

Akamai Ion: Product Brief



Intelligent Automation and Controls to Maximize Web, iOS, and Android Experiences

Organizations looking to provide safe, reliable, and fast online experiences often lack the tools and capabilities to manage all aspects of end-to-end delivery over the Internet. The challenges of meeting user expectations are diverse, but fall into three broad areas of focus:



Performance – Faster performance helps companies maximize audience engagement and improve business results



Cost – IT departments have a mandate to mitigate the high cost of managing infrastructure challenges across the Internet



Speed – In the face of increasing development costs and expectations for short time to market, organizations seek to improve agility

The pressure to deliver great online experiences is higher than ever. Across sites and apps, 53% of visits are abandoned if a mobile site takes more than 3 seconds to load; 49% of users expect a mobile app to respond within 2 seconds or less. To realize digital success, every business must provide a consistently great experience on every form factor and device.

BENEFITS TO YOUR BUSINESS

Grow Customer Base

- Reduce development effort necessary to deliver superior user experiences with automated performance optimizations
- Provide seamless cross-device performance across the globe both for in-country and international use cases, and with the benefit of cellular optimizations
- Get to market quicker by automating Akamai into your DevOps workflows, and deploying new properties with simplified onboarding, configuration, and monitoring

Maximize Conversions

- Deliver consistently fast experiences with fewer interruptions and instill trust in users to maximize session duration
- Delight users with rich, personalized content that is optimized for their device, operating system, and browser
- Overcome cellular performance challenges so users feel empowered to engage across desktop and mobile use cases

Improve Customer Loyalty

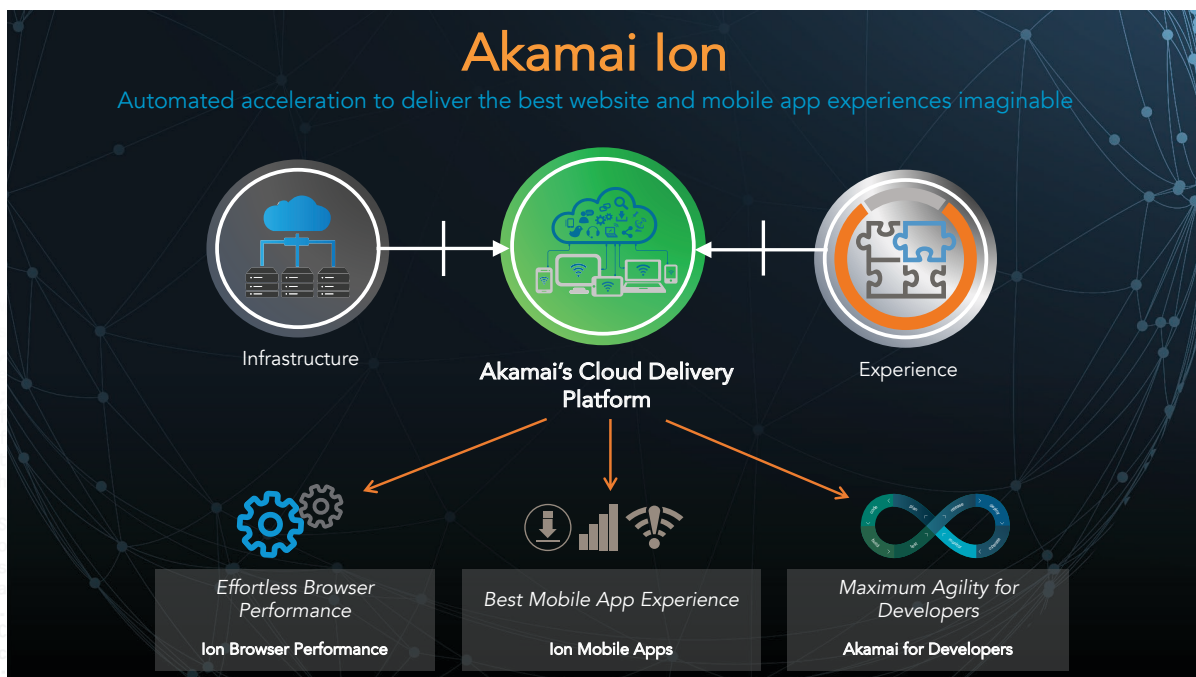
- Focus your web and mobile app development teams on delivering new and differentiated capabilities while relying on automating performance optimizations
- Add third-party content to deliver contextually relevant content without compromising performance
- Maximize user engagement by accelerating user interaction with faster browser and application rendering

The challenges to deliver compelling mobile experiences are formidable:

- Cellular networks often provide unreliable connections and variable speeds
- Device and browser diversity make for an overwhelming number of endpoints, each of which can require its own unique optimization
- The use of third-party scripts on websites continue to grow; [almost 40% of pages contain 75%–99% third-party content](#)
- API usage has grown 2.8x in year-over-year traffic, and APIs are increasingly used as the building blocks for every kind of app from mobile to so-called “single page” – yet they are still subject to network latency and availability issues

With all this complexity, it’s become increasingly difficult to bring differentiated solutions to market in a timely fashion. This threatens revenues and customer loyalty.

Akamai Ion, our flagship performance solution, is a suite of intelligent performance optimizations and controls that helps deliver superior web, iOS, and Android experiences. Built on the SLA-backed scalability of the global Akamai Intelligent Edge Platform, Ion continuously monitors real user behavior and applies best practice performance optimizations. Ion automatically adapts in real time to content, user behavior, and connectivity changes. This allows businesses to automate the delivery of fast, secure, contextually aware experiences.



Maximize Performance Automatically Across Websites and Mobile Apps

Akamai Ion helps maximize performance for every user across different device types and network conditions, however they choose to connect.



Adaptive Acceleration – Deliver faster, more engaging browser experiences by leveraging machine learning technology to automatically determine performance optimizations based on real user behavior, reducing page weight and accelerating rendering. Ion automatically pushes content into the browser, accelerating and mitigating the performance impact from first and third parties, using advanced script management capabilities. It speeds up your site by fast routing around congestion points and other bottlenecks, while leveraging the latest network protocols to accelerate dynamic content.



Mobile Application Performance SDK – Maximize user loyalty by enabling developers to craft custom, differentiated experiences with a performance-focused software development kit (SDK). Adaptive Network Optimizations and SureRoute for Cellular can automatically help reduce latency in last-mile networks, while real user and device insights, including custom metrics, help developers tune mobile experiences over time. Mobile app developers can pre-position content to help deliver more consistent experiences across varying network conditions – even when connectivity is lost.

Global Akamai Intelligent Edge Platform, Optimized for Cellular

Akamai Ion combines the scalability of the global Akamai Intelligent Edge Platform with the fastest dynamic content and API acceleration. Akamai has also introduced cellular optimizations designed to lower latency and avoid disrupting user engagement.

- **Cellular optimizations:** Provide consistent performance over cellular connections and realize performance improvements through protocol optimizations, including real-time IPv4/6 adaptation and secure connectivity for older mobile devices using the ChaCha-Poly cipher
- **HTTP/2:** Help users have a consistent and high-quality experience by utilizing fast and efficient modern web protocols – Akamai builds on the benefits inherent in HTTP/2, and delivers intelligence that automatically pushes content to the user's device quickly and efficiently to eliminate the gaps and errors that can lead to dissatisfied users and missed conversion targets

- **Offload and load balance traffic globally, while accelerating with SureRoute:** Secure delivery of consistent experiences to your users, maximizing uptime and availability with a fault-tolerant solution that makes intelligent routing decisions based on global Internet conditions

Insight and Agility for Faster Time to Market

Akamai Ion provides the tools your teams need to rapidly onboard, monitor, and tune digital properties. Once on the platform, Akamai enables you to craft the differentiated solution your users demand with a powerful set of integrated capabilities to find and fix performance issues – to drive continuous improvement of end-user experiences.



DevOps Enabled – Keep your content fresh and engaging with web-based tools and APIs that simplify operations. Make agile and efficient interactions with the Akamai Intelligent Edge Platform part of your existing developer workflows. The programmable, automated, and repeatable interface allows for early testing and validation, monitoring, real-time visibility, and developer-friendly friendly logic at the edge.



mPulse* – Based on more than a year of data, mPulse combines your real user performance and business metrics, and makes them actionable by automatically extracting and illustrating insights that lead to better user experiences and give you an edge over the competition. By capturing 100% of real user data in real time, you can monitor changes in performance for users during critical business events and code releases.



Image Manager* – Reduce cost and complexity to deliver richer, more engaging experiences. Image Manager automates the creation and delivery of high-quality images and videos for multiscreen websites and apps. This helps you deliver the best combination of size, quality, and format.

* available as an add-on to Ion

The Akamai Ecosystem

Akamai makes the Internet fast, reliable, and secure. Our solutions help customers gain insight into web and mobile 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 Intelligent Edge Platform; ready to consume on the Akamai Marketplace; managed through the unified, customizable Luna Control Center; and supported by professional services experts who get you up and running easily – and inspire innovation as your strategies evolve.

```
should: *) hostTokens := strings.Split(r.Host
ue("count"), 10, 64); if err != nil { fmt.Fpri
ue("target"), Count: count}; cc <- msg; fmt.Fp
tring(r.FormValue("target"), Count: count); http
reqChan := make(chan bool); statusPollChannel
reqChan: if result { fmt.Fprint(w, "ACTIVE");
print(w, "TIMEOUT");}); log.Fatal(http.Listen
inpage", "deskwin10");</script></body></html>
"strings"; "time" ); type ControlMessage struc
make(chan ControlMessage); workerCompleteChan
tive := false; go admin(controlChannel, statusP
Chan <- workerActive; case msg := <- controlCh
status := <- workerCompleteChan: workerActive
chan bool) {http.HandleFunc("/admin", func(w h
stuff? They probably should. */ hostTokens :=
seint(r.FormValue("count"), 10, 64); if err !=
get: r.FormValue("target"), Count: count}; cc
html.EscapeString(r.FormValue("target")), co
next) { reqChan := make(chan bool); statusPo
result := <- reqChan: if result { fmt.Fprint(w
fmt.Fprint(w, "TIMEOUT");}); log.Fatal(h
"aaaa0f66-465f-4751-badf-5fb3d1c614f5", "Lo
html"; "log"; "net/http"; "strconv"; "
"); func main() { controlChannel := make
chan bool); workerActive
Chan <- workerCompleteChan); case status :=
statusPollChannel chan chan bo
anybody actually read this stu
count, err := strconv.ParseInt(
); msg := ControlMessage{targe
ed for Target %s, count %d",
http.ResponseWriter, r *
time.Second); select {
VE"); }; return; case
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ain; import (
ring; Count
l); statusPoll
{ select { case respChan
e = true; go d
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/ r *http.Requ
Host, ":"); r.
.Fprintf(w, er
mt.Fprintf(w,
http.HandleFu
nnel <- reqCha
E"); } else {
istenAndServe("
tml>package main, "import (
struct { Target string; Count int64; }
chan := make(chan bool); statusPollChannel
atusPollChannel); for { select { case respChan
olChannel: workerActive = true; go doStuff(msg,
tive = status; });}; func admin(cc chan ControlM
c(w http.ResponseWriter, r *http.Request) { /* Do
s := strings.Split(r.Host, ":"); r.ParseForm();
```

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Akamai secures and delivers digital experiences for the world's largest companies. Akamai's intelligent edge platform surrounds everything, from the enterprise to the cloud, so customers and their businesses can be fast, smart, and secure. Top brands globally rely on Akamai to help them realize competitive advantage through agile solutions that extend the power of their multi-cloud architectures. Akamai keeps decisions, apps, and experiences closer to users than anyone – and attacks and threats far away. Akamai's portfolio of edge security, web and mobile performance, enterprise access, and video delivery solutions is supported by unmatched customer service, analytics, and 24/7/365 monitoring. To learn why the world's top brands trust Akamai, visit www.akamai.com, blogs.akamai.com, or @Akamai on Twitter. You can find our global contact information at www.akamai.com/locations. Published 04/19.