Package Types for ASD Delete Actions..... FN-6

Feature Notice

Introduction

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

The *Feature Notice* includes a brief feature overview, 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 for the EAGLE Provisioning Application Processor (EPAP) Release 12.0 (see [Locate Product Documentation on the Customer Support Site](#)).

New Features for EPAP 12.0

EPAP 12.0 includes the following new features:

- 120 Million EPAP DN/IMSI entries
The 120 Million EPAP DN/IMSI Entries feature allows up to 120 million entries to be provisioned in the RTDB database.
- Additional Subscriber Data (CNL & Triggerless Equal Access)
This feature enables generic data to be associated with Dialed Number (DN) and DN Block subscriber records.

The modifications to the EPAP Graphical User Interface (GUI) include changes to the following:

- Provisioning Database Application (PDBA)

Important Operational Changes

New or changed GUI (Graphical User Interface) screens are discussed with the relevant feature.

Compatibility

EPAP 12.0 is partially compatible with EAGLE 5 ISS Releases 39.1 and 39.2, and fully compatible with EAGLE 5 ISS Release 40.0. The Compatibility Matrix – EPAP 12.0 table identifies the compatibility of EPAP 12.0 with other products

NOTE: The EAGLE 5 ISS must be upgraded to a compatible release before the EPAP is upgraded to 12.0. Only EPAP 10.0 or EPAP 11.0 can be upgraded to 12.0.

Table 1-1. Compatibility Matrix - EPAP 12.0

Product	Release	Compatibility
EAGLE® 5 ISS	37.6	NC
	37.10	NC
	37.13	NC
	38.0	NC
	39.0	NC
	39.1	PC (120 Million EPAP DN/IMSI Entries feature only)
	39.2	PC (Additional Subscriber Data (CNL & Triggerless Equal Access) only)
	40.0	FC

Legend:

FC - Fully Compatible

PC- Partially Compatible (Compatible but not fully functional — feature dependent)

NC - Not Compatible

N/A - Not Applicable

120 Million EPAP DN/IMSI Entries

The 120 Million EPAP DN/IMSI Entries feature allows an EPAP-based EAGLE 5 ISS user to provision up to 120 million entries in the EPAP/RTDB database, utilizing DSM/E5-SM4G cards and compacting the database. This database capacity is available for DN-only, IMSI-only, or combinations of DN and IMSI entries, as currently supported by EPAP.

This feature also increases the supported DN ranges to 100,000 range entries.

NOTE: Not all combinations of DN and IMSI will add up to 120. However, 60 Million subscribers will be supported assuming a 1:1 ratio of DN and IMSIs.

Hardware Requirements

This feature requires E5-SM4G or DSM cards with EPAP-based applications, and 250 G hard disks on the provisioning EPAP-A server.

NOTE: EPAP hard disks must be upgraded to 250 G drives and the file systems be reconfigured if the database size exceeds 56 million entries. The non-provisioning server's hard disk does not require any changes to support the 120 Million EPAP DN/IMSI Entries feature.

Limitations

The 120 Million EPAP DN/IMSI Entries feature has the following limitations:

Feature Notice

- Once customers have installed the 120 Million EPAP DN/IMSI Entries feature, all prior PDB backups are no longer valid. Restoration of a backup made prior to the upgrade to 120 Million EPAP DN/IMSI Entries feature can result in inability of the PDBA software and MySQL daemon to start up. Contact Tekelec Customer Service for assistance with these restorations.
- Once customers have upgraded from EPAP 10.0 or 11.0 to EPAP 12.0 and beyond, RTDB backups made prior to the upgrade are no longer compatible with the software. If the EPAP software detects that such an incompatible RTDB has been restored, the database will be marked DB DIFF and RTDB. A reload (or restore from a post upgrade backup) must be performed.

Alarms

A new “MPS Over-Allocation” alarm has been added to the MPS. This alarm is triggered when the calculated size of the RTDB database meets or exceeds the RTDB partition size. Currently, the RTDB partition size is calculated to be $((\# \text{ Used}) \text{ MB} + (\# \text{ Available}) \text{ MB}) - 50 \text{ MB}$. If the partition size cannot be calculated, the default partition size is set to 4734 MB. Triggering this alarm will result in:

- RTDB provisioning disabled
- RTDB database status set to “MPS over allocated”
- “RTDB MPS Over-Allocation” displayed in the GUI banner
- The alarm will be sent to the EAGLE and can be seen by performing “rept-stat-mps” at the console

To recover from the MPS over-Allocation state, the PDBA and RTDB must be configured or reloaded with a database that does not exceed the RTDB partition size.

Alarm Details

- Alarm ID: RTDB_MPS_OVERALLOC
- Alarm Category: Major Application Alarm
- Alarm Hex Value: 0x 4000000004000000”
- Alarm Hex Value Decoded: “RTDB MPS Over-Allocation”
- Alarm Banner Message: “RTDB MPS Over-Allocation”
- View RTDB Status DB Status: “Mps over allocated”

Feature Control Requirements

There are no feature control requirements identified for this feature.

Additional Subscriber Data (CNL & Triggerless Equal Access)

The existing G-Port, G-Port SRI Query for Prepaid, and INAP Number Portability Phase 2/ANSI-41 INP Query (INP/AINPQ) features are enhanced to support the Additional Subscriber Data (ASD) (CNL & Triggerless Equal Access) feature. This enhancement extends the existing Number Portability Routing Number functionality for these features, supporting the new MSRN formatting options that use ASD.

In EPAP 12.0, a new portability type (PT=36) is added to facilitate the convergence of G-Flex and Number Portability features. The new PT value labels the DN Blocks as “Not identified to be Ported” under the Number

Portability feature. The value PT=0 continues to be supported for IS41-GSM migration and for existing number-portability installations.

The ASD (CNL & Triggerless Equal Access) feature does not require a particular EAGLE release. However, use of ASD functionality is determined by the EAGLE release. ASD is partially supported in EAGLE 5 ISS Release 39.2 and fully supported in EAGLE 5 ISS Release 40.0.

In EAGLE 5 ISS Release 39.2, the ATI Number Portability Query (ATINP) feature provides partial support for ASD. ASD support was also added for G-Port, INP, and AINPQ. Refer to the *EAGLE 5 ISS Release 39.2 Feature Notice*, the *Feature Manual - ATINP* and the *Commands Manual* of your 39.2 documentation for more information.

EAGLE 5 ISS Release 40.0 provides full support for ASD with the ASD (CNL & Triggerless Equal Access) feature and the 120 Million EPAP DN/IMSI Entries feature. Refer to the *EAGLE 5 ISS Release 40.0 Feature Notice* for more information.

The EPAP RTDB is limited to support 1.0 Million unique ASD entries.

The ASD feature enhances the G-Port feature to support nine new MSRN formats. See “Additional Subscriber Data Support for G-Port and G-Port SRI Query for Prepaid” in the *Feature Manual - G-Port*.

Hardware Requirements

The Additional Subscriber Data (ASD) (CNL & Triggerless Equal Access) feature does not have any additional hardware requirements.

Limitations

The Additional Subscriber Data (ASD) (CNL & Triggerless Equal Access) feature has the following limitations:

- Database backups of PDBA and RTDB made prior to upgrade will not be viable to restore these databases after upgrade.
- The ASD feature is dependent on the 120 Million EPAP DN/IMSI entries feature.

PDBA Changes

The following **PDBA > Manage Data > DN** menu options were modified to support the ASD feature requirements:

- **DN > Add** - Add Additional Subscriber Data (ASD) of up to 10 hexadecimal digits
- **DN > Update** - Update ASD of up to 10 hexadecimal digits
- **DN > Retrieve** - Retrieve ASD of up to 10 hexadecimal digits

The following **PDBA > Manage Data > DN Block** menu options were modified to support the ASD feature requirements:

- **DN Block > Add** - Add ASD of up to 10 hexadecimal digits
- **DN Block > Update** - Update ASD of up to 10 hexadecimal digits
- **DN Block > Retrieve** - Retrieve ASD of up to 10 hexadecimal digits

The following are new tables that will be added to PDB during upgrade.

Feature Notice

Table 1-2. PDB dn_asd Table Structure

Field	Type	Null	Key	Default	Size (bytes)
dnld	char(9)		PRI		9
asld	char(6)		PRI		6

Table 1-3. PDB dnb_asd Table Structure

Field	Type	Null	Key	Default	Size (bytes)
dnBSld	char(9)		PRI		9
asld	char(6)		PRI		6

Table 1-4. PDB ASD Table Structure

Field	Type	Null	Key	Default	Size (bytes)
ld	char(6)		PRI		6
refCnt	mediumint unsigned				3

Structure of Associated Subscriber Data

Associated Subscriber Data is represented as a sequence of hexadecimal digits. The customer will enter ASD as a string of hex digits. This data is stored in BCD format. Leading zeros are significant, so a length value will be stored with the BCD.

The following table shows an example of several ASD values and their corresponding representation in memory. ASD is shown as 10 digits, requiring 6 bytes of storage with a length indicator in the lower nibble of the most significant byte.

Table 1-5. ASD Values

	Length	Ten Digit BCD Field					ASD Value
Byte	1	2	3	4	5	6	
	01	00	00	00	00	00	0
	01	00	00	00	00	01	1
	043	00	00	00	0332	A21	32A1
	06	00	00	01	23	45	012345

PDBA-RTDB Interface

For the ASD feature, the PDBA-to-RTDB interface for updating DNs and DN Blocks must be extended to convey an ASD value. These appear together with their package payload type:

Table 1-6. PDBA-to-RTDB Package Payload Type

Package Type	Package Payload Type
RTDB_PT_C_UPDATE_TN_V3	t_rtdb_upd_tn_v3_pkg
RTDB_PT_C_UPDATE_TN_BLOCK_V3	t_rtdb_upd_tn_block_v3_pkg

A new RTDB version identifier will be added to the PDBA MTS file, enabling ASD-compliant RTDBs to connect and identify them to PDBA. This version for ASD and 120 Million EPAP DN/IMSI Entries feature will be PDDBA_RTDB_VER3.

A new class will be created to represent ASD, named t_ASD

DN Subscriptions

The following is a definition of the package structure for version 3 DN updates.

```
typedef struct s_rtdb_upd_tn_v3_pkg
{
    t_mtsu_package_header package_header;
    t_u32 sequence_num;
    t_u32 number_of_tns;
    t_Exxx_number entity[RTDB_MAX_NE_ASSOC];
    t_u32 entity_type[RTDB_MAX_NE_ASSOC];
    t_u32 port_type;
    t_ASD asd;
    t_Exxx_number tn[1];
} t_rtdb_upd_tn_v3_pkg;
```

DN Block Subscriptions

The following is a definition of the package structure for version 3 DN Block updates.

```
typedef struct s_rtdb_upd_tn_block_v3_pkg
{
    t_mtsu_package_header package_header;
    t_u32 sequence_num;
    t_Exxx_number begin_tn;
    t_Exxx_number end_tn;
    t_Exxx_number entity[RTDB_MAX_NE_ASSOC];
    t_u32 entity_type[RTDB_MAX_NE_ASSOC];
    t_u32 port_type;
    t_ASD asd;
} t_rtdb_upd_tn_block_v3_pkg;
```

Associated Subscriber Data Table Management

The PDDBA will keep reference counts for ASD instances, and inform RTDB when an ASD entry must be deleted. For this, a new package type will be created to convey ASD delete actions. This is given below along with its package payload type:

Table 1-7. Package Types for ASD Delete Actions

Package Type	Package Payload Type
RTDB_PT_C_DELETE_ASD	t_rtdb_dlt_asd_pkg

The following is a definition of the package structure for ASD delete payload type.

```
typedef struct s_rtdb_dlt_asd_pkg
{
    t_mtsu_package_header package_header;
    t_u32 sequence_num;
    t_ASD asd;
} t_rtdb_dlt_asd_pkg;
```

Commands

The **rtrv-data-rtdb** command is enhanced to display the Additional Subscriber Data address when the directory number is specified in the command. For a complete description of this command, refer to the *Commands Manual* of your EAGLE 5 ISS documentation set. The following examples display output for the rtrv-data-rtdb command.

Feature Notice

Example 1 displays the output that results when data for a specific directory number is requested.

rtrv-data-rtdb:dn=12345

tekelecstp 08-08-18 07:56:48 EST EAGLE5 39.1.0

Card Loc : 1101 Status:Coherent
DN Portability Type (255)
12345 No portability type

EntIdx1 EntIdx2

ASD Address: 1234567890

;

Example 2 displays the output that results when data for a specific Service Module card is requested.

rtrv-data-rtdb:dn=1919555444:loc=1107

tekelecstp 08-08-26 14:03:15 EST EAGLE5 39.1.0

Card Loc : 1107 Status:Coherent
DN Portability Type (1) Entity Index
1919555444 Own Number ported out H'0000513d

Entity Address Type PC(ANSI) RI SSN TT NP NAI DA
1234 RN ----- GT 000 000 00 000 none

SRFIMSI NSSN CCGT NTT NNP NNAI
no no no no no

ASD Address: 1234567890

;

Example 3 displays the output that results when data for a directory number that is associated with two network entities is requested.

rtrv-data-rtdb:dn=11111111111111

tekelecstp 08-08-11 07:56:48 EST EAGLE5 39.1.0

Card Loc : 1103 Status:Coherent
DN Portability Type (255)
11111111111111 No portability type

EntIdx1 EntIdx2
H'00000007 H'00000005

Entity Address Type PC(INTL) RI SSN TT NP NAI DA
bcda4321 RN 5-005-5 GT 000 000 00 000 none

SRFIMSI NSSN CCGT NTT NNP NNAI
no no no no no

Entity Address Type PC(ANSI) RI SSN TT NP NAI DA
abcd1234 VMSID ----- GT 000 000 00 000 none

SRFIMSI NSSN CCGT NTT NNP NNAI
no no no no no

ASD Address: 1234567890

;

PDBA export files are unaffected and will continue to be supported as a means to load or reload data to the PDBA.

Performance

The feature has small but negligible impact on the provisioning performance of the PDBI. New joins to the ASD table will be performed on DN and DN Block search and count operations.

The feature will have a slight impact on PDBA to RTDB delete performance. A new message type to manage the ASD table will be sent from PDBA to RTDB during these operations.

Feature Control Requirements

There are no feature control requirements identified for this feature.

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.

Locate Product Documentation on the Customer Support Site

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

1. Log into the Tekelec **new** Customer Support site at support.tekelec.com .
NOTE: If you have not registered for this new site, click the Register Here link. Have your customer number available. The response time for registration requests is 24 to 48 hours.
2. Click the **Product Support** tab.
3. Use the Search field to locate a document by its part number, release number, document name, or document type. The Search field accepts both full and partial entries.
4. Click a subject folder to browse through a list of related files.
5. To download a file to your location, right-click the file name and select **Save Target As**.

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 the EAGLE 5 ISS. To enroll in any of the courses or for schedule information, contact the Tekelec Training Center at (919) 460-3064 or E-mail eagletrain@tekelec.com.

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

Customer Care Center

The Tekelec Customer Care Center offers a point of contact for product and service support through highly trained engineers or service personnel. When a call is received, a Customer Service Request (CSR) is issued to record the request for service. Each CSR includes an individual tracking number.

After a CSR is issued, the Customer Care Center determines the classification of the trouble. If a critical problem exists, emergency procedures are initiated. If the problem is not critical, information regarding the serial number

Feature Notice

of the system, Common Language Location Identifier (CLLI), initial problem symptoms (includes outputs and messages) is recorded. A primary Customer Care Center engineer is also assigned to work on the CSR and provide a solution to the problem. The CSR is closed when the problem is resolved.

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

Tekelec - Global

Email (All Regions): support.tekelec.com

- **USA and Canada**

Phone:

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

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

TAC Regional Support Office Hours:

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

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

Phone:

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

TAC Regional Support Office Hours (except Brazil):

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

- **Argentina**

Phone:

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

- **Brazil**

Phone:

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

TAC Regional Support Office Hours:

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

- **Chile**

Phone:

1230-020-555-5468

- **Columbia**

Phone:

01-800-912-0537

- **Dominican Republic**
Phone:
1-888-367-8552
- **Mexico**
Phone:
001-888-367-8552
- **Peru**
Phone:
0800-53-087
- **Puerto Rico**
Phone:
1-888-367-8552 (1-888-FOR-TKLC)
- **Venezuela**
Phone:
0800-176-6497
- **Europe, Middle East, and Africa**
 - **Signaling**
Phone:
+44 1784 467 804 (within UK)
TAC Regional Support Office Hours:
8:00 a.m. through 7:00 p.m. (GMT), Monday through Friday, excluding holidays
 - **Software Solutions**
Phone:
+33 3 89 33 54 00
TAC Regional Support Office Hours:
8:00 a.m. through 7:00 p.m. (GMT), Monday through Friday, excluding holidays
- **Asia**
 - **India**
Phone:
+91 124 436 8552 or +91 124 436 8553

Feature Notice

TAC Regional Support Office Hours:

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

— Singapore

Phone:

+65 6796 2288

TAC Regional Support Office Hours:

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

Emergency Response

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

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

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

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

Glossary

C

CLLI	Common Language Location Identifier
CSR	Customer Service Request

E

EPAP	EAGLE Provisioning Application Processor
------	--

G

GUI	Graphical User Interface
-----	--------------------------

I

ISS	Integrated Signaling System
-----	-----------------------------

Index

C

CSRCustomer Service Request (CSR)
 Customer Service Request (CSR) FN-8
Customer Care Center
 contact information FN-8
 emergency response FN-11
Customer Service Request (CSR) FN-8
Customer Support site
 how to access FN-8

D

documentation
 locate on Customer Support site FN-8

Related Publications FN-8

E

emergency response, Customer Care Center
 FN-11

L

locate documentation on Customer Support site
 FN-8

R

Related Publications FN-8

T

TAC Regional Support Office FN-9

