

# IP Accelerator

Improve performance, reliability, and security of non-cacheable applications

Organizations are increasingly reliant on fast, reliable, and secure connections to power their mission-critical applications. Whether supporting globally distributed teams, delivering real-time interactive experiences, or running custom applications across cloud and hybrid environments, network performance issues can severely impact productivity and user experience. Slow response times and unreliable connectivity can negatively impact customer experience, reduce engagement, and hurt revenues — particularly for industries like ecommerce, gaming, and financial services.








## Boost performance of real-time dynamic applications

Akamai IP Accelerator solves critical business and technical challenges related to network performance, security, and scalability by optimizing IP traffic over Akamai's global network. For enterprises running non-cacheable applications, where data is highly dynamic or user specific, IP Accelerator offers optimized, secure, and direct paths for data traffic without relying on caching mechanisms. Applications such as financial fund transfers, ecommerce checkouts, and real-time analytics require instantaneous data delivery and must reflect up-to-the-moment information unique to each user. IP Accelerator ensures that this data is routed through the most efficient, low-latency paths within Akamai's edge network, providing a stable, fast, and secure connection, while bypassing congested sections of the public internet.

## Strengthen security across your applications with advanced protection features

Since IP Accelerator does not cache or alter content, applications retain full data integrity, which is essential for applications processing sensitive information. This approach also ensures continuous encryption, maintaining end-to-end security for each unique transaction or session. In addition, built-in security protocols limit access to critical application resources, allowing businesses to manage and restrict traffic based on geolocation and rate limits. This combination of secure traffic management and advanced protections provides comprehensive safeguarding for applications, especially in high-risk regions or for confidential data.

### Benefits for your business

-  **Improve application performance**  
By optimizing routes, minimizing trips, and reducing packet loss
-  **Control which ports can be used**  
Giving you more granular control over network access and security
-  **Implement rate limiting controls**  
Manage traffic flow and prevent server overload, enhancing performance and stability
-  **Maintain end-to-end encryption**  
SSL (Secure Sockets Layer) termination and decryption are not handled by IP Accelerator, maintaining the end-to-end encryption of your data
-  **Control traffic spikes**  
Rate limiting functionality helps control traffic spikes and malicious activity by limiting the number of requests allowed within a specific time frame
-  **Control geolocation**  
Traffic can be restricted or allowed at a country level, enabling geo-based access controls to improve security and compliance
-  **Avoid caching**  
There is no content caching, ensuring that dynamic and frequently changing content is always served directly without delay



## Minimize performance bottlenecks

IP Accelerator helps enterprises manage network scalability by leveraging Akamai's global edge infrastructure to distribute and balance traffic more efficiently. By routing data through optimized congestion-free paths organizations can minimize performance bottlenecks and dynamically adapt to fluctuating demand. This ensures critical applications can handle traffic surges without compromising on speed, reliability, or security, making it an effective tool for enterprises facing growth or seasonal spikes in usage.

## IP Accelerator key capabilities

### Performance features

- **SureRoute web optimization technology** identifies the optimal path (fastest and most reliable) over the internet for your end user to reach the origin network infrastructure
- **Akamai's high-performance transport protocol** reduces the number of round trips required while increasing end-to-end throughput
- **Packet loss reduction techniques** can improve IP application performance further, particularly in times of peak demand and congestion

### Availability features

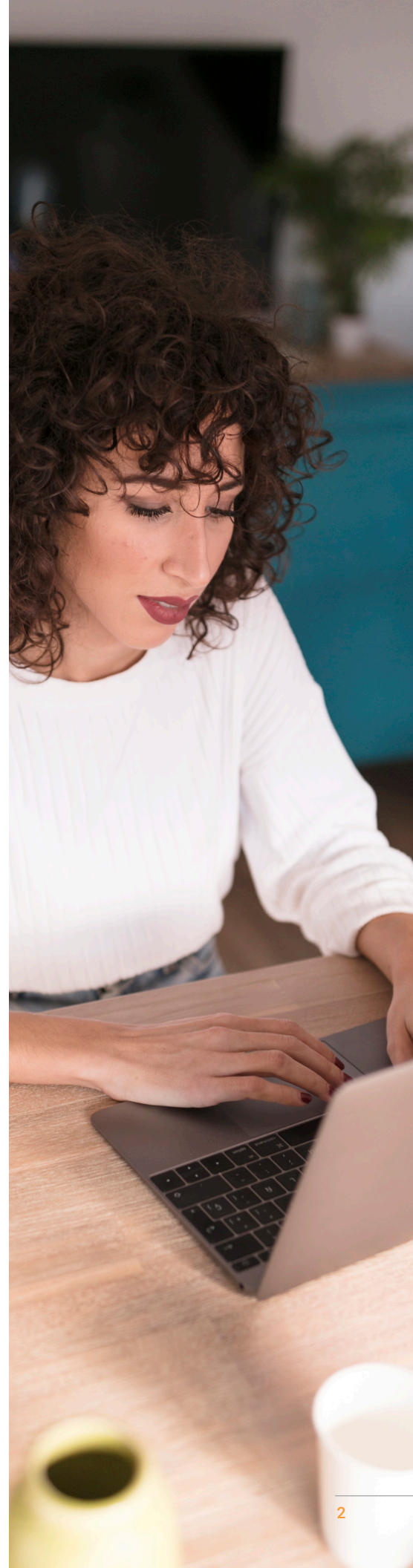
- Akamai provides a 100% availability SLA of the IP Accelerator service
- IP Accelerator includes built-in redundancy and failover procedures for your applications

### Security and data protection features

- Does not terminate any TLS connections while delivering traffic over TCP and UDP ports, ensuring end-to-end encryption remains intact throughout the entire data transmission process
- **Sophisticated IP filtering and rate limiting capabilities** enable you to limit specific IP addresses or regions

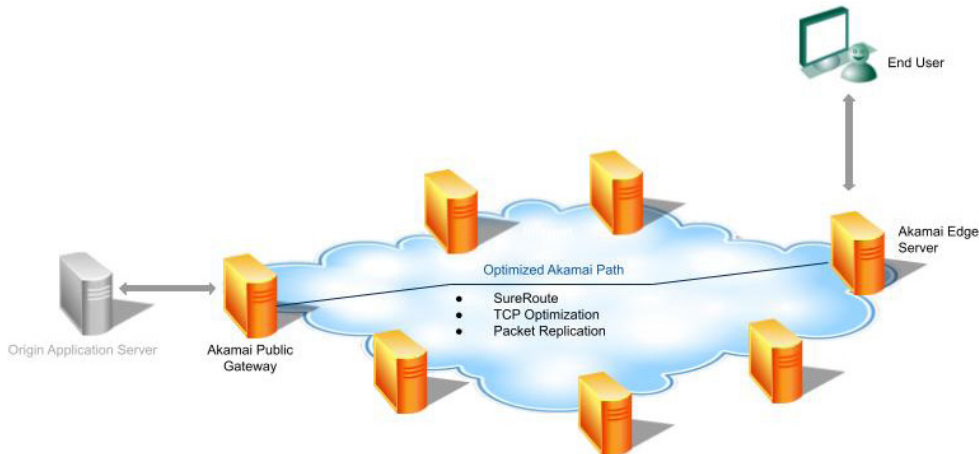
### Visibility and control features

- IP Accelerator provides tools to monitor and control internet traffic, IP applications, and site content
- The Akamai Control Center manages IP application and site content faults, web configuration, and performance
- Akamai's dynamic IP translation manages both IPv4 and IPv6 traffic automatically



## How it works

IP Accelerator runs on Akamai's global edge network, where Akamai software controls the platform and monitors internet conditions constantly, in real time. Akamai applies several techniques – dynamic web server mapping, session route optimization, packet redundancy algorithms, and TCP optimization techniques – to improve IP application security and performance.



## The Akamai ecosystem

Akamai makes life better for billions of people, trillions of times a day, as we power and protect life online. Our solutions help customers gain insight into web application bottlenecks, turning insights into actions that allow customers to improve their online revenue-generation engine. Solutions can be built on the globally distributed Akamai Connected Cloud; ready to consume on the Akamai Marketplace; managed through the unified, customizable Akamai Control Center; and supported by professional services experts who get you up and running easily – and inspire innovation as your strategies evolve.

To learn more, visit [akamai.com](https://akamai.com) or contact your Akamai sales team.