Oracle Communications Unified Session Manager

Deploy new services and applications with more agility and less complexity with Oracle Communications Unified Session Manager. Oracle Communications Unified Session Manager combines an agile session core with the proven security, interoperability, reliability, and regulatory compliance capabilities of Oracle Communications Session Border Controller in an extremely cost-effective, rapidly deployable product.

**KEY BENEFITS**

- Reduces complexity and cost of delivering SIP multimedia services
- Accelerates time to market
- Includes support for core IMS interfaces
- Allows for rapid VoLTE deployments starting at the session core with complete access session border control capability
- Enhanced for CSP Telco-Apps (so called OTT model)

**KEY FEATURES**

- Compliance with 3GPP IMS core function and interfaces
- VoLTE features such as eSRVCC support
- Session routing
- Integrated routing and subscriber database
- Enhanced multi-media sessions handing with TURN on the FLY
- MS Authentication and Key Agreement (AKA) support
- Support SCTP for enhanced network resiliency
- Integrate Oracle Communications Operations Monitor (OCOM) feature to provide better network monitoring thereby reducing operations costs and improving the user experience

**Overview**

Oracle Communications Unified Session Manager can be used as a standalone session core with an application server to deliver services. Or, it can be used in conjunction with a variety of third-party ecosystem and interoperability partners, including database, policy, application server, and charging vendors. With the addition of Oracle Communications Subscriber-Aware Load Balancer, Oracle Communications Unified Session Manager can be clustered to create a session delivery infrastructure that scales from thousands to millions of subscribers.

- **Improve your TCO.** Oracle Communications Unified Session Manager minimizes up-front cost and risk while providing a fully standards-based architecture. It also leverages the rich features and functions of Oracle’s SBCs to create an integrated service delivery solution. By leveraging state-of-the-art network design principles, Oracle Communications Unified Session Manager is designed to scale from small initial deployment trials involving thousands of users to mature deployments with millions of subscribers or more.

- **Simplify your operations.** Taking advantage of Oracle’s highly efficient and IMS-compliant Acme Packet OS signaling engine, Oracle Communications Unified Session Manager streamlines the core-signaling model, making it easier to operate, maintain, and troubleshoot. With this enhancement, Oracle Communications Unified Session Manager accelerates time to market by reducing operational and deployment complexity for delivering Session Initiation Protocol (SIP) multimedia services over any Internet Protocol (IP) network.

- **Deploy VoLTE today.** The Oracle Communications Unified Session Manager is designed for delivering trusted, first-class VoLTE services. It provides support for enhanced Single Radio Voice Call Continuity (eSRVCC) as well as key VoLTE features in the area of security, service interoperability as well as SLA assurance.
Network Session Delivery and Control Infrastructure

Oracle’s network session delivery and control infrastructure enables enterprises and service providers to manage the many challenges in the delivery of IP voice, video, and data services and applications. Service provider solutions are deployed at network borders and in the IP service core to help fixed-line, mobile, wholesale, and over-the-top service providers optimize revenues and realize long-term cost savings. In the enterprise, session delivery infrastructure solutions seamlessly connect fixed and mobile users, enabling rich multimedia interactions and automating business processes for significant increases in productivity and efficiency.

Related Products

- Oracle Communications Session Border Controller
- Oracle Communications Session Router
- Oracle Communications Subscriber-Aware Load Balancer
- Oracle Communications Unified Session Manager
- Oracle Communications Security Gateway
- Oracle Communications Interactive Session Recorder
- Oracle Communications Application Session Controller
- Oracle Communications Tunneled Session Controller
- Oracle Communications Core Session

Low-Cost, Integrated, Service Delivery Solution

Oracle Communications Unified Session Manager builds upon Oracle Communications Session Border Controller, which incorporates multiple functions including the following:

- SIP registrar
- Application server coordination
- External interconnect interfaces
- Multiple subscriber database query options (for authentication, authorization, location update, and lookup)
- Integrated SIP session routing
- Industry-leading SBC

Because many communications networks already feature access SBCs, service providers can use Oracle Communications Unified Session Manager to augment existing Oracle Communications Session Border Controller with powerful session management functions. This can be done at a fraction of the cost required to deploy the same functionality in separate network elements. Oracle Communications Unified Session Manager features a comprehensive set of functions and standard interfaces to create an integrated and fully 3GPP IMS-compliant Call Session Control Function (CSCF) core. Such functions and standard interfaces include the following:

- Session CSCF (S-CSCF)
- Interrogating CSCF (I-CSCF)
- Proxy CSCF (P-CSCF)
- Emergency CSCF (E-CSCF)
- Breakout Gateway Control Function (BGCF)
- IMS Access Gateway (IMS-AGW)

Figure 1. Oracle Communications Unified Session Manager features a comprehensive set of functions and standard interfaces
Scalable Solution

Oracle Communications Unified Session Manager offers IMS service providers a flexible combination of session capacity options, including advanced hardware acceleration for processor-intensive media control functions such as encryption, quality of service (QoS) monitoring, and transcoding.

Oracle Communications Unified Session Manager can easily evolve to support large-scale IMS deployments by creating an Oracle Communications Unified Session Manager cluster using Oracle Communications Subscriber-Aware Load Balancer. This capability increases subscriber capacity up to 2 million subscribers per cluster.

A large-scale network can be built with multiple distributed Oracle Communications Unified Session Manager clusters providing smooth, linear growth, with the added benefit of geographic redundancy. IMS session management scalability can also be achieved by adding dedicated BGCF functions with Oracle Communications Session Router to offload core session routing from the session core.

Flexible Subscriber Database Options

Oracle Communications Unified Session Manager supports three centralized subscriber database deployment options, including two external and one local onboard subscriber table. Using the Cx Diameter interface on Oracle Communications Unified Session Manager, Home Subscriber Server (HSS) elements can be queried for network operation procedures such as subscriber authentication, service orchestration rules (for example, initial filter criteria), and serving CSCF assignment and lookup. As an alternative to an HSS, Oracle Communications Unified Session Manager supports an interface to an E.164 Number Mapping (ENUM)–based server database for both subscriber and routing information. Similar to the Acme Packet OS local routing table, Oracle Communications Unified Session Manager can also provide a local subscriber table for subscriber credentials. These nonexclusive options provide flexibility for service providers looking to balance cost, capacity, and migration preferences.

Enhanced Platforms

Oracle Communications Unified Session Manager is available on industry leading AP6300, AP6100 platform and AP4600 platforms. AP6300 platform is a feature rich purpose built platform which is a powerhouse in signaling & media handling capacity delivering on the demands of a future network.

Industry-Leading Oracle Communications Session Border Controller Functions and Features

Based on the industry-leading Acme Packet OS, the Oracle Communications Unified Session Manager solution supports all SIP session control functions (signaling, media, and policy) and features in the areas of security, interoperability, service-level agreement (SLA) assurance, revenue protection, and regulatory compliance. Key functions and features for each functional area are listed in the table below:
Oracle Communications Unified Session Manager is a complete access SBC that also integrates a comprehensive set of IMS-compliant functions and interfaces, as shown in the table below:

### Key IMS Functions and Features of Oracle Communications Unified Session Manager

<table>
<thead>
<tr>
<th>IMS Entity</th>
<th>Description</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-CSCF</td>
<td>Proxy Call Session Control Function</td>
<td>Access signaling controls at IMS entry point for user equipment (UE)</td>
</tr>
<tr>
<td>I-CSCF</td>
<td>Interrogating Call Session Control Function</td>
<td>Core routing proxy, determines S-CSCF for registration</td>
</tr>
<tr>
<td>S-CSCF</td>
<td>Serving Call Session Control Function</td>
<td>Core session control proxy and registrar</td>
</tr>
<tr>
<td>E-CSCF</td>
<td>Emergency Call Session Control Function</td>
<td>Routing and prioritization of emergency calls</td>
</tr>
<tr>
<td>IMS-AGW</td>
<td>IMS Access Gateway</td>
<td>Media relay between access and core networks</td>
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<tr>
<td>ATGW</td>
<td>Access Transfer Gateway</td>
<td>Media relay to mobile switching center (MSC) for 3G handover</td>
</tr>
<tr>
<td>ATCF</td>
<td>Access Transfer Control Function</td>
<td>Signaling transfer point for handoff to 3G network</td>
</tr>
<tr>
<td>BGCF</td>
<td>Breakout Gateway Control Function</td>
<td>Core session routing within the IMS networks and to external interconnect border</td>
</tr>
<tr>
<td>Cx</td>
<td>Interface to ENUM or HSS database</td>
<td>Diameter authentication, authorization, location update, and lookup</td>
</tr>
<tr>
<td>Rx/Rq</td>
<td>Interface to PCRF and RACS</td>
<td>Diameter policy and charging control</td>
</tr>
<tr>
<td>Rf</td>
<td>Interface to online charging system (OCS)</td>
<td>Diameter charging control</td>
</tr>
<tr>
<td>e2/Mi</td>
<td>Interface to Network Attachment Sub-System (NASS) / CLF / LRF</td>
<td>Diameter interface for retrieving location information</td>
</tr>
<tr>
<td>Gm</td>
<td>Interface to SIP endpoint</td>
<td>SIP interface for registration and session establishment</td>
</tr>
<tr>
<td>Mx</td>
<td>Interface to i-BCF</td>
<td>SIP interface for interconnect with other IMS networks</td>
</tr>
<tr>
<td>ISC</td>
<td>Interface to AS</td>
<td>SIP interface from S-CSCF to application server for service orchestration</td>
</tr>
<tr>
<td>Mi</td>
<td>Interface to BGCF</td>
<td>SIP interface for signaling to Public Switched Telephone Network (PSTN) or other IMS networks</td>
</tr>
<tr>
<td>Mj/Mg</td>
<td>Interface to MGCF</td>
<td>SIP interface for sending signaling to PSTN</td>
</tr>
</tbody>
</table>

**Management**

Oracle Communications Unified Session Manager can be managed using any combination of Oracle Communications Session Delivery Management product family. Oracle Communications Session Delivery Management product family delivers highly scalable fault, configuration, accounting, performance, and security (FCAPS) management for Oracle Communications Unified Session Manager. Its flexible, high availability architecture accommodates small to very large networks and provides extensibility for hosting advanced management applications and services. Through multiple dashboard and configuration views, Oracle Communications Session Delivery Management product family facilitates flow-through provisioning, capacity planning, and comprehensive performance and fault monitoring, with at-a-glance status indicators that simplify real-time, network-wide management. Through standard interfaces, including Simple Network Management Protocol (SNMP), Secure File Transfer Protocol (SFTP), XML, and Simple Object Access Protocol (SOAP), Oracle Communications Session Delivery Management product family also integrates with operations support systems / business support systems (OSS/BSS) ecosystems to deliver advanced service fulfillment, service assurance, billing, and mediation. Oracle Communications Session Route Manager centralizes and automates the management and distribution of local route tables to the BGCF function of Oracle Communications Unified Session Manager. SFTP is supported for updating of local route tables via XML. Oracle Communications Unified Session Manager also supports Remote Authentication Dial-In User Service (RADIUS) accounting and SFTP for transfer of locally stored accounting and call detail records, in addition to SNMP and syslog for monitoring.
Professional Services

Oracle’s integration service for Oracle Communications Unified Session Manager is a robust deployment service that offers customers a thorough and streamlined design and implementation of Oracle Communications Unified Session Manager solutions. It combines an array of Oracle professional services offerings into a single service solution, including pre-installation planning, project management, solution architecture and design, solution testing and certification, onsite implementation, and post implementation remote consulting.

CONTACT US

For more information about [insert product name], visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

Integrated Cloud Applications & Platform Services

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