

IBM WebSphere IP Multimedia Subsystem Connector

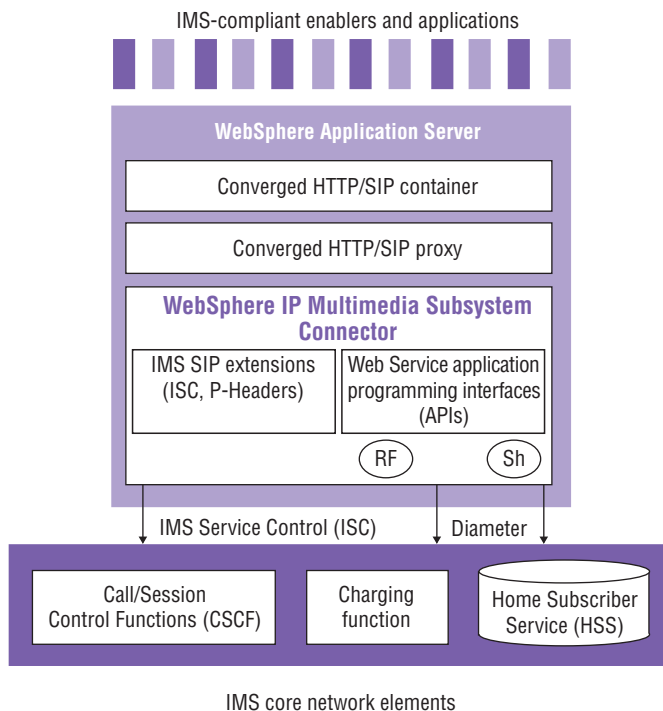
Highlights

- Build and deploy “converged” next-generation applications on a single service execution platform to flexibly meet evolving customer expectations
- Leverage integrated Session Initiation Protocol (SIP) support and standards-based extensions to IBM WebSphere Application server to support IP Multimedia Subsystem (IMS) in a telecom service provider environment
- Create and deploy new revenue-enhancing services more quickly with prebuilt, standard interfaces
- Help provide innovative multimedia-based services to your customers
- Enable a broad range of independent software vendors (ISVs) to more simply and cost-efficiently build rich new converged HTTP and SIP applications to be deployed in a service provider environment

Meet customers’ rising service expectations

For telecommunications service providers, there’s little doubt that both consumers and business customers demand — and are very quickly adopting — new forms of communication. Along with excellent service quality, they expect ubiquitous access, personalization and richer multimedia features. But until now, ISVs and integrators have been forced to use separate platforms to create Web (HTTP)-based and real-time communications (SIP)-based services, and deploy them in parallel run-time environments — one for HTTP and one for SIP.

IBM WebSphere® IP Multimedia Subsystem Connector — combined with IBM WebSphere Application Server — powers the WebSphere telecom service execution platform. WebSphere IMS Connector extends the industry-leading WebSphere Application Server platform and delivers an SIP application server that is intended specifically for telecom



WebSphere IP Multimedia Subsystem Connector extends the WebSphere Application Server platform to more flexibly and efficiently connect with IMS control plane network elements — helping facilitate delivery of rich, next-generation services.

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

The proliferation of Internet Protocol (IP) technologies such as SIP — and the development of open standards like the 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 IMS Connector 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 — WebSphere IP Multimedia Subsystem Connector, IBM WebSphere Presence Server and IBM WebSphere Telecom Web Services Server — to help minimize the cost and time to deliver rich, composite services to market.

applications and complies with IMS standards. WebSphere Application Server is a proven, high-performance transaction engine that helps you build, run, integrate and manage dynamic applications. It also includes extensive Web services support, which helps make it easier to integrate applications inside your enterprise, as well as externally with customers, partners and suppliers.

WebSphere IMS Connector facilitates flexible service oriented architecture (SOA) deployments by interfacing with IMS network elements through industry-standard interfaces and facilitating flexible application development through Web services. Because it supports IMS-ready HTTP and SIP applications in a single application server, WebSphere IMS Connector allows service providers and their partners to build and deploy “converged” IMS applications on a single service execution platform. As a result, it helps reduce the complexity of developing — and the costs of operating — IMS-compliant services.

Leverage deeply integrated SIP support and standardized IMS interfaces

To provide a dynamic IMS service platform to telecom service providers, IBM embedded telecom-specific

capabilities right into the core application server. SIP support has been deeply integrated into the WebSphere Application Server foundation at the same level as HTTP, including the load-balancing proxy server. As a result, IBM's core Web execution platform is compliant with industry standards and requirements specific to the telecom industry.

WebSphere IMS Connector adds key IMS-compliant interface elements to this core WebSphere Application Server platform:

- IMS Service Control (ISC) interface allows standards-based connectivity to Call/Session Control Functions (CSCF) in the IMS control plane. The ISC interface facilitates session control, supporting communications between applications running on WebSphere Application Server and the different CSCFs of the IMS control plane.
- Diameter stack and interfaces support subscriber management and charging functions in accordance with IMS standards. They include a standard Sh interface for subscriber profile management and a standard RF interface for offline charging.
- SIP extensions, such as IMS-specific private headers and parameters, are made available to the service plane applications.

Both SIP and Diameter protocols are deeply integrated into WebSphere Application Server. WebSphere IMS Connector enables and licenses the use of the ISC interface and Diameter on the WebSphere platform in IMS deployments. As a result:

- IMS-compliant applications can be built and deployed on the industry-leading application server platform.
- Applications can manage subscriber profiles from Home Subscriber Server (HSS) in a more reliable, secure fashion.
- Offline charging allows the support of post-paid billing model for IMS services.

Simplify the creation and deployment of new revenue-enhancing IMS services

WebSphere IMS Connector provides a host of application programming interfaces (APIs) that helps simplify the development and deployment of IMS services. WebSphere IMS Connector helps minimize the programming complexity of the Diameter protocol to the application developer, because it provides a Web services layer to all supported APIs such as the Sh and RF interfaces. These simple Web services abstractions hide the complexities of interfacing with Diameter network elements using binary protocols. They

can also be used as component APIs for service orchestration and choreography in an SOA.

WebSphere IMS Connector and WebSphere Application Server also help speed and simplify service creation with support for SIP Servlet APIs. Furthermore, IBM also provides an IMS enablement toolkit that includes several IMS integration APIs — such as the one for IBM WebSphere Presence Server — as Eclipse plug-ins (sample applications are also included).

IBM also actively engages with Network Equipment Providers (NEPs) to enhance the interoperability of WebSphere IP Multimedia Subsystem Connector with IMS core network elements that NEPs provide, helping maximize deployment speed in an IMS environment.

Deploy innovative multimedia applications for subscribers

WebSphere IMS Connector not only helps provide benefits to your company — it also helps provide significant benefits to your customers by giving them innovative multimedia applications and services. A few examples of those kinds of applications might include:

- *Call tones:* A user selects a ringtone and a picture, then writes a message to send to a buddy or buddies when calling them, which are then delivered to the callee during call setup.
- *Real-time call management:* An application intercepts a call from one user to another, when both users are on IMS-capable phones. The application checks the presence of the second user, and if that user is unavailable, opens a browser window for the first user, who is offered several options: leave a message, notify me when available or initiate call when available.
- *Multiplayer games with conference:* Subscribers can set up action games between several mobile devices and talk to each other during the game, over the same device.

These types of value-added services can help you retain and grow your customer base and increase average revenue and profit per user (ARPU and APPU), as well as reduce customer churn.

Take advantage of a growing community of external services developers for service innovation

WebSphere IMS Connector represents a different approach to providing a converged IMS solution to telecom service providers. It helps you minimize the cost and complexity of service creation and implementation for the lines of business and business partners.



As an extension of the widely used WebSphere Application Server, it is an attractive tool for enticing ISVs to build their applications on your platform, helping spur application creativity in the telecom market.

A network-side enabler and problem solver for telecom service providers, WebSphere IMS Connector is a powerful extension of the WebSphere Application Server environment to help address the challenges and demands of IMS rollouts.

Hardware and software requirements

WebSphere IP Multimedia Subsystem Connector requires IBM WebSphere Application Server Network Deployment, Version 6.1. For details on all hardware and software requirements, visit ibm.com/software/pervasive/multisubcon/sysreqs

For more information

To learn more about WebSphere IP Multimedia Subsystem Connector, contact your IBM sales representative or IBM Business Partner, or visit ibm.com/software/pervasive/multisubcon

© Copyright IBM Corporation 2006

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

Produced in the United States of America
7-06

All Rights Reserved

IBM, the IBM logo and WebSphere are trademarks of International Business Machines Corporation in the United States, other countries or both.

Other company, product and service names may be trademarks or service marks of others.

The information contained in this documentation is provided for informational purposes only. While efforts were made to verify the completeness and accuracy of the information contained in this documentation, it is provided "as is" without warranty of any kind, express or implied. In addition, this information is based on ibm's current product plans and strategy, which are subject to change by ibm without notice. Ibm shall not be responsible for any damages arising out of the use of, or otherwise related to this documentation. Nothing contained in this documentation is intended to, nor shall have the effect of, creating any warranties or representations from ibm (or its suppliers or licensors), or altering the terms and conditions of the applicable license agreement governing the use of ibm software.

TAKE BACK CONTROL WITH **WebSphere.**