Oracle® Communications

Diameter Signaling Router

Licensing Information User Manual

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Oracle Communications Diameter Signaling Router Licensing Information User Manual, Release 8.4

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1. Introduction

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2. Licensing Information

Description of Product Editions and Permitted Features

Prerequisite Products

Entitled Products and Restricted Use Licenses

Product	Subproduct	Licensing Information
Oracle Communications Diameter Signaling Router	Oracle Communications Diameter Signaling Router (base fee) – per Server	**Description**: This product provides the following base Diameter Signaling Router functionality: **OAM** – Operations, administration, measurements functionality including: SNMP, event logs, security logs, configuration, topology, user/group management, and reports. **Core Routing** – Core routing and processing functionality that provides application specific handling of real-time Diameter messages. **Congestion Management** – Ingress and egress, local and remote Diameter congestion control. **Connection Management** – TCP, SCTP uni- and multi-homing, IPv4-IPv6 interworking, IPsec, load balancing and capabilities exchange. **Diameter Mediation** – GUI-based Diameter mediation framework used to build mediation rules to resolve inter- operability issues. **Range Based Address Resolution** – Stateless diameter proxy routing application that routes Diameter end-to-end transactions based on application ID, command code, routing entity type and routing entity address ranges. **Message Copy** – Ability to copy certain Diameter Requests or Requests and Answers that transit the Diameter Signaling Router. **IP Front End** – TCP/SCTP connection based ingress load balancing which enables Diameter clients to access multiple Diameter Signaling Router servers via one or more virtual

Product	Subproduct	Licensing Information
		addresses. **Geo-redundant** – The Diameter Signaling Router can be deployed with or without geo-redundancy. **High Availability** – All message processing critical components are engineered with high levels of redundancy to ensure high availability. **Included products**: MySQL Enterprise Edition **Restriction**: MySQL Enterprise Edition is included for use with Oracle Communications Diameter Signaling Router (Base Fee). Use of MySQL Enterprise Edition, including without limitation MySQL Enterprise Backup, is restricted to use with Oracle Communications Diameter Signaling Router (Base Fee).
	Oracle Communications Diameter Signaling Router (capacity) – per 100 Network-wide Messages per Second	**Description**: Determines the maximum number of network-wide Messages per Second (MPS) allowed by Oracle Communications Diameter Signaling Router. An MPS is defined as: Processing of an ingress Diameter message and either transmitting a single outgoing message or discarding the ingress message. The outgoing message may be a variant of, or a response to, the ingress message. Transmission of any Diameter message that is associated with incremental actions/events associated with #1 above. For example, the re-routing of a Request upon connection failure or the copying of a Request. Messages excluded from this measure are: Diameter peer-to-peer messages: CER/CEA, DWR/DWA, and DPR/DPA Ingress Diameter messages discarded by the DSR due to Overload controls Answers received in response to message copy Network-wide MPS is calculated as the peak 5-minute interval of the sum of all signaling nodes managed by a single network operation, administration, and maintenance node. Orderable in 100 MPS increments. **Prerequisites**: A license to Oracle Communications Diameter Signaling Router (base fee) is a prerequisite to license and use Oracle Communications Diameter Signaling Router (capacity) or a license to one of the following legacy products: • DSR Initial Content per server • DSR RMS Initial Content per server • DSR 5 Content Bundle per server

Product	Subproduct	Licensing Information
		• DSR 5 Initial Content per server • DSR Diameter MPS per network • DSR Core Routing per server • DSR Core Routing per blade is a prerequisite to license and use Oracle Communications Diameter Signaling Router (capacity).
	Oracle Communications Diameter Signaling Router Roaming Proxy – per Server	**Description**: This sub-product adds the roaming proxy features listed below to the Oracle Communications Diameter Signaling Router. • MME Topology Hiding • HSS Topology Hiding • Path Topology Hiding **Prerequisites**: A license to Oracle Communications Diameter Signaling Router (base fee) is a prerequisite to license and use Oracle Communications Diameter Signaling Router Roaming Proxy or a license to one of the following legacy products: • DSR Initial Content per server • DSR RMS Initial Content per server • DSR Core Routing per server • DSR Core Routing per blade • DSR Policy Proxy per blade is a prerequisite to license and use Oracle Communications Diameter Signaling Router Roaming Proxy
	Oracle Communications Diameter Signaling Router Full Address Resolution – per Server	**Description**: This sub-product adds full address resolution features to the Oracle Communications Diameter Signaling Router. Full address resolution is an enhanced proxy routing application that routes end-to-end Diameter transactions based on app-ID, Command Code, Routing Entity type, and Individual Routing Entity. This sub-product adds the following functionality to the Oracle Communications Diameter Signaling Router: **Subscriber Database Server** – Provides provisioning and storage of database information for full address resolution. Supports querying, reports and audits. **Database Processor** – Provides real-time access to the subscriber database at the signaling node. **Prerequisites**: A license to Oracle Communications Diameter Signaling Router (base fee) is a prerequisite to license and use Oracle Communications Diameter Signaling Router Full Address Resolution or a license to one of the following legacy products: • DSR Initial Content per server

Product	Subproduct	Licensing Information
		• DSR Core Routing per server • DSR Core Routing per blade • DSR Policy Proxy per blade is a prerequisite to license and use Oracle Communications Diameter Signaling Router Full Address
	Oracle Communications Diameter Signaling Router Full Address Resolution – per 25k Subscribers	**Description**: Determines the number of subscribers or entities allowed by Oracle Communications Diameter Signaling Router for full address resolution. Licensing for Subscribers is provided on a network-wide basis. Each entry (entity) in the provisioned subscriber (SDS) database server (SDS) counts as one subscriber. Orderable in 25k subscriber increments. **Prerequisites**: A license to Oracle Communications Diameter Signaling Router Full Address Resolution per server is a prerequisite to license and use Oracle Communications Diameter Signaling Router Full Address Resolution per 25k subscribers or a license to one of the following legacy products: • DSR Address Resolution Proxy per server • DSR Full Address Resolution I per server • DSR 5 Content Bundle per server • DSR 5 Initial Content per server • DSR Subscribers per network is a prerequisite to license and use Oracle Communications Diameter Signaling Router Full Address Resolution per 25k subscribers.
	Oracle Communications Diameter Signaling Router Policy Proxy – per Server	**Description**: This sub-product adds policy proxy to the Oracle Communications Diameter Signaling Router to enable the Policy DRA function. Policy DRA enables dynamic routing of subscriber sessions to PCRFs. This sub- product: • Distributes Gx/Gxx/S9/Rx sessions across PCRFs • Provides network-wide subscriber session binding • Provides session correlation across mated pairs • Performs topology hiding to hide the identities of the PCRFs from other elements in the network. **Prerequisites**: A license to Oracle Communications Diameter Signaling Router (base fee) is a prerequisite to license and use Oracle Communications Diameter Signaling Router Policy Proxy or a license to one of the following legacy products: • DSR Initial Content per server

Product	Subproduct	Licensing Information
		• DSR Core Routing per server • DSR Core Routing per blade is a prerequisite to license and use Oracle Communications Diameter Signaling Router Policy Proxy.
	Oracle Communications Diameter Signaling Router Policy Proxy – per 5K Network-wide Concurrent Sessions	**Description**: Determines the number of concurrent Diameter sessions allowed by Oracle Communications Diameter Signaling Router Policy Proxy. Licensing for concurrent sessions is provided on a network-wide basis. Network-wide concurrent sessions are calculated as the peak 5-minute interval of the sum of all signaling nodes managed by a single network operation, administration, and maintenance node. Orderable in 5k session increments. **Prerequisites**: A license to Oracle Communications Diameter Signaling Router Policy Proxy per server is a prerequisite to license and use Oracle Communications Diameter Signaling Router Policy Proxy per 5k Network-wide Concurrent Sessions or a license to one of the following legacy products: • DSR Policy Proxy 1 per server • DSR 5 Content Bundle per server • DSR 5 Initial Content per server • DSR Policy Concurrent Sessions per network is a prerequisite to license and use Oracle Communications Diameter Signaling Router Policy Proxy per 5k Network-wide Concurrent Sessions.
	Oracle Communications Diameter Signaling Router Online Charging Proxy – per 5K Network-wide Concurrent Sessions	**Description**: Determines the number of concurrent Diameter sessions allowed by Oracle Communications Diameter Signaling Router Online Charging Proxy. Licensing for concurrent sessions is provided on a network-wide basis. Network-wide concurrent sessions are calculated as the peak 5-minute interval of the sum of all signaling nodes managed by a single network operation, administration, and maintenance node. Orderable in 5k session increments. **Prerequisites**: A license to Oracle Communications Diameter Signaling Router Online Charging Proxy per server is a prerequisite to license and use Oracle Communications Diameter Signaling Router, Online Charging per 5k Network-wide Concurrent Sessions or a license to one of the following legacy products: • DSR Charging Proxy OCS Per Server • DSR Charging Concurrent Sessions per network is a prerequisite to license and use Oracle Communications Diameter Signaling Router, Online

Product	Subproduct	Licensing Information
		Network-wide Concurrent Sessions.
	Oracle Communications Diameter Signaling Router, Policy Proxy II – per Server	**Description**: This sub-product adds policy proxy features to the Oracle Communications Diameter Signaling Router Policy Proxy. This sub-product adds: • Support for multiple PCRF pools including the ability to select the pool based on the APN+IMSI • Support for Gx' and Gx-Lite messages • Gateway Location Application (GLA) interface support to access the binding database • Policy Proxy Selection & routing to a PCRF pool based on APN **Prerequisites**: A license to Oracle Communications Diameter Signaling Router Policy Proxy is a prerequisite to license and use Oracle Communications Diameter Signaling Router Policy Proxy II or a license to one of the following legacy products: • DSR Policy Proxy 1 per server • DSR 5 Content Bundle per server • DSR 5 Initial Content per server • DSR Core Routing per blade • DSR Policy Proxy per blade is a prerequisite to license and use Oracle Communications Diameter Signaling Router Policy Proxy II.
	Oracle Communications Diameter Signaling Router Translation Agent Base – per Server	**Description**: This sub-product adds MAP Diameter Interworking features to the Oracle Communications Diameter Signaling Router. For LTE-3G roaming, the DSR plays the role of the Interworking Function (IWF) to provide protocol mediation between Gr/Gr+ (3GPP MAP) and S6d (Diameter). The IWF also supports 3G-3G roaming over the S6d interface (SGSN Rel8). This capability also supports access by the MME or Rel8 SGSN over the S13 Diameter interface to an SS7 EIR DB, or vice-versa. **Prerequisites**: A license to Oracle Communications Diameter Signaling Router is a prerequisite to license and use Oracle Communications Diameter Signaling Router Translation Agent Base or a license to one of the following legacy products: • DSR Initial Content per server • DSR RMS Initial Content per server • DSR Core Routing per server • DSR Core Routing per blade • DSR Policy Proxy per blade

Product	Subproduct	Licensing Information
		• DSR 5 Content Bundle per server • DSR 5 Initial Content per server is a prerequisite to license and use Oracle Communications Diameter Signaling Router Translation
	Oracle Communications Diameter Signaling Router, Core Routing I – per Server	**Description**: This sub-product adds Active/Standby Peer Node Support and mediation enhancement features to the Oracle Communications Diameter Signaling Router. The following features are added with this sub-product: Active/Standby Peer Node Support Mediation Enhancements: • Support for logical OR'ing and a mechanism to group conditions • Support for "optional" actions • Support for a combined 'set/add AVP' action • Support for grouped AVPs to a depth of 5 • Support for checking of ranges on numbers • Import/export of templates • Support for setting Message Priority and Route List in mediation. • Support for Discard message action • Support for Bit Set/Reset in conditions and actions • Ability to check for peers/connections in conditions • Special function to set Destination Realm from IMSI. • Support for setting "OctetString" type from the GUI. DSR maximum message size of 60,000 bytes PDU Pool Flexible Message Sizing DSR NOAM/SDS 32 Node Support **Prerequisites**: A license to Oracle Communications Diameter Signaling Router is a prerequisite to license and use Oracle Communications Diameter Signaling Router Core Routing I or a license to one of the following legacy products: • DSR Initial Content per server • DSR RMS Initial Content per server • DSR Core Routing per server • DSR Core Routing per blade • DSR Policy Proxy per blade • DSR 5 Content Bundle per server

Product	Subproduct	Licensing Information
		• DSR 5 Initial Content per server is a prerequisite to license and use Oracle Communications Diameter Signaling Router Core Routing
	Oracle Communications Diameter Signaling Router, Core Routing II – Per Server	**Description**: This sub-product adds Active/Standby Peer Node Support and mediation enhancement features to the Oracle Communications Diameter Signaling Router. The following features are added with this sub-product: IPFE Enhancements: • Peer Node Group aware least load distribution algorithm • IPFE initiator support: DSR 'initiator only' connections Mediation Enhancements: • Mediation support for Re-routed requests. • Support for “optional” actions. • Mediation support for accessing components of the Diameter ingress request at the Answer Trigger Points • Ability to import/export mediation rules • Additional DCL trigger points • Additional DRL/DAL triggers • Support for Scripting in Mediation • Mediation: per rule pegging • Making AVP dictionary editable • Comcol logging for CAPM • Debug shell support for CAPM • Support for grouped AVPs that are 6 levels deep • Support for setting “OctetString” type from the GUI. Pending Answer timer increase to 16 (from 8) Extended Command Codes RBAR -> PDRA Application Chaining Ingress Message Screening **Prerequisites**: A license to Oracle Communications Diameter Signaling Router Core Routing I is a prerequisite to license and use Oracle Communications Diameter Signaling Router
	Oracle Communications Diameter Signaling	**Description**: This sub-product adds Active/Standby Peer Node Support and mediation enhancement features to the Oracle Communications Diameter Signaling Router.

Product	Subproduct	Licensing Information
	Core Routing III – Per Server	The following features are added with this sub-product: IPFE Enhancements: • IPFE Initiator + Responder Support Mediation Enhancements: • Support for grouped AVPs that are 8 levels deep • Support for "Set Alarm/Event" as an action • Support for "Re-direct" as an action • Support for "Parse Decorated NAI" as an action • Support for new Mediation conditions to identify Requests Redirected by DSR Routing Attributes by (Extended) Command Code Coordinated Egress Throttling across multiple DSRs Support for Redirect Client Realm-Based Redirect Notification Support Session SBR Database Consolidation and Remating **Prerequisites**: A license to Oracle Communications Diameter Signaling Router Core Routing II is a prerequisite to license and use Oracle Communications Diameter Signaling Router Core Routing III.
	Oracle Communications Diameter Signaling Router, Core Routing IV – Per Server	**Description**: This sub-product adds Active/Standby Peer Node Support and mediation enhancement features to the Oracle Communications Diameter Signaling Router. The following features are added with this sub-product: Mediation Enhancements: • Routing Loop Alarm • Tekelec specific AVP removal • DCL peg and event normalization Dynamic Peer Discovery Increased Diameter Connection Limits (in a route group) DOIC Overload Control: DSR as a Reacting Node Implicit Realm Routing DSR Application ID aware routing Shared Traffic Throttle Groups (TTGs) for DOIC Support for FABR & OC-DRA interworking FABR – PDRA Application Chaining FABR – RBAR Application Chaining **Prerequisites**: A license to Oracle Communications Diameter Signaling Router Core Routing III is a prerequisite to license

Product	Subproduct	Licensing Information
		and use Oracle Communications Diameter Signaling Router Core Routing IV.
	Oracle Communications Diameter Signaling Router, Core Routing V – Per Server	**Description**: This sub-product adds Active/Standby Peer Node Support enhancement features to the Oracle Communications Diameter Signaling Router. The following features are added with this sub-product: New Generation Network Priority Service ("NGN-PS") allows DSR to assign all NGN-PS messages higher priority over non NGN-PS messages (request and answers). Control for NGN-PS feature on a per diameter interface basis and for any combination of the following Long Term Evolution (LTE) and IP-Multimedia Subsystem (IMS) diameter interfaces: • **Gx interface**: The Gx is used between the Policy Control and Charging Rules Function (PCRF) and the Policy and Charging Enforcement Function (PCEF) in the 3GPP interface specifications TS29.212. The Gx is used for provisioning and removal of Policy and Charging Control (PCC) rules from the PCRF to the PCEF and the transmission of traffic plane events from the PCEF to the PCRF. • **Rx interface**: The Rx interface is used to exchange application level session information between the Policy and Charging Rules Function (PCRF) and the Application Function (AF). • **Cx/Dx**: The Cx interface between the Call Session Control Function (CSCF) and the Home Subscriber Server (HSS). The Dx interface between the CSCF and the Server Locator Function (SLF). • **Dh/Sh**: Dh and Sh Interfaces are used between the Application Server (AS) and the HSS. The procedure is invoked by the AS and is used to read transparent and/or non-transparent data for a specified user from the HSS. Support NGN-PS where priority service messages are assigned the highest priority of Priority four (P4). If required DSR throttles normal traffic to an engineered capacity such that internal resources, including resources related to message queuing, resource pools, and message control functions are always available for a small amount of additional NGN-PS traffic. DSR per-connection ingress Multimedia Priority Service ("MPS") control algorithms shall discard the messages based on message priority in Priority zero (P0), Priority one (P1), Priority two (P2) and Priority three (P3) order respectively when the ingress message rate exceeds the configured maximum capacity of the given Diameter Peer Connection. **Prerequisites**: A license to Oracle Communications Diameter

Product	Subproduct	Licensing Information
		Signaling Router Core Routing IV is a prerequisite to license and use Oracle Communications Diameter Signaling Router Core Routing V.
	Oracle Communications Diameter Signaling Router, Core Routing VI – Per Server	**Description**: This sub-product adds Active/Standby Peer Node Support and mediation enhancement features to the Oracle Communications Diameter Signaling Router. The following features are added with this sub-product: Diameter Custom Application Framework Enables Operators to use in-house R&D resources or 3rd party application development organizations to rapidly develop and deploy new Diameter applications on DSR without requiring a new DSR software release. Diameter Custom "starter" Applications • Roaming Steering The Roaming Steering platforms allow the home network to control successful registration rate of their outbound roamers. Therefore, the home network defines roaming steering policies for each group of roaming partners that are part of the same country. • Online Charging Zero Balance Offload The primary purpose of the Online Charging Server (OCS) Zero Balance Offload feature defined here includes the following capabilities: • Detecting when a given subscriber, identified by MSISDN, has zero balance in their account. • Detecting when the OCS rejects the subscriber's session setup attempt N times during a given interval due to zero balance. • Responding to the PCEF to deny service to the subscriber on behalf of the OCS during a second given interval. **Prerequisites**: A license to Oracle Communications Diameter Signaling Router Core Routing V is a prerequisite to license and use Oracle Communications Diameter Signaling Router Core Routing VI. Additionally for CAF applications following are prerequisites. • Oracle Communications Diameter Signaling Router, Policy Proxy – 5K Network-wide Concurrent Sessions Or Oracle Communications Diameter Signaling Router, On-line Charging Proxy – 5K Network-wide Concurrent Sessions
	Oracle Communications Diameter	**Description**: The Oracle Communications Diameter Signaling Router.

Product	Subproduct	Licensing Information
	Signaling Router, Core Routing VII – Per Server	The following features are added with this sub-product: IETF RFC 7944 Diameter Routing Message Priority Overview of Diameter Routing Message Priority (DRMP) Mechanism to allow Diameter endpoints to indicate the relative priority of Diameter transactions. Message priority is be used in routing, resource allocation and overload abatement decision Use cases • First Responder Related Signaling • Emergency Call Related Signaling • Differentiated Services • Application Specific Priorities Ability to assign message priorities based on DRMP AVP received in diameter messages as well as static message priorities configured using Message Priority Configuration Set (MPCS). Message priorities are used for message throttling decisions during congestion conditions Enable and disable DRMP AVP based message priority assignment for configurable diameter app-ID. Ability to assign priorities to answer messages equal to that of request messages. Support Answer message back from different connections (21072456) Allows DSR to process the Ingress Answer Diameter message received from connection of the upstream Diameter Peer, which is different from the connection, which was used to send the egress Diameter request for a given Diameter Transaction. Route Group Measurements (19091550) New measurements to monitor the amount of traffic being routed through specific route group Provides visibility of traffic distribution across different route groups Configuration to enable and disable route group measurements for individual route groups through SOAM GUI Support up to maximum of 250 Route Groups per DSR network element Two new measurement groups are added to support route group measurements: • Route Group Performance • Route Group Exception **Prerequisites**: A license to Oracle Communications Diameter

Product	Subproduct	Licensing Information
		and use Oracle Communications Diameter Signaling Router Core Routing VII.
	Oracle Communications Diameter Signaling, Roaming Proxy II – Per Server	**Description**: This sub-product adds the roaming proxy features listed below to the Oracle Communications Diameter Signaling Router. S9 PCRF Topology Hiding S9 AF/pCSCF Topology Hiding S6a/S6d HSS Topology Hiding with multiple pseudo hosts names **Prerequisites**: A license to Oracle Communications Diameter Signaling Router Roaming Proxy is a prerequisite to license and use Oracle Communications Diameter Signaling Router Roaming Proxy II or a license to the following legacy product: DSR_Roaming Proxy Per Server is a prerequisite to license and use Oracle Communications Diameter Signaling Router Roaming Proxy II.
	Oracle Communications Diameter Signaling Router, Online Charging Proxy – Per Server	**Description**: This sub-product adds online charging server proxy features to the Oracle Communications Diameter Signaling Router. The online charging proxy supports a stateful Diameter proxy agent over the Gy interface between multiple charging clients such as LTE PGWs, 3G GGSNs, IMS AFs, and multiple online charging servers (OCS). **Prerequisites**: A license to Oracle Communications Diameter Signaling Router (base fee) is a prerequisite to license and use Oracle Communications Diameter Signaling Router Online Charging Server Proxy or a license to one of the following legacy products: • DSR Initial Content per server • DSR Core Routing per server • DSR Core Routing per blade • DSR Policy Proxy per blade • DSR 5 Content Bundle per server • DSR 5 Initial Content per server is a prerequisite to license and use Oracle Communications Diameter Signaling Router Online Charging Server Proxy.
	Oracle Communications Diameter Signaling Router Translation Agent RADIUS– per Server	**Description**: This sub-product adds RADIUS-Diameter Interworking features to the Oracle Communications Diameter Signaling Router. The DSR plays the role of the Interworking Function (IWF) to provide protocol mediation between RADIUS and Diameter for trusted/untrusted Wi-Fi access to 3GPP core. This will also provide the ability for WLAN Access Gateway (WAG) to continue using the legacy RADIUS AAA server, HLR authentication for legacy RADIUS-MAP, and HSS authentication for RADIUS-Diameter S6d.

Product	Subproduct	Licensing Information
		Prerequisites: A license to Oracle Communications Diameter Signaling Router Translation Agent Base is a prerequisite to license and use Oracle Communications Diameter Signaling Router Translation Agent RADIUS.
Oracle Communications Integrated Diameter Intelligence Hub	Oracle Communications Integrated Diameter Intelligence Hub – per Server	**Description**: This product provides a troubleshooting tool for the Oracle Communications Diameter Signaling Router. This product: Integrates the configuration of trace filters directly into DSR Allows trace filters to be applied against all messages processed by DSR Allows Transaction Data Records containing both Diameter Requests and Answers to be captured for additional analysis and filtering. Provides Ladder Diagrams to facilitate troubleshooting concerning message sequence and peer connection issues Supports detailed decoding of AVPs associated with the base Diameter protocol, as well as the following interfaces: Sh, Cx, Gy, Cc, S6a/d, Gx, Rx, SLg, SLh, SWm, SWx, STa, S6b, S9, Gxa **Prerequisites**: A license to Oracle Communications Technology Foundation for Monitoring Applications is a prerequisite to license and use Oracle Communications Integrated Diameter Intelligence Hub or a license to the following products: • Oracle Database Enterprise Edition • Oracle Database Enterprise Edition Option: Partitioning • WebLogic Server Enterprise Edition are prerequisites to license and use Oracle Communications Integrated Diameter Intelligence Hub. **Included Products**: MySQL Enterprise Edition **Restriction**: MySQL Enterprise Edition is included for use as the Oracle Communications Integrated Diameter Intelligence Hub Management Repository. Use of MySQL Enterprise Edition, including without limitation MySQL Enterprise Backup, is restricted to use with Oracle Communications Integrated Diameter Intelligence Hub.
	Oracle Communications Network Integrated Diameter Intelligence Hub – per Server	**Description**: This sub-product provides network-wide Integrated Diameter Intelligence Hub (iDIH), which enables correlation of trace data across a network of Integrated DIH (iDIH) instances. This sub-product: Provides the ability to correlate trace data across a network of Integrated DIH (iDiH) instances. Retrieves and correlates trace data that has been captured

Product	Subproduct	Licensing Information
		across multiple DSR (iDIH) sites, and render an integrated trace to the user allowing centralized troubleshooting of all DSR's in the network. Is required at each integrated DIH (iDIH) node/server in the network to enable a network view. **Prerequisites**: A license to Oracle Communications Integrated Diameter Intelligence Hub is a prerequisite to license and use Oracle Communications Network Integrated Diameter Intelligence Hub.

	Oracle Communications Diameter Signaling Router, SS7 Signaling Transfer Point I – per server	**Description**: This sub-product adds the following features to the Oracle Communications Diameter Signaling Router:
		
		Signaling Transfer Point (STP) functionality
		
		Possibility to combine SS7 and Diameter signaling on the same node
		
		The SS7 Signaling Transfer Point on DSR includes SIGTRAN protocols (M3UA and M2PA), Global Title Translation (GTT) and GTT Advanced load-sharing features
		
		Signaling and MTP3
		• M3UA and M2PA
		  • Signaling Gateway mode for M3UA
		  • M2PA can be either server or client at the SCTP connection level
		  • Flow control at SCTP to manage incoming and outgoing traffic rates on each link
		  • Link Transaction Per Second values defined at linkset level (all links within a linkset shall have the same capacity)
		• MTP3
		  • Routing based on Destination Point Code of MTP3 layer
		  • Supports equal load-sharing or dominant/backup up to 2 destinations
		
		SCCP
		• Supports UDT/XUDT and UDTS/XUDTS routing based on Called Party SCCP information
		• Enhanced Global Title Translation (GTT) designed for the Signaling Connection Control Part (SCCP)
		• Enables selection of various translation tables based on Global Title Information:
		  • Numbering Plan (NP)
		  • Nature of Address Indicator (NAI)

Product	Subproduct	Licensing Information

		• Translation Type (TT)
		• Variable GTT Length in the same GTT Set
		• Advanced Load-Sharing features
		  • Intermediate GTT Load-Sharing
		  • Flexible GTT Load-Sharing
		  • Allows creation and customization of load-sharing groups in Mated Relay Node (MRN) or Mated APplications (MAP) tables.
		  • Weighted GTT Load-Sharing
		  • Allows creation and customization based on weighting for each destination, in-service threshold for group of load-sharing groups in MRN or MAP tables.
		  • Transaction Based GTT Load-Sharing
		  • Allows creation and customization based on transaction types and keys of load-sharing groups in MRN or MAP tables.
		Prerequisites: A license to Oracle Communications Diameter Signaling Router (base fee) is a prerequisite to license and use Oracle Communications Diameter Signaling Router, SS7 Signaling Transfer Point I.

	Oracle Communications Diameter Signaling Router, SS7 Signaling Transfer Point II – per server	**Description**: This sub-product adds the following features to the Oracle Communications Diameter Signaling Router: Signaling Transfer Point (STP) functionality Possibility to combine SS7 and Diameter signaling on the same node The SS7 Signaling Transfer Point on DSR includes SIGTRAN protocols (M3UA and M2PA), Global Title Translation (GTT) and GTT Advanced load-sharing features **Routing/Screening Features** • **Flexible Origin Linkset Based Routing (FLOBR)** • **TCAP Operation Based Routing (TOBR)** • **GTT Actions for screening** **Prerequisites**: A license to Oracle Communications Diameter Signaling Router, SS7 Signaling Transfer Point I is a prerequisite to license and use Oracle Communications Diameter Signaling Router, SS7 Signaling Transfer Point II.
	Oracle Communications Diameter Signaling Router, Diameter Security Application - Per	**Description**: This sub-product adds the following features to the Oracle Communications Diameter Signaling Router: **Deploying Diameter Signaling Router (DSR) at interconnects as DEA (Diameter Edge Agent) allows security policies per GSMA FS.19 and IR.88 based**

Product	Subproduct	Licensing Information
	Server	**integrated Diameter Firewall to be applied to all Diameter incoming traffic.** **Prerequisites**: The following license are prerequisite to license and use Oracle Communications Diameter Signaling Router, Diameter Security Application • Oracle Communications Diameter Signaling Router, (base fee) – Per Server • Oracle Communications Diameter Signaling Router, (capacity) – Per 100 Network-wide Messages per Second • Oracle Communications Diameter Signaling Router, Core Routing VII- Per Server • Oracle Communications Diameter Signaling Router, Policy Proxy – 5K Network-wide Concurrent Sessions • Or • Oracle Communications Diameter Signaling Router, On-line Charging Proxy – 5K Network-wide Concurrent Sessions

3. Network Function Edition Licensing Information

Description of Product Editions and Permitted Features for the Diameter Signaling Router Network Function Edition. The Network Function Edition products cannot be mixed in the same network as any other Diameter Signaling Router products managed by a single Network OAM (NOAM).

Prerequisite Products

Entitled Products and Restricted Use Licenses

Product	Subproduct	Licensing Information
Oracle Communications Diameter Signaling Router	Oracle Communications Diameter Signaling Router Network Function Edition – per Network-wide Messages per Second Perpetual	**Description**: This product provides the following base Diameter Signaling Router functionality on a network-wide basis. Messages per Second (MPS) allowed by Oracle Communications Diameter Signaling Router. An MPS is defined as: Processing of an ingress Diameter message and either transmitting a single outgoing message or discarding the ingress message. The outgoing message may be a variant of, or a response to, the ingress message. Transmission of any Diameter message that is associated with incremental actions/events associated with #1 above. For example, the re-routing of a Request upon connection failure or the copying of a Request. Messages excluded from this measure are: • Diameter peer-to-peer messages: CER/CEA, DWR/DWA, and DPR/DPA • Ingress Diameter messages discarded by the DSR due to Overload controls • Answers received in response to Message Copy Network-wide MPS is calculated as the peak 5-minute interval of the sum of all signaling nodes managed by a single network operation, administration, and maintenance node. Orderable in 5000 MPS increments. **OAM** – Operations, administration, measurements functionality including: SNMP, event logs, security logs, configuration, topology, user/group management, and reports. **Congestion Management** – Ingress and egress, local and remote Diameter congestion control. **Connection Management** – TCP, SCTP uni- and multi-homing, IPv4-IPv6 interworking, IPsec, load balancing and capabilities exchange.

Product	Subproduct	Licensing Information
	Oracle Communications Diameter Signaling Router Network Function Edition – per Network-wide Messages per Second Perpetual – continued	**Diameter Mediation** – GUI-based Diameter mediation framework used to build mediation rules to resolve inter- operability issues. **Range Based Address Resolution** – Stateless diameter proxy routing application that routes Diameter end-to-end transactions based on application ID, command code, routing entity type and routing entity address ranges. **Message Copy** – Ability to copy certain Diameter Requests or Requests and Answers that transit the Diameter Signaling Router. **IP Front End** –TCP/SCTP connection based ingress load balancing which enables Diameter clients to access multiple Diameter Signaling Router servers via one or more virtual IP addresses. **Geo-redundant** – The Diameter Signaling Router can be deployed with or without geo-redundancy. **High Availability** – All message processing critical components are engineered with high levels of redundancy to ensure high availability. **Core Routing** – All core routing and process functionality which includes specific handling of real-time Diameter messages Active/Standby Peer Node Support and mediation enhancement features to the Oracle Communications Diameter Signaling Router **Roaming Proxy** – All roaming proxy functionality for the Oracle Communication Diameter Signaling Router. **Translation Agent** – All Diameter Interworking functionality for the Oracle Communication Diameter Signaling Router. **Included Products**: MySQL Enterprise Edition **Restriction**: MySQL Enterprise Edition is included for use with Oracle Communications Diameter Signaling Router Network Function Edition. Use of MySQL Enterprise Edition, including without limitation MySQL Enterprise Backup, is restricted to use with Oracle Communications Diameter Signaling Router Network Function Edition. The Network Function Edition products cannot be mixed in the same network as any other Diameter Signaling Router products.

Product	Subproduct	Licensing Information
	Oracle Communications Diameter Signaling Router Network Function Edition for Database Applications – per 25k Subscribers Perpetual	**Description**: This product provides subscriber application Diameter Signaling Router functionality, such as Full Address Based Resolution, on a network-wide basis. Determines the number of subscribers or entities allowed by Oracle Communications Diameter Signaling Router for full address resolution. Licensing for Subscribers is provided on a network-wide basis. Each entry (entity) in the provisioned subscriber database server (SDS) counts as one subscriber. Orderable in 25k subscriber increments. **Prerequisites**: A license to Oracle Communications Diameter Signaling Router Network Function Edition is a prerequisite to license and use Oracle Communications Diameter Signaling Router Network Function Edition for Database Applications.
	Oracle Communications Diameter Signaling Router Network Function Edition for Stateful Applications – per 5k Network-wide Concurrent Sessions Perpetual	**Description**: This product provides stateful session application Diameter Signaling Router functionality, such as Policy Proxy and On-line Charging Proxy, on a network-wide basis. Determines the number of concurrent Diameter sessions allowed by Oracle Communications Diameter Signaling Router. Licensing for concurrent sessions is provided on a network-wide basis. Network-wide concurrent sessions are calculated as the peak 5-minute interval of the sum of all signaling nodes managed by a single network operation, administration, and maintenance node. Orderable in 5k session increments. **Prerequisites**: A license to Oracle Communications Diameter Signaling Router Network Function Edition is a prerequisite to license and use Oracle Communications Diameter Signaling Router Network Function Edition for Stateful Applications.

Product	Subproduct	Licensing Information
	Oracle Communications Integrated Diameter Intelligence Hub Network Function Edition – per Server Perpetual	**Description**: This product provides a troubleshooting tool for the Oracle Communications Diameter Signaling Router Network Function Edition. Functionality included: Integrated DIH and Network Integrated DIH **Prerequisites**: A license to Oracle Communications Technology Foundation for Monitoring Applications is a prerequisite to license and use Oracle Communications Integrated Diameter Intelligence Hub Network Function Edition or a license to the following products: • Oracle Database Enterprise Edition • Oracle Database Enterprise Edition Option: Partitioning • WebLogic Server Enterprise Edition are prerequisites to license and use Oracle Communications Integrated Diameter Intelligence Hub Network Function Edition. **Included Products**: MySQL Enterprise Edition **Restriction**: MySQL Enterprise Edition is included for use as the Oracle Communications Integrated Diameter Intelligence Hub Network Function Edition Management Repository. Use of MySQL Enterprise Edition, including without limitation MySQL Enterprise Backup, is restricted to use with Oracle Communications Integrated Diameter Intelligence Hub Network Function Edition. The Network Function Edition products cannot be mixed in the same network as any other Diameter Signaling Router products.

4. Common Signaling Licensing Information

Description of Product Editions and Permitted Features for the Diameter Signaling Router Common Signaling Licensing Model. The Common Signaling Licensing Model products cannot be mixed in the same network as any other Diameter Signaling Router products managed by a single Network OAM (NOAM).

Prerequisite Products

Entitled Products and Restricted Use Licenses

Product	Subproduct	Licensing Information
Oracle Communications Common Signaling	Oracle Communications Common Signaling – per Signaling Unit	**Description**: Signaling Unit is defined as follows. In the case of EAGLE, defined as a 4 nodal TPS which includes failover and engineered throughput. In the case of DSR, defined as 1 network-wide MPS. This product provides the following base Diameter Signaling Router functionality on a network-wide basis. Messages per Second (MPS) allowed by Oracle Communications Diameter Signaling Router. An MPS is defined as: • Processing of an ingress Diameter message, RADIUS, SS7 message and either transmitting a single outgoing message or discarding the ingress message. The outgoing message may be a variant of, or a response to, the ingress message. • Transmission of any Diameter message, RADIUS, SS7 message that are associated with incremental actions/events associated with #1 above. For example, the re-routing of a Request upon connection failure or the copying of a Request. Messages excluded from this measure are: • Diameter peer-to-peer messages: CER/CEA, DWR/DWA, and DPR/DPA • Ingress Diameter messages discarded by the DSR due to Overload controls • Answers received in response to Message Copy Network-wide MPS is calculated as the peak 5-minute interval of the sum of all signaling nodes managed by a single network operation, administration, and maintenance node. Orderable in 5000 MPS increments. **OAM** – Operations, administration, measurements functionality including: SNMP, event logs, security logs, configuration, topology, user/group management, and reports. **Congestion Management** – Ingress and egress, local and remote Diameter congestion control. **Connection Management** – TCP, SCTP uni- and multi-homing, IPv4-IPv6 interworking, IPsec, load balancing and capabilities exchange.

Product	Subproduct	Licensing Information
	Oracle Communications Common Signaling – per Signaling Unit – continued	**Diameter Mediation** – GUI-based Diameter mediation framework used to build mediation rules to resolve inter-operability issues. **Range Based Address Resolution** – Stateless diameter proxy routing application that routes Diameter end-to-end transactions based on application ID, command code, routing entity type and routing entity address ranges. **Message Copy** – Ability to copy certain Diameter Requests or Requests and Answers that transit the Diameter Signaling Router. **IP Front End** – TCP/SCTP connection based ingress load balancing which enables Diameter clients to access multiple Diameter Signaling Router servers via one or more virtual IP addresses. **Geo-redundant** – The Diameter Signaling Router can be deployed with or without geo-redundancy. **High Availability** – All message processing critical components are engineered with high levels of redundancy to ensure high availability. **Core Routing** – All core routing and process functionality which includes specific handling of real-time Diameter messages Active/Standby Peer Node Support and mediation enhancement features to the Oracle Communications Diameter Signaling Router **Roaming Proxy** – All roaming proxy functionality for the Oracle Communication Diameter Signaling Router. **Translation Agent** – All Diameter Interworking functionality for the Oracle Communication Diameter Signaling Router. This product also provides base and signaling unit throughput for the Oracle Communications EAGLE application. Refer to the EAGLE License Information Manual for licensing details when used to deliver SS7 routing. **Included Products**: MySQL Enterprise Edition **Restriction**: MySQL Enterprise Edition is included for use with Oracle Communications Common Signaling. Use of MySQL Enterprise Edition, including without limitation MySQL Enterprise Backup, is restricted to use with Common Signaling.

Product	Subproduct	Licensing Information
	Oracle Communications Common Signaling for Database Applications – per 25k Subscribers Perpetual	**Description**: This product provides subscriber application Diameter Signaling Router functionality, such as Full Address Based Resolution, on a network-wide basis. Determines the number of subscribers or entities allowed by Oracle Communications Diameter Signaling Router for full address resolution. Licensing for Subscribers is provided on a network-wide basis. Each entry (entity) in the provisioned subscriber database server (SDS) counts as one subscriber. Orderable in 25k subscriber increments. This product also provides database applications and capacity for the Oracle Communications EAGLE application. Refer to the EAGLE License Information Manual for licensing details when used to deliver SS7 database applications. **Prerequisites**: A license to Oracle Communications Common Signaling is a prerequisite to license and use Oracle Communications Common Signaling for Database Applications.
	Oracle Communications Common Signaling for Stateful Applications – per 5k Network-wide Concurrent Sessions Perpetual	**Description**: This product provides stateful session application Diameter Signaling Router functionality, such as Policy Proxy and On-line Charging Proxy, on a network-wide basis. Determines the number of concurrent Diameter sessions allowed by Oracle Communications Diameter Signaling Router. Licensing for concurrent sessions is provided on a network-wide basis. Network-wide concurrent sessions are calculated as the peak 5-minute interval of the sum of all signaling nodes managed by a single network operation, administration, and maintenance node. Orderable in 5k session increments. **Prerequisites**: A license to Oracle Communications Common Signaling is a prerequisite to license and use Oracle Communications Common Signaling for Stateful Applications.

	Oracle Communications Common Signaling, SS7 Signaling Transfer Point – per node	**Description**: This sub-product adds the following features to the Oracle Communications Diameter Signaling Router:
		
		Signaling Transfer Point (STP) functionality
		
		Possibility to combine SS7 and Diameter signaling on the same node
		
		The SS7 Signaling Transfer Point on DSR includes SIGTRAN protocols (M3UA and M2PA), Global Title Translation (GTT), and GTT Advanced load-sharing features.
		
		Signaling and MTP3
		• M3UA and M2PA
		  • Signaling Gateway mode for M3UA
		  • M2PA can be either server or client at the SCTP connection level

Product	Subproduct	Licensing Information
		• Flow control at SCTP to manage incoming and outgoing traffic rates on each link • Link Transaction Per Second values defined at linkset level (all links within a linkset is have the same capacity) • MTP3 • Routing based on Destination Point Code of MTP3 layer • Supports equal load-sharing or dominant/backup up to 2 destinations SCCP • Supports UDT/XUDT and UDTS/XUDTS routing based on Called Party SCCP information • Enhanced Global Title Translation (GTT) designed for the Signaling Connection Control Part (SCCP) • Enables selection of various translation tables based on Global Title Information: • Numbering Plan (NP) • Nature of Address Indicator (NAI) • Translation Type (TT) • Variable GTT Length in the same GTT Set • Advanced Load-Sharing features • Intermediate GTT Load-Sharing • Flexible GTT Load-Sharing • Allows creation and customization of load-sharing groups in Mated Relay Node (MRN) or Mated APplications (MAP) tables. • Weighted GTT Load-Sharing • Allows creation and customization based on a weighting for each destination, In-service threshold for a group of load-sharing groups in MRN or MAP tables. • Transaction-Based GTT Load-Sharing • Allows creation and customization based on transaction types and keys of load-sharing groups in MRN or MAP tables. **Prerequisites**: A license to Oracle Communications Diameter Signaling Router Network Function Edition (base) or Oracle Communications Common Signaling (base) is a prerequisite to license and use Oracle Communications Diameter Signaling Router, SS7 Signaling Transfer Point.

Product	Subproduct	Licensing Information
	Oracle Communications Common Signaling, Security Application - per NODE	**Description**: This sub-product adds the following features to the Oracle Communications Diameter Signaling Router: **Deploying Diameter Signaling Router (DSR) at interconnects as DEA (Diameter Edge Agent) allows security policies per GSMA FS.19 and IR.88 based integrated Diameter Firewall to be applied to all Diameter incoming traffic.** **Prerequisites**: The following license is prerequisite to license and use Oracle Communications Common Signaling, Security Application Oracle Communications Common Signaling – per Signaling Unit Or Oracle Communications Diameter Signaling Router Network Function Edition – per Network-wide Messages Oracle Communications Common Signaling for Stateful Applications – per 5k Sessions Or Oracle Communications Diameter Signaling Router Network Function Edition for Stateful Applications – per 5k Network-wide Concurrent Sessions.
	Oracle Communications Common Signaling, Equipment Identity Register – per NODE	**Description:** The sub-product adds the following features to the Oracle Communications Diameter Signaling Router: Equipment Identity Register (EIR) reduces the number of GSM mobile handset thefts by providing a mechanism that will allow the network operators to prevent stolen or disallowed handsets from accessing the network. This control is done by using the International Mobile Equipment Identity (IMEI) provided during handset registration and comparing it against a set of lists provided by the network operator. This application may also provide an option to validate IMEI based on the IMSI (International Mobile Subscriber Identity). **Prerequisites:** The following license is prerequisite to license and use Oracle Communications Common Signaling, Equipment Identity Register – per Node Oracle Communications Common Signaling – per Signaling Unit – per Message per Second Oracle Communications Common Signaling for Database Applications - per 25k Subscribers
	Oracle Communications Common Signaling, Service Capability	**Description:** The sub-product adds the following features to the Oracle Communications Diameter Signaling Router Service Capability Exposure Function (SCEF) is a new network element in EPC which provides a means to securely expose the services and capabilities provided by 3GPP

Product	Subproduct	Licensing Information
	Exposure Function - per NODE	network interfaces. It provides access to network capabilities through homogenous network application programming interfaces (e.g. Network APIs) defined over T8 interface towards SCS/AS. The important functionalities of SCEF include Non IP data delivery for low power devices, Monitoring a device's state, SCS/AS AAA (Application Server authorization, accounting and SLAs), Device Trigger Delivery through SMS acting as an MTC-IWF, QoS of a data flow, sponsoring a data flow (i.e. changing the chargeable party), Scheduling data transfers, and Receiving reports about the network congestion condition of the RAN. **Prerequisites:** The following license is prerequisite to license and use Oracle Communications Common Signaling, Service Capability Exposure Function - per NODE Oracle Communications Common Signaling – per Signaling Unit – per Message per Second Oracle Communications Common Signaling for Stateful Applications - per 5k Network-Wide Concurrent Sessions
	Oracle Communications Common Signaling, Nodal Configuration – Node Perpetual	**Description:** The sub-product adds the following features to the Oracle Communications Diameter Signaling Router Nodal Configuration provides enhanced configuration capacity on a nodal bases for following items. • 500K MPS for Diameter and 500K MPS for vSTP **Note:** o For vSTP, Part Number **L106078 - Oracle Communications Common Signaling, SS7 Signaling Transfer Point – Node Perpetual** is a pre-requisite to avail this license. o For capacity beyond 500K MPS on vSTP, an additional nodal license is required. • Virtual Network Function Manager (VNF-M) • 32K connections per node (SOAM) • Application Routing Tables & Peer Routing Tables to 50K **Prerequisites:** The following license is prerequisite to license and use Oracle Communications Common Signaling, Nodal Configuration – Node Perpetual Oracle Communications Common Signaling – per Signaling Unit – per Message per Second

	Oracle Communications Common Signaling, Service Proxy Function - per NODE	**Description:** The sub-product adds the following features to the Oracle Communications Diameter Signaling Router The Service Proxy Function (SPF) addresses introduction of 5G Service Based Architecture and the usage of HTTP/2 for signaling. Provides congestion control in cases of flooding and at the same time protect servers from being overloaded. Facilitates traffic prioritization to ensure that the higher priority traffic is addressed in overload situations Uniform Authorization/Authentication mechanism in the network Simplifies the network and provider better visibility into the health of the network. Reduces the connection mesh to a manageable number of connections, thereby decreasing the chances of failure.

Product	Subproduct	Licensing Information
		Prerequisites: The following license is prerequisite to license and use Oracle Communications Common Signaling, Service Proxy Function - per NODE Oracle Communications Common Signaling – per Signaling Unit – per Message per Second
	Oracle Communications Common Signaling, Network Repository Function - per NODE	**Description:** The sub-product adds the following features to the Oracle Communications Diameter Signaling Router The Network Repository Function (NRF) supports management and discovery services and the management services allow for Network Function (NF) instances to be Introduced/Updated/Removed in the 5G core without manual configuration. The more NRF developments will come as part of future releases. **Prerequisites:** The following license is prerequisite to license and use Oracle Communications Common Signaling, Network Repository Function - per NODE Oracle Communications Common Signaling – per Signaling Unit – per Message per Second
	Oracle Communications Common Signaling, Routing and Selection domain – per NODE	**Description:** The sub-product adds the following features to the Oracle Communications Diameter Signaling Router Routing and Selection domain combines both Service Proxy Function (SPF) and Network Repository Function (NRF) provides a real-time information about any Network Function (NF) and leads to better NF selection decision making by the NRF and SPF able to perform overload protection without configuration and dynamic re-routing where applicable. Refer to following Subproduct information for additional details. Oracle Communications Common Signaling, Service Proxy Function - per NODE Oracle Communications Common Signaling, Network Repository Function - per NODE **Prerequisites:** The following license is prerequisite to license and use Oracle Communications Common Signaling, Routing and Selection domain – per NODE Oracle Communications Common Signaling – per Signaling Unit – per Message per Second Oracle Communications Common Signaling, Service Proxy Function - per NODE Oracle Communications Common Signaling, Network Repository Function - per NODE
	Oracle Communications Common Signaling, Binding Support Function	**Description:** The sub-product adds the following features to the Oracle Communications Diameter Signaling Router The Binding Support Function (BRF) provides session binding functionality, which ensures request for session reaches the

Product	Subproduct	Licensing Information
	– per Node	relevant PCF holding the session information. This service: - Allows Network Function (NF) consumers to register, update and remove the binding information; and - Allows Network Function (NF) consumers to retrieve the binding information. **Prerequisites:** The following license is prerequisite to license and use Oracle Communications Common Signaling, Binding Support Function - per NODE Oracle Communications Common Signaling – per Signaling Unit – per Message per Second Oracle Communications Common Signaling for Stateful Applications – per 5k Network-wide Concurrent Sessions Perpetual
	Oracle Communications Common Signaling, Network Exposure Function - Per Node	**Description:** The sub-product adds the following features to the Oracle Communications Diameter Signaling Router The Network Exposure Function (NEF) provides RESTful APIs that allow access to the services and capabilities provided by network entities and securely exposed by NEF. The NEF Northbound interface supports the following procedures: - Procedures for Monitoring - Procedures for Device Triggering - Procedures for resource management of Background Data Transfer - Procedures for Communication Pattern Parameters Provisioning - Procedures for Packet Flow Description Management - Procedures for Traffic Influence **Prerequisites:** The following license is prerequisite to license and use Oracle Communications Common Signaling, Network Exposure Function - Per Node Oracle Communications Common Signaling – per Signaling Unit – per Message per Second Oracle Communications Common Signaling for Stateful Applications – per 5k Network-wide Concurrent Sessions Perpetual
	Oracle Communications Common Signaling, Interworking and Mediation	Description: The sub-product adds the following features to the Oracle Communications Diameter Signaling Router The Interworking and Mediation (IWF) provides Interworking and mediation function between HTTP ⇔ HTTP and HTTP ⇔ Diameter that allow access to the services and capabilities

Product	Subproduct	Licensing Information
	Function - Per Node	provided by network entities. Prerequisites: The following license is prerequisite to license and use Oracle Communications Common Signaling, Interworking and Mediation Function - Per Node Customer must purchase a license of Interworking and Mediation Function (IWF) for each separately purchased Network Function (NF) where the customer requires IWF whether deploying all functions on one node or on separate nodes. When licensed in the Routing and Selection offering, pricing includes the use of IWF for the following five functions deployed in the same node: Service Proxy Function (SPF), Network Slice Selection Function (NSSF), Binding Support Function (BSF), Security Edge Protection Proxy (SEPP), and Network Expose Function (NEF). IWF is not applicable to Network Repository Function (NRF).
	Oracle Communications Common Signaling, Network Slice Selection Function - Per Node	Oracle Communications Common Signaling, Network Slice Selection Function - Per Node **Description:** The sub-product adds the following features to the Oracle Communications Diameter Signaling Router The Network Slice Selection Function (NSSF) provides an important capability to bring network resource utilization efficiency, deployment flexibility and support fast growing over the top (OTT) application and services. **Prerequisites:** The following license is prerequisite to license and use Oracle Communications Common Signaling, Network Slice Selection Function - Per Node Oracle Communications Common Signaling – per Signaling Unit – per Message per Second
	Oracle Communications Common Signaling, Security Edge Protection Proxy - Per Node	**Description:** The sub-product adds the following features to the Oracle Communications Diameter Signaling Router The Signaling Security Edge Protection Proxy (SEPP) Security Edge Protection Proxy (SEPP) is a nontransparent proxy that supports message filtering and policing on inter-PLMN control-plane interfaces and topology hiding for the PLMN network. A SEPP function should perform the firewall role for transactions between domains. Given that the SEPP is the point where integrity protection and encryption are applied, the SEPP has visibility into each aspect of a transaction. **Prerequisites:** The following license is prerequisite to license and use Oracle Communications Common Signaling, Security Edge Protection Proxy - Per Node Oracle Communications Common Signaling – per Signaling Unit – per Message per Second
	Oracle Communications Common Signaling, Mobile	Oracle Communications Common Signaling, Mobile Number Portability - Per Node **Description:** The sub-product adds the following features to

Product	Subproduct	Licensing Information
	Number Portability - Per Node	the Oracle Communications Diameter Signaling Router The Mobile Number Portability (MNP) Process is the facility that helps you switch from one mobile phone network service provider to another in any Licensed Service Area (LSA) while retaining your existing number. **Prerequisites:** The following license is prerequisite to license and use Oracle Communications Common Signaling, Mobile Number Portability – per Node Oracle Communications Common Signaling – per Signaling Unit – per Message per Second Oracle Communications Common Signaling for Database Applications - per 25k Subscribers
	Oracle Communications Common Signaling, Automated Test Tools and Scripts - Per Node	**Description:** The sub-product adds the following features to the Oracle Communications Diameter Signaling Router The Automated Test Tools, Scripts license provides tools and scripts for functional, and performance testing needs in the field. **Prerequisites:** The following license is prerequisite to license and use Oracle Communications Common Signaling, Automated Test Tools and Scripts – per Node Oracle Communications Common Signaling – per Signaling Unit – per Message per Second
	Oracle Communications Common Signaling, Network Function Cloud Native Environment - Per Node	**Description:** The sub-product adds the following features to the Oracle Communications Diameter Signaling Router The Network Function Cloud Native Environment provides tools and capabilities to run cloud native network functions in the network. **Prerequisites:** Any one of the following license is prerequisite to license and use Oracle Communications Common Signaling, Network Function Cloud Native Environment – per Node Oracle Communications Common Signaling, Security Edge Protection Proxy - Per Node Oracle Communications Common Signaling, Network Slice Selection Function - Per Node Oracle Communications Common Signaling, Interworking and Mediation Function - Per Node Oracle Communications Common Signaling, Network Exposure Function - Per Node Oracle Communications Common Signaling, Binding Support Function - per NODE Oracle Communications Common Signaling, Network

Product	Subproduct	Licensing Information
		Repository Function - per Node Oracle Communications Common Signaling, Service Proxy Function - per Node Oracle Communications Common Signaling, Routing and Selection domain – per Node Oracle Communications Common Signaling, Unified Data Repository – per Node Oracle Communications Common Signaling, Unstructured Data Storage Function – per Node Oracle Communications Common Signaling, Diameter Routing Agent – per Node
	Oracle Communications Common Signaling, Unified Data Repository – per Node	**Description:** The sub-product adds the following features to the Oracle Communications Diameter Signaling Router The User Data Repository (UDR) is a functional entity that acts as a single logical repository of user data and is unique from Application Front End's perspective. Entities which do not store user data and that need to access user data stored in the UDR are collectively known as application front ends.. **Prerequisites:** The following license is prerequisite to license and use Oracle Communications Common Signaling, Unified Data Repository – per Node Oracle Communications Common Signaling – per Signaling Unit – per Message per Second Oracle Communications Common Signaling for Database Applications - per 25k Subscribers
	Oracle Communications Common Signaling, Unstructured Data Storage Function – per Node	**Description:** The sub-product adds the following features to the Oracle Communications Diameter Signaling Router The Unstructured Data Storage Function (UDSF) function is a part of the UDM entity. Network Functions (NFs) can store/ retrieve "unstructured" data from an Unstructured Data Storage Function (UDSF). This data is based on the state information of different NFs, intermediate representation of data crossing different technologies, etc. **Prerequisites:** The following license is prerequisite to license and use Oracle Communications Common Signaling, Unstructured Data Storage Function – per Node Oracle Communications Common Signaling – per Signaling Unit – per Message per Second Oracle Communications Common Signaling for Database Applications - per 25k Subscribers
	Oracle Communications Common Signaling,	**Description:** The sub-product adds the following features to the Oracle Communications Diameter Signaling Router The Diameter Routing Agent (DRA) provides ability to route

Product	Subproduct	Licensing Information
	Diameter Routing Agent – per Node	diameter messages between Network Functions (NF) in the 4G network **Prerequisites:** The following license is prerequisite to license and use Oracle Communications Common Signaling, Diameter Routing Agent – per Node Oracle Communications Common Signaling – per Signaling Unit – per Message per Second

5. Oracle Communications Diameter Signaling Router – Licensing Notes – Legacy

Product	Subproduct	Licensing Information
Oracle Communications Diameter Signaling Router	EXG DSR MPS Per Node	**Description**: Determines the maximum number of nodal Messages per Second (MPS) allowed by Oracle Communications Diameter Signaling Router. An MPS is defined as: Processing of an ingress Diameter message and either transmitting a single outgoing message or discarding the ingress message. The outgoing message may be a variant of, or a response to, the ingress message. Transmission of any Diameter message that is associated with incremental actions/events associated with #1 above. For example, the re-routing of a Request upon connection failure or the copying of a Request. Messages excluded from this measure are: Diameter peer-to-peer messages: CER/CEA, DWR/DWA, and DPR/DPA Ingress Diameter messages discarded by the DSR due to Overload controls Answers received in response to Message Copy Nodal MPS is calculated as the peak 5-minute interval of the signaling node. A node is defined as a network element that is managed by a single system operation, alarms, and measurements server pair. Orderable in MPS increments that match MPS capacity product description. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR IPSEC MPS Per Node	**Description**: Determines the maximum number of nodal Messages per Second (MPS) using IPsec encryption allowed by Oracle Communications Diameter Signaling Router. Orderable in MPS increments that match IPsec MPS capacity product description.

Product	Subproduct	Licensing Information
		Signaling Router EXG DSR MPS Per Node is a prerequisite to license and use Oracle Communications Diameter Signaling Router EXG DSR IPSEC Per Node. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR Connections per Node	**Description**: Determines the number of connections allowed by Oracle Communications Diameter Signaling Router. A connection is defined as an SCTP association or a TCP/IP connection. Orderable in increments that match product description. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR ADDL Routing Pkg 1	**Description**: Enables the capability per node of the Oracle Communications Diameter Signaling Router to route based on Command Code and Origin-Realm. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR ADDL Routing Entries per Node	**Description**: Determines the number of routing entries allowed by Oracle Communications Diameter Signaling Router. A routing entry is defined as an entry in the DSR routing table. Orderable in increments that match product description. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR NPA Splits Per Node	**Description**: This sub-product enables the Oracle Communications Diameter Signaling Router Subscriber Database Server to create temporary duplicate MSISDN records automatically during Numbering Plan Area (NPA) split process. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR LTE Address Resolution	**Description**: This sub-product adds full address resolution features per node to the Oracle Communications Diameter Signaling Router for the LTE HSS. Full address resolution is an enhanced proxy routing application that routes end-to-end Diameter transactions based on app-ID, Command Code, Routing Entity type, and Individual Routing Entity. This sub-product adds the following functionality to the Oracle Communications Diameter Signaling Router: **Subscriber Database Server** – Provides provisioning and storage of database information for full address resolution. Supports querying, reports and audits. **Database Processo**r – Provides real-time access to the subscriber database at the signaling node.

Product	Subproduct	Licensing Information
		Restrictions: This product SKU is for legacy customer applications only.
	EXG DSR IMS Address Resolution	**Description**: This sub-product adds full address resolution features per node to the Oracle Communications Diameter Signaling Router for the IMS HSS. Full address resolution is an enhanced proxy routing application that routes end-to-end Diameter transactions based on app-ID, Command Code, Routing Entity type, and Individual Routing Entity. This sub-product adds the following functionality to the Oracle Communications Diameter Signaling Router: **Subscriber Database Server** – Provides provisioning and storage of large amounts of database information for full address resolution. Supports querying, reports and audits. **Database Processor** – Provides real-time access to the subscriber database at the signaling node. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR IMS Range Address Resolution	**Description**: This sub-product adds range based address resolution features per node to the Oracle Communications Diameter Signaling Router for IMS. This sub-product adds the following functionality to the Oracle Communications Diameter Signaling Router: Routing based on app-ID, Command Code, Routing Entity Type, and Routing Entity address ranges Routing Entity types can be a user identity (IMSI, MSISDN, IMPI or IMPU) or an IP address Allows definition of a prioritized (primary and secondary) Routing Entity type and associated range for each app-ID/Command Code combination. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR LTE Range Address Resolution	**Description**: This sub-product adds range based address resolution features per node to the Oracle Communications Diameter Signaling Router for LTE. This sub-product adds the following functionality to the Oracle Communications Diameter Signaling Router: Routing based on app-ID, Command Code, Routing Entity Type, and Routing Entity address ranges Routing Entity types can be a user identity (IMSI, MSISDN, IMPI or IMPU) or an IP address Allows definition of a prioritized (primary and secondary) Routing Entity type and associated range for each app-ID/Command Code combination. **Restrictions**: This product SKU is for legacy customer applications only.

Product	Subproduct	Licensing Information
	EXG DSR SLF	**Description**: This sub-product adds full address resolution features per node to the Oracle Communications Diameter Signaling Router. Full address resolution is an enhanced proxy routing application that routes end-to-end Diameter transactions based on app-ID, Command Code, Routing Entity type, and Individual Routing Entity. This sub-product adds the following functionality to the Oracle Communications Diameter Signaling Router: **Subscriber Database Server** – Provides provisioning and storage of database information for full address resolution. Supports querying, reports and audits. **Database Processor** – Provides real-time access to the subscriber database at the signaling node. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR Subscribers	**Description**: Determines the number of subscribers or entities allowed per node by Oracle Diameter Signaling Router for full address resolution. Each entry (entity) in the provisioned subscriber database server (SDS) counts as one subscriber. Orderable in subscriber increments that match product description. **Restrictions**: This product SKU is for legacy customer applications only.
	SDS Software Kernel	**Description**: This sub-product enables per node the Oracle Communications Diameter Signaling Router Subscriber Database Server (SDS), which is used for IMS or LTE Full Address Resolution or SLF. **Restrictions**: This product SKU is for legacy customer applications only.
	SDS Query Server	**Description**: This sub-product enables per node the Oracle Communications Diameter Signaling Router Subscriber Database Server (SDS) for an offline version of the address resolution database on a query server. This function is used for IMS or LTE Full Address Resolution or SLF. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR Message Throttling	**Description**: This sub-product enables per node message throttling in the Oracle Communications Diameter Signaling Router. This sub-product adds the following functionality to the Oracle Communications Diameter Signaling Router: Per-connection Ingress MPS control Per-connection Egress Message throttling Remote BUSY congestion control Remote Transport congestion control

Product	Subproduct	Licensing Information
		Restrictions: This product SKU is for legacy customer applications only.
	EXG DSR Mediation Rules Per Node	**Description**: This sub-product adds Diameter Mediation to the Oracle Communications Diameter Signaling Router. Diameter Mediation is a GUI-based Diameter mediation framework used to build mediation rules to resolve inter-operability issues. A mediation rule is defined as a rules template, which contains multiple conditions and actions associated with the mediation function. Orderable in increments that match product description. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR OFCS Topology Hiding Per Node	**Description**: This sub-product adds Off-Line Charging topology hiding to the Oracle Communications Diameter Signaling Router. This sub-product provides topology hiding to and from Charging Trigger Functions and Charging Data Functions. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR Concurrent Sessions	**Description**: Determines the number of concurrent Diameter sessions allowed per node by Oracle Communications Diameter Signaling Router for policy proxy or off-line charging proxy. Licensing for concurrent sessions is provided on a per node basis. Nodal concurrent sessions are calculated as the peak 5-minute interval of the signaling node managed by a single system operation, administration, and maintenance server pair. Orderable in session increments that match session capacity product description. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR IPFE GB/S	Determines the bandwidth per node of the IP Front End allowed by Oracle Communications Diameter Signaling Router. Orderable in bandwidth increments that match product description. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR Policy Topology Hiding Per Node	**Description**: This sub-product adds policy topology hiding to the Oracle Communications Diameter Signaling Router. This feature hides the identities PCRFs from other elements in the network. **Restrictions**: This product SKU is for legacy customer applications only.

Product	Subproduct	Licensing Information
	EXG DSR Remote Congestion Control Per Node	**Description**: This sub-product enables the following remote congestion control features in the Oracle Communications Diameter Signaling Router: Remote BUSY congestion control Remote Transport congestion control **Restrictions**: This product SKU is for legacy customer
	EXG DSR Per Connection TPS Controls Per Node	**Description**: This sub-product enables the following per connection message control features in the Oracle Communications Diameter Signaling Router: Per-connection Ingress MPS control Per-connection Egress Message throttling **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR Policy DRA Per Node	**Description**: This sub-product adds Policy DRA to the Oracle Communications Diameter Signaling Router. Policy DRA enables dynamic routing of subscriber sessions to PCRFs, distributes Gx/Gxx/S9/Rx sessions across PCRFs and provides network-wide subscriber session binding **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR Policy Correlation Per Node	**Description**: This sub-product adds policy proxy correlation to the Oracle Communications Diameter Signaling Router. Policy correlation provides session correlation across interfaces, such as Gx and Rx, and across mated DSR pairs. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR 5K MPS Per Network	**Description**: Determines the maximum number of network-wide Messages per Second (MPS) allowed by Oracle Communications Diameter Signaling Router. An MPS is defined as: Processing of an ingress Diameter message and either transmitting a single outgoing message or discarding the ingress message. The outgoing message may be a variant of, or a response to, the ingress message. Transmission of any Diameter message that is associated with incremental actions/events associated with #1 above. For example, the re-routing of a Request upon connection failure or the copying of a Request. Messages excluded from this measure are: Diameter peer-to-peer messages: CER/CEA, DWR/DWA, and DPR/DPA Ingress Diameter messages discarded by the DSR due to Overload controls

Product	Subproduct	Licensing Information
		Answers received in response to Message Copy Network-wide MPS is calculated as the peak 5-minute interval of the sum of all signaling nodes managed by a single network operation, administration, and maintenance node. Orderable in increments that match product description. **Restrictions**: This license is for specific legacy customer applications only.
	DSR 5M Concurrent Sessions Per Network	**Description**: Determines the number of concurrent Diameter sessions allowed by Oracle Communications Diameter Signaling Router for policy proxy. Network-wide concurrent sessions are calculated as the peak 5-minute interval of the sum of all signaling nodes managed by a single network operation, administration, and maintenance node. Orderable in increments that match product description. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Concurrent Sessions per 5M Per Network	**Description**: Determines the number of concurrent Diameter sessions allowed by Oracle Communications Diameter Signaling Router for policy proxy. Network-wide concurrent sessions are calculated as the peak 5-minute interval of the sum of all signaling nodes managed by a single network operation, administration, and maintenance node. Orderable in increments that match product description. **Restrictions**: This product SKU is for legacy customer applications only.
	SDS XML to PDBI Conversion Per Network	**Description**: This sub-product adds an XML to PDBI conversion capability to the Oracle Communications Diameter Signaling Router Subscriber Database Server. This interface conversion allows for interoperability between the Subscriber Database Server and legacy PDBI network elements. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR MPS Per 100K Per Network	**Description**: Determines the maximum number of network-wide Messages per Second (MPS) allowed by Oracle Communications Diameter Signaling Router. An MPS is defined as: Processing of an ingress Diameter message and either transmitting a single outgoing message or discarding the ingress message. The outgoing message may be a variant of, or a response to, the ingress message. Transmission of any Diameter message that is associated with incremental actions/events associated with #1 above. For example, the re-routing of a Request upon connection

Product	Subproduct	Licensing Information
		failure or the copying of a Request. Messages excluded from this measure are: Diameter peer-to-peer messages: CER/CEA, DWR/DWA, and DPR/DPA Ingress Diameter messages discarded by the DSR due to Overload controls Answers received in response to Message Copy Network-wide MPS is calculated as the peak 5-minute interval of the sum of all signaling nodes managed by a single network operation, administration, and maintenance node. Orderable in increments that match product description. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Core Routing Per Blade	This sub-product provides the following base Oracle Communications Diameter Signaling Router functionality: **OAM** – Operations, administration, measurements functionality including: SNMP, event logs, security logs, configuration, topology, user/group management, and reports. **Core Routing** – Core routing and processing functionality that provides application specific handling of real-time Diameter messages. **Congestion Management** – Ingress and egress, local and remote Diameter congestion control. **Connection Management** – TCP, SCTP uni- and multi-homing, IPv4-IPv6 interworking, IPsec, load balancing and capabilities exchange. **Diameter Mediation** – GUI-based Diameter mediation framework used to build mediation rules to resolve inter-operability issues. **Range Based Address Resolution** – Stateless diameter proxy routing application that routes Diameter end-to-end transactions based on application ID, command code, routing entity type and routing entity address ranges. **Message Copy** – Ability to copy certain Diameter Requests or Requests and Answers that transit the Diameter Signaling Router. **IP Front End** –TCP/SCTP connection based ingress load balancing which enables Diameter clients to access multiple Diameter Signaling Router servers via one or more virtual IP addresses. **Geo-redundant** – The Diameter Signaling Router can be deployed with or without geo-redundancy.

Product	Subproduct	Licensing Information
		components are engineered with high levels of redundancy to ensure high availability. Orderable in increments that match product description. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Policy Proxy Per Blade	**Description**: This sub-product adds policy proxy to the Oracle Communications Diameter Signaling Router. The policy proxy enables dynamic routing of subscriber sessions to PCRFs and supports the following capabilities: Distributes Gx/Gxx/S9/Rx sessions across PCRFs Provides network-wide subscriber session binding Provides session correlation across mated pairs Performs topology hiding to hide the identities of the PCRFs from other elements in the network. Orderable in increments that match product description. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Diameter MPS Per Network	**Description**: Determines the maximum number of network-wide Messages per Second (MPS) allowed by Oracle Communications Diameter Signaling Router. An MPS is defined as: Processing of an ingress Diameter message and either transmitting a single outgoing message or discarding the ingress message. The outgoing message may be a variant of, or a response to, the ingress message. Transmission of any Diameter message that is associated with incremental actions/events associated with #1 above. For example, the re-routing of a Request upon connection failure or the copying of a Request. Messages excluded from this measure are: Diameter peer-to-peer messages: CER/CEA, DWR/DWA, and DPR/DPA Ingress Diameter messages discarded by the DSR due to Overload controls Answers received in response to Message Copy Network-wide MPS is calculated as the peak 5-minute interval of the sum of all signaling nodes managed by a single network operation, administration, and maintenance node. Orderable in single MPS increments. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Policy Concurrent	**Description**: Determines the number of concurrent Diameter sessions allowed by Oracle Communications Diameter

Product	Subproduct	Licensing Information
	Sessions Per Network	Signaling Router for policy proxy. Network-wide concurrent sessions are calculated as the peak 5-minute interval of the sum of all signaling nodes managed by a single network operation, administration, and maintenance node. Orderable in single session increments. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Subscribers – Per Network	**Description**: Determines the number of subscribers or entities allowed by Oracle Communications Diameter Signaling Router for full address resolution. Each entry (entity) in the provisioned subscriber database server (SDS) counts as one subscriber. Orderable in single subscriber increments. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Core Routing Per Server	**Description**: This sub-product provides the following base Oracle Communications Diameter Signaling Router functionality: **OAM** – Operations, administration, measurements functionality including: SNMP, event logs, security logs, configuration, topology, user/group management, and reports. **Core Routing** – Core routing and processing functionality that provides application specific handling of real-time Diameter messages. **Congestion Management** – Ingress and egress, local and remote Diameter congestion control. **Connection Management** – TCP, SCTP uni- and multi-homing, IPv4-IPv6 interworking, IPSec, load balancing, and capabilities exchange. **Diameter Mediation** – GUI-based Diameter mediation framework used to build mediation rules to resolve inter-operability issues. **Range Based Address Resolution** – Stateless diameter proxy routing application that routes Diameter end-to-end transactions based on application ID, command code, routing entity type, and routing entity address ranges. **Message Copy** – Ability to copy certain Diameter Requests or Requests and Answers that transit the Diameter Signaling Router. **IP Front End** – TCP/SCTP connection based ingress load balancing which enables Diameter clients to access multiple Diameter Signaling Router servers via one or more virtual IP addresses.

Product	Subproduct	Licensing Information
		Geo-redundant – The Diameter Signaling Router can be deployed with or without geo-redundancy. **High Availability** – All message processing critical components are engineered with high levels of redundancy to ensure high availability. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Policy Proxy Per Server	**Description**: This sub-product adds policy proxy to the Oracle Communications Diameter Signaling Router. Policy Proxy enables dynamic routing of subscriber sessions to PCRFs. Policy Proxy supports the following capabilities: Distributes Gx/Gxx/S9/Rx sessions across PCRFs Provides network-wide subscriber session binding Provides session correlation across mated pairs Performs topology hiding to hide the identities of the PCRFs from other elements in the network. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Charging Proxy OFCS Per Server	**Description**: This sub-product adds off-line charging server proxy to the Oracle Communications Diameter Signaling Router. The off-line charging proxy supports a Diameter proxy agent over the Rf interface between multiple Charging Trigger Function (CTF) clients such as PGWs, SGWs, GGSNs, CSFCs, and multiple Charging Data Function (CDF) servers. The following features are provided with this sub-product: Session/Subscriber Binding Repository Charging Topology Hiding **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Address Resolution Proxy Per Server	**Description**: This sub-product adds full address resolution to the Oracle Communications Diameter Signaling Router. Full address resolution is an enhanced proxy routing application that routes end-to-end Diameter transactions based on app-ID, Command Code, Routing Entity type, and Individual Routing Entity. The following features are provided with this sub-product: **Subscriber Database Server** – Provides provisioning and storage of large amounts of database information for full address resolution. Supports querying, reports and audits. **Database Processor** – Provides real-time access to the subscriber database at the signaling node. IMS HSS Address Resolution

Product	Subproduct	Licensing Information
		LTE HSS Address Resolution **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Roaming Proxy Per Server	**Description**: This sub-product adds roaming proxy to the Oracle Communications Diameter Signaling Router. The following features are provided with this sub-product: • MME Topology Hiding • HSS Topology Hiding • Path Topology Hiding **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Software Per lab	**Description**: This sub-product provides access to all functionality in the Oracle Communications Diameter Signaling Router and all sub-products for non-production lab or test environments. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Diameter MPS Per Node	**Description**: This sub-product includes base functionality of the Oracle Communications Diameter Signaling Router and determines the maximum number of nodal Messages per Second (MPS) allowed by Oracle Communications Diameter Signaling Router. The base functionality consists of: • Connections • Routes • Additional routing package • IPsec MPS • Diameter Mediation rules • Message copy • Message throttling • Remote Congestion control • LTE and IMS Range based address resolution • Per connection TPS controls An MPS is defined as: • Processing of an ingress Diameter message and either transmitting a single outgoing message or discarding the ingress message. The outgoing message may be a variant of, or a response to, the ingress message. • Transmission of any Diameter message that is associated with incremental actions/events associated

Product	Subproduct	Licensing Information
		with #1 above. For example, the re-routing of a Request upon connection failure or the copying of a Request. Messages excluded from this measure are: • Diameter peer-to-peer messages: CER/CEA, DWR/DWA, and DPR/DPA • Ingress Diameter messages discarded by the DSR due to Overload controls • Answers received in response to Message Copy Nodal MPS is calculated as the peak 5-minute interval of the signaling node. A node is defined as a network element that is managed by a single system operation, alarms, and measurements server pair. Orderable in single MPS increments. **Restrictions**: This license is for specific legacy customer applications only.
	DSR Initial Content Per Server	**Description**: This sub-product provides the base Oracle Communications Diameter Signaling Router functionality as follows: **OAM** – Operations, administration, measurements functionality including: SNMP, event logs, security logs, configuration, topology, user/group management, and reports. **Core Routing** – Core routing and processing functionality that provides application specific handling of real-time Diameter messages. **Congestion Management** – Ingress and egress, local and remote Diameter congestion control. **Connection Management** – TCP, SCTP uni- and multi-homing, IPv4-IPv6 interworking, IPsec, load balancing and capabilities exchange. **Diameter Mediation** – GUI-based Diameter mediation framework used to build mediation rules to resolve inter-operability issues. **Range Based Address Resolution** – Stateless diameter proxy routing application that routes Diameter end-to-end transactions based on application ID, command code, routing entity type and routing entity address ranges. **IP Front End** – TCP/SCTP connection based ingress load balancing which enables Diameter clients to access multiple Diameter Signaling Router servers via one or more virtual IP addresses. **Geo-redundant** – The Diameter Signaling Router can be deployed with or without geo-redundancy. **High Availability** – All message processing critical

Product	Subproduct	Licensing Information
		components are engineered with high levels of redundancy to ensure high availability. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR 5 Initial Content Per Server	**Description**: This sub-product provides Oracle Communications Diameter Signaling Router functionality as follows: **OAM** – Operations, administration, measurements functionality including: SNMP, event logs, security logs, configuration, topology, user/group management, and reports. **Core Routing** – Core routing and processing functionality that provides application specific handling of real-time Diameter messages. **Congestion Management** – Ingress and egress, local and remote Diameter congestion control. **Connection Management** – TCP, SCTP uni- and multi-homing, IPv4-IPv6 interworking, IPsec, load balancing and capabilities exchange. **Diameter Mediation** – GUI-based Diameter mediation framework used to build mediation rules to resolve inter- operability issues. **Range Based Address Resolution** – Stateless diameter proxy routing application that routes Diameter end-to-end transactions based on application ID, command code, routing entity type and routing entity address ranges. **Message Copy** – Ability to copy certain Diameter Requests or Requests and Answers that transit the Diameter Signaling Router. **IP Front End** –TCP/SCTP connection based ingress load balancing which enables Diameter clients to access multiple Diameter Signaling Router servers via one or more virtual IP addresses. **Geo-redundant** – The Diameter Signaling Router can be deployed with or without geo-redundancy. **High Availability** – All message processing critical components are engineered with high levels of redundancy to ensure high availability. **Policy Proxy** **Off-Line Charging Proxy** **Roaming Proxy** **Message Copy** **Full Address Resolution Proxy** **Restrictions**: This product SKU is for legacy customer

Product	Subproduct	Licensing Information
		applications only.
	DSR 5 Content Bundle Per Server	**Description**: This sub-product adds all DSR 5.0 content to the Oracle Communications Diameter Signaling Router: **Restrictions**: This product SKU is for legacy customer applications only.
	DSR RMS Initial Content Per Server	**Description**: This sub-product provides Oracle Communications Diameter Signaling Router functionality as follows: **OAM** – Operations, administration, measurements functionality including: SNMP, event logs, security logs, configuration, topology, user/group management, and reports. **Core Routing** – Core routing and processing functionality that provides application specific handling of real-time Diameter messages. **Congestion Management** – Ingress and egress, local and remote Diameter congestion control. **Connection Management** – TCP, SCTP uni- and multi-homing, IPv4-IPv6 interworking, IPsec, load balancing and capabilities exchange. **Diameter Mediation** – GUI-based Diameter mediation framework used to build mediation rules to resolve inter-operability issues. **Range Based Address Resolution** – Stateless diameter proxy routing application that routes Diameter end-to-end transactions based on application ID, command code, routing entity type and routing entity address ranges. **Message Copy** – Ability to copy certain Diameter Requests or Requests and Answers that transit the Diameter Signaling Router. **IP Front End** – TCP/SCTP connection based ingress load balancing which enables Diameter clients to access multiple Diameter Signaling Router servers via one or more virtual IP addresses. **Geo-redundant** – The Diameter Signaling Router can be deployed with or without geo-redundancy. **High Availability** – All message processing critical components are engineered with high levels of redundancy to ensure high availability. **Roaming Proxy** **Message Copy** **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Policy Proxy	**Description**: This sub-product adds policy proxy to the

Product	Subproduct	Licensing Information
	I Per Server	Oracle Communications Diameter Signaling Router. The policy proxy enables dynamic routing of subscriber sessions to PCRFs and supports the following capabilities: Distributes Gx/Gxx/S9/Rx sessions across PCRFs Provides network-wide subscriber session binding Provides session correlation across mated pairs Performs topology hiding to hide the identities of the PCRFs from other elements in the network. **Prerequisites**: A license to DSR Initial Content Per Server is a prerequisite to license and use DSR Policy Proxy I Per Server **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Full Address Resolution I Per Server	**Description**: This sub-product adds full address resolution features to the Oracle Communications Diameter Signaling Router. Full address resolution is an enhanced proxy routing application that routes end-to-end Diameter transactions based on app-ID, Command Code, Routing Entity type, and Individual Routing Entity. The following features are provided with this sub-product: **Subscriber Database Server** – Provides provisioning and storage of large amounts of database information for full address resolution. Supports querying, reports and audits. **Database Processor** – Provides real-time access to the subscriber database at the signaling node. IMS HSS Address Resolution LTE HSS Address Resolution **Prerequisites**: A license to DSR Initial Content Per Server is a prerequisite to license and use DSR Full Address Resolution I Per Server. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR Message Copy Per Node	**Description**: This sub-product adds message copy capability to the Oracle Communications Diameter Signaling Router. Message Copy is the ability to copy certain Diameter Requests or Requests and Answers that transit the Diameter Signaling Router. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR HSS Topology Hiding Per Node	**Description**: This sub-product adds HSS Topology Hiding to the Oracle Communications Diameter Signaling Router. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR MME	**Description**: This sub-product adds MME Topology Hiding to

Product	Subproduct	Licensing Information
	Topology Hiding Per Node	the Oracle Communications Diameter Signaling Router. **Restrictions**: This product SKU is for legacy customer applications only.
	EXG DSR Path Topology Hiding Per Node	**Description**: This sub-product adds Path Topology Hiding to the Oracle Communications Diameter Signaling Router. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Blacklisting Per Node	**Description**: This sub-product adds Blacklisting support to the Oracle Communications Diameter Signaling Router. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR User Config MSG Priority Per Node	**Description**: This sub-product adds user configurable message priority to the Oracle Communications Diameter Signaling Router. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Message Copy Per Server	**Description**: This sub-product adds message copy capability to the Oracle Communications Diameter Signaling Router. Message Copy is the ability to copy certain Diameter Requests or Requests and Answers that transit the Diameter Signaling Router. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR RMS Message Copy Per Server	**Description**: This sub-product adds message copy capability to the rack-mount Oracle Communications Diameter Signaling Router. Message Copy is the ability to copy certain Diameter Requests or Requests and Answers that transit the Diameter Signaling Router. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR IPFE II Per Server	**Description**: This sub-product adds IPFE features to the Oracle Communications Diameter Signaling Router. The IPFE features added by this sub-product are: • SCTP Multi-Homing for IPFE • Enhanced load balancing **Restrictions**: This product SKU is for legacy customer applications only.
	DSR RMS IPFE II Per Server	**Description**: This sub-product adds IPFE features to the rack-mount Oracle Communications Diameter Signaling Router. The IPFE features added by this sub-product are: • SCTP Multi-Homing for IPFE • Enhanced load balancing

Product	Subproduct	Licensing Information
		Restrictions: This product SKU is for legacy customer applications only.
	DSR Core Routing III Per Server	**Description**: This sub-product adds core routing features to the Oracle Communications Diameter Signaling Router. The core routing features added by this sub-product are: • Maximum message size of 30k bytes • Route group entries up to 160 • Enhanced pending answer timer configurations **Restrictions**: This product SKU is for legacy customer applications only.
	DSR RMS Core Routing III Per Server	**Description**: This sub-product adds core routing features to the rack-mount Oracle Communications Diameter Signaling Router. The core routing features added by this sub-product are: • Maximum message size of 30k bytes • Route group entries up to 160 • Enhanced pending answer timer configurations **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Roaming Proxy Topology Hiding I Per Server	**Description**: This sub-product adds roaming proxy features to the Oracle Communications Diameter Signaling Router. The following features are added to this sub-product: • MME Topology Hiding • HSS Topology Hiding • Path Topology Hiding **Restrictions**: This product SKU is for legacy customer applications only.
	DSR RMS Roaming Proxy Topology Hiding I Per Server	**Description**: This sub-product adds roaming proxy features to the rack-mount Oracle Communications Diameter Signaling Router. The following features are added to this sub-product: • MME Topology Hiding • HSS Topology Hiding • Path Topology Hiding **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Full Address Resolution II Per Server	**Description**: This sub-product adds full address resolution features to the Oracle Communications Diameter Signaling Router Full Address Resolution I license. The full address resolution features added by this sub-product are: • Blacklisting support

Product	Subproduct	Licensing Information
		• Ability to activate range and full address resolution on the same message **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Charging Concurrent Sessions Per Network	**Description**: Determines the number of concurrent Diameter sessions allowed by Oracle Communications Diameter Signaling Router for Online Charging Proxy (OCS). Network-wide concurrent sessions are calculated as the peak 5-minute interval of the sum of all signaling nodes managed by a single network operation, administration, and maintenance node. Orderable in single session increments. **Restrictions**: This product SKU is for legacy customer applications only.
	DSR Charging Proxy OCS Proxy Per Server	**Description**: This sub-product adds online charging server proxy features to the Oracle Communications Diameter Signaling Router. The online charging proxy supports a stateful Diameter proxy agent over the Gy interface between multiple charging clients such as LTE PGWs, 3G GGSNs, IMS AFs, and multiple online charging servers (OCS). **Restrictions**: This product SKU is for legacy customer applications only.

6. Third-Party Notices and/or Licenses

6.1 Commercial Software

Commercial software products or components distributed in Oracle Communications Diameter Signaling Router are identified in the following table along with the applicable licensing information.

Provider	Component(s)	Licensing Information
Genivia	gsoap 2.8.65	Copyright (c) 2000-2015 Robert A. van Engelen, Genivia, Inc. All Rights Reserved. This is part of DSR.
iReasoning	iReasoning SNMP Libraries- 7.0.1	Copyright © 2002-2016 iReasoning Networks This is part of IDIH.

6.2 Written Offer for Source Code

For third party technology that you receive from Oracle in binary form which is licensed under an open source license that gives you the right to receive the source code for that binary, you can obtain a copy of the applicable source code from this page. If the source code for the technology was not provided to you with the binary, you can also receive a copy of the source code on physical media by submitting a written request to:

- Oracle America, Inc.
- Attn: Associate General Counsel
- Development and Engineering Legal
- 500 Oracle Parkway, 10th Floor
- Redwood Shores, CA 94065

Or, you may send an email to Oracle using this form. Your request should include:

- The name of the component or binary file(s) for which you are requesting the source code
- The name and version number of the Oracle product
- The date you received the Oracle product
- Your name
- Your company name (if applicable)
- Your return mailing address and email
- A telephone number in the event we need to reach you.

We may charge you a fee to cover the cost of physical media and processing. Your request must be sent (i) within three (3) years of the date you received the Oracle product that included the component or binary file(s) that are the subject of your request, or (ii) in the case of code licensed under the GPL v3, for as long as Oracle offers spare parts or customer support for that product model.

6.3 Open Source or Other Separately Licensed Software

Required notices for open source or other separately licensed software products or components distributed in Oracle Communications Diameter Signaling Router are identified in the following table along with the applicable licensing information. Additional notices and/or licenses may be found in the included documentation or readme files of the individual third party software.

6.3.1 DSR Licensing information

Provider	Component(s)	Licensing Information

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d. If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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   This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

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   However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the

library." The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

7. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

   You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

   a. Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

   b. Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) operates properly with a modified version of the library, if the user installs one, as long as the modified version is interface- compatible with the version that the work was made with.

   c. Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

   d. If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

   e. Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

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    The “Corresponding Application Code” for a Combined Work means the object code and/or source code for the Application, including any data and utility programs needed for reproducing the Combined Work from the Application, but excluding the System Libraries of the Combined Work.

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    If you modify a copy of the Library, and, in your modifications, a facility refers to a function or data to be supplied by an Application that uses the facility (other than as an argument passed when the facility is invoked), then you may convey a copy of the modified version:

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    2. Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (a) uses at run time a copy of the Library already present on the user's computer system, and (b) will operate properly with a modified version of the Library that is interface-compatible with the Linked Version.

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Knockout Fast Foreach v0.6.0 (2016-07-28T11:02:54.197Z)

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* webcomponents/custom-elements - v1.0.8

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ES6-Promise v1.0.0

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```
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 *
 * Support: IE8+, FF3+, Opera 9+, Safari, Chrome and other
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 */
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* http://jqueryui.com
* Includes: core.js, widget.js, mouse.js, position.js, draggable.js, sortable.js
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 *
 * Includes Sizzle.js
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Version 2.1, February 1999

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