

# API Acceleration

ACCELERATE API PERFORMANCE BY CACHING CONTENT NEAR USERS AND REDUCING BACKEND LOAD WITH NO CODE CHANGES REQUIRED

## Deliver faster APIs without backend refactoring

Performance is critical to a great API experience—slow endpoints and redundant calls can degrade user satisfaction and increase infrastructure costs. Akamai AI and API Manager (AAM) enhances performance at the gateway layer through edge caching, request shaping, and programmable policies, all powered by a globally distributed edge network. You can cache content close to users and define custom caching rules based on request path, headers, authentication status, or query parameters for faster, more efficient APIs.

## Maximize performance while reducing backend load

AAM supports flexible caching strategies such as time-to-live (TTL), stale-while-revalidate, and event-triggered cache invalidation. You can also apply different policies for public versus private users to ensure personalized content remains dynamic while common endpoints are highly performant.

## Example: Product catalog API under peak load

A retail platform's `/products` endpoint handles high traffic from both guests and logged-in users. Anonymous shoppers receive generic data. Authenticated users expect fast and personalized content. This puts additional strain on the backend during peak demand.

- Personalized catalog responses are cached per user, using their authentication token to key responses securely.
- Frequent, repeated queries from logged-in users are served instantly from the edge, keeping performance consistent across sessions and devices.
- Short TTLs and event-based invalidation ensure a balance between speed and data freshness.
- Backend load is reduced dramatically, freeing up capacity for real-time inventory updates and other dynamic workloads.

### Key Benefits

- **Faster user experiences**  
Cached responses keep product pages snappy, even during peak traffic.
- **Improved agility**  
Caching rules and invalidation can be updated without backend coordination.
- **Reduced infrastructure costs**  
Edge caching offloads the majority of requests, cutting CPU and DB use.
- **Greater control**  
Fine-grained policies let you tailor performance and freshness to different types of users.

## Performance at scale, without complexity.

Contact us to see how enterprise teams are using AAM to optimize API speed and reliability.