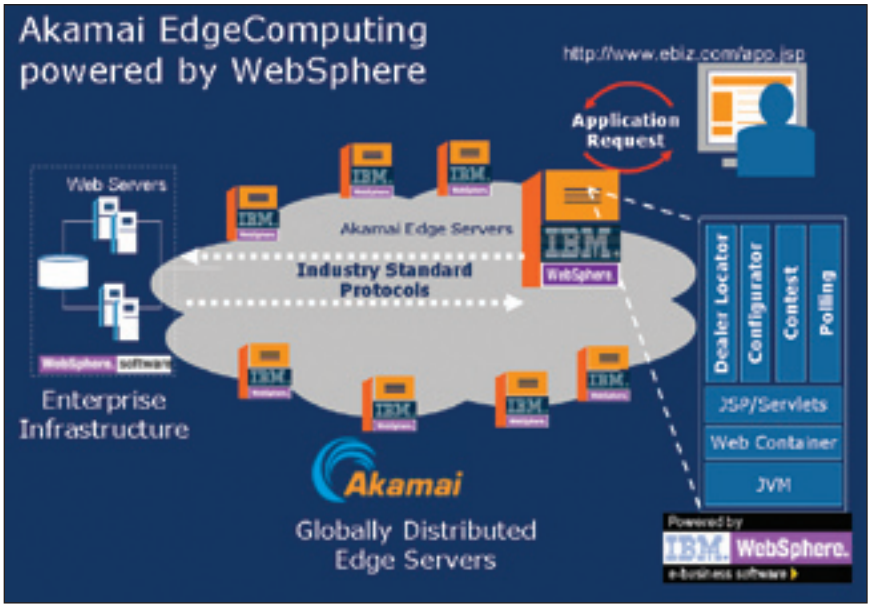
Akamai enables greater application responsiveness with utility-like solution powered by WebSphere software.

Overview

- ***Challenge***
  Improve market share by enabling e-commerce enterprises to quickly respond to market demands with improved Internet application performance while lowering costs
- ***Solution***
  Akamai EdgeComputing powered by WebSphere®, a utility-like computing solution that lets customers tap into (and pay for) only the amount of computing power from the network that they need, when they need it
- ***Why on demand?***
  Integrating its solution with IBM WebSphere Application Server, Version 5 would provide customers with an open, reliable, commercial-strength platform for on demand Web-based applications
- ***Key Benefits***
  For Akamai: Ability to deliver additional service offerings opens door to substantial revenue and larger market share while enhancing customer loyalty
  For customers: Ability to eliminate time-to-market constraints and respond faster to business challenges; seize new opportunities more quickly with more efficient solutions



Powered by IBM WebSphere Application Server, Akamai's new service allows customers to get additional computing power on a pay-as-you-go basis.

As the Internet grows larger and more complex, users of business-to-business and business-to-consumer applications are losing their patience with slow performance and stale content. Their growing frustration has fueled the market for on demand content delivery services, which today exceeds $250 million as businesses continue to deploy more functionality online. That's a big market, and Akamai wants its share.

> *"Akamai chose WebSphere Application Server because it is the most flexible middleware for creating, running and integrating e-business applications, such as e-commerce Web sites."*
>
> *–Annie Boyer, Director of Product Management for Akamai EdgeComputing, Akamai*

Anticipating and responding to customer and market demand

On Demand Benefits

- Utility-like computing solution based on WebSphere software has allowed Akamai to deliver more service offerings, tap into new revenue streams, strengthen customer relationships and improve its business agility
- Customers respond more rapidly to new business opportunities without taking on new overhead or making additional capital investments
- Improved Web application performance and security
- Better ability to control costs
- Open, reliable and stable platform for deploying Web-based applications has empowered Akamai to reinforce its position as a technology innovator by providing customers with additional computing power as they need it

Akamai pioneered the content delivery business. In broad terms, using a content delivery service is a way of guaranteeing that mission-critical content — video, audio, data or text — gets from its source to its destination in a timely and reliable fashion. Located in Cambridge, Massachusetts, the 550-employee company now supports more than 14,000 servers, deployed in 70 countries worldwide and across over a thousand networks. Along the way, it has assembled an extensive customer list, including Apple, FedEx, Macy's, NASDAQ and Reebok. Founded in 1998, Akamai earned revenues in 2002 of $145 million.

Seeking to serve its customers' increasing demands to conduct more business over the Web, Akamai knew that it would have to expand its services with special offerings. For example, e-commerce customers wanted the flexibility of buying computing resources on demand. That way, they could avoid the high cost of purchasing peak-use servers that otherwise might be underutilized. "We wanted to enhance our customer offerings with a utility-like services model for accessing additional computing capacity as required," says Annie Boyer, director of product management for Akamai EdgeComputing, Akamai. "It is this value that allows enterprises to reliably move more traditional business practices to the Internet."

To accomplish its goals, Akamai required a common platform for building and distributing Web applications on its global network. This would permit Akamai to offer companies the high-performance they were seeking without the large capital investments. The system would also have to be robust and based on open standards, to keep pace with future growth.

"Integrating WebSphere Application Server into our existing technology nicely positions Akamai for the future. What's more, it furthers our companywide effort to expand the range of benefits we can offer our growing customer base."

– Annie Boyer

Working with IBM Software Services, Akamai developed a service — Akamai EdgeComputing powered by WebSphere — that basically creates a virtual data center that customers can tap into as needed. Through virtualization, Akamai's customers receive capacity that immediately and automatically adjusts to their needs, streamlines their IT operations and lowers their management costs.

On demand service helps customers respond faster to business opportunities

Akamai EdgeComputing powered by WebSphere allows users of IBM WebSphere Application Server to leverage Akamai's servers distributed around the world. By doing so, customers can run their applications from the best possible location — based on Internet traffic conditions — at any particular time. "With Akamai EdgeComputing powered by WebSphere, customers can now get additional Internet computing power on a pay-as-you-go basis, and enjoy the confidence of knowing their applications will be faster and more reliable for every user," explains Boyer.

Akamai has integrated WebSphere Application Server, Version 5, with its servers using a set of application programming interfaces developed by IBM and Akamai to provide an open standards-based distributed computing infrastructure. "Akamai chose to work with WebSphere Application Server because it is the most flexible middleware for creating, running and integrating e-business applications, such as e-commerce Web sites," says Boyer. "Other factors were its support of open standards such as Java™ 2 Platform, Enterprise Edition (J2EE) technology, XML and the new Web services standards; and its high reliability, scalability and security."

By leveraging Akamai EdgeComputing Powered by WebSphere, Akamai's customers can head off network congestion, since the company's distributed network of servers, which include IBM @server xSeries systems, handle everyday Web application traffic and spikes on demand. "The result is that Akamai, rather than your IT infrastructure, manages the bulk of the load, allowing you to significantly reduce the cost and managerial complexity of the infrastructure required to support application-based e-business," says Boyer. "This lets enterprises invest their time and people in innovating rather than maintaining systems and worrying about their scalability."

Today, Akamai's globally distributed network of servers enables companies to provide enterprise customers, partners and vendors with anytime access to lightning-fast, highly personalized Web-based applications. By using Akamai's service, Akamai's clients present pertinent content quickly to customers faster and at lower costs. Says Boyer: "Akamai has transformed itself. We've evolved from a business that helped make Web pages traverse the Internet faster to also enabling enterprises to consume computing resources on demand. Now, Akamai can serve more of the requirements of our customers, and tap into new revenue streams."

Solution reduces cost and complexity of IT environments

Akamai recently launched Akamai EdgeComputing powered by WebSphere that has been utilized by Internet Broadcasting Systems (IBS) to run its Web-based applications for polling and surveys across Akamai's global network. IBS needed its polling application to withstand spikes in requests around major news events, when viewer feedback became even more critical. By distributing the application processing using Akamai EdgeComputing powered by WebSphere, IBS was able to reduce the load on its origin servers by up to 99 percent, dramatically enhancing the performance and reliability of the user experience, and avoiding tens of thousands of dollars in additional hardware costs.

Key Components

Software

- IBM WebSphere Application Server, Version 5

Servers

- IBM @server xSeries® 300 and 330

Services

- IBM Global Services
- IBM Software Services

A version of Akamai's EdgeComputing solution has already helped Sony Ericsson Mobile Communications experience 400 percent faster application performance, and has reduced its server infrastructure by 65 percent. It also boosted system reliability from the low 90s to 100 percent. In doing so, Sony Ericsson has lowered its IT costs significantly and increased its ability to respond to customers in a timely and relevant manner.

Akamai is confident that many other companies will enjoy the same benefits. "By tapping into our on demand services, our customers can focus on their core competencies and transform their businesses to provide even greater levels of responsiveness," says Boyer, noting that the solution can be hosted by the customers themselves, by an IBM Business Partner or through IBM Global Services. "At the same time," she adds, "our customers benefit from spending less to maintain systems and more on developing new solutions. Plus they can respond faster to fresh business opportunities."

Future enhancements will include easy one-button network deployment and testing within WebSphere developer tools, and integration with other products in the WebSphere line. The system now provides a performance boost for Web services applications, by having them run on computers close to the edges of the network.

"The market for our services is expanding. Every day we see more businesses building more creative applications targeted at improving their traditional business processes, such as lead qualification, partner registration and catalog browsing," says Boyer. "Integrating WebSphere Application Server into our existing technology nicely positions Akamai for the future. What's more, it furthers our companywide effort to expand the range of benefits we can offer our growing customer base."

For more information

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