Oracle® Communications EAGLE

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Chapter 1

EAGLE Publications

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Oracle Communications EAGLE Documentation

Oracle Communications EAGLE customer documentation is a comprehensive group of electronic files available on the Customer Support site (see *Locate Product Documentation on the Oracle Help Center Site*).

EAGLE Core Documentation

- *Release Notes* describes the features contained in the specified release, including hardware baselines. It also contains Generic Program Loads (GPL)s, a list of PRs resolved in a build, the Product Compatibility Matrix, the EAGLE-PIC Compatibility Matrix, and the latest known PRs per system and subsystem.
- *Commands User's Guide* contains procedures for logging in to or out of the EAGLE, a general description of the terminals, printers, the disk drive used, and a description of all the commands used in the system.
- *Commands Error Recovery Reference* contains the procedures to resolve error message conditions generated by the commands in the *Commands User's Guide*. These error messages are presented in numerical order.
- *Database Administration – Features User's Guide* contains procedural information required to configure the EAGLE to implement the STP LAN, Database Transport Access, GSM MAP Screening, and EAGLE Support for Integrated Sentinel features.
- *Database Administration - GWS User's Guide* contains a description of the Gateway Screening (GWS) feature and the procedures necessary to configure the EAGLE to implement this feature.
- *Database Administration – GTT User's Guide* contains procedural information required to configure an EAGLE to implement Global Title Translation features, including Enhanced Global Title Translation, Variable Length Global Title Translation, Interim Global Title Modification, Intermediate GTT Loadsharing, Flexible Intermediate GTT Loadsharing, Flexible Final GTT Loadsharing, ANSI/ITU SCCP Conversion, and Origin-Based SCCP Routing.
- *Database Administration - IP7 User's Guide* contains procedural information required to configure the EAGLE to implement the SS7-IP Gateway.
- *Database Administration – SEAS User's Guide* contains the EAGLE configuration procedures that can be performed from the Signaling Engineering and Administration Center (SEAC) or a Signaling Network Control Center (SNCC). Each procedure includes a brief description of the procedure, a flowchart showing the steps required, a list of any EAGLE commands that may be required for the procedure but that are not supported by SEAS, and a reference to optional procedure-related information, which can be found in the Database Administration manuals for either Gateway Screening, Global Title Translation, or SS7.
- *Database Administration – SS7 User's Guide* contains procedural information required to configure an EAGLE to implement the SS7 protocol.
- *Database Administration – System Management User's Guide* contains procedural information required to manage the EAGLE database and GPLs, and to configure basic system requirements such as user names and passwords, system-wide security requirements, and terminal configurations.
- *Measurements Reference* contains descriptions of Basic OAM Measurements, the Measurements Platform, and E5-OAM Integrated Measurements. The measurements that can be collected, collection

intervals, storage and retrieval of measurements, and the reports that can be generated for the EAGLE are described.

- *Unsolicited Alarm and Information Messages Reference* describes the EAGLE system unsolicited alarm and information messages sent to the system terminal whenever there is a system fault, whenever a previous fault condition is corrected, or when a subsystem, equipment, and/or service is placed in or taken out-of-service. Each message has a trouble code and text associated with the trouble condition.
- *Security Guide* describes how to ensure a secure installation of EAGLE and explains EAGLE security features.
- *System Healthcheck Guide* describes the recommended methods and procedures to be used to evaluate Site and STP data retrieved from in-service EAGLE STPs. The scope of this document is specifically to collect data to determine the health of an in-service EAGLE prior to a software upgrade or an extension shelf installation. In general, this document may be used for an instance where the health determination of the EAGLE is required (i.e., troubleshooting).
- *Software Upgrade Guide* describes methods utilized and procedures executed to perform a software upgrade on an in-service EAGLE STP.

EAGLE Feature Documentation

- *Analyzed Information Features User's Guide* provides information and instructions on how to configure, use, and maintain Analyzed Information features on the EAGLE. The Analyzed Information features are Info Analyzed Relay (IAR) Base, IAR Number Portability (IAR NP), IAR Additional Subscriber Data (IAR ASD), and IAR Generic Routing Number (IAR GRN). Service Portability and S-Port Subscriber Differentiation support for IAR NP are also described in the manual.
- *A-Port User's Guide* describes a feature that provides the capability for IS41 mobile subscribers to change service provider while retaining their original Mobile Directory Number (MDN). This manual gives the instructions and information on how to configure, use, and maintain the A-Port feature on the EAGLE.
- *ATINP User's Guide* describes a feature that provides the capability for IS41 subscribers to migrate to a GSM network and GSM mobile subscribers to migrate to an IS41 network. This manual provides instructions and information on how to configure, use, and maintain the IS41 GSM Migration (IGM) feature on the EAGLE. Service Portability support for ATINP is also described in the manual.
- *EIR User's Guide* provides instructions and information on how to configure, use, and maintain the Equipment Identity Register (EIR) feature on the EAGLE. The feature provides network operators with the capability to prevent stolen or disallowed GSM mobile handsets from accessing the network.
- *ENUM User's Guide* describes a feature that allows ENUM Number Portability Query messages to be received by an EAGLE ENUM card, processed by the database (RxDB, ENUM), and then a Tier 1 ENUM Response message pointing to a carrier Tier 2 server returned to the requestor. This manual provides feature descriptions, along with commands, maintenance, measurements, and configuration details associated with the ENUM Mobile Number Portability and Tier One Address Resolution feature.
- *G-Flex C7 Relay User's Guide* describes features that support the efficient management of Home Location Registers in various networks. This manual provides instructions and information on

how to configure, use, and maintain G-Flex,*G-Flex MAP Layer EAGLE Routing*, and *EPAP Provisioning Blacklist* features and the*G-Flex Relay* function on the EAGLE.

- *G-Port User's Guide* describes features that provide the capability for mobile subscribers to change the GSM subscription network within a portability cluster while retaining their original MSISDNs. This manual provides instructions and information on how to configure, use, and maintain the G-Port, MT-based GSM SMS NP, MT-based GSM MMS NP, and GSM MAP SRI Redirect to Serving HLR, G-Port SRI Query for Prepaid, G-Port SCCP Service Re-Route Capability, and MNP Circular Route Prevention features on the EAGLE. Service Portability support for G-Port SRI Query for Prepaid is also described in the manual.
- *IDP-Related Features User's Guide* provides information and instructions on how to configure, use, and maintain IDP-related features on the EAGLE. The IDP-related features are Prepaid IDP Query Relay (IDP Relay), IDP Screening for Prepaid, IDP A-Party Blacklist, and IDP A-Party Routing. Service Portability and S-Port Subscriber Differentiation support for IDP Relay are also described in the manual.
- *INP/AINPQ User's Guide* describes the INP feature that provides INAP-based Number Portability functions and the AINPQ feature that provides ANSI-41 INP Query functions. This manual provides information and instructions on how to configure, use, and maintain the INP, AINPQ, and INP Circular Route Prevention features on the EAGLE. Service Portability support for INPQ and INPMR services and S-Port Subscriber Differentiation for the INPMR service are also described in the manual.
- *IS41 GSM Migration User's Guide* describes a feature that provides the capability for IS41 subscribers to migrate to a GSM network and GSM mobile subscribers to migrate to an IS41 network and keep their original telephone number. This manual provides instructions and information on how to configure, use, and maintain the IS41 GSM Migration (IGM) feature on the EAGLE.
- *MO-SMS User's Guide* addresses the number portability requirements of wireless network operators for delivery of Mobile Originated SMS messages in a number portability environment for GSM and IS41 and in the IS41-to-GSM Migration environment . The EAGLE MO SMS features apply number portability database lookup to SMS messages for IS41 and GSM networks. This manual provides instructions and information on how to configure, use, and maintain the MO-based GSM SMS NP, MO-based IS41 SMS NP, MO SMS IS41-to-GSM Migration, Portability Check for Mobile Originated SMS (MNP SMS), and Prepaid Short Message Service Intercept (PPSMS) features on the EAGLE. Service Portability and S-Port Subscriber Differentiation support for the MO-based GSM SMS NP and MO-based IS41 SMS NP features are also described in the manual.
- *Numbering Plan Processor (NPP) User's Guide* describes a generic software process to provision complex numbering plans and to modify parameters for digit string filtering, conditioning, and encoding. NPP is used by EAGLE features; other manuals in this documentation set describe the specific use of NPP for a feature. The manual defines the components of NPP and their interactions, and describes a test tool that can be used to verify NPP provisioning before it is used with live traffic.
- *SIGTRAN User's Guide* describes SS7-over-IP networks that use the Signaling Transport (SIGTRAN) protocol suite as an enabler to access IP networks. This document also examines reasons for transitioning, planning and dimensioning, and helpful information for implementing the network.
- *TIF User's Guide* describes the functions and use of the Triggerless ISUP Framework (TIF) and the TIF Number Portability (TIF NP), TIF SCS Forwarding, and TIF Simple Number Substitution (TIF SNS) features. TIF provides a method for querying entities (such as gsmSCF) to obtain number portability and routing information for subscribers directly from an EAGLE acting as MNP SRF.

The TIF NP feature uses TIF and NPP for incoming ISUP IAM message decoding, number conditioning, RTDB lookup for number portability information, and outgoing message formatting. The TIF SCS Forwarding feature determines when to use DTA to send relayed IAM and SAM MSU information to the SCS. The TIF SNS feature substitutes the calling party number in the ISUP IAM message with a single configured calling party number. The manual provides instructions and information about configuring and using TIF and the TIF features on the EAGLE. Service Portability support for TIF NP is also described in the manual.

- *V-Flex User's Guide* describes the V-Flex Voice Mail Router (V-Flex) feature, which allows calls to be routed to a specific voice mail server (VMS) based on subscriber and call context data. This manual provides instructions and information on how to configure, use, and maintain the V-Flex Voice Mail Router (V-Flex) feature on the EAGLE.

EAGLE Hardware, Installation and Maintenance Documentation

- *Hardware Reference* provides an overview of each system and its subsystems, details of standard and optional hardware components in each system, and basic site engineering. Refer to this manual to obtain a basic understanding of each type of system and its related hardware, to locate detailed information about hardware components used in a particular release, and to help configure a site for use with the system hardware.
- *Installation Guide* contains cabling requirements, schematics, and procedures for installing the EAGLE along with LEDs, connectors, cables, and power cords to peripherals. Refer to this manual to install components or the complete systems.
- *Maintenance Guide* contains procedural information required for maintaining the EAGLE system. *Maintenance Guide* provides preventive maintenance procedures used in maintaining the different systems, including card removal and replacement procedures.
- *Application B Card Hardware and Installation Guide* provides specifications and a description of the E5-APP-B card, as well as procedures for installation. Refer to this manual to obtain a basic understanding of the card, its hardware and installation requirements.

Reference Documentation

- *Master Glossary* contains an alphabetical listing of terms, acronyms, and abbreviations relevant to the system.
- *Previously Released Features* summarizes the features of previous EAGLE releases, and it identifies the release number of their introduction.
- *Related Publications Reference* (this document) lists all EAGLE-related documents.
- *Licensing Information User Manual* is intended to help customers understand the program editions, entitlements, restrictions, prerequisites, and/or separately licensed third party technology terms associated with the EAGLE software.

Locate Product Documentation on the Oracle Help Center Site

Oracle Communications customer documentation is available on the web at the Oracle Help Center (OHC) site, *http://docs.oracle.com*. You do not have to register to access these documents. Viewing these files requires Adobe Acrobat Reader, which can be downloaded at *http://www.adobe.com*.

1. Access the Oracle Help Center site at *http://docs.oracle.com*.
2. Click **Industries**.
3. Under the Oracle Communications subheading, click the **Oracle Communications documentation** link.
   The Communications Documentation page appears. Most products covered by these documentation sets will appear under the headings "Network Session Delivery and Control Infrastructure" or "Platforms."
4. Click on your Product and then the Release Number.
   A list of the entire documentation set for the selected product and release appears.
5. To download a file to your location, right-click the **PDF** link, select **Save target as** (or similar command based on your browser), and save to a local folder.

Glossary

A

ANSI	American National Standards Institute An organization that administers and coordinates the U.S. voluntary standardization and conformity assessment system. ANSI develops and publishes standards. ANSI is a non-commercial, non-government organization which is funded by more than 1000 corporations, professional bodies, and enterprises.
ATINP	ATI Number Portability Query feature

E

EIR	Equipment Identity Register A network entity used in GSM networks, as defined in the 3GPP Specifications for mobile networks. The entity stores lists of International Mobile Equipment Identity (IMEI) numbers, which correspond to physical handsets (not subscribers). Use of the EIR can prevent the use of stolen handsets because the network operator can enter the IMEI of these handsets into a 'blacklist' and prevent them from being registered on the network, thus making them useless.

G

G-Flex	GSM Flexible numbering A feature that allows the operator to flexibly assign individual

G

	subscribers across multiple HLRs and route signaling messages, based on subscriber numbering, accordingly.
GPL	Generic Program Load Software that allows the various features in the system to work. GPLs and applications are not the same software.
GSM	Global System for Mobile Communications A second generation digital PCS mobile phone standard used in many parts of the world.
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 database is allowed to enter the EAGLE.

I

Integrated Sentinel	The Integrated Sentinel product provides monitoring capabilities for Signaling System 7 (SS7) links. Integrated Sentinel includes network surveillance capabilities and fault-management functions.
IP	Intelligent Peripheral Internet Protocol - IP specifies the format of packets, also called

I

	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.
ITU	International Telecommunications Union An organization that operates worldwide to allow governments and the private telecommunications sector to coordinate the deployment and operating of telecommunications networks and services. The ITU is responsible for regulating, coordinating and developing international telecommunications, and for harmonizing national political interests.

M

MAP	Mated Application Part Mobile Application Part An application part in SS7 signaling for mobile communications systems.

N

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.

P

P

PR	Problem Report Tekelec's term for a bug record.

S

SCCP	Signaling Connection Control Part The signaling connection control part with additional functions for the Message Transfer Part (MTP) in SS7 signaling. Messages can be transmitted between arbitrary nodes in the signaling network using a connection-oriented or connectionless approach.
SEAC	Signaling Engineering and Administration Center
SS7	Signaling System #7 A communications protocol that allows signaling points in a network to send messages to each other so that voice and data connections can be set up between these signaling points. These messages are sent over its own network and not over the revenue producing voice and data paths. The EAGLE is an STP, which is a device that routes these messages through the network.
STP LAN	Signaling Transfer Point Local Area Network. A feature in the EAGLE that copies MSUs selected through the gateway screening process and sends these MSUs over the Ethernet to an external host computer for further processing.