

Akamai IP Application Accelerator

Improving Performance and Reliability of IP-Enabled Applications

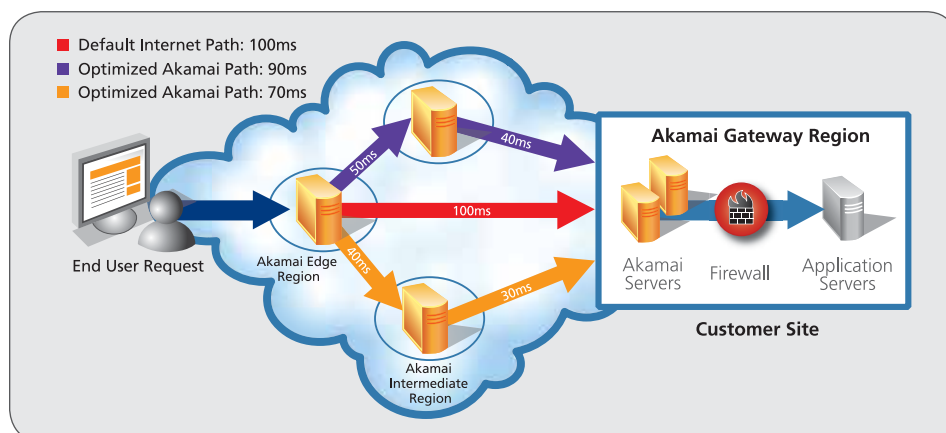
As enterprises extend their business-critical applications to an increasingly global user community of employees and partners, they are discovering that they cannot always ensure reliable, consistent performance. And when performance suffers, so does the business. Poor application performance results in end user frustration, poor adoption rates and lost productivity. Akamai's IP Application Accelerator, a managed service, solves the inherent performance and availability problems associated with delivering IP-enabled applications over the Internet from consolidated infrastructure.

With IP Application Accelerator, IP-enabled applications can be delivered to users on a global scale without high capital expenditures or deploying private-WAN infrastructure with preset reach and scale. IP Application Accelerator offers the versatility to improve the delivery of a variety of TCP/IP applications by leveraging key optimization technologies integrated within Akamai's globally distributed platform.

Example use cases suitable for the IP Application Accelerator service include, but are not limited to, the following: remote access of core enterprise applications delivered by way of SSL VPN, real-time interactive Web conferencing, virtualized applications running over Citrix ICA and Microsoft RDP protocols, virtual desktop initiatives (VDI) and large un-cacheable files transferred thru methods such as secure FTP or SSH.

End to End Route Optimization

The default Internet path is frequently not the fastest. Akamai's SureRoute technology employs end-to-end route optimization to determine the most efficient path from the user to the application server, leveraging a dynamic mapping capability that directs users' requests to optimal entry points on the Akamai network. Each time an end user sends a request, IP Application Accelerator ensures that packets are routed along the optimal path, improving latency and boosting performance.



Continued

BENEFITS TO YOUR BUSINESS

Improved User Experience, Greater Productivity

When you give users a consistently high-performance experience with mission-critical business applications, adoption rates soar — boosting productivity, increasing revenue, and lowering IT infrastructure costs.

Optimized Application Performance and Reliability for IP-Enabled Applications

Akamai's unique and innovative network technologies including end to end routing and TCP optimizations, dynamic mapping and packet replication — protect against packet loss and dropped connections, while significantly reducing latency. These capabilities ensure high performance applications and always-on Availability — anywhere in the world.

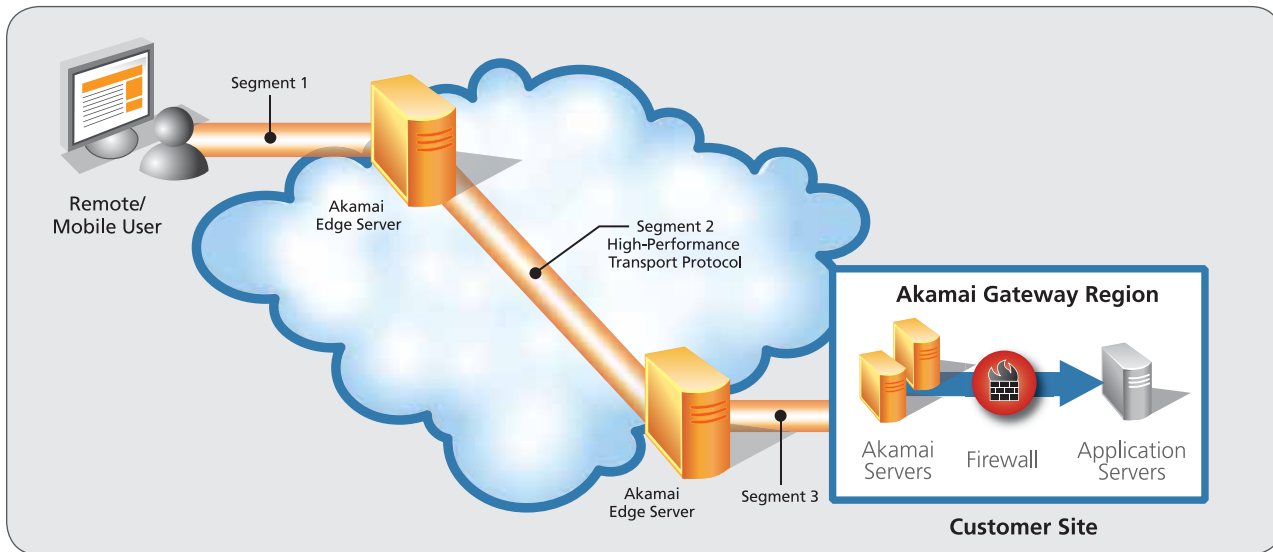
Greater Network Visibility and Control

Akamai's EdgeControl Management Center (ECMC) tracks network layer latency and packet loss metrics, enabling you to monitor and report on customers' service usage, network conditions, performance and reliability. Diagnostic and troubleshooting tools give you the means to analyze and address end-user problems.

Transport Protocol Optimizations

TCP performance is adversely impacted by the distance of the connections. IP Application Accelerator applies several techniques to address this distance sensitivity. First, IP Application Accelerator divides the TCP transmission between the end user and the origin site into three segments. The immediate benefit of Akamai's approach is improved TCP

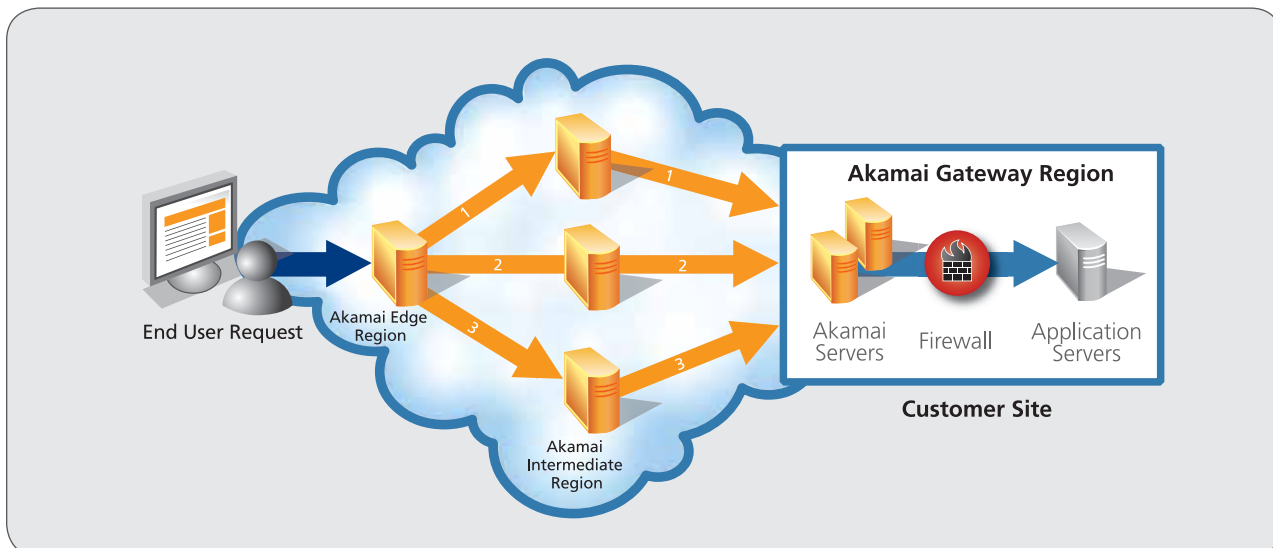
performance at the edge, due to the shortened distance between endpoints. IP Application Accelerator tunes additional TCP parameters to take further advantage of these shorter edge segments. And, once traffic reaches the Akamai network, Akamai uses a high-performance transport protocol to significantly reduce the number of round trips.



Packet Loss Reduction

Application performance is also affected by packet loss, which may be particularly troublesome when traffic traverses international network paths. IP Application

Accelerator uses a variety of advanced packet loss reduction techniques, including forward error correction and optional packet replication to eliminate packet loss.



How Akamai Security Solution Suite Works

To provision the service, the customer creates a CNAME for the application server, pointing to a hostname that will be mapped to an optimal entry point on the Akamai network. Once activated the service flows as under:

Service Data Flow

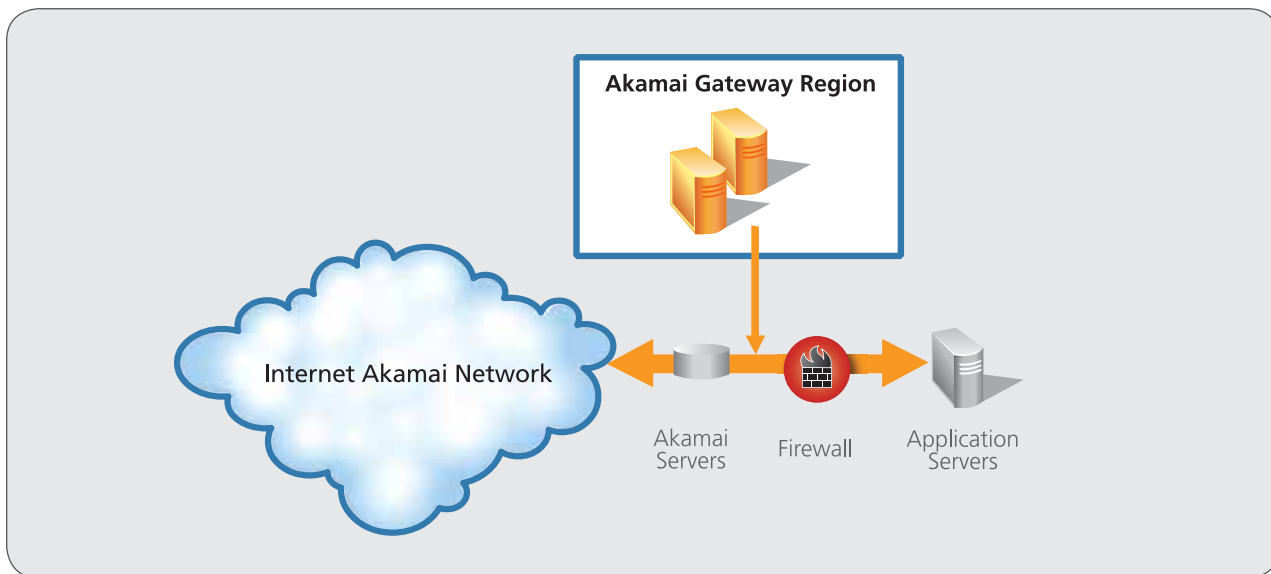
When a user requests the IP Application, Akamai's mapping software points the request to the optimal entry point on the Akamai network of Edge servers. Upon receiving the request, Akamai's Edge Region identifies the destination (origin server), determines the optimal path for the request to take back to the application server,

and sends the encrypted packets to the application server via Intermediary Regions on the Akamai network, leveraging the optimal paths to avoid latency. The Origin server then responds with the requested packets back to the Edge region and return to the end user.

OPTIONAL GATEWAY REGION

The standard configuration for IP Application Acceleration does not require any hardware within the datacenter. However, Akamai can optionally deploy a 'Gateway Region' at the customers premises (in the DMZ, outside the firewall), remotely managed by Akamai to further extend optimizations from the

nearest edge region into the datacenter. Since the Gateway region resides outside of the perimeter or firewall, it poses no security risk. When utilized, the Gateway region performs the task of accepting encrypted packets from the firewall and passing them across the network over optimized, replicated paths. Furthermore, to ensure continuity of service in the event of network or equipment failure, Akamai has implemented redundant servers and failover procedures that seamlessly default to the public internet - and back to Akamai when the problem is fixed — without any disruption to end users.



Inside Akamai IP Application Accelerator

Proven Global Platform

IP Application Accelerator is built on a subset of Akamai's global platform, comprising 40,000 servers in 71 countries. Akamai's global reach, optimized routing and transport and packet replication technologies enable businesses to deliver optimized global performance and reliability for applications delivered over IP Application platforms.

Implementation

IP Application Accelerator implementation is supported by an award-winning Professional Services team, which has integrated more than 1,000 Akamai customers through a well-established and well-tested service deployment methodology.

Visibility and Control

IP Application Accelerator provides a range of features to monitor and control service usage. Tools and alerts allow enterprises to monitor and manage service configurations, performance and reliability through the Akamai customer portal or their own applications.

The Akamai Difference

Akamai® provides market-leading managed services for powering rich media, dynamic transactions, and enterprise applications online. Having pioneered the content delivery market one decade ago, Akamai's services have been adopted by the world's most recognized brands across diverse industries. The alternative to centralized Web infrastructure, Akamai's global network of tens of thousands of distributed servers provides the scale, reliability, insight and performance for businesses to succeed online. Akamai has transformed the Internet into a more viable place to inform, entertain, interact, and collaborate. To experience The Akamai Difference, visit www.akamai.com.

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