EdgeWorkers — Serverless Edge Computing

Empowering developers to innovate

As companies embrace agile application development and delivery processes, the ability to create and execute code at the edge opens new opportunities for innovative solutions and managing customers' digital experiences as code. Akamai EdgeWorkers offers capabilities and tools for development teams to create new microservices that leverage our network of hundreds of thousands of distributed servers — for secure and fast-acting computation at the edge.

EdgeWorkers

With EdgeWorkers, Akamai is deploying JavaScript engines across our secure network — creating the largest distributed edge compute network available. Just as caching content at the edge enables rapid delivery, deploying logic at the edge allows for rapid execution — at the point closest to end users, regardless of their location. EdgeWorkers eliminates high-latency calls to services deployed at the origin or in the cloud while providing improved security by moving exposed client-side logic to the edge.

Using EdgeWorkers

Access to EdgeWorkers can be enabled through the Akamai Marketplace. Developers can begin coding in JavaScript using their IDE of choice or the one included in the Akamai Control Center. EdgeWorkers was built from the ground up — with the needs of agile development teams in mind — for easy incorporation into existing continuous integration/continuous deployment workflows. EdgeWorkers delivers a wide array of tools for testing and debugging code while also offering complete reporting for visibility into performance. EdgeWorkers can be taken a step further by incorporating EdgeKV, an integrated key-value store enabling low-latency access to data.

EdgeWorkers can be used in conjunction with the following Akamai delivery products:

- API Acceleration
- Adaptive Media Delivery
- Download Delivery
- Dynamic Site Accelerator
- Ion
- Object Delivery

BENEFITS FOR YOUR BUSINESS

Innovation
Developers can quickly and iteratively create and deploy new services to problem solve and customize delivery directly on Akamai's globally distributed platform.

Low-latency computation
EdgeWorkers provides the shortest possible round trip from request to response by removing unneeded calls to origin and associated network hops that add latency.

Just code
EdgeWorkers enables developers to create their own solutions for routing traffic, personalizing content delivery, and controlling cacheability with dynamic content assembly using JavaScript. Check out our growing GitHub repository of creative solutions.
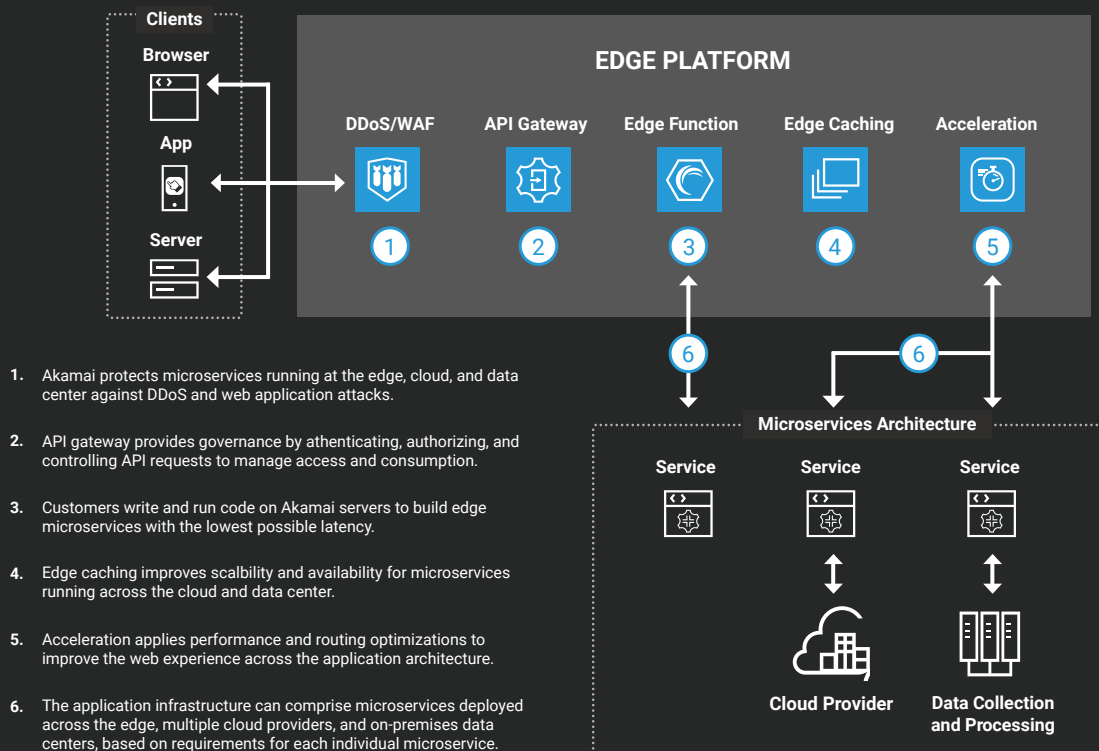
Use cases

EdgeWorkers empowers developers to tackle complex challenges through programmable solutions. The integration of a key-value store enhances its capabilities, enabling data processing at the edge. Many of our customers are currently using EdgeWorkers for a variety of innovative applications, including:

- **Advanced caching and traffic routing** — Streamline content delivery and reduce origin load with edge cache key manipulation and efficient route management.

- **Localization and personalization** — Provide personalized customer experiences based on device type, location, and user data.

- **Dynamic content assembly** — Deliver the right content to the right user by dynamically assembling content from various sources.

- **Insights and key feature integration** — Add value to your web experience by integrating insights and functionalities from Akamai and its technology partners.

- **Header and cookie management** — Modify, reduce, or create headers and cookies to comply with user preferences and data privacy regulations.

- **Add third-party content to your site** — Leverage third-party services and run JavaScript at the edge to add additional features to your site.

Explore All Use Cases

Microservices at the Edge: Reference Architecture

EDGE PLATFORM

Clients: Browser, App, Server

DDoS/WAF (1) — API Gateway (2) — Edge Function (3) — Edge Caching (4) — Acceleration (5)

Microservices Architecture: Service, Service, Service — Cloud Provider, Data Collection and Processing

1. Akamai protects microservices running at the edge, cloud, and data center against DDoS and web application attacks.

2. API gateway provides governance by athenticating, authorizing, and controlling API requests to manage access and consumption.

3. Customers write and run code on Akamai servers to build edge microservices with the lowest possible latency.

4. Edge caching improves scalbility and availability for microservices running across the cloud and data center.

5. Acceleration applies performance and routing optimizations to improve the web experience across the application architecture.

6. The application infrastructure can comprise microservices deployed across the edge, multiple cloud providers, and on-premises data centers, based on requirements for each individual microservice.

To learn more, visit akamai.com or contact your Akamai sales team.