Digital publishing with an edge

How Fastly’s Edge Cloud platform is helping reinvent digital publishing
Overview

Digital publishers are facing formidable competition for readers at a time when customer loyalty is eroding. More than ever, consumers want fast, personalized digital content regardless of device, platform, or location. They are quick to abandon slow and mediocre online experiences in favor of outlets that deliver fresh content at the speed in which news breaks.

As social networks and top-tier news aggregators increasingly dominate the digital publishing landscape, traditional publishers are responding with subscription-based services that drive predictable revenue streams and viewership. They are also doubling-down on video content to exploit viewers’ preferences for the medium. While not all readers are willing or able to pay for gated content, those who do have even higher expectations for a seamless experience when it comes to both accessing and viewing this content.

In the face of all these challenges, the key to customer retention is serving the most up-to-date content instantly, personalizing that content for readers, and ensuring online experiences are fast, safe and secure.

Fastly is purpose-built to deliver an outstanding experience in digital publishing. As an industry leading edge cloud platform, Fastly lets you securely edit and publish at the edge of your network—right where your readers are. In this brief, you will learn how Fastly can help you optimize, personalize, and secure online experiences, and deliver your content at speed and scale.

“By making ft.com 1% faster, we could increase engagement by 5% for everybody. A single second of speed is worth millions of dollars to Financial Times.”

– Cait O’Riordan
CIO/CPO
FINANCIAL TIMES
Speed matters

The importance of being first is nothing new in digital publishing, where milliseconds matter and work streams must be optimized and fine-tuned continuously. Success often depends on whether editors are empowered to make content available the instant an article or video is approved for publication. Inherent delays, even for a few minutes, can spell the end for a publishing platform.

Legacy content delivery networks (CDNs) struggle to deliver content at the high speeds and low-latency required to attract and keep viewers. The problem is one of architecture: legacy CDNs depend on old infrastructure designed to deliver predictable content to wired devices. These legacy systems could scarcely have imagined, let alone prepared for today’s distributed environment, much less the explosion of wireless devices and the insatiable demand of billions of global customers. In this new world, digital content (especially highly dynamic content) must live and be processed at the edge of the cloud where the reader is—a physical location that is often far from where the content is stored in the content management system (CMS).

Personalization helps drive loyalty

With a plethora of news content, the competition for viewers and their loyalty has moved from pure availability and uptime to responsiveness, and with that personalization of content. Tailoring news stories using variables such as viewing platform, location and subscription status to deliver highly personalized content faster has grown increasingly popular over the last few years. Today it is a practice exercised by the majority of digital publishers. However, not all CDNs have the needed visibility and configurability to support these efforts, compromising customer loyalty initiatives and losing readers in both the near and long term.
Authentication at the edge drives revenue

Subscribers expect responsive systems that allow repeated and immediate access to gated and premium content. Authentication and paywalls must be as unobtrusive as possible. If the process takes too long for each request, there is significant risk of abandonment. Traditional CDNs are unable to authenticate users at the network edge, where it makes the most sense and creates the least delay. Instead they require a costly trip back to the authentication server, causing delays which ultimately frustrate a digital publisher’s most valuable customers.

Growing privacy and security concerns at every level

Strict privacy laws are now placing new limits on traditional digital publishing approaches, and deploying cookies and other IP tracking methods is proving increasingly difficult. Within the European Union (EU), General Data Protection Regulation (GDPR) enforcement is in effect, and requires publishers to explicitly define their tracking systems and allow users to opt-out. Similar privacy laws are expected to emerge in the U.S. To enable compliance, digital publishers are increasingly seeking to control where content is viewed, and partner with a content delivery vendor that can block access based on location and IP address as well as identify virtual private network (VPN) traffic.

Bots are another growing security concern for digital publishers. Bots can scrape and republish content illegally, greatly diminishing its value for the original publisher and posing a significant threat to both content quality and ad revenue. Advertisers are expected to lose an estimated $19 billion to fraudulent activities this year—equivalent to $51 million daily, according to Juniper Research.¹

Lastly, digital publishers are frequently targeted for distributed disruption of service (DDoS) attacks due to political affiliations, opinionated pieces, and other controversial content. Even the exposure a hacker can get from disrupting major news sites is often incentive enough. Digital publishers looking to build out their online protection plans must be cautious of legacy CDNs that often lack visibility to detect online attacks as well the ability to react and mitigate.

Adoption of video comes at a cost

Increasingly, customer demand is driving a pivot from written news content to streaming video. Snackable video is easy to consume, and in the context of news, video usually conveys a higher level of perceived trust. Support for video can also bring additional revenues, as advertisers will pay significantly more for video ads. The shift by traditional

digital publishers to embed video into their news stories and feature articles is blurring the competitive landscape with video-only or video-first outlets.

However, video content and delivery brings its own set of unique challenges. The amount of data needing to be transported increases exponentially, and can put a heavy burden on infrastructure typically designed to accommodate much smaller payloads. Also, successful video delivery requires systems that can scale with audience and demand—from predictable demand for local news segments and purpose-build videos, to unpredictable demand during significant news events or when a video goes viral.

Legacy CDNs rarely come with built-in capability to automatically reformat and optimize content and digital publishers must dedicate resources to integrating and maintaining third-party solutions.

**Technical debt slows pace of innovation**

As digital publishers evolve their businesses to reach more customers with higher-bandwidth content, they often encounter technical constraints created by legacy CDNs. Inflexible architectures fail to address fundamental content delivery requirements, including real-time visibility and control, as well as the ability to scale on demand. And, since publishing workflows are often complex and contain custom-developed technology stacks, modifying deployments for better scale and performance while maintaining uninterrupted workflows is usually fraught with risk, and can feel daunting if not insurmountable. Legacy CDNs routinely lack APIs, granular control, and real-time configuration changes that are necessary in order to integrate with custom tech stacks, as well as other emerging technologies, and thus impede digital transformation efforts.

**Introducing Fastly**

Fastly’s edge cloud platform is uniquely built to meet the performance requirements of today’s most innovative digital publishing companies. Our combination of edge delivery, security, and computing enables publishers to build the high-caliber experiences that customers have come to expect. And, our real-time, API-first platform integrates into your CMS and existing workflows, eliminating the need to rebuild or re-architect brand new systems.
Empower your editors

Fastly’s responsive edge cloud platform lets content creators edit, publish, and purge in real-time. Our API-first approach enables Fastly to integrate into existing workflows (within a CMS for example) without needing to adapt to new procedures or learn new tools. Not only does this free your editors from antiquated procedures, but it optimizes publishing workflows by removing dependencies on IT departments when a story needs to be rushed through. In addition, our ability to purge content programmatically, and with surrogate keys, gives you the confidence to cache pages and content that changes frequently and unpredictably (like your homepage), knowing that any news updates will programmatically invalidate stale content in 150 milliseconds on global average.

“We have the utmost confidence in Fastly handling our traffic spikes for breaking news events. We never really have to think, ‘Is Fastly going to be able to handle this?:’”

– Carlos Santos
VIDEO PLATFORM MANAGER
ATRESMEDIA

Experiences that amaze

Fastly’s edge cloud platform can scale to meet and exceed readers’ expectations for instant, responsive digital experiences—even for the most viral video content. In the case of high cache-hit-ratios, when the most in-demand content is cached close to the reader, Fastly eliminates the need and the associated costs of fetching from the origin. With our near real-time streaming logs, you can also identify issues such as traffic spikes and sudden client errors as they happen and react decisively before it’s too late—and your site outage becomes the news. If or when your site experiences an outage, Fastly offers the ability to serve stale content, a far better option than 404 messages.

“Worst-case scenario, we can always ghost-serve. Which actually happened: our Rolling Stone legacy origin was down for three days; the only reason readers could still visit our site without noticing the problem was because we used Fastly’s stale-if-error.”

– Matthew O’Brien
FORMER SOFTWARE ARCHITECT
THE GUARDIAN
Tailor experiences for any device

Fastly is built to support personalized experiences at scale, allowing digital publishers to keep up with even the most demanding reader expectations. Our platform has built-in capabilities to identify the device requesting the content and personalize experiences from the edge. Fastly’s mobile device detection features along with our Image Optimizer (IO) will detect device type so you can determine what formats to send. Letting you scale images in real-time and from only one original, Fastly IO eliminates the need for storing multiple versions of the same image.

Extending similar functionality to video-on-demand, Fastly’s on-the-fly-packager (OTFP) delivers a faster overall viewing experience by transcoding and resizing content to popular streaming formats, frame rates and resolution. Serving right-sized content will save on egress cost, and since we package only the requested portion, playback is immediate.

Enforce security with rapid edge enforcement

These days digital publishers often find themselves targets of online attacks due to opinionated content or political affiliations. Their ability to react is in direct correlation with the amount of damage an online attack will cause. Most CDNs are built to absorb DDoS attacks, but not all CDNs empower you to respond in real-time or filter traffic right at the edge. Fastly’s high-bandwidth, globally distributed network is built to absorb DDoS attacks, and our entire network acts as a DDoS scrubbing center, so you don’t sacrifice performance for protection. We allow you to respond in near real time, filtering malicious requests at the network edge before they get near your origin.

As bots become an increasingly difficult challenge for digital publishers, the need to protect valuable content both in cache and at the origin is paramount. Leading bot mitigation companies (PerimeterX, ShapeSecurity, DataDome and ShieldSquare) can be integrated with our edge cloud platform, combining their bot detection expertise with our rapid mitigation capabilities at the network edge. Our multi-terabit-per-second network manages millions of simultaneous connections globally, allowing us to operate as a distributed filter to enforce bot policies. Our cache nodes perform real-time evaluation of trust scores for request-by-request edge enforcement. Unlike other solutions, Fastly and our partners enable you to protect both cached content and origin content, so you can keep more in cache without the risk of bot abuse.
Edge authentication to deliver premium experiences

Subscription revenue models continue to be strong, but slow authentication can leave your readers frustrated before they gain access. Authentication used to require a roundtrip back to origin for each request, causing long wait times in an industry where milliseconds matter when it comes to delivering stellar customer experiences. With Fastly, you can move paywall authentication to the edge of your delivery network for increased performance and security, enabling you to authenticate cached responses and grant viewers immediate access to premium content.

Control where your content is viewed

Due in large part to global data privacy and security rules, digital publishers are increasingly seeking to control where content is viewed. Licensing rules can legally prevent playback in certain areas, and governments might request certain stories to be unavailable in certain regions. By adding logic at the edge, Fastly lets you block access based both on location and IP address, and can detect the location of the viewer and block access based both on location and IP address. We can even mitigate usage for those utilizing a VPN.

Don’t let outdated technology stand in your way

In a highly competitive market, digital publishers striving to stay relevant must have systems in place that deliver content to readers and aggregators the moment it is ready. As you set out to architect and build your content delivery platform, be sure to evaluate the practical challenges a legacy CDN will impose when it comes to meeting your readers expectations.

Fastly offers edge cloud solutions that will let you deliver fast, secure, and engaging online experiences regardless of platform, device, or location. To learn more about how we can help modernize your publishing platform contact us at sales@fastly.com.