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Fastly's edge platform targets developers while aspiring to a broader audience

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The company is still doubling down on its role as an edge platform for application delivery. Investors may fixate on challenges to the content delivery network business, but Fastly is playing the long game, to provide developers with a platform that overcomes the network and security concerns of web applications.

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Introduction

Fastly's recent Xcelerate event in New York updated customers on the ongoing advances in its edge platform for application delivery. The company's content delivery network services remain a significant portion of revenue, which has been problematic as video streaming budgets have tightened. Still, Fastly is growing overall, and its application delivery story remains intact and has fans among developers. That audience does not necessarily have buying power within their respective companies; however, Fastly is responding with a more extroverted marketing strategy and more overt discussion of the platform's evolving capabilities.

THE TAKE

Fastly's highly technical culture has served it well, but its growth at this juncture could depend on more ordinary business and IT audiences. That means more aggressive marketing. A busier product release road map would help too; Fastly's engineering has been an edge, but competitors can catch up, as evidenced by Cloudflare's recent claim of achieving 150 ms cache purging, a capability that had been unique to Fastly and a point of pride for more than a decade. CEO Todd Nightingale, who joined Fastly from Cisco Systems Inc./Meraki in 2022, has assembled a team with a more extroverted product approach, including fellow Cisco veteran Kip Compton as chief product officer, recruited late in 2023. Importantly, Nightingale's vision embraces Fastly's developer-focused roots; that audience remains a differentiating criterion for the company.

Context

Fastly's annual customer event has been renamed Xcelerate (formerly Altitude) and is now divided into multiple midsize events regionally. We attended the most recent installment, held in New York in October.

Fastly is perhaps best described as a programmable edge platform for delivering web applications, with fast and secure delivery being its hallmarks, but its true product breadth spans network services, security, observability and computing. The platform is built on a content delivery network (CDN) architecture with global points of presence and a network with 353 Tbps of capacity. The company lore is that the founders, back in 2011, were dissatisfied with existing CDNs and built one they would prefer to use. Fastly has maintained an appetite for strong engineering and a developer-centric mindset, as evidenced by the 2022 acquisition of Glitch, a coding platform and developer community site. The company is headquartered in San Francisco.

Financials

While Fastly's story for application delivery remains strong, much of the company's revenue comes from conventional content delivery, especially video, a sector under continual pricing pressure. Moreover, major streaming platforms have begun emphasizing profitability rather than customer acquisition and have softened their traffic projections accordingly. This trend affects all CDN providers, but has been particularly visible at Fastly, where content delivery accounts for roughly one-third of its total customers. Fastly has bifurcated its business strategy, continuing to accommodate large customers, particularly in media, while separately focusing on growth in other customer segments. Importantly, Fastly is still growing overall, with second-quarter 2024 revenue of \$132.4 million representing an 8% year-over-year improvement. Still, Fastly recently announced staff cuts (a yet-undisclosed amount) and has lowered its 2024 guidance to 6% year-over-year growth versus 16% previously.

Products

Fastly groups its products into four major categories: network services (including content delivery), security, observability and computing. The latter category involves serverless functions based on WebAssembly, representing a next-generation step beyond containers and virtual machines.

Over the last 12 months, Fastly worked on simplifying and unifying the platform, making it easier to use even in the earliest stages of application development. Fastly also introduced a free tier of services, an avenue for developers to try out the platform. Developers rarely hold the keys to the enterprise budget; a free tier lets them experiment with the platform, giving Fastly a foothold in the organization that might otherwise be unattainable.

AI Accelerator, launched to beta in June, uses CDN principles to improve generative AI response times. It operates using smart semantic caching — storing not only a user query but also the underlying meaning — so that requests with the same intention, but perhaps containing typos or slightly altered wording, can receive the same response without having to query the generative AI model. This not only helps overcome the latency incurred by distance, but it also keeps end users' queries from being delayed when traffic to popular platforms, mainly OpenAI, is overflowing. It also means the enterprise incurs fewer API charges.

On the security front, Fastly announced a new application-layer distributed denial of service (DDoS) product called Fastly DDoS Protection. The solution leverages a proprietary technology called Attribute Unmasking, which improves the speed and accuracy of detecting new types of attacks and removes the need for customers to manually tune for protection. CDNs have long offered DDoS protection, but not necessarily against application-layer DDoS. Elsewhere in security, Fastly has reached general availability of its bot management product, which was announced in 2023 and fills a noteworthy gap in the portfolio.

Content delivery, while much maligned as a market, remains one of Fastly's differentiating strengths. This can be seen in Media Shield, a service where Fastly is the platform underlying a multi-CDN deployment; that is, a content provider uses multiple CDNs to deliver, say, a live-event stream and uses Fastly to control the distribution of data to the CDNs involved. Media Shield is not new, and other CDNs can provide the same service, but Fastly takes pride in having been the media shield provider of choice for some recent high-profile sporting events. It is evidence that content delivery remains one of the company's differentiating strengths.

Fastly Anywhere, initially teased in late 2022 and now available in beta, is a capability that would run the Fastly stack in arbitrary locations, from public cloud infrastructure to on-premises, and would be a promising, differentiating direction for the company.

Edge computing and Wasm

Fastly has been active in the community around WebAssembly (Wasm), which lets customers write code in popular languages and execute it on the Fastly platform in serverless fashion. This broadens the audience considerably for Fastly's edge computing, which was originally limited to the Varnish Control Language (VCL). The "component model" being developed by the Wasm community promises to make these code pieces more modular, potentially creating a microservices option that is simpler and more fluid than Kubernetes. While its competitors also support Wasm, Fastly seems particularly poised to take advantage of the technology as it matures.

Competition

Fastly compares most directly to Akamai Technologies Inc. and Cloudflare Inc. in offering an edge-cloud platform based on a CDN architecture. Akamai also acquired a traditional public cloud, Linode, and has not stressed serverless technology to the extent that others have. Cloudflare targets a general enterprise audience and offers technologies that seem outside Fastly’s scope, such as email security. Other CDNs that have evolved toward being edge clouds include CDNetworks, Edgio (the combination of EdgeCast and Limelight) and Gcore.

In a developer context, Fastly would compete with front-end application platforms such as Netlify and Vercel, which operate entirely on edge networks. They do not offer a full breadth of cloud services, however, and in fact rely on edge caching infrastructure such as Fastly’s and Cloudflare’s. Along similar lines, multiple startups provide PaaS for WebAssembly applications. Examples include Cosmonic, Fermyon, Mycelial, SecondState and Suborbital.

The hyperscale public clouds offer CDN services that compete with the broader market: Amazon CloudFront, Microsoft Azure Front Door, and Google Cloud CDN and Media CDN.

SWOT Analysis

<p>STRENGTHS</p> <p>Fastly operates from a solid technical background and excels at content delivery. The platform is well suited for the emerging trend of application developers having greater control over infrastructure through APIs and automation.</p>	<p>WEAKNESSES</p> <p>Content delivery faces routine pricing pressure and, lately, cost-cutting by the streaming platforms. Fastly has expanded to more generalized edge platform work but must accelerate this transition, coaxing mainstream enterprises onto the platform. A more aggressive marketing approach (already underway) and greater product velocity will be crucial.</p>
<p>OPPORTUNITIES</p> <p>Fastly can serve as a broad-based application platform, providing a home for development and delivery along with the necessary security and observability. Getting there requires a mindset shift among enterprises, which might be possible as serverless technologies and Wasm mature. Additionally, Fastly’s strengthened focus on security creates new avenues to attract customers.</p>	<p>THREATS</p> <p>The hyperscale public clouds continue to extend out to the edge, and could eventually absorb the edge cloud space that Fastly and its peers occupy. Separately, the edge cloud concept still has not caught hold with most enterprises, and the rise of GenAI is deflecting customer interest toward hyperscale clouds (for training) and on-premises or enterprise-controlled sites (for inferencing, due to privacy and security concerns).</p>

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