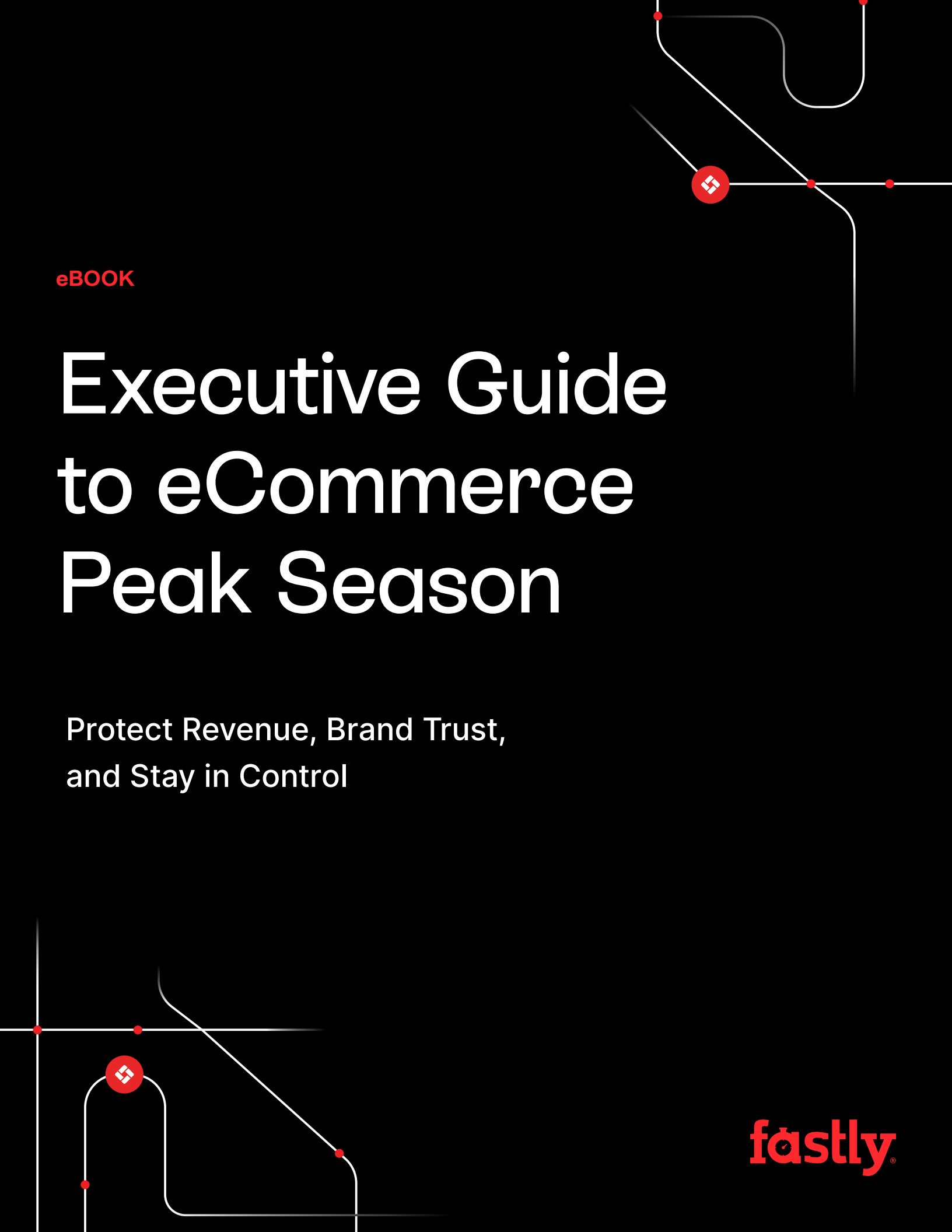
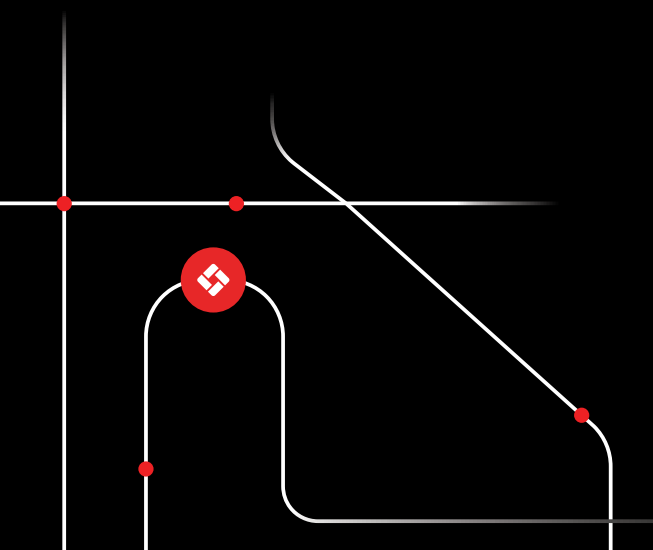




eBOOK

Executive Guide to eCommerce Peak Season

Protect Revenue, Brand Trust,
and Stay in Control



fastly[®]

For senior eCommerce leaders, peak season is no longer a contained, short-term stress test. It has become an extended period of sustained commercial risk, where pressure on revenue and smooth customer experience remains elevated for weeks at a time.

Fastly's analysis of November 2025 traffic patterns across major commerce sites shows that [Black Friday traffic was only 10.8% above the November daily average](#), signaling that demand is now distributed across the entire month. This undermines the long-held assumption of "peak days" as isolated moments of strain, and forces leadership teams to operate under peak conditions for far longer than before.

This white paper is designed to help you manage these risks. It examines the forces reshaping peak season in 2026 and shows how leading eCommerce organizations are turning sustained peak pressure into a controllable, repeatable operating state by simplifying architectures, consolidating control at the edge, and aligning performance and security decisions with business outcomes.

Reducing Risk by Reducing Complexity

Downtime during peak remains extremely costly, with estimates ranging from hundreds of thousands to millions of dollars per hour, depending on scale. At the same time, the operating environment has become harder to control. [Nearly one-third of all web traffic is now bot-driven](#), and during peak periods, opportunistic attackers increasingly blend in with legitimate customer demand, making malicious activity harder to detect precisely when your business is most vulnerable.

Peak season pressure exposes a second, often overlooked risk: fragmented delivery and security stacks.

A modern CDN is a critical foundation for scaling traffic and maintaining fast, reliable experiences during periods of sustained demand. But when content delivery, security, and traffic management are handled by separate tools and vendors, complexity quickly creeps in.

Fastly's eCommerce edge platform builds on the CDN by unifying performance, security, and compute on a single global network. This integrated approach helps businesses absorb sustained demand, reduce latency, and actively detect and mitigate abuse in real time without forcing teams to stitch together multiple systems during critical moments.

Executive teams are facing a distinct set of business risks in 2026:

- **Revenue concentration is higher than ever.** More sales now depend on digital performance, and the cost of failure during peak has grown accordingly.
- **Customer tolerance is shrinking.** AI-driven shoppers are less patient, quicker to abandon, and more sensitive to performance and trust signals.
- **Threats are harder to separate from demand.** Bots and automated abuse increasingly blend into legitimate traffic precisely when systems are under the most strain.
- **Operational complexity amplifies risk.** Fragmented delivery and security stacks slow decision-making and obscure accountability at the moments when speed and clarity matter most.

The RealReal

Customer Story: How The RealReal Protects Revenue and Trust with Fastly

In high-value eCommerce environments, trust is nonnegotiable.

The RealReal, the world's largest online marketplace for authenticated resale luxury goods, serves more than **40 million members** who expect every purchase to be secure and credible. Shoppers are buying expensive high-end fashion, fine jewelry, and art, where confidence and a seamless experience are critical.

Behind the scenes, that experience is constantly under threat. As a large eCommerce platform, The RealReal faces approximately 31,000 attack signals each month. Malicious bots and automated abuse must be stopped immediately, but blocking legitimate customers, even briefly, risks lost sales and damaged trust.

As Alex Wang, Staff Security Engineer at The RealReal, explains: **"If we have a customer buying a high-end item, we don't want to lose the sale because of false positives. We feel very confident that traffic being blocked today by Fastly is malicious."**

At the same time, The RealReal security team needed tools that would not slow development or overwhelm operations. Developers must deploy updates frequently, and security controls must keep pace without introducing bottlenecks.

The RealReal uses Fastly's CDN, Next-Gen WAF, and Bot Management to bring performance and security together at the edge.

When delivery and security are integrated on a single edge platform, teams can reduce handoffs, gain clearer visibility into traffic and threats, and respond faster during peak pressure.

Fastly's signal-based detection and immediate blocking capabilities allow the RealReal team to spot malicious automation without interrupting legitimate shoppers. Just as importantly, the platform's intuitive design and visibility make it easier for teams to understand what is happening in real time and to act with confidence.

This usability proved critical when The RealReal experienced a full turnover of its infosec team in 2024. New engineers were able to ramp quickly without disrupting security operations.

"Getting a whole new team ramped up was a pretty big challenge, but Fastly made it easy. The Next-Gen WAF is a very intuitive platform and a very well-designed tool."

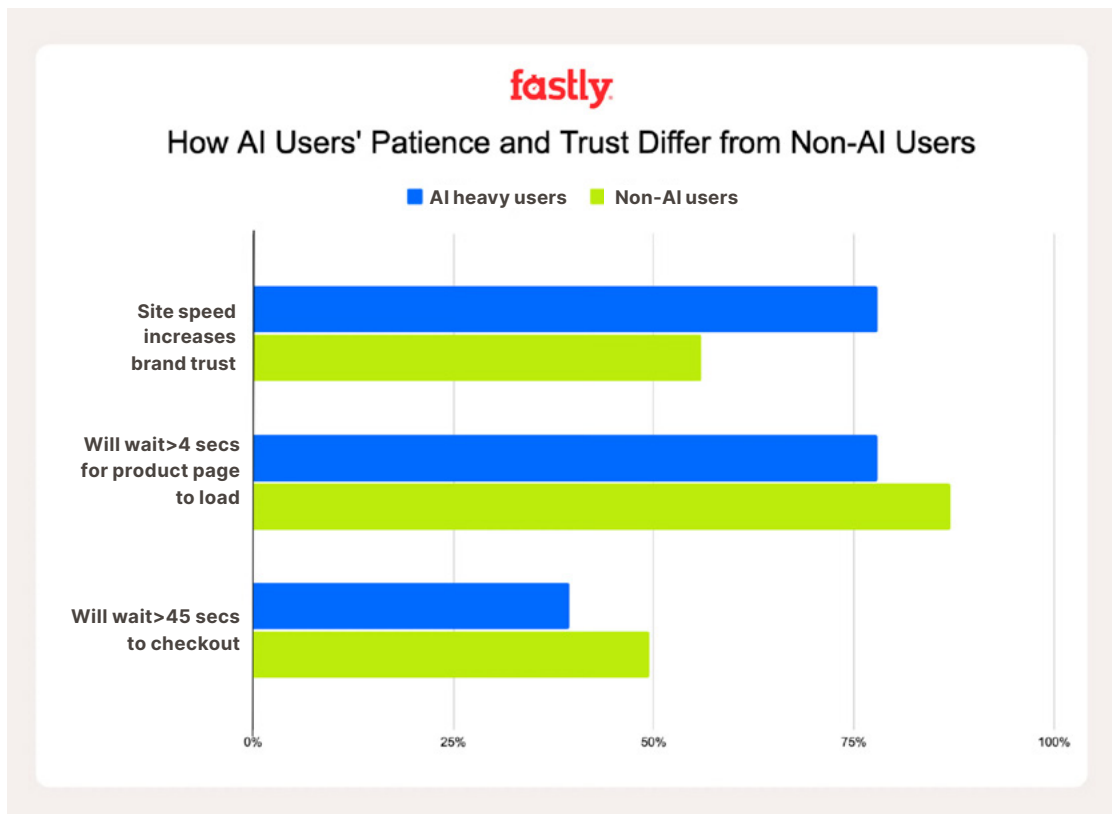
***— Kevin Ponds,
Director of Cybersecurity Engineering,
The RealReal***

"We have a frictionless relationship with our developers... We don't need late-night change windows because we feel confident in Fastly's capabilities to protect our applications."

***— Alex Wang,
Staff Security Engineer,
The RealReal***

Today, security and delivery operate as a single system rather than competing priorities.

For eCommerce leaders navigating peak season, The RealReal's experience highlights that **effective protection doesn't need to mean more friction.**



eCommerce trends to watch in 2026

As peak periods stretch from days into weeks and digital commerce grows more complex, eCommerce leaders are rethinking how they manage performance, security, and risk. Two trends are shaping how leading brands prepare for 2026 and beyond.

Trend 1: AI reshapes customer trust and security risk

With more than 6 billion people now online worldwide, digital commerce has become the default way customers buy products. Generative AI has added a new dynamic to this environment.

During the 2025 holiday period, traffic from AI-driven sources to retail sites increased by 693.4% compared to the previous year, reshaping how customers discover products.

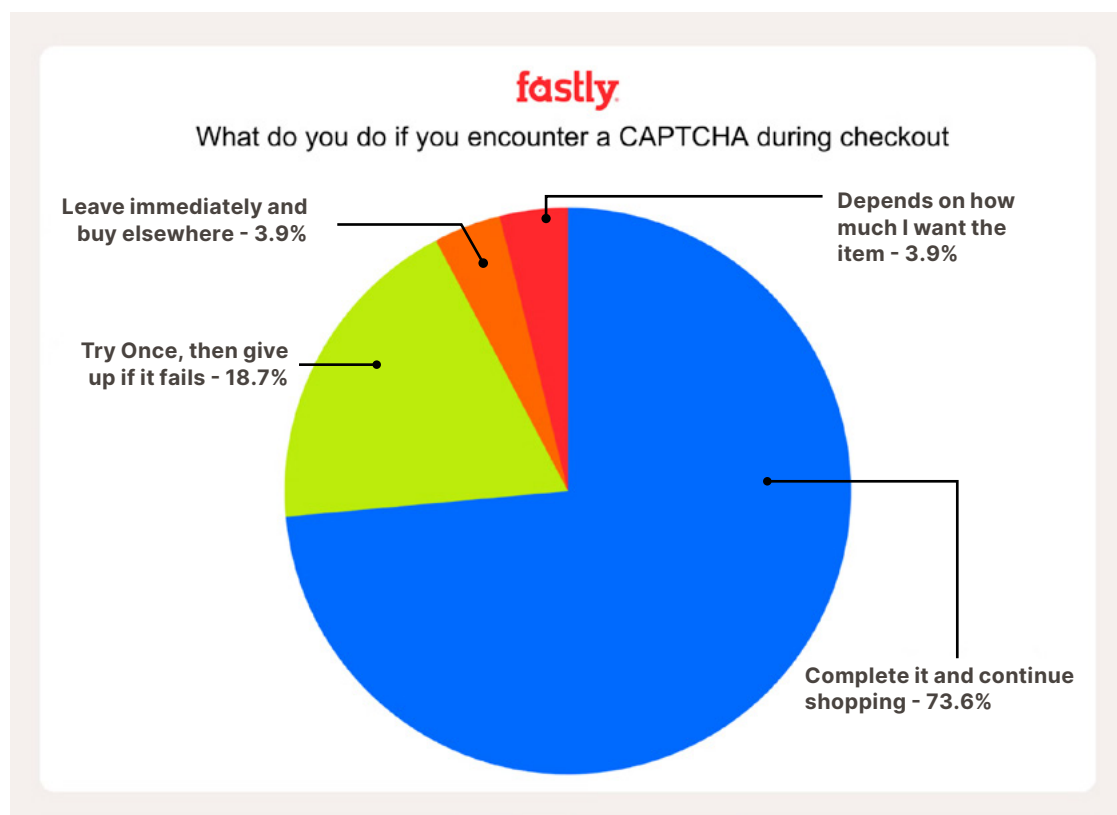
This is not the only way AI is changing customer behavior. Fastly's end-of-year 2025 consumer survey shows that heavy AI users - those using AI tools daily or several times a week - are less tolerant of slow sites and poor digital experiences.

AI use shapes customer expectations:

- **77% heavy AI users say a fast, responsive site directly increases their trust in a brand** (56% of non-AI users feel the same)
- Heavy AI users are **less patient at checkout** than non-AI users

On top of all this, generative AI has lowered the barrier to planning and executing automated attacks, accelerating the scale of bot activity. Together, these shifts raise the stakes for performance and security decisions during peak periods.

When a CAPTCHA — a quick puzzle a website visitor must solve to prove they're human — appears at checkout, nearly one in four shoppers abandon their purchase after a single failed attempt or leave immediately. Our survey data shows that heavy AI users drop out even faster. At the same time, turning off protection without an alternative exposes risks that no eCommerce business wants.

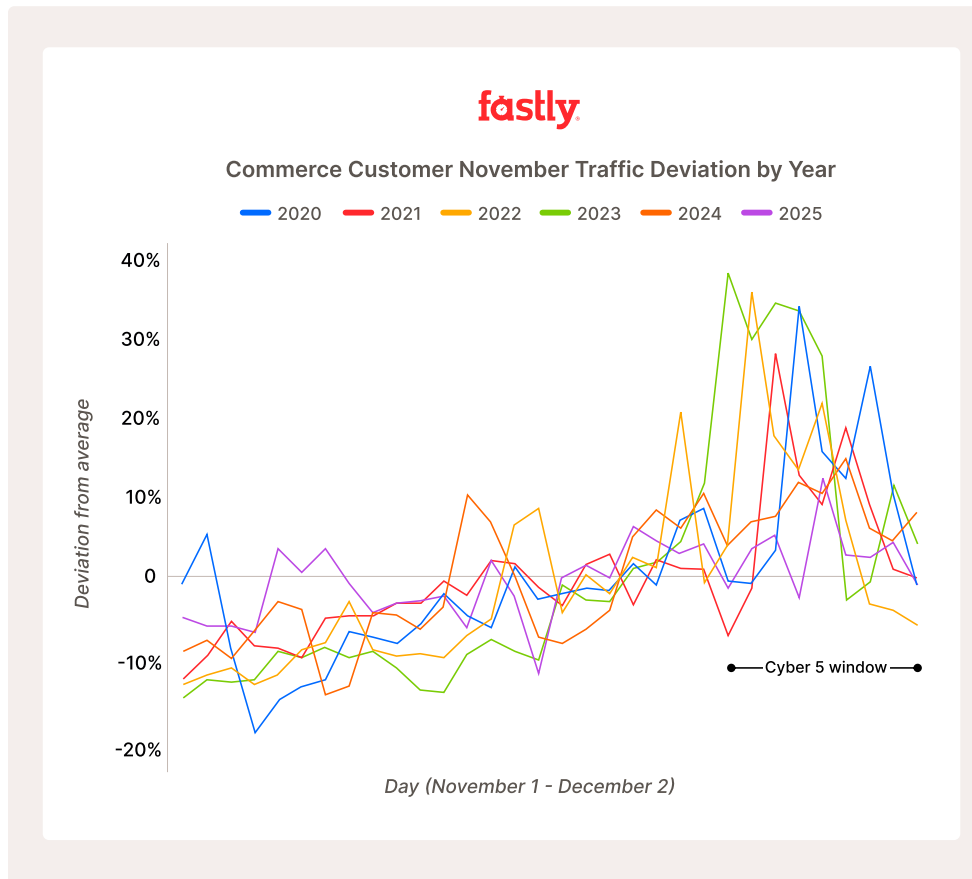


This is why modern security tools are shifting away from controls that interrupt customer journeys. Adaptive, non-intrusive security models like [Fastly's Dynamic Challenges](#) can assess behavior in real time, allowing legitimate users to move through checkout uninterrupted while applying friction only when risk is high.

Trend 2: Peak performance must hold under sustained demand

The eCommerce sector is expecting year-over-year growth despite broader economic uncertainty. [In the United States alone, online spending across November and December of 2025 exceeded \\$250 billion.](#) However, how that demand shows up during peak season has changed in the last few years.

While Black Friday remains the single highest moment of traffic, [it was only 10.8% above the November daily average in 2025.](#) Cyber Monday, once a clear crescendo, now behaves much like the surrounding days. When viewed across the full month, November increasingly resembles a period of elevated, steady demand rather than a lead-up to one defining spike.



Under these sustained peak conditions, small performance inefficiencies compound quickly. By caching more content at the edge and executing logic closer to users, modern CDN architectures reduce origin load, shorten response times, and stabilize performance even as demand remains consistently high.

This is where infrastructure choices become visible in business outcomes. Websites migrating from Cloudflare to Fastly experience a **25% faster Time to First Byte**, equivalent to roughly **300 milliseconds shaved off initial response time**. Sites moving from Akamai to Fastly see comparable gains, including a **200 millisecond improvement in Time to First Byte (a 57% increase in speed)**, alongside faster rendering of visible content.

These milliseconds matter as speed is directly tied to revenue. Faster initial response times reduce early-stage abandonment, particularly on mobile networks, while quicker rendering of primary content shortens the window in which customers decide whether to continue or leave. During extended peak periods, when traffic remains elevated for weeks rather than days, these gains can compound across millions of sessions.

"We're already seeing improvements of 50–100 milliseconds per page. It might sound small, but at our scale, that makes a real difference to customer experience."

*— David Edwards,
Head of Technology, River Island*

Consistent performance limits the need for reactive infrastructure scaling and helps stabilize operating costs during the most commercially critical periods of the year.

"After deploying Fastly globally, median end-to-end latency dropped by roughly 50% worldwide."

*— Davide Pedranz,
Platform Engineer, Bending Spoons*

How to Be Peak Season Ready in 2026

To recap, eCommerce plays a central role in how customers discover, evaluate, and purchase products, with nearly [one in five retail purchases now taking place online](#). As more revenue concentrates in digital channels, the tolerance for failure during peak periods continues to shrink.

What to expect for the peak season in 2026:

- More revenue depends on digital performance
 - Customer patience is lower, not higher
 - Traffic and threat patterns are less predictable
 - Peak demand lasts longer, amplifying the impact of small mistakes
-

Peak Season Checklist for eCommerce Leader:



Real-time visibility across the stack

Leadership should have a clear, shared view of performance, availability, and security so teams can quickly distinguish real issues from normal peak volatility.



Revenue-critical systems protected from excess load

Origin infrastructure should be reserved for transactions, with repeat and nonessential traffic absorbed at the edge to keep checkout, payments, and inventory stable.



Ability to change fast—and reverse faster

Teams must be able to deploy updates fast but safely during peak, validate impact in real time, and roll back immediately if performance or availability degrades.



Promotions that don't destabilize performance

Pricing, inventory, and campaign updates should reach customers instantly without adding backend strain or risking inconsistency during peak periods.



Security that protects revenue, not blocks it

Security controls should stop abuse without adding friction for legitimate buyers or forcing trade-offs between protection and conversion.



Clear ownership and decision-making

Before peak begins, accountability across engineering, infrastructure, and security should be well defined, with a clear escalation path when speed matters most.

The result for leadership teams is not just technical resilience, but business confidence:

- Revenue is protected without introducing friction that blocks buyers.
- Brand trust is preserved through consistent, fast, and secure experiences.
- Operational risk is reduced through simpler architectures and clearer accountability.
- Costs scale predictability with demand, rather than locking in inefficiency year-round.

For leadership teams, preparing for peak season means ensuring the right conditions are in place before demand ramps up.

Fastly's eCommerce platform supports this checklist by consolidating performance, security, and traffic management at the edge, where decisions have the greatest impact on customer experience, revenue protection, and operational control.

[Get in touch with our team](#) to discuss how Fastly helps eCommerce leaders stay in control during peak season.