Application Acceleration managed services

Attract and retain customers by accelerating your web presence

Highlights

- Consolidate functions and simplify deployment for application infrastructure at the "edge" of the database, "edge" of the enterprise and "edge" of the Internet.
- Consistently reach customers, regardless of their location, with enhanced performance.
- Accelerate multiple applications between the Public Cloud or SaaS environment and your enterprise users.
- Amplify protection against malicious attacks.
- Strengthen security inside your firewall.

Business and IT leaders today know the importance of consistently reaching customers, regardless of the location of those customers. To stay competitive, you need to study response times, amplify protection against malicious attacks and strengthen security inside your firewall. And you need a solution that is simple to deploy.

A simplified and converged solution is now available to address the performance, scalability and security challenges that are associated with web application delivery. The IBM approach to application acceleration combines best-in-class Internet application delivery technologies with best-in-class enterprise infrastructure appliances. These solutions are simple and quick to implement—application changes are not required.

Take action to consistently reach customers, regardless of their location, with enhanced user response times at the "edge" of the Internet. IBM Application Acceleration managed services help you amplify protection against malicious attacks and help you strengthen security inside your firewall.

IBM Application Acceleration managed services are a comprehensive combination of hardware and software. This combination supports rapid, security-enhanced delivery of applications to employees, partners and customers around the globe. Simplify your environment. Reduce response times and increase business agility.

Components of the IBM Application Acceleration managed services include:

- IBM® WebSphere® DataPower® Edge Appliance XE82, an integrated traffic gateway that provides traffic consolidation, monitoring, workload management and acceleration for web application delivery. The performance of WebSphere DataPower Edge Appliance XE82 enables fine-grained control for governing, balancing, routing, securing and caching policies for applications.
- IBM WebSphere Application Accelerator for Hybrid Networks, a managed service that accelerates application delivery for public cloud infrastructure and services into your enterprise.
- IBM WebSphere Application Accelerator for Public Networks, a managed service that accelerates and enhances security for your enterprise web-presence and Internet-based applications.

Both managed services cache content close to users, offloading backend application servers and removing network delay. For content that cannot be cached, the services accelerate requests through a variety of optimization methodologies, including:

- Identifying the fastest path through the Internet
- Optimizing network communication
- Caching web page content before it is needed

The difference between public, private and hybrid networks

A private network is used by a single company and is managed internally by corporate resources. A public network is the Internet (you provide content to your users). A hybrid network combines public cloud services with internal applications for improved efficiency and lower costs.

The benefits of IBM Application Acceleration managed services

Adapt quickly and grow in a changing business environment. In a world that is increasingly instrumented, interconnected and intelligent, it is important to work smarter—and technology can significantly improve productivity management and reduce costs. IBM Application Acceleration managed services help you to increase business agility by giving you more control over the application delivery experience, regardless of where customers and employees are located.

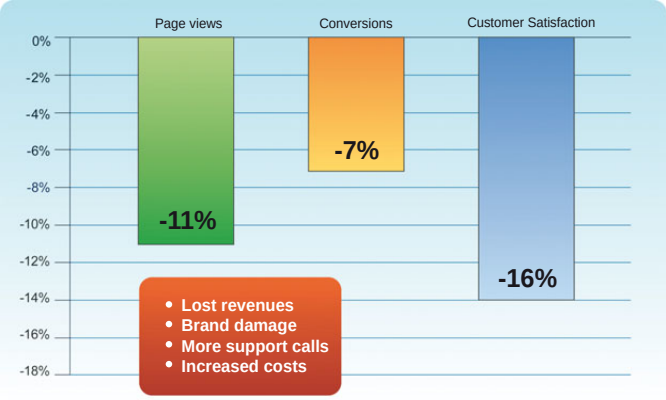

Figure 1: illustrates how the challenges of slow Internet response time negatively impact revenue and user satisfaction

Create competitive success by improving application response times. Slow response time impacts revenue and customer satisfaction. As shown in Figure 1, the average impact of a one-second delay in response time can equate to lost revenues, brand damage, a higher level of support calls and increased costs.

Enhance operational efficiency. Simplify traffic consolidation, content-based routing, intelligent load balancing and workload management with integrated application acceleration managed services from IBM. Enhanced security and fine-grained control help you to select resources intelligently, so that your resources correspond to your business goals directly.

Strengthen the security of your applications. These managed services from IBM provide end-to-end optimization, acceleration and security-rich management from your enterprise through the Internet, to your users, and back. Help protect your websites against surges in traffic and malicious attacks. This IBM managed service helps you control the application delivery experience, regardless of which demands or attacks might be affecting the network.

Take control by managing applications at the "edge" of the enterprise

WebSphere DataPower Edge Appliance XE82 is the enterprise gateway, or "front door," to the network. The DataPower Edge Appliance XE82 simplifies traffic consolidation, content-based routing, load balancing and workload management.

Figure 2: depicts the IBM WebSphere DataPower Edge Appliance XE82.

The DataPower Edge Appliance XE82 interfaces as an optional enhancement for WebSphere Application Accelerator for Public Networks and as a prerequisite for WebSphere Application Accelerator for Hybrid Networks.

This modular "edge-of-networking" appliance combines network and application intelligence for those who seek a simplified and converged solution. With the DataPower Edge Appliance XE82, you can consolidate functions, simplify deployment for your application infrastructure with intelligent cache control, and act to address the performance, scalability and security challenges that are associated with web application delivery.

WebSphere DataPower Edge Appliance XE82

Capabilities	Benefits
Provide intelligent distribution of application traffic to create dynamic adjustments that optimize server utilization, response time and throughput. Supply intelligent distribution of application traffic to server members or groups (using feedback from the application cluster, health checks or application-session affinity.	• IT environment simplification
Deliver wire speed performance unique to a workload-optimized system design. Offer "next-generation" content processing capabilities, hardware accelerated encryption and decryption, advanced compilation of processing policies into machine code instructions and ten-gigabit Ethernet connectivity. Create dynamic adjustments that direct traffic to servers, which optimizes server utilization, response time and throughput.	• Reduced and consistent response time
Confirm that your applications and websites remain available through standards-based, centralized governance and security, along with intelligent back-end application workload balancing with failover. Ensure that even a "box failure" can be handled non-disruptively with the proper configuration, with high-availability configuration options provided by optimization. Retrieve application-version information from a WebSphere Virtual Enterprise Edition deployment that can be used for intelligent routing based on your chosen policies.	• Minimized business disruption
Enhance origin security with mature message-content-level security and access control. Provide more-secure enablement of your high-value applications because message traffic can be filtered, validated, encrypted and signed. Control access to applications, services and data, based on customizable roles and rights. Strengthen standards-based, centralized governance and security, which enhances your ability to protect sensitive information.	• Protection of your IT environment and management of security risks
Achieve version rollout and quiesce that are nondisruptive; this appliance acts as a dynamic router, providing "application version"-based routing. Bridge to Web 2.0 technologies with JavaScript Object Notation (JSON) filtering and validation. Support Representational State Transfer (REST) verbs and the ability to convert and bridge REST and web services.	• Optimization of applications

Your colleagues and customers can experience improved response times for both static and dynamic content. And a significant amount of processing can be offloaded from your backend web applications.

IBM WebSphere Application Accelerator for Hybrid Networks is a managed service that accelerates application delivery for public cloud services. Even when employees and partners are far from the origin of their Software as a Service (SaaS) applications, you can deliver the reliability that is required to support important business functions—and you can do so as if these services were delivered locally from your enterprise data center.

With WebSphere Application Accelerator for Hybrid Networks, a dedicated, globally distributed server network optimizes mission-critical traffic. You can accelerate multiple applications and improve the performance and availability of public cloud or SaaS applications—while simplifying application management simultaneously.

WebSphere Application Accelerator for Hybrid Networks

Capabilities	Benefits
Strengthen authentication, authorization and accounting processes (AAA) and govern access for cloud-built applications. Deliver security-rich connections from the enterprise through the Internet to the cloud service or application.	• Improve enterprise access control and manage security risks.
Improve performance and availability between public cloud providers and your enterprise data center. Enable greater agility to respond more quickly to the infrastructure needs required by cloud services. Provide scalability to avoid over-provisioning your network.	• Lower cost for your organization's cloud adoption • Yield higher return on investment for your organization's cloud strategies
Maximize performance for third-party applications and facilitate your organization's move to cloud computing. Provide content caching within the enterprise, data compression throughout the public Internet and rapid path routing through the Internet.	• Remove barriers and encourage the adoption of cloud services

IBM WebSphere Application Accelerator for Public Networks is a managed service that delivers security-enhanced performance for Internet-based applications. These managed services help you reach customers faster, accelerating the delivery of enterprise applications behind the firewall to users throughout the Internet. The performance of WebSphere Application Accelerator for Public Networks can strengthen your ability to deliver consistent, reliable application response to your customers—and helps you to reduce the risks from attacks on your network.

To expand business potential, it is important to shrink response time for the applications that represent your company to the world. That is why the security-enhanced acceleration of applications draws interest from a range of stakeholders throughout organizations. CFOs, enterprise architects, salespeople, business application owners and IT operational staff are all interested in hardware and software solutions that can help create success in an increasingly competitive marketplace.

WebSphere Application Accelerator for Public Networks

Capabilities	Benefits
Deliver timely web content to your customers, no matter where they are located. Rapidly deliver interactive web applications while you take action to reduce the costs of your data center infrastructure and network.	• Improve user response times without requiring any changes to your web applications • Increase revenues and strengthen your corporate brand with reliable, consistent availability throughout the world
Boost application availability to protect websites against surges in traffic. Optimize mission-critical traffic with a dedicated, globally distributed network of tens of thousands of servers.	• Reap the benefits of a dedicated, globally distributed network of tens of thousands of servers helps you optimize mission-critical web traffic • Eliminate of the majority of distance-sensitive factors
Protect applications by using an encrypted "handshake." Take action to shield the server upon which your application resides and protect it from invalid requests and malicious traffic, such as distributed denial-of-service attacks.	• Manage costs, reduce support calls and respond with confidence to changes in your networks, in your partner relationships and in the behaviors of customers

If your organization's Internet presence reaches a broad geographic audience, or if you are concerned about delivering consistent quality of service to your user base, WebSphere Application Accelerator for Public Networks is a managed service that you should consider.

If your organization has websites or applications that deliver rich content to customers or enterprise partners, application acceleration is worth investigating. IBM customers who employ these acceleration managed services are helping colleagues and customers in locations around the globe to access applications in a rapid, more secure manner. A unique combination of IBM hardware and software creates a managed service that addresses current performance pains—especially if your company's application performance is acceptable locally, but degrades for global users.

How the components of this managed service work together

The IBM approach to application acceleration combines best-in-class Internet application delivery technologies with best-in-class enterprise infrastructure appliances. The DataPower Edge Appliance XE82 is a highly specialized, rack-mountable network appliance. However, unlike most network appliances, it processes information at the application protocol layer, not the network protocol layer. The DataPower Edge Appliance XE82 correlates request and response messages and optimizes throughput by buffering or streaming network input/output as appropriate. This is a significant advantage over traditional network security gateways, which inspect only the individual packets on an IP network. Because this IBM appliance processes work at the application layer and not the packet layer, your organization gets higher-level services including governance, dynamic content caching, AAA, and verification and validation.

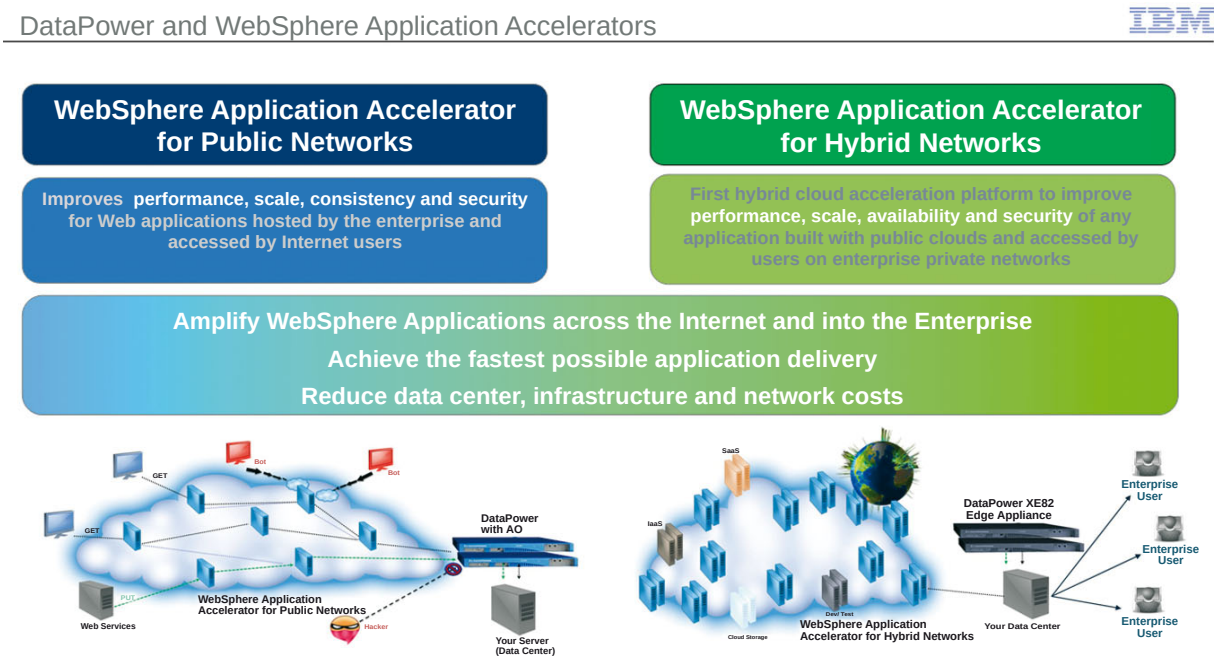

Figure 3: illustrates how the IBM Application Accelerators maximized by the DataPower Edge Appliance XE82 deliver three edges of control; from the database to the enterprise and through the Internet.

This IBM application acceleration managed service makes the most of innovative acceleration technologies and capitalizes upon the unique strengths of the DataPower Edge Appliance XE82 appliance. Take action to improve performance through advanced caching techniques without making application changes. The DataPower Edge Appliance XE82 gateway accurately maps Web 2.0 and rich client applications for cacheable components, content and services that would otherwise be unrecognizable by the caching servers. Enjoy elastic scalability of applications to customers and colleagues, to the "edge" of your enterprise and within your data center.

Gain access to a massive network of tens of thousands of servers in more than 1,000 networks located in more than 70 countries around the globe. With this IBM managed service, these servers are controlled by intelligent network systems that route requests, balance load and ensure extreme network uptime. This server approach places your applications within a single "network hop" of 90 percent of the world's Internet users. The widely distributed nature of this approach places a server region in close proximity to Internet users, regardless of their location.

Discover the value of IBM Application Acceleration managed services

- Deploy in a simpler manner—application changes are not required.
- Consistently reach customers, regardless of their location, with enhanced performance that offloads your server.
- Reduce response time at the "edge" of the Internet.
- Amplify protection against malicious attacks.
- Strengthen security inside your firewall.

Go beyond static caching. With this managed service, you can take advantage of a sophisticated set of techniques to accelerate dynamic content. This IBM managed service uses a variety of optimizations to address the routing, transport and application layer "bottlenecks" that are inherent to the Internet. When a WebSphere cluster starts to get overloaded, the intelligent load distribution feature of the IBM Application Acceleration managed service dynamically adjusts caching settings at the edge, and can set a higher degree of caching as the load increases to ensure that the load is managed.

The DataPower XE82 appliance, when used with IBM Application Acceleration managed services, helps you achieve governed, highly manageable, more secure and scalable integration for the delivery of web services and web applications. When every second counts, select a managed service that is uniquely prepared to accelerate your applications.

Explore the advantages of the IBM approach

Create competitive success with an approach to business agility that simplifies your environment and shrinks response time for the applications that represent your company.

For more information

Change is possible. The tools exist today.
To learn more about IBM WebSphere DataPower XE82 http://www-01.ibm.com/software/webservers/appserv/xe82/#ibm-contentand IBM Application Acceleration managed services, contact your IBM sales representative or IBM Business Partner, or visit: http://www-01.ibm.com/software/websphere/products/application-infrastructure/application-acceleration

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