

Sun Java™ System Instant Messaging

Secure, standards-based real-time communication and presence framework



Highlights

- Increases the work efficiency and productivity of employees, partners, and customers through secure, rapid, and real-time communication and collaboration
- Reduces business expenses by replacing costlier means of communication (phone and teleconferencing) and eliminating the delays and time lags associated with email and voice mail
- Extensible and integratable real-time communication platform allows the embedding of presence and real-time collaboration functionalities within other applications and services
- Open standards-based architecture and co-packaged gateways facilitate interoperability with other IM systems and public IM networks
- Scalable, highly available, distributed architecture enables large deployments and helps reduce total cost of ownership



Sun Java™ System Instant Messaging provides a secure, scalable, extensible, and rich communication and collaboration platform. It enables telecommunications service providers, financial services firms, enterprises, government agencies, and educational institutions to leverage the power of presence and instant communication to create a highly responsive, real-time business environment of connected employee, customer, and partner communities.

Java System Instant Messaging is a key component of the Sun Java Communications Suite, which includes the industry-leading Sun Java System Messaging Server and Sun Java System Calendar Server. Java Communications Suite products enable the creation of highly secure, robust, and feature-rich communication and collaboration environments, and to date have sold more than 240 million seats.

Java System Instant Messaging integrates with Sun Java System Directory Server and Sun Java System Access Manager. It can provide presence information and presence-based collaboration capabilities to a wide range of additional applications.

Real-time communication

Real-time communication and collaboration is a powerful tool that has changed social and business practices, delivering benefits to both service providers and users. The foundation of instant messaging is presence awareness. Presence information tells a user which colleagues are available to help solve a problem or provide information immediately. It increases productivity and reduces response times.

Instant messaging also facilitates the work of remote teams by enabling interactive communication more cost-effectively across disparate locations. Being able to communicate in real

time through instant messaging reduces the use of other more costly and sometimes delayed means of communications, for example, long-distance phone calls, teleconferences, email, and voice mail. The ability to quickly resolve an outstanding issue also provides the benefit of user satisfaction. In the case of a customer interaction, that satisfaction often leads to customer loyalty, an ongoing relationship, and ultimately more revenue.

The presence management technology in Java System Instant Messaging automatically indicates who is online — even across organizational boundaries and geographical regions. Automatic activity detection updates a user's presence information without user input. Users can add customized text messages to their presence status to more accurately describe their availability or location. In addition, they can choose to be “invisible,” which enables them to see the presence of others but not appear online themselves.

Beyond an application, a foundation for leveraging presence

Presence can be the foundation for a wide range of real-time applications. Presence information can be used to perform intelligent routing and workflow based on available resources. In the case of a customer service desk, knowing the availability of appropriate resources is critical to a rapid response, which in turn contributes to customer satisfaction and increased loyalty.

Java System Instant Messaging provides not only a real-time communication and collaboration platform, but also a foundation to leverage presence for real-time application development. For example, Java System Instant Messaging is embedded in Sun Java Studio Enterprise development software to enable collaboration among distributed developers. Developers can share snippets of Java code, hold online conferences to discuss a project, and communicate in real time with other project members.

Security, privacy, archiving and regulatory compliance

Business users are increasingly employing public instant messaging services to interact with colleagues and others across the extended enterprise. However, when users communicate with coworkers or customers about business related topics via a public instant messaging network, the integrity of enterprise information assets can be at risk. On public instant messaging networks, messages that are sent unencrypted can be intercepted. In many industries, such as healthcare and financial services, regulations require that enterprises protect their information assets and users' privacy with secure communications.

Java System Instant Messaging enables IT organizations to manage their own user populations, control their own servers to prevent interception of confidential information, ensure user privacy, and comply with industry regulations. It enables users to archive and retrieve transcripts of instant messaging exchanges by leveraging the archive capabilities of traditional email systems as well as the search capabilities of traditional email clients.

Multiple authentication mechanisms and granular access policies help ensure that users are properly identified and authorized. Communications are secured through client-to-server and server-to-server Secure Sockets Layer (SSL) support. In addition, Java System Instant Messaging offers a sophisticated set of privacy profile controls, enabling users to specify which other users and groups can and cannot see their status and communicate with them.

Finally, while mostly known in the context of email, spam and viruses are penetrating instant messaging as well. Alerts can be a mechanism for broadcasting spam or viruses in real time. As a means of protecting against spam and viruses, Java System Instant Messaging provides a message conversion application programming interface (API) that enables scanning and filtering of message contents and attachments.

Platform extensibility, scalability and interoperability safeguards investments

Support for Java technology and the Extensible Messaging and Presence Protocol (XMPP) helps protect infrastructure investments by enabling Java System Instant Messaging to be easily extended and customized to meet specific or changing business requirements. A number of XMPP-based clients, including mobile clients, can be used with Java System Instant Messaging.

A comprehensive set of APIs facilitate openness and extensibility:

- The Services API enables developers to extend instant messaging services, embed them in other applications, or develop additional Java technology-based or Web-based clients or bridges to other classes of clients.
- The Authentication Framework API allows integration with alternate authentication and single sign-on services, facilitating integration with third-party portal solutions.

- The Message Conversion API enables integration with content filtering, anti spam, and virus protection. Both text messages and attachments can be scanned before delivery.
- The Archive API allows integration with third-party message archiving applications.

Built for high performance and scalability, Java System Instant Messaging can support very large user deployments. Gateways to public IM networks such as AOL AIM, Yahoo Messenger, and MSN Messenger can be used for interoperability across Java System Instant Messaging and public IM networks. Java System Instant Messaging co-packages AIM, MSN, and Yahoo gateways for out-of-the-box interoperability with AOL Instant Messaging, MSN Messenger, and Yahoo Messenger networks.

Java System Instant Messaging capabilities

Java System Instant Messaging provides a variety of collaborative features, security and privacy controls, and administrative tools that meet the needs of end users, IT administrators, and developers.

Collaborative features

- Instant messaging and chat enable users to converse with each other — either one to one or in a group. Users can invite other users into an ongoing chat or have side conversations.
- Alerts inform users of time-critical messages and information. The notification mechanism can be used for individual messages or for one-way broadcasts to a group of users.
- Alert storage and forwarding enable users to specify routing of alerts received when offline. Store and forward options include storing until the next time the user logs on, discarding alerts sent while offline, and forwarding to email, pager, or Short Message Service (SMS)-equipped mobile phones.

- Contact lists let users create and manage groups of contacts for collaborating with different users and groups. Users can create group contacts specific to projects, teams, or accounts.
 - Polling provides a means for rapidly surveying a group for opinions on a given question or subject. This feature helps facilitate rapid decision-making. The poll originator poses a question with several possible answers; respondents may also customize their replies.
 - Conference rooms are persistent, preestablished, private discussion rooms where multiple users can collaborate. In a moderated conference room, a designated moderator facilitates the discussion by receiving, filtering, and submitting messages. Content from these conferences can be archived when a project is complete.
 - File transfer enables users to share documents, media files, and any other files to supplement communications.
 - News channels enable users to access published information — such as company announcements, project updates, or event notices — on a subscription basis. News channels can contain Web links and attached files, and are controlled by the administrator. Users can be automatically subscribed to appropriate news channels based on their roles.
 - User-configurable content enables users to input information to specify presence status such as “on the phone” or “at lunch.” Users can also indicate the mood of a message by changing the font and color of the text or by adding an emotion for emphasis.
 - Calendar pop-up reminders enable users to receive real-time notification of upcoming calendar events through integration with the Java System Calendar Server.
 - Message archiving enables users to capture the knowledge generated within an instant messaging session, conference, or poll with keyword search and retrieval of transcripts through a variety of email servers and clients, or via the Archive API and a third-party archiving solution.
 - VoIP support enables users to talk to each other using the audio hardware on their PCs.
 - IMPS protocol support allows users to connect to the IM system by cellphone, enabling them to reach others or be reached even when away from their PCs or laptops. The multiuser chat support for IMPS enables mobile users to manage and participate in conferences or group conversations.
 - HTTP Gateway allows connection to the Instant Messaging system via the HTTP protocol, enabling clients running on constrained platforms, such as J2ME or Browser-based AJAX clients, to use the IM service.
 - SMS Gateway provides a connection between the XMPP network and the Short Message Service (SMS), enabling users to deliver chat messages and alerts to offline contacts in the form of SMS messages.
 - AIM, MSN, and Yahoo Gateways enable Java System Instant Messaging users to communicate with their contacts on AIM, MSN and Yahoo Messenger.
- Security and privacy controls**
- Session encryption through client-to-server and server-to-server SSL support protects the integrity of communications.
 - Extensive privacy controls enable users to exercise control over who can see and communicate with them, delivering authorization for presence access as well as communication access. Privacy profiles enable

a user to specify multiple separate sets of rules for who can communicate with them. For example, a user might have a “working at home” profile that specifies access only to their manager and immediate team members.

- Spam and virus protection is enabled through a Message Conversion API, which enables scanning and filtering of message contents and attachments.

Centralized administration and management

- Ease of installation and administration allows for both rapid deployment and lower total cost of ownership.
- Simple server-to-server configuration facilitates the rapid deployment of distributed servers across multiple datacenters.
- Flexible feature provisioning enables administrators to control, at a very granular level, exactly which features a given user or group has provisioned for them. For example, one group might be allowed only basic chat and alerts, while another group can also do file transfers, news, and polling.
- Logging allows for storage on the server of instant messaging and conference transcripts.
- Server monitoring, supporting both the Java Management Extensions (JMX™) specification and Simple Network Management Protocol (SNMP) monitoring standards, enables administrators to watch various vital statistics about a deployed server in real time.
- Auditing of message transcripts is possible through the message archiving feature, which allows for storage of message transcripts within a fully searchable database. Archiving enables institutions in finance and healthcare to comply with industry regulations.

Open, scalable, flexible and integratable platform

- Open standards such as XMPP, HTML, Java technology, and TCP/IP facilitate integration with other software applications as part of a total real-time collaboration solution.
- A modular, scalable architecture with message-routing multiplexers, multiserver federation, and clustering enables highly available and reliable deployments supporting hundreds of thousands of users.
- Java System Instant Messaging can be used with any XMPP-compliant client, including many open source clients that aggregate contacts from public networks.
- Gateways to public IM networks such as AOL AIM, Yahoo Messenger, and MSN Messenger can be used for interoperability across Java System Instant Messaging and public IM networks.
- Published APIs enable developers to extend and enhance presence and real-time collaboration capabilities, security and authentication mechanisms, and user interfaces.

Platforms and requirements

Server operating systems

- Sun Solaris™ 10 Operating System
- Red Hat Enterprise Linux 4 and 5 (64-bit version)

Client operating systems

- Sun Solaris 10 and 9 Operating Systems for SPARC and x64/x86 platforms
- Apple Mac OS X v10.1 or later
- Microsoft Windows 98, ME, NT (SP 6a), 2000, and XP
- Red Hat Linux 7.2 or later

System requirements

- Server Deployments: Java 2 Runtime Environment, Standard Edition 1.6 (or later)
- Client Deployments on All Systems: Java 2 Runtime Environment, Standard Edition 1.6 (or later)
- Microsoft Windows Client Deployments Only: Java 2 Runtime Environment, Standard Edition 1.6 (or later)
- Server Disk Space: 300 MB, plus 5 KB per user
- Memory: 256 MB minimum

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For more information about Sun Java System Instant Messaging, please visit sun.com/comms.