The Ubiquity SIP Application Server

The Power to Leverage the Next Generation Service Delivery Network

Carrier-Class Performance and Application-Creation Expertise in One Simple Solution

As the next-generation service delivery network continues to emerge, converged applications will drive service providers' infrastructure deployments as well as their revenue. Ubiquity's SIP Application Server (USAS) is both a carrier-class platform and a programmable, standards-based application-creation environment (ACE) that allows providers to develop, roll out and host these new-generation services.

Modeling Converged Applications with Internet-Like Speed & Efficiency

The growing numbers of service providers migrating to all-IP networks face a major challenge. They must learn to build and implement converged services. However, the traditional telecom network, unlike the Internet, is not designed for rapid, cost-effective application development and service deployment.

To bring the Internet-like application development to next-generation networks, the Ubiquity SIP Application Server employs SIP Servlet architecture, which resembles the popular web Servlet model. Using this standards-based framework, programmers can employ familiar tools to quickly develop converged services that use voice, video, Instant Messaging and other IP-based media. Service providers using the USAS can significantly accelerate their time-to-market and ROI.

Seamless Interoperability with IP Networks & SIP Devices

By using the Session Initiation Protocol (SIP) as its primary signaling construct for interconnecting endpoint devices and network resources, the Ubiquity SIP Application Server offers service providers the unprecedented flexibility to deliver converged communications across all IP networks and SIP clients.

The USAS seamlessly interoperates with wireline IP networks, including LANs, WANs and the Public Internet, as well as mobile 2.5G, 3G and Wi-Fi networks. In wireline and pre-3G networks, the USAS communicates via SIP to other network devices, including media gateways for PSTN connectivity, network servers, media servers, IP phones and other SIP clients, as well as softswitches.

In completely IP-based, 3G mobile networks, the USAS facilitates the delivery of services by communicating with a mobile SIP Proxy Server, a Home Subscriber System and other application servers.

Reliable, High-Performance Delivery of Real-time Services

Today's real-time communications requires carriers to deploy high-performing, ultra-reliable application servers in the core of their networks. To meet these exacting standards, the Ubiquity SIP Application Server is designed with a customized, load-balanced, distributed architecture without single points of failure. The high-availability system is fully optimized to execute SIP service requests and easily scales up to meet growing service providers' demands. Applications are replicated across individual service hosts. Incoming service requests are load- balanced across service hosts by service directors.

[Insert diagram of platform]

The USAS operates in clustered configurations using off-the-shelf; NEBS-compliant server platforms based on Intel x86 and Sun SPARC architectures. It supports carrier-grade Linux (CGL), Sun Solaris and Microsoft Windows Server 2000 / XP Pro operating systems. A single, clustered Ubiquity SIP Application Server can achieve throughput rates in excess of 1,000 SIP transactions per second.

The Ubiquity SIP Application Server provides the following features:

- Redundancy – No single point of failure at the component server level
- Scalability – Multiple service directors and hosts can be added without impacting existing services
- Fault tolerance - Fail-over protection and switchover of services
- Security - Standard SIP mechanisms for hop-by-hop authentication

Comprehensive Platform Management, Administration & Billing Support

In a real-world carrier network, the manageability and reliability of application servers are equally important. The Ubiquity SIP Application Server provides an easy-to-use GUI to manage server clusters and servlet applications. It also supports SNMPv2c for ease of integration with external Operations Support Systems (OSS).

The USAS provides a comprehensive logging service that enables service providers to quickly collect fault and performance data. This logging service also permits providers to extract accounting information and export it to external billing systems to expedite customer invoices.

A Standards-based, Open & Programmable Application-Creation Environment

The Ubiquity SIP Application Server comes pre-loaded with a powerful set of Application Building Blocks (ABBs) that dramatically reduce the effort and knowledge needed to build SIP applications.

- Session Control - USAS provides the capability to create, tear down and modify existing communications sessions for all media types.

- Call Processing Language (CPL) - The USAS provides CPL storage and execution capabilities, enabling developers to deploy user-profiling services such as call forwarding and find-me/follow-me.

- Call Forwarding - This ABB provides a superset of special call forwarding attributes for developers who want a higher level of abstraction of call handling than CPL.

- Application Event Logging – The USAS enables logging of application context sensitive information for accounting, fault or performance management purposes.

- Presence Management - This IETF SIMPLE-compliant ABB allows applications to subscribe to notifications regarding the status of other registered SIP entities.

- Instant Messaging – The USAS offers an IETF SIMPLE-compliant IM handling capability.

- Conferencing -- This ABB allows the conference server to connect to the USAS and provides the application developer with complete conferencing control.

- IVR Control - Developers use this ABB to access IVR capabilities within applications.

- SIP Registration – This function provides SIP registrar capabilities as well as user location information for SIP applications and devices.

Software Development Kit (SDK) Library Streamlines Service Deployments

The Ubiquity SIP Application Server ABBs are available in the Ubiquity SDK, making them accessible to a community of more than three million, third-party Java developers. The Ubiquity SDK is a set of library components that can be used in a free-form manner, unleashing a powerful blend of IT, Web

and communication applications that even developers without networking expertise can leverage. The Ubiquity SDK works with familiar J2EE IDEs, including BEA WebLogic Workshop.

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Leverages the JAIN SIP Servlet API Standard for an Optimal ROI

The Ubiquity SIP Application Server is an extremely flexible and extensible SIP-based platform that enables application developers to add new SIP features via a standards-based mechanism: the JAIN SIP Servlet API (JSR116). Emulating the web services model, this programmable architecture maximizes the longevity of the platform, in stark contrast to proprietary, closed telecom application models.