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End-to-end visibility and simplified network operations management

Learn how Oracle Communications helps operators to deliver carrier-grade, real-time communications services, increase visibility into the network and simplify network operations management

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Real-time communications challenges

Communications service providers (CSPs) are faced with the complexities of managing multiple environments from traditional on-premises systems, to private, public and hybrid cloud deployment models. To deliver carrier-grade, real-time communications services operators have critical requirements for security, interoperability, reliability and quality, regulatory compliance, and cost optimization.

At the same time, Internet Protocol (IP) based communications is a lot different from the older circuit-switched networks, firstly because all IP calls share the same infrastructure, and there are many more services and applications on IP networks than there are on older ones. Therefore, networks have changed, and operators need to worry about a lot more things than they needed to before — customer experience, ensuring service-level agreements (SLAs), optimizing their networks, and planning for growth.

Managing multiple network elements is a challenge, and maintaining configuration, frequent software upgrades, and continuous performance monitoring can be time consuming and expensive. With disparate networks and siloed management systems, service providers may be overwhelmed with multiple passwords and different attributes across the networks and network functions (NFs) they manage and monitor.

What can service providers do about it?

Operators need session border controllers (SBCs) to deliver real-time communications in all types of IP networks. Furthermore, to obtain device and network wide key performance indicators (KPIs), sample and analyze call quality, troubleshoot network issues and isolate problems, spot usage patterns and plan infrastructure growth, they would need end-to-end network monitoring and troubleshooting solutions. Moreover, to eliminate swivel-chair network operations management across their increasingly complex networks, a unified presentation layer for the management and monitoring of their network functions would help service providers simplify their operations.

- ✓ **Choose best in class SBCs for carrier-grade, real-time communications.**
- ✓ **Take advantage of end-to-end and real-time network monitoring and troubleshooting solutions.**
- ✓ **Simplify network operations management with a unified presentation layer for management and monitoring.**

Oracle Communications Session Border Controller

Oracle Communications Session Border Controller (SBC) makes possible trusted, carrier-grade, real-time communications across IP network access borders and IP interconnect borders, including fixed line and mobile services. SBC runs as a single software application that supports both purpose-built hardware platforms as well as virtualized deployments in both private and public clouds. SBC offers a unique combination of performance, capacity, high availability, and manageability. With the offering, CSPs can manage critical requirements for security, interoperability, reliability and quality, regulatory compliance, and cost optimization. Via state-of-the-art hardware platforms, virtualized offerings, industry leading 3GPP, GSMA, and IETF compliance, and groundbreaking software enhancements, SBC brings value-added solutions through integration with other Oracle offerings and helps operators remain innovative and profitable.

SBC embedded element management delivers full administrative access to the command line interface (CLI), Simple Network Management Protocol (SNMP), management information bases (MIBs), statistics, system logs, packet trace information, and system software and configuration files via distinct management interfaces. Third-party management systems and operation support systems (OSS)/ business support systems (BSS) applications can also leverage Secure File Transfer Protocol (SFTP) and SNMP to access system accounting and performance data, MIBs, and historical data records (HDRs). REST API support is also available for configuration and statistics monitoring.

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Furthermore, as a comprehensive end-to-end network monitoring and troubleshooting solution, Oracle Communications Operations Monitor provides operations teams with real-time call correlation across multiple network sites, protocols, devices, and unified communications services. Additionally, it provides in-depth root cause analysis with sub-second visualization, offering flexible deployment options over on-premises, virtual and cloud environments. SBC features an internal probe that captures and forwards session traffic at wire rate, helping Oracle Communications Operations Monitor to instantly display fine-grained real-time communications performance metrics. The embedded probe also analyzes voice quality metrics and reports it to Oracle Communications Operations Monitor. Additionally, the Operations Monitor can also gather data from external Unified Communications as a Service (UCaaS) services such as Microsoft Graph via REST and correlate that information with the SBC data to allow a more holistic end-to-end monitoring of UCaaS networks and localize issues without having to pivot across systems.

With a single-pane-of-glass presentation layer, operators can manage and monitor all their Oracle Communications SBCs and related products using Oracle Session Delivery Management Cloud. Built on Oracle's next-generation cloud infrastructure, Oracle Session Delivery Management Cloud helps customers minimize operational costs in an agile, reliable, and secure way. The feature-rich SaaS solution includes fault, configuration, accounting, performance, and security (FCAPS) management, and provides an insightful and unified view across the Oracle Communications session delivery products such as session border controllers, session routers and subscriber-aware load balancers. Through integration with Oracle Communications Operations Monitor, Oracle Session Delivery Management Cloud provides users with the ability to view call data using a ladder diagram, as well as additional monitoring KPIs which can be displayed in customized dashboards.

- ✓ **Oracle Communications Session Border Controller (SBC) satisfies critical service provider requirements in five major areas: security, interoperability, reliability and quality, regulatory compliance, and cost optimization.**
- ✓ **SBC features an internal probe that captures and forwards session traffic at wire rate, helping Oracle Communications Operations Monitor to instantly display fine-grained real-time communications performance metrics.**
- ✓ **With a single-pane-of-glass presentation layer, operators can manage and monitor all their Oracle Communications SBCs and related products using Oracle Session Delivery Management Cloud.**

Solving for network complexity

Service providers' need to have deep visibility into the network is critical and the most immediate benefit is being able to troubleshoot quickly. In addition to that, operators can spot trends and take corrective actions quickly and therefore improve customer satisfaction. Management also means that they can configure and ensure that all their network elements are in good working order.

Oracle Communications SBCs are in the best spot to help operators achieve those objectives as all incoming and outgoing calls pass through them. They can pass details about those calls to specialized monitoring applications such as Oracle Communications Operations Monitor. And at the same time, and since the media is also passing through the SBCs, they can also monitor call quality. All these details help operators gain insights into their networks and keep them running most efficiently.

Moreover, Oracle Communications SBC features powerful embedded management options such as CLI and REST API and it can also be managed with specialized management solutions such as Oracle Session Delivery Management Cloud. Because it's managed in the cloud, Oracle Session Delivery Management Cloud eliminates the need to maintain a management system. It creates a single management and monitoring layer across the entire Oracle Communications session delivery product portfolio, helping operators to simplify their operations.

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