# fastly

# API acceleration and security
## Improve your site and app experience while reducing infrastructure costs

APIs are the building blocks for modern web and mobile applications, as well as machine-to-machine communication. They enable the development of flexible, real-time experiences by providing a conduit to backend services like pricing, product, and customer data. However because API responses can change frequently and unpredictably, they have been notoriously hard to cache. Fastly helps you to overcome this challenge using the advantages of our edge cloud platform. We can also reliably accelerate unique API responses on our network and provide security without compromising performance.

## Cache API responses
Fastly can cache many of your API responses and deliver them from the edge, including those that may change frequently and unpredictably. Even calls to retrieve inventory levels or weather data are constant for a fraction of time. Fastly's edge cloud can cache such responses because they can be programmatically purged across our global network in a mean time of 150 milliseconds.

Your users get a better site and app experience. You benefit from less traffic to your API servers with greater predictability and uniformity of requests to origin.

## Accelerate API responses
Some API responses contain sensitive data or are unique to the user and should not be cached. However Fastly is still able to accelerate the delivery of those APIs via Dynamic Site Acceleration (DSA). This speeds up requests and responses between cache nodes in our points of presence (POPs) and your API server, so your web and mobile content is served faster.

If you have a mix of cacheable and non-cacheable content, Fastly can support both simultaneously (per request) to ensure the fastest possible user experience.

## Offload API encryption at the edge
We allow you to terminate secure TLS connections at the edge for API calls. This significantly reduces round-trip times, minimizing latency. We also allow TLS connections back to your API server for PCI-compliant encryption.

Since the release of iOS 9, Apple requires that all communication be TLS-encrypted by default. Fastly is fully compliant, terminating connections at the edge, ensuring your users have fast, secure experiences.

## The New York Times

When The New York Times sends news alerts to its mobile users, 20 to 30 million push alerts are sent out in a single minute. The Times uses Fastly to mirror those alerts and take load off their central systems. The company saves around $25,000 per month by putting Fastly in front of its alerts API.

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## Secure APIs against attack

APIs are vulnerable to attacks from bad actors. Fastly provides security against distributed denial of service (DDoS) and application-layer attacks. We are able to protect your API without sacrificing performance because our security products are built into our globally distributed network.

## API authentication at the edge

While authentication is a common practice that uses identity verification to secure access to APIs, it is typically performed at the origin. Fastly allows you to move authentication to the edge for increased performance and security. This also enables you to authenticate API calls for cached responses. The flexibility of our edge cloud platform enables you to easily extract your preferred authentication solution, including the use of JSON Web Token and OAuth.

**INFURA**

By caching their APIs via Fastly, Infura is able to achieve high cache hit ratios (approximately 91%), saving their origin from around 7 to 9 billion additional requests each day.