

KAAZING WEBSOCKET GATEWAY

KAAZING WEBSOCKET GATEWAY enables companies to quickly create a new class of fully-interactive web applications with live streaming data – while enhancing the user experience, simplifying the development process and reducing the cost of back-end server infrastructure.

Many modern business applications demand reliable real-time communications with near-zero latency. Today's Internet users expect this kind of responsive, two-way communication – whether they're facilitating financial transactions, getting up-to-the second data, playing games with others, conducting on-line chatting, or bidding in auctions.

Until now, the way to achieve this has been to throw money at the problem, buying thousands of servers and deploying expensive custom-build software that has limited adoption. Even then, the results have been cumbersome, error-prone, and expensive to manage.

That's because traditional web architectures aren't designed for real-time web communications; instead they focus on document-centric, request-and-response communications patterns – one browser and one server, one page at a time – an approach that has served the Internet well for the last fifteen years, and is now outmoded.

The KAAZING WEBSOCKET GATEWAY can connect hundreds of thousands of concurrent users directly to the real-time data flowing through an organization. By avoiding the overhead and latency inherent in HTTP, it can deliver bi-directional, ultra-high performance, communication over the Web.

Kaazing's founding team is spearheading work on industry open standards, and has contributed directly to the HTML 5 WebSocket specification. By building your applications atop standards-based protocols, you ensure that you'll be able to hire skilled development resources, protecting your applications against vendor lock-in while ensuring their longevity and maintainability.

FEATURES

BENEFITS

- Creates a much superior web user experience with full interactivity and live data, without plug-in
- Extends existing Client/Server based applications to the Web
- Reduces operational costs significantly
- Simplifies Web architecture by minimizing Web-tier processing
- Scales to massive number of users with existing hardware infrastructure
- Supports globally distributed user population with high availability without service degradation
- Reduces the complexity of delivering a disaster recovery solution for applications requiring 100% uptime

FEATURES

- Connects hundreds of thousands of concurrent Web clients directly to the real-time data
- Delivers ultra high performance full duplex bi-directional communication – does not require the user to 'refresh page' to see content updates
- Distributes load dynamically with fine-grained control across the cluster
- Delivers enterprise-grade reliability and resiliency
- Supports all browser technology platforms and integrates quickly and easily with existing enterprise messaging platforms by leveraging HTML5 standards
- Provides enhanced security & stateless single sign-on capability
- Includes management and monitoring features

Features of the Kaazing WebSocket Gateway

WebSocket Acceleration Technology

At the core is Kaazing's patent-pending WebSocket Acceleration™ technology, which handles the transmission of hundreds of thousands of messages a second between clients and servers. WebSocket Acceleration™ extends any TCP-based messaging format out to the Web client. Unlike traditional HTTP connections, a WebSocket is an HTTP-friendly TCP socket, across which any application data can flow in either direction. This turns every browser into a full-featured enterprise platform – a first-class citizen of any enterprise messaging system that is both fast and fully manageable. In addition, since all connectivity is client-initiated, Kaazing WebSocket Gateway can seamlessly traverse firewalls and proxy servers.

Best-in-industry high performance and scalability

Kaazing WebSocket Gateway scales easily to enormous amounts of concurrent users. It runs separately from application logic hosted in an application server. This separation eliminates competition for resources and dramatically enhances performance and lowers latency. In addition, by not inserting HTTP header meta-data in the client/server conversation, network bandwidth is a tiny fraction of competing pseudo-real-time Web products. In some cases, the bandwidth required is 1/1000 of an HTTP-based solution.

Dynamic load distribution across clusters

Kaazing WebSocket Gateway has the ability to offload connection overhead and create a hierarchy of gateways to distribute load scales architecturally – rather than by brute force – allowing far higher capacity deployments than other approaches.

Enhanced security and stateless single sign-on capability

Kaazing WebSocket Gateway has built-in protocol awareness, verifying that bytes flowing through the gateway match the expected protocol wire format. This check helps to prevent buffer overrun attacks or other malicious attacks on the back-end server. Kaazing WebSocket Gateway integrates with JAAS, supporting pluggable authentication modules, and client libraries provide encrypted storage to remember back-end system credentials. Encrypted credentials sent to Kaazing WebSocket Gateway are automatically injected into the protocol before authenticating with the backend system, eliminating the time and risk of a long, multi-password authentication sequence without compromising credential storage.

Browser technologies and enterprise messaging platforms

Kaazing WebSocket Gateway supports browsers as old as IE 5.5, requires no browser plug-ins, and integrates quickly and easily with enterprise messaging platforms, such as TIBCO EMS, WebSphere MQ, ejabberd, Openfire, Active MQ, and RabbitMQ. It does not rely on costly “polling” or “long-polling” techniques that eat up valuable server resources, but is instead a true full-duplex communications model. What's more, it works with a wide variety of client-side technologies, including JavaScript, Adobe Flex (Flash), Microsoft Silverlight, Java, and JavaFX.

Enterprise-grade reliability and resiliency

With Kaazing WebSocket Gateway, message delivery from back-end systems and services is guaranteed all the way from the server to the browser and vice-versa. Kaazing WebSocket Gateway also supports multicast so that a data source can be configured to send packets to a multicast IP address. In case of a broken request, Kaazing WebSocket Gateway automatically reconnects, guaranteeing message delivery.

Management and Monitoring

Kaazing WebSocket Gateway allows administrators to manage and monitor the internal state of the gateway. In addition, management tools compatible with any JMX-compliant protocol can recognize Kaazing WebSocket Gateway – and connected Kaazing WebSocket Gateway clients – as part of their management topography, letting IT teams use existing management tools to oversee both LAN-based and browser-attached users.

LEARN MORE

Protocol client libraries

AMQP (JavaScript, Flex, Silverlight)
STOMP
XMPP (JavaScript & Flex)
Darkstar (JavaScript)
IRC (JavaScript & Flex)

System requirements

100MB of storage space
1.5GHz CPU or better
Java 1.6 (Java6) certified platform
Java Developer Kit (JDK) 1.6x (Java6) or greater

Minimum Browser Requirements

Apple Safari 3.0
Google Chrome 1.0
Microsoft Internet Explorer 5.5
Mozilla Firefox 1q.5
Opera 9.5

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