Fastly Cloud Optimizer
Handle traffic spikes with ease

Ensure the best web experiences
When you use multi-cloud or multi-CDN infrastructures to distribute your content, each with their own global architecture, you could end up flooding your origin with extra requests especially during a traffic spike. For example, if traffic is routed across three different CDNs or multiple clouds, you could end up with edge points of presence (POPs) from each of these networks requesting the same content for users in the same region. In this scenario, your origin is processing three times the number of requests it normally would with a single CDN or cloud. Now imagine this happening across dozens or hundreds of regions around the world simultaneously. It’s easy to see how the costs to process those traffic spikes add up, not to mention the egress charges you’ll incur from the additional requests. And as more POPs fetch content from origin, it can increase origin load resulting in a subpar web experience.

How can Fastly help?
Fastly’s Cloud Optimizer streamlines existing multi-CDN and multi-cloud deployments while reducing the total cost of ownership (TCO) of your delivery services. Cloud Optimizer cuts costs by significantly decreasing the traffic hitting your origin and flattening the number of requests to origin during traffic spikes that are common in high traffic events like online sales or product launches, thereby reducing the amount of infrastructure required to support your delivery services. Building on our existing origin shielding and request collapsing functionality, Cloud Optimizer extends these concepts to multi-CDN or multi-cloud deployments outside of the Fastly network.
With minimal changes to your existing network architecture, you can drastically reduce your origin footprint by inserting Fastly Cloud Optimizer in front of your origins. Simply configure your CDNs to use Cloud Optimizer as their origin, then configure Cloud Optimizer to point to your infrastructure and central cloud(s). Continue using your existing CDNs or central cloud as you normally would, but with drastically reduced origin traffic and greater control, allowing you to eliminate or repurpose your origin infrastructure. And since you aren’t altering the amount of traffic going through each CDN or central cloud, you don’t have to re-evaluate any existing contractual commitments.

**Superior performance**

When requests for content need to go back to origin, user experience suffers. Cloud Optimizer can cache more of your content at powerful Fastly POPs with connectivity to multiple providers, to boost their web experience.

Since Cloud Optimizer is built on Fastly’s performant edge cloud platform, it will effectively turn cache misses into cache hits, giving your popular content a higher likelihood of being served from cache. Customers will enjoy greater security as well, as all traffic is encrypted by Transport Layer Security (TLS).

**Real-time visibility & control**

With real-time logs and analytics, you can see what the multi-CDNs or multi-clouds are requesting in real-time, allowing you to make informed business decisions as quickly as possible. Gain full control with the ability to push out configurations quickly and pivot immediately as needed.

**Agility**

Every organization has unique technical and business requirements. Fastly lets you deploy Cloud Optimizer in a way
that makes the most sense for your team. You can designate multiple origin shield locations, allowing you to create an architecture that is best suited for your users. In addition, you can switch between origins quickly to avoid getting locked into one provider. Make any cloud work smarter with Cloud Optimizer’s **intelligent routing capabilities**. Create unlimited rules to intelligently route traffic based on data such as location, device, and cookies. Cloud Optimizer can even support integrated configuration with CI/CD systems, and during migrations from on-premise to cloud, or from one cloud provider to another.

**Cost reduction**

Managing infrastructure costs associated with delivery is no small feat. Fastly Cloud Optimizer takes advantage of a number of key features to help you eliminate extraneous requests so you can cut costs and increase efficiency, particularly for situational needs such as Black Friday or the launch of new software or game.

**Request collapsing** consolidates multiple requests for the same content down to a single request per unique object back to origin, and compounded with Fastly’s unique POP design, can increase cache hit ratio. In addition, this decreases the number of requests your infrastructure needs to process by several orders of magnitude, and helps save on network egress costs.

**Origin shielding** lets you designate a public or managed Fastly POP as the Cloud Optimizer in front of your infrastructure. Any cache-misses get sent to the Cloud Optimizer instead of your origin, cutting infrastructure costs.

**Getting started**

Contact sales@fastly.com to get started with Fastly’s Cloud Optimizer.

“Important events, such as Black Friday or the launch of new software, can really be difficult to execute, as they require a good deal of agility and reliability. As a result, today’s commerce and high tech organizations commonly work with multi-cloud or multi-CDN architectures, but that can quickly lead to higher traffic volumes and egress costs, limited visibility into legacy CDN performance, and vendor lock-in with origin providers. Cloud Optimizer helps those organizations by lowering costs and increasing observability, and that’s a big win for customers prioritizing quality experiences for their end users”

Joshua Bixby
PRESIDENT OF FASTLY