

# Fastly Media Shield

Optimize your multi-CDN deployment while cutting costs

## The hidden costs of multi-CDN architectures

When you use multiple CDNs to distribute your streaming content, each with their own architecture and configurations, it's difficult to get an efficient distribution of requests back to origin. For example, if traffic is randomly routed across three different CDNs, you could have points of presence (POPs) from each of these networks requesting a video for viewers in the same location. In this scenario, your origin is processing three times the number of requests it normally would with a single CDN. 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 extra requests add up, not to mention the egress charges you'll incur from the additional requests. And as more requests fetch content from origin, latency also increases, resulting in a subpar viewer experience.

## How can Fastly help?

Fastly's Media Shield optimizes existing multi-CDN deployments while reducing the total cost of ownership (TCO) of your streaming services. Media Shield cuts costs by significantly decreasing the traffic hitting your origin, thereby reducing the amount of infrastructure required to support your video services. Building on our existing **origin shielding** and **request collapsing** functionality Media Shield extends these concepts to multi-CDN deployments **outside** of the Fastly network.

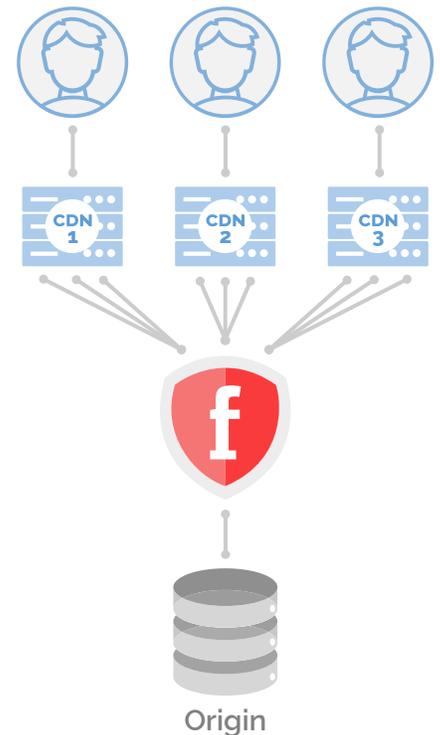
With minimal changes to your existing workflows you can drastically reduce your origin footprint by inserting Fastly Media Shield behind your multi-CDN deployment. Simply configure your CDNs to use Media Shield as their origin, then configure Media Shield to point to your infrastructure. You can also use Fastly as one of your CDNs alongside Media Shield with the same setup. Continue using your existing CDNs as you normally would, but with drastically reduced origin traffic, allowing you to eliminate or repurpose your origin infrastructure. And since you aren't altering the amount of traffic going through each CDN, you don't have to re-evaluate any existing contractual commitments.

## Cost reduction

Managing infrastructure costs associated with streaming video is no small feat. Fastly Media Shield takes advantage of a number of key features to help you eliminate extraneous requests so you can cut costs and increase efficiency.

**Request collapsing** consolidates multiple requests for the same content down to a single request per unique object back to origin. This decreases the number of requests your infrastructure needs to process by several orders of magnitude, and helps save on network egress costs.

Media Shield architecture



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

## Superior performance

When requests for content need to go back to origin, user experience suffers. Media Shield can cache more of your content at the edge, closer to your users, to boost quality of experience (QoE).

Since Media Shield is built with **powerful SSDs**, it will effectively turn cache misses into cache hits, giving your popular and long-tail content a higher likelihood of being served from cache. This reduces startup times and playback interruptions, leading to a frustration-free viewing experience for your audience.

**Cache clustering** allows cache nodes in a POP to access content from each other's storage, meaning more long-tail content is kept in cache for longer durations. Being able to serve more infrequently accessed content from cache significantly reduces latency, further enhancing your viewer's experience.

## Flexible deployment

Every organization has unique technical and business requirements. Fastly lets you deploy Media Shield in a way that makes the most sense for your team.

With our **load balancing techniques** you can designate different Media Shields for each origin location you have, allowing you to create an architecture that is best suited for your audience.

## Getting started

Contact [sales@fastly.com](mailto:sales@fastly.com) to get started with Fastly's Media Shield.

## Benefits:

- Decreased origin infrastructure costs
- Decreased egress costs
- Improved quality of experience (QoE)
- Flexible deployment

**"One of the biggest challenges media companies can face is how to route streaming traffic across multiple CDNs in a way that doesn't duplicate efforts and multiply costs. Fastly's Media Shield offers a compelling solution to this problem."**

*Dan Rayburn, Principal Analyst,  
Frost & Sullivan*