

**Oracle® Communications  
Diameter Signaling Router**

Related Publications Reference

**E53481 Revision 01**

July 2014

Oracle® Communications Related Publications Reference

Copyright © 2014,

Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

# Table of Contents

<b>Related Publications</b> .....	<b>4</b>
Oracle Communications Diameter Signaling Router Documentation Set.....	4
Locate Product Documentation on the Oracle Technology Network Site.....	5
<b>Glossary</b> .....	<b>7</b>

## Related Publications

### Oracle Communications Diameter Signaling Router Documentation Set

The Diameter Signaling Router (DSR) documentation set includes the following publications, which provide information for the configuration and use of DSR and related Applications.

Some documents, such as *Release Notes*, are available only through the Oracle Technical Network (OTN).

The current releases of all documents are available through the Oracle Technical Network.

*Feature Notice* describes new features in the current release, provides the hardware baseline for this release, and explains how to find customer documentation on the OTN.

*Release Notes* are published when a release becomes available. The contents include a list of Problem Reports that have been fixed in the release and a list of Problem Reports that are still open in the release.

*Roadmap to Hardware Documentation* provides links to access manufacturer online documentation for hardware related to the DSR.

*Operation, Administration, and Maintenance (OAM) Guide* provides information on system-level configuration and administration tasks for the advanced functions of the DSR, both for initial setup and maintenance.

*SS7/Sigtran User's Guide* describes explains how to use the SS7/Sigtran GUI pages to perform configuration and maintenance tasks related to Adjacent Servers, SS7 Signaling Points, Link Sets, Associations, Routes, and SS7 Sigtran Options, for the Signaling Network Interface (SRI) used by the MD-IWF SS7 Application. The Signaling Network Interface provides standard SCCP functions, traditional MTP3 routing capabilities, and a standard M3UA interface to the external network.

*Transport Manager User's Guide* explains how to use the Transport Manager GUI pages to configure "Transports" (SCTP Associations with remote hosts over an underlying IP network). Transport Manager provides the interface to the Adapter Layer and manages the connections and data transmission from SCTP sockets.

*Communication Agent User's Guide* explains how to use the Communication Agent GUI pages to configure Remote Servers, Connection Groups, and Routed Servers, and to maintain configured connections.

*Diameter Common User's Guide* explains how to use the Diameter Common GUI pages to configure components that are common to more than one DSR Application, including Network Identifiers (MCC Ranges and MCCMNC), MPs (Profiles and Profile Assignments). The Guide also describes the use of the Bulk Import and Export functions for exporting Diameter, IPFE, and DSR Application configuration data on demand and at scheduled intervals, and for importing configuration data from exported files.

*Diameter User's Guide* explains how to use the Diameter GUI pages to manage the configuration and maintenance of Diameter Configuration components, including Local and Peer Nodes, Connections,

Configuration Sets, Peer Routing Rules, Application Route Tables, System Options, DNS options, AVP dictionary functions; introduces IDIH and Diameter Mediation; addresses Topology Hiding; describes the functions of Diameter Message Copy; and describes DSR capacity and congestion controls.

*Diameter Mediation User's Guide* describes the functions of Diameter Mediation, and explains how to use the Diameter Mediation GUI pages (nested inside the Diameter GUI folder) to configure and test Rule Templates, how to use the Formatting Value Wizard, and how to configure Rule Sets.

*IP Front End (IPFE) User's Guide* explains how to use the IPFE GUI pages to configure IPFE to distribute IPv4 and IPv6 connections from multiple clients to multiple nodes.

*Range-Based Address Resolution (RBAR) User's Guide* explains how to use the RBAR GUI pages to configure RBAR to route Diameter end-to-end transactions based on Diameter Application ID, Command Code, Routing Entity Type, and Routing Entity address ranges and individual addresses.

*Full-Address Based Resolution (FABR) User's Guide* explains how to use the FABR GUI pages to configure FABR to resolve designated Diameter server addresses based on Diameter Application ID, Command Code, Routing Entity Type, and Routing Entity addresses.

*MAP-Diameter IWF User's Guide* describes the configuration and operation of the MAP-to-Diameter Interworking Function (MD-IWF) and Diameter-to-MAP Interworking Function (DM-IWF) DSR Applications.

*Charging Proxy Application (CPA) and Offline Charging Solution User's Guide* describes the Offline Charging Solution and explains how to use the CPA GUI pages to set System Options for CPA, configure the CPA's Message Copy capability, and configure the Session Binding Repository for CPA.

*Policy DRA User's Guide* describes the topology and functions of the Policy Diameter Routing Agent (Policy DRA) DSR Application and the Policy Session Binding Repository, and explains how to use the GUI pages to configure Policy DRA.

*Gateway Location Application (GLA) User's Guide* describes the functions of retrieving subscriber data stored in Policy Session Binding Repository (pSBR) provided by Policy DRA and explains how to use the GUI pages to configure GLA.

*DSR Alarms, KPIs, and Measurements Reference* provides detailed descriptions of alarms, events, Key Performance Indicators (KPIs), and measurements; indicates actions to take to resolve an alarm, event, or unusual Diameter measurement value; and explains how to generate reports containing current alarm, event, KPI, and measurement information.

*DSR Administration Guide* describes DSR architecture, functions, configuration, and tools and utilities (IPsec, Import/Export, IDIH, and database backups); and provides references to other publications for more detailed information.

*IDIH User's Guide* describes the configuration and use of Integrated Diameter Information Hub (IDIH).

## Locate Product Documentation on the Oracle Technology Network Site

Oracle customer documentation is available on the web at the Oracle Technology Network (OTN) 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 [www.adobe.com](http://www.adobe.com).

1. Log into the Oracle Technology Network site at <http://docs.oracle.com>.
2. Under **Applications**, click the link for **Communications**.

The **Oracle Communications Documentation** window opens with Tekelec shown near the top.

3. Click **Oracle Communications Documentation for Tekelec Products**.
4. Navigate to your Product and then the Release Number, and click the **View** link (the **Download** link will retrieve the entire documentation set).
5. To download a file to your location, right-click the PDF link and select **Save Target As**.

# Glossary

## C

CPA	<p>Charging Proxy Application</p> <p>The Charging Proxy Application (CPA) feature defines a DSR-based Charging Proxy Function (CPF) between the CTFs and the CDFs. The types of CTF include GGSN, PGW, SGW, HSGW, and CSCF/TAS.</p>
-----	---

## D

DNS	<p>Domain Name System</p> <p>A system for converting Internet host and domain names into IP addresses.</p>
-----	--

DSR	<p>Diameter Signaling Router</p> <p>A set of co-located Message Processors which share common Diameter routing tables and are supported by a pair of OAM servers. A DSR Network Element may consist of one or more Diameter nodes.</p>
-----	--

## F

FABR	<p>Full Address Based Resolution</p> <p>Provides an enhanced DSR routing capability to enable network operators to resolve the designated Diameter server addresses based on individual user identity addresses in the incoming Diameter request messages.</p>
------	--

## G

GLA

**G**

Gateway Location Application A DSR Application that provides a Diameter interface to subscriber data stored in the DSR's Policy Session Binding Repository (pSBR). Subscriber data concerning binding and session information is populated in the pSBR-B by the Policy Diameter Routing Agent (Policy DRA). GLA provides methods for a Diameter node to query binding information stored in the pSBR-B. The query can be by either IMSI or MSISDN. GLA processes Diameter Requests and generates Diameter Answers.

IDIH

**I**

Integrated Diameter Intelligence Hub

IPFE

IP Front End

A traffic distributor that routes TCP traffic sent to a target set address by application clients across a set of application servers. The IPFE minimizes the number of externally routable IP addresses required for application clients to contact application servers.

IPsec

Internet Protocol Security

A protocol suite for securing Internet Protocol communications by authenticating and encrypting each IP packet of a data stream.

KPI

**K**

Key Performance Indicator

**M**

**M**

MCC

Mobile Country Code

A three-digit number that uniquely identifies a country served by wireless telephone networks. The MCC is part of the International Mobile Subscriber Identity (IMSI) number, which uniquely identifies a particular subscriber. See also MNC, IMSI.

**P**

Policy DRA

Policy Diameter Relay Agent. A scalable, geo-diverse DSR application that creates a binding between a subscriber and a PCRF, and routes all policy messages for a given subscriber to the PCRF that currently hosts that subscriber's policy rules. Policy DRA is capable of performing Topology Hiding to hide the PCRF from the Policy Client.

pSBR

Policy SBR

**R**

RBAR

Range Based Address Resolution

A DSR enhanced routing application which allows the user to route Diameter end-to-end transactions based on Application ID, Command Code, "Routing Entity" Type, and Routing Entity address ranges.

**S**

SCTP

Stream Control Transmission Protocol

An IETF transport layer protocol, similar to TCP that sends a message in one operation.

**S**

The transport layer for all standard IETF-SIGTRAN protocols.

SCTP is a reliable transport protocol that operates on top of a connectionless packet network such as IP and is functionally equivalent to TCP. It establishes a connection between two endpoints (called an association; in TCP, these are sockets) for transmission of user messages.