Oracle Communications Converged Application Server

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COMMUNICATIONS

Oracle Communications Converged Application Server is the industry's most widely used, fastest and most powerful converged Java EE-SIP-IMS application server, delivering a carrier-grade, open, standards-based development and deployment platform for next-generation and enterprise communications applications. As the foundation for several Oracle service delivery products, it is proven to dramatically lower the cost and time of developing and deploying converged Web-telecom applications for communication service providers, enterprises, and contact centers.

KEY FEATURES

- Converged Web-telecom application container based on SIP Servlet, IMS, Java EE, Diameter, JSR 309 Media Server Control and Web Services

- SIP Servlet 2.0 built on Java EE 7 includes efficient optimal POJO and CDI interfaces, concurrent session management, web sockets, and standard JSON, XML, JAX, JMS interfaces

- Virtual Network Function (VNF) compliance to Network Function Virtualization

- Extends unified communications (UC) and contact center features to enterprise applications

- Carrier-grade high availability Grid Computing architecture with geographic redundancy

- Extreme high performance and low latency with coherence in-memory cache and virtualization

Migration to Communications Application Platforms

With the explosive proliferation of IP devices such as smartphones, tablets, TVs, home appliances, gaming consoles, and cars, communications service providers (CSP) and enterprises are faced with the operational and business challenges of delivering innovative services with maximum profitability. In order to achieve this goal, they are migrating away from expensive, closed, proprietary, application-specific legacy platforms, towards virtualized converged communications application platforms. This dramatically lowers the time and cost of adding new features and extensions to existing IP-based communication services. It enables CSPs and enterprises to develop and deploy applications on a single, unified platform, and re-use those applications across multiple networks, including the Web, mobile, virtualized, broadband or fixed networks.

Rapid Development and Deployment

Most legacy communication applications are built on proprietary platforms which lack Enterprise capabilities. As a result, many CSP and Enterprises are challenged with long lead times and associated high costs of developing and deploying communication applications. By providing an open, standards-based, virtualized converged application platform with integrated SIP and Web capabilities, Oracle Communications Converged Application Server helps customers worldwide reduce the cost and time of developing and deploying carrier- grade, converged applications by over 70%.   It enables customers to maximize profitability from existing services, realize new revenue from innovative converged Web-Telecom applications, and implement new features in their existing enterprise Unified Communication (UC) and contact center networks.

Enterprises face challenges with the implementation of communications-enabled business processes. Oracle Communications Converged Application Server addresses these challenges extending and integrating communication features into enterprise business applications. With standard web-based interfaces including SIP, businesses

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- Lower cost of application development and deployment using latest, state of the art, open, standards JEE SIP Servlet platforms

- VNF capabilities remove hardware dependencies and provide rapid scaling based on network demand

- Increase revenue with innovative converged Web-telecom applications and diverse business models

- Accelerate deployment of Communications Enabled Business Processes

- Reduce integration and deployment time with tested media functions and NFV components

- Grid computing increases performance while lowering architecture footprint

may build or interact with communications services such unified communications (UC) or contact centers. The Oracle Communications Converged Application Server provides an abstraction layer that enables any Web application to control multiple UC and contact center vendor systems, each with its own proprietary interface. This abstraction layer makes application development and maintenance more efficient.

Carrier-Grade, Open Standard, Communications App Server

Oracle Communications Converged Application Server is a carrier-grade, open, standards-based converged Web-telecom application platform based on the SIP Servlet, Java EE, Web Services, and IMS standards. It is designed for a wide-range of IP-based, communication-enabled applications, such as VoIP, multimedia conferencing, SIP/IMS-based call control and messaging services.
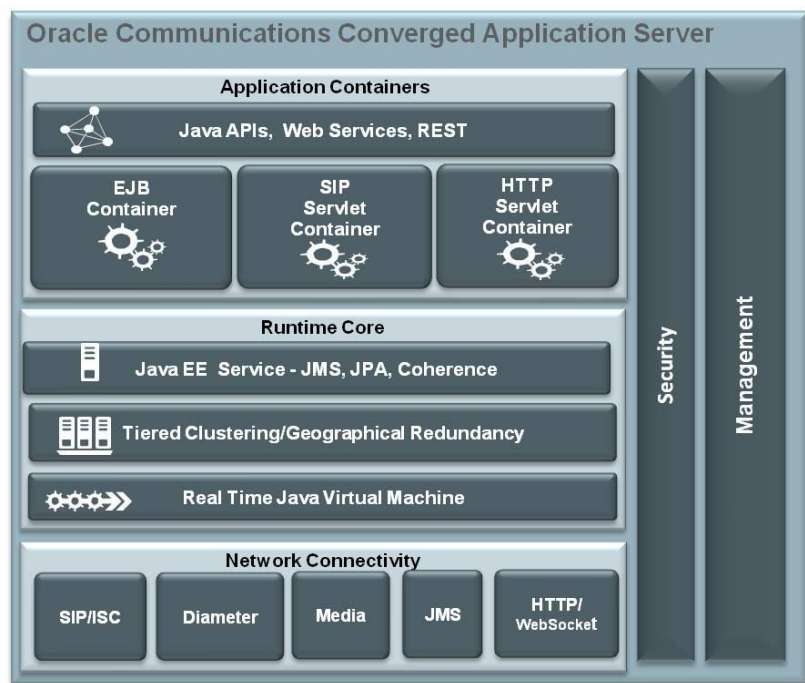

Figure 1. Functional Overview of Oracle Communications Converged Application Server

Multimedia and Converged Applications

At the core of Oracle Communications Converged Application Server is the industry's most advanced SIP Servlet container, integrated with the industry's most powerful Java EE platform. The integrated container allows for rapid and cost-effectively development and deployment of innovative, converged Web-telecom applications. CSPs or Enterprises may easily integrate applications with SIP/IMS-based communication and collaboration services such as VoIP, presence, location, or multimedia conferencing.

Converged Web-Telecom applications involve the delivery or sharing of one or more types of media, whether it is voice/audio, video, images or other types of data, which requires converged applications to interact with media servers. The Oracle Communications Converged Application Server is not only the first container to be fully compliant with SIP Servlet 2.0, but also simplifies the development of rich-media converged applications by supporting the Media Server Control API. It reduces the

time and complexity to integrate with 3rd party media servers, resulting in reduced costs and faster time-to-market for innovative multimedia converged applications.

Performance, Availability and Reliability

Oracle Communications Converged Application Server helps customers minimize the risk of service outages and performance degradations by providing the industry's only converged application platform to support geographically redundant deployment configurations.. Customers can deploy converged IP-based applications into their networks with unmatched availability and reliability, by having the application session state automatically distributed across multiple regional data centers in real time. This eliminates the risk of service outages from single points of failure.

Converged applications deployed in telecom networks require real-time session set- up and application data access with minimal latency, because these factors have a direct impact on the quality of the end-user's experience. High performance and low latency are key attributes of communications applications developed and deployed on Oracle Communications Converged Application Server. It takes full advantage of the real-time Java Virtual Machine (JVM), Coherence Grid Computing, and optimization of the converged application container for extremely high throughput.

Standards and Platforms Support

Standard	Compliant to	Specification/Release
IP	SIP Servlet 1.0, 1.1, & 2.0	JSR 116 & 289 & 359
	Java EE 7	Oracle WLS 12.1.3
	Java SE 8	JDK 1.8.0_31
	Media	JSR 309
	Web Sockets	JSR 359
Telecom	3GPP IMS	Release 11: 3GPP TS 23.228, 24.229, 29.328
	IETF SIP	RFC 3251,3588,2543,3262,3515 , 3903,3311,61,41,5626
	Diameter	3GPP TS 32.299
OS	Oracle Solaris 11 Linux Windows 7(64 bit) HP-UX	Oracle 6+, Redhat
VM	Java Virtual Machine	Oracle Java VM, HP JVP, Oracle Virtual Machine

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