Oracle Communications Control Plane Monitor offers advanced monitoring and troubleshooting features for Diameter transactions—a Third Generation Partnership Project (3GPP) recommended standard for signaling—in Long Term Evolution (LTE) and IP Multimedia Subsystem (IMS) deployments. It is part of Oracle Communications Session Monitor Family of Products, an end-to-end network visibility and monitoring software system that increases the return on investment (ROI) of LTE, IMS, and Voice over IP (VoIP) deployments and provides an unprecedented view of the network for both operations management and in-depth troubleshooting.

Overview
Oracle Communication Session Monitor Product family allow service providers to quickly and securely migrate to IP networks, reduce operational costs, generate additional revenue, prevent voice fraud, and minimize churn. It is a proven, carrier-grade solution for fixed and mobile service providers with more than 100 deployments globally, including many tier-1 service providers. Oracle Communications Session Monitor family of products are vendor agnostic and supports any next-generation network architecture. It offers full, end-to-end correlation of all calls in real time and gives a high-level view, enabling perspectives of calls and registrations network-wide as well as insights on network statistics.

A passive, nonintrusive solution, Oracle Communications Control Plane Monitor provides specific key performance indicators (KPIs) of Diameter usage in real time and end-to-end correlation of Diameter transactions for mobile service providers’ signaling and roaming network infrastructure, along with drill-down and sequence diagrams for these transactions that enable rapid troubleshooting.

Deploying Oracle Communications Control Plane Monitor
Oracle Communications Control Plane Monitor offers advanced monitoring and troubleshooting features in LTE and IMS deployments. It provides the statistics mobile service providers need for Diameter usage in roaming and core scenarios. When Oracle Communications Control Plane Monitor is deployed with Oracle Communications Operations Monitor, service providers can view “a single pane of glass” to gain VoIP, video, and Diameter visibility.

Oracle Communications Control Plane Monitor captures all signaling messages from the network using network probes linked to an unrivaled correlation engine, with the results...
Oracle Communications Session Monitor product family is a robust network intelligence solution that helps service providers and enterprises to improve productivity and efficiency by providing a high-level overview of what is actually happening in their networks.

Using Oracle Communications Session Monitor Product family with Oracle's network session delivery and control infrastructure products allows service providers and enterprises to get the most out of their IP communications networks with unique, real-time management capabilities. Network operators can move beyond individual element management and benefit from real-time, network-wide visibility into multi-vendor IP communications networks.

**Related Products**
- Oracle Communications Operations Monitor
- Oracle Communications Control Plane Monitor
- Oracle Enterprise Operation Monitor
- Oracle Communications Fraud Monitor
- Oracle Communications Session Border Controller

Oracle Communications Control Plane Monitor is a 100 percent passive, nonintrusive solution that offers comprehensive, end-to-end correlation of all Diameter transactions in real time. Fully web based, it can be securely accessed from any browser. Integrated KPIs enable better monitoring of Diameter transactions, both platform-wide and per device, and Oracle Communications Control Plane Monitor offers drill-down capabilities and sequence diagrams for the Diameter transactions for advanced monitoring and analysis.

![Figure 1: Oracle Communications Session Monitor Family of Products offers full, end-to-end correlation of all calls in real time and high-level visibility of the network for management and troubleshooting.](image)

**Functions and Features**

**Real-Time Monitoring and End-to-End Correlation**

Oracle Communications Session Monitor mediation engine receives compressed signaling from the probes and performs further processing of the signaling, data, message correlation, and database functions. It performs massive processing of Diameter messages to provide the necessary correlation of Diameter transactions through Oracle Communications Control Plane Monitor.

**Monitoring to Prevent Overloads**

Oracle Communications Control Plane Monitor tracks authentication of mobile calls using S6a and S13 protocols. This enables mobile service providers to monitor authentication requests from user endpoints as they traverse Mobile Management Entity (MME), Equipment Identity Register (EIR), Diameter Signaling Controller (DSC), and Home Subscriber Server (HSS) infrastructure and to proactively balance resources to prevent network congestion.

**Enhanced KPIs and Grids Show Associated S6a Transactions**

Oracle Communications Control Plane Monitor presents KPIs and grids that display associated S6a dialog transactions.
Oracle Communications Control Plane Monitor presents Diameter messages in grids and tables, and enables real-time filtering of Diameter messages.

Figure 2: Oracle Communications Control Plane Monitor presents Diameter messages in grids and tables, and enables real-time filtering of Diameter messages.

Storing of All Diameter Transactions

All Diameter transactions are stored in the Oracle Communications Control Plane Monitor database for an extended period of time so a mobile service provider can perform capacity planning and analysis.

Detailed Visualization of All IMSI Numbers

Oracle Communications Control Plane Monitor captures the IMSI identification information associated with each mobile user endpoint, enabling IMSI tracking of all Diameter transactions and online viewing of IMSI numbers that are currently registered on the network. This provides a quick and convenient way to find the most important details about a given subscriber. An operator can simply enter the IMSI number in the
search box and Oracle Communications Control Plane Monitor will present the current attachment state, the type of device the subscriber is using, as well as the most-recent Diameter transactions related to the subscriber. Operators can even drill down into a given transaction to view the message flow, or obtain the associated PCAP file for analysis.

Figure 3: Operations personnel can conduct searches by IMSI number and track the status of IMSI end-user mobile devices in use throughout the network.

Summary

Oracle Communications Control Plane Monitor leverages the proven infrastructure of Oracle Communications Session Monitor Product family for real-time monitoring and end-to-end correlation of Diameter messages. It allows mobile service providers to monitor Diameter authentication call flows in order to proactively prevent overload conditions, and offers specific KPIs and grids that show associated S6a transactions. Oracle Communications Control Plane Monitor allows real-time filtering by relevant fields in the Diameter messages and storing of all Diameter transactions, and it provides mobile operators with full, detailed visualization of IMSI numbers to enable IMSI tracking of mobile devices.

CONTACT US

For more information about Oracle Communications Control Plane Monitor, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

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