WebSphere® software

IBM WebSphere Telecom Web Services Server

Highlights

- Enhance services and revenue opportunities by enabling third-party access to rich telecom capabilities
- Provide flexible, controlled access to telecom network capabilities and information through standards-based telecom Web services
- Help retain high-value customers with flexible, policy-driven delivery of network capabilities — based on service level agreements (SLAs) at the service or individual subscriber level
- Help protect network resources from unauthorized access and overload with effective access control and traffic management capabilities
- Ease operations support activities associated with delivering third-party access to telecom network capabilities
- Enable flexible and fast delivery of IP Multimedia Subsystem (IMS)–compliant services based on industry-standard interfaces for flexible service oriented architecture (SOA) deployments

Meet increasing customer demand for innovative communications services

Business and consumer users alike are increasingly demanding richer communications capabilities in a variety of applications they use every day. Examples include the following:

- Tailored communications capabilities in a broad array of applications, such as mobile workforce, enterprise collaboration or consumer gaming
- Applications that incorporate real-time information about the people with whom subscribers communicate, such as location and presence
- Incorporation of richer, multimedia-based content in communications

As customer expectations and competitive pressure continue to increase, service providers are looking for not only new revenue-generating services, but also new business models that involve partners that offer value-added services to the service provider's customers. As service providers significantly increase the number of services in their catalogs, third parties will deliver many — if not most — of these services. Using industry-standard Web services to abstract telecom network capabilities, service providers can tap into the creativity of the large number of IT developers outside of the telecom industry for innovative new services their customers will value.

Enable third-party access to rich telecom capabilities

IBM WebSphere® Telecom Web Services Server enables telecom operators to provide third parties with controlled, reliable access to telecom network capabilities such as presence and call control. Consequently, it helps service providers:

- *Offer new revenue-generating services* in conjunction with their business partners and explore new business models enabled from the controlled exposure of core network services to third-party developers.
- *Retain high-value customers and third-party service providers* with the flexible and reliable management of policy-driven SLAs at the service and individual subscriber levels.
- *Protect underlying network resources* from unauthorized access and overload with security-enhanced, policy-based access and effective traffic management capabilities.

Additionally, third-party application developers can access network services through standards-based

Establish a flexible, high-performance execution platform for next-generation services

The proliferation of Internet Protocol (IP) technologies such as Session Initiation Protocol (SIP) — and the development of open standards like the IP Multimedia Subsystem (IMS) framework and Parlay X Web services — create the opportunity for telecommunications service providers to deliver enhanced services to their customers more rapidly. Further, they can help cut the costs of developing and managing these services, while overcoming the challenges of inflexible legacy infrastructure. By leveraging these technologies, service providers can use a single platform to support rich, converged applications and communications traffic — voice, video or data — over fixed and mobile networks, independent of the underlying network infrastructure.

WebSphere Telecom Web Services Server is part of the IBM next-generation services platform for telecommunications. Based on SOA principles — reusing individual service components and separating the creation and execution of new service applications from the underlying network — the IBM next-generation services platform provides a flexible execution environment for rich IP-based services. As part of this telecom service platform, IBM has developed IMS-compliant service enablers — IBM WebSphere IP Multimedia Subsystem Connector, IBM WebSphere Presence Server and WebSphere Telecom Web Services Server — to help minimize the cost and time to deliver rich, composite services to market.

Parlay X Web services to enhance their consumer and enterprise applications with valuable service provider network capabilities and information. WebSphere Telecom Web Services Server offers third-party application developers:

- *Insulation from telecom network complexity,* so they can focus their creativity on business or consumer functions rather than low-level implementation of communications capabilities.
- *Simplification of skills requirements,* allowing a large pool of Web developers to access communications service functionality without requiring detailed infrastructure knowledge.
- *Protection from evolving communications network technologies,* with standardized Web services interfaces that remain stable as service provider networks evolve.

Leveraging the principles of an SOA, service providers and application developers can use WebSphere Telecom Web Services Server to offer both consumer and business users a broader range of tailored applications that include rich communications capabilities.

Implement standards-based access to communications capabilities

WebSphere Telecom Web Services Server provides a security-rich access gateway that is based on industry-standard Parlay X Web services. WebSphere Telecom Web Services Server is comprised of:

- A front-end access gateway for controlling and managing third-party access to network services.
- Back-end service implementations of Parlay X–based connections to network elements for exposing specific network functions and information.

This modular architecture enables service providers to flexibly scale and evolve the WebSphere Telecom Web Services Server to meet rapidly changing customer demands and network technologies.

The access gateway provides a common control point that telecom service providers can use to define, manage and enforce policies and SLAs for third-party services and subscribers. At all times, the telecom operator controls which applications and which users have access to which network capabilities and under what conditions. The access gateway is built on IBM WebSphere Enterprise Service Bus, which provides the flexibility to customize Web service message processing in accordance with the telecom service provider's network policies and enterprise SOA.

The Web service implementations deliver standardized interfaces, compliant with Parlay X 2.1 Web services standards, for accessing telecom network functions including third-party call setup, call notification and presence capabilities.

Provide differentiated service levels for valued customers

With WebSphere Telecom Web Services Server, service providers have the flexibility to establish and enforce SLAs at the service, operation and individual subscriber levels. Consequently, telecom operators — and the third parties that leverage their services — can better maintain predictable service levels for different end users.

To enforce SLAs and support predictable network service performance, WebSphere Telecom Web Services Server provides policy-driven traffic monitoring and management of Web service requests. The software enables:

- *SLA enforcement* — tracks system use by each requester to enforce policy-driven SLAs. This enables operators to provide differentiated levels of quality of service (QoS) based on service subscriptions.
- *Admission control* — manages the number of requests admitted into the system, to avoid exceeding the system capacity (based on a configured rate for a given time interval).
- *Traffic shaping* — controls the rate at which traffic can be directed toward associated downstream network elements.

Additionally, WebSphere Telecom Web Services Server enables automatic notification of network events to support dynamic application operations. For example, an application can take action when WebSphere Telecom Web Services Server notifies it that a specific user's presence status has changed. In this manner, the server gives applications real-time, dynamic information upon which to act.

Tightly control access to network resources

Telecom operators serve millions of users every day and require very tight control over who and what applications can access various services under what conditions. WebSphere Telecom Web Services Server enables service providers to establish policy-driven control over access to network capabilities and assets through functions such as:

- *Policy retrieval* — retrieves and delivers service provider–defined policy information to downstream access gateway components and back-end service implementations, to support policy-based decisions during service execution.
- *Service authorization* — evaluates the requester, targeted service and invoked operation against the policies defined by the telecom operator.
- *Group resolution* — facilitates the identification of members within specified groups, to account for the specific subscriber targets during SLA enforcement and traffic management.
- *Privacy enforcement* — provides an integration point with the service provider's privacy system to allow access to requested information only to those who should view it.

Simplify associated operations support activities

To support operations activities such as network monitoring and maintenance, billing and customer relationship management, WebSphere Telecom Web Services Server enables flexible monitoring and reporting of various statistics related to the delivery of Web services–based telecom functions. WebSphere Telecom Web Services Server provides:

- *Network statistics* — records Web service message statistics in a database that can be used by network operations to construct service traffic reports for network analysis and capacity planning.
- *Faults and alarms* — outputs fault information and alarms for severe error conditions.
- *Service usage records* — generates and stores descriptions of service use for accounting and billing purposes.

Enable flexible and fast delivery of IMS services

WebSphere Telecom Web Services Server is built on the converged WebSphere Application Server. This server supports SIP-, HTTP- and portal-dependent applications, so Web functions and real-time voice and multimedia applications can be deployed, run and managed from a single application platform. Together, the core application server and the service enablers provide a high-performance, SOA-based execution platform in compliance with the IMS framework and associated standards. These tools help service providers quickly and efficiently deliver rich, next-generation communications services to market.

Hardware and software requirements

For details on all hardware and software requirements, visit **ibm.com**/software/pervasive/serviceserver/sysreqs

For more information

To learn more about WebSphere Telecom Web Services Server, contact your IBM sales representative or IBM Business Partner, or visit **ibm.com**/software/pervasive/serviceserver

For more details about next-generation services platform offerings from IBM software, visit **ibm.com**/software/solutions/LE/LA09-01/solutions_overview.html

IBM Corporation
Software Group
Route 100
Somers, NY 10589
U.S.A.

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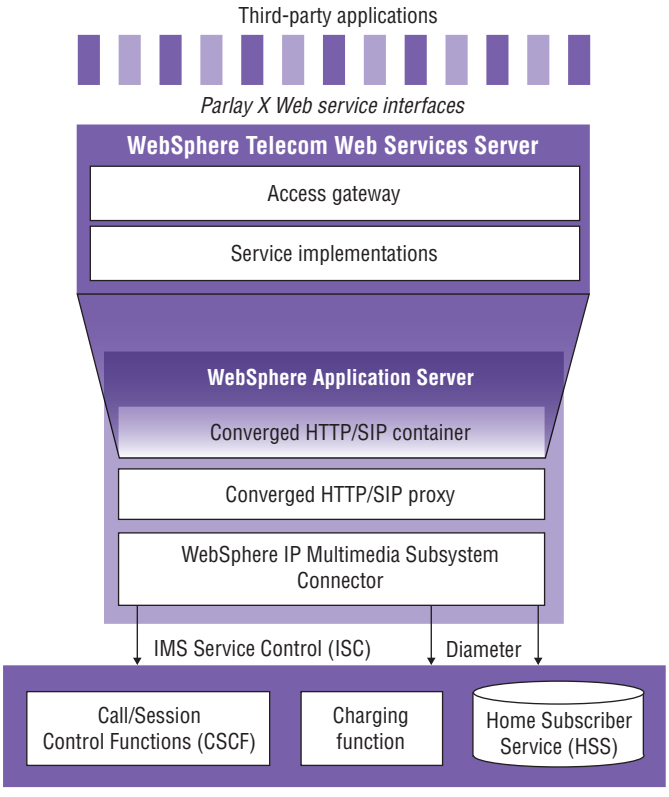

IMS core network elements

WebSphere Telecom Web Services Server is part of the IBM next-generation services plane platform for telecom.

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