

**Oracle® Communications
Diameter Signaling Router**

Related Publications Reference

Release 8.1

E86287 Revision 01

July 2017

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, then 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 about 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 unless otherwise set forth in an applicable agreement between you and Oracle. 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, except as set forth in an applicable agreement between you and Oracle.

Table of Contents

Chapter 1: Related Publications.....	4
Oracle Communications Diameter Signaling Router Documentation Set.....	5
Oracle Communications Subscriber Database Server Documentation Set.....	7
Oracle Communications IDIH Documentation Set.....	7
Locate Product Documentation on the Oracle Help Center Site.....	8
Glossary.....	9

Chapter 1

Related Publications

Topics:

- [*Oracle Communications Diameter Signaling Router Documentation Set.....5*](#)
- [*Oracle Communications Subscriber Database Server Documentation Set.....7*](#)
- [*Oracle Communications IDIH Documentation Set.....7*](#)
- [*Locate Product Documentation on the Oracle Help Center Site.....8*](#)

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.

Release Notice describes new features in the release; lists the known and fixed bugs, and the software lineup; and explains how to find customer documentation on the Oracle Technology Network (OTN).

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

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, Peer Node Groups, Connections, Configuration Sets, Peer Routing Rules, Application Route Tables, System Options, DNS options, AVP dictionary functions, Egress Throttling, and Shared Traffic Throttling Groups. It also introduces IDIH, RADIUS, and Diameter Mediation; addresses Topology Hiding; describes the functions of Diameter Message Copy; and describes DSR capacity and congestion controls.

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 Dashboard, 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.

As of DSR 7.2, the Charging Proxy Application (CPA) has reached its end of service life. The product has no replacement.

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 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.

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.

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.

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.

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.

Policy and Charging Application User's Guide describes the configuration and maintenance functions of the Policy and Charging Application (PCA), including Policy Diameter Routing Agent (Policy DRA) and Online Charging DRA (OCDRA) DSR Application. and explains how to use the GUI pages to configure PCA.

SBR User's Guide describes the configuration and maintenance functions of the SBR, including SBR database management, reconfiguration, resizing, and migration.

RADIUS User's Guide describes the features associated with RADIUS (Remote Authentication Dial In User Service).

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.

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.

Diameter Custom Applications (DCA) Feature Activation Guide explains how to enable and disable the DCA Framework and applications. The DCA framework is a set of APIs and services that allows for the creation of applications on top of the Diameter Signaling Router (DSR).

Steering of Roaming (SoR) User's Guide explains how to use the SoR application on the DCA Framework. The SoR application allows home network operators to control and distribute the registration traffic of their outbound roamers.

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

DSR Measurements Reference provides detailed descriptions of measurements, indicates actions to take to resolve unusual Diameter measurement value, and explains how to generate reports containing current measurement information.

Machine to Machine Interface API describes the Machine to Machine Interface (MMI) for DSR. The DSR MMI is a RESTful (Representational State Transfer) interface providing access to a broad range of Operations, Administration, and Maintenance (OAM) services that clients use to configure and manage the DSR. This document is the comprehensive API reference guide to the RESTful services the DSR makes available to clients through the DSR MMI. To access the MMI API documentation through a direct URL access, without login, go to [http://\(IP address of NOAM or SOAM\)/raml/mmi.html](http://(IP address of NOAM or SOAM)/raml/mmi.html). Or the MMI API documentation can be accessed directly from the DSR GUI by clicking on the new MMI API Guide menu item.

Oracle Communications Subscriber Database Server Documentation Set

The Subscriber Database Server (SDS) documentation set includes the following publications, which provide information for the configuration and use of SDS and related applications.

Some documents, such as the *Provisioning Interface Guide*, are available only on the Oracle Technical Network (OTN).

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

Getting Started Guide provides an overview of the SDS documentation, application, system architecture, and functionality including user interface elements, main menu options, supported browsers, and common user interface widgets.

The *User's Guide* provides screen-by-screen documentation to describe each SDS menu option.

Operations, Administration, and Maintenance (OAM) User's Guide describes how to view and manage the basic operation, administration, and maintenance for SDS.

Communication Agent User's Guide describes the plug-in included with SDS that includes infrastructure features and services for enabling inter-server communication including the High-Availability (HA) services sub-resources.

SDS Alarms, KPIs, and Measurements (AKMs) Reference provide information relevant to understanding alarms and events that may occur in the SDS application; recovery procedures for addressing alarms and events, as necessary; tasks for viewing alarms and events, generating alarms reports, and viewing and exporting alarms and events history; and information, including any relevant customer actions for addressing unusual measurement values.

Provisioning Interface describes the provisioning XML and SOAP interfaces local and remote provisioning client applications use to administer the Oracle Communications User Data Repository (UDR) system provisioning database.

Oracle Communications IDIH Documentation Set

The IDIH documentation set includes the following publications, which provide information for the configuration and use of IDIH and related applications.

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

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

IDIH Audit Viewer Administrator's Guide provides information about the Audit Viewer application, including its functionalities to efficiently and effectively monitor applications, user's activities, and alarm status.

IDIH Alarm Forwarding Administrator's Guide provides information about the Alarm Forwarding application, including definitions and instructions to help the user efficiently and effectively define conditions and destinations for forwarding alarms.

IDIH Operations, Administration, and Maintenance Administrator's Guide provides information about the OAM application, including its functionality to configure IDIH mediation for processing and storing

TDR records. It also provides configuration functionality for viewing TDR records in the ProTrace application.

The *IDIH ProTrace User's Guide* describes the ProTrace application, including its functionality to monitor traces.

IDIH System Alarms User's Guide provides information about the System Alarms application, including its functionality to efficiently and effectively monitor alarm status.

IDIH Log Viewer User's Guide explains the Log Viewer application, including its functionalities to efficiently and effectively monitor applications, user's activities, and alarm status.

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.

D

DCA	Diameter Custom Application
DNS	Domain Name System A system for converting Internet host and domain names into IP addresses.
DSR	Diameter Signaling Router 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.

F

FABR	Full Address Based Resolution 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.
------	--

G

GLA	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
-----	--

G

(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.

H

HA

High Availability

High Availability refers to a system or component that operates on a continuous basis by utilizing redundant connectivity, thereby circumventing unplanned outages.

I

IDIH

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.

K

KPI

Key Performance Indicator**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

M

a particular subscriber. See also MNC, IMSI.

O

OAM

Operations, Administration, and Maintenance. These functions are generally managed by individual applications and not managed by a platform management application, such as PM&C.

Operations – Monitoring the environment, detecting and determining faults, and alerting administrators.

Administration – Typically involves collecting performance statistics, accounting data for the purpose of billing, capacity planning, using usage data, and maintaining system reliability.

Maintenance – Provides such functions as upgrades, fixes, new feature enablement, backup and restore tasks, and monitoring media health (for example, diagnostics).

OTN

Oracle Technology Network

Oracle website where Info Dev documents are posted at P2.

P

PCA

Point Code ANSI

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

P

policy rules. Policy DRA is capable of performing Topology Hiding to hide the PCRF from the Policy Client.

pSBR

Policy SBR

R

RADIUS

Remote Authentication Dial-In User Service

A client/server protocol and associated software that enables remote access servers to communicate with a central server to authorize their access to the requested service. The MPE device functions with RADIUS servers to authenticate messages received from remote gateways. See also Diameter.

RBAR

Range Based Address Resolution

A DSR enhanced routing application which allows you 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.

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

S

to TCP. It establishes a connection between two endpoints (called an association; in TCP, these are sockets) for transmission of user messages.

SDS

Subscriber Database Server

Subscriber Database Server (SDS) provides the central provisioning of the Full-Address Based Resolution (FABR) data. The SDS, which is deployed geo-redundantly at a Primary and Disaster recovery site, connects with the Query Server and the Data Processor System Operations, Administration, and Maintenance (DP SOAM) servers at each Diameter Signaling Router (DSR) site or a standalone DP site to replicate and recover provisioned data to the associated components.

SOAP

Simple Object Access Protocol

SoR

Steering of Roaming

U

UDR

User Data Repository

A logical entity containing user data.

X

XML

eXtensible Markup Language

A version of the Standard Generalized Markup Language (SGML) that allows Web developers to create customized tags for additional functionality.