



WEBSCALE

SOLUTION BRIEF
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VelocityEDGE

Enhance digital experience with improved ecommerce performance

As an innovative leader in the world of website performance optimization, Webscale is proud to present VelocityEDGE, a groundbreaking performance module for Webscale's Intelligent CloudOps Platform designed to revolutionize your customers' online experience.



VelocityEDGE



VelocityEDGE is a cutting-edge performance module that combines the power of Intelligent Varnish Caching at the edge and Advanced HTML Streaming to accelerate website performance and create an unparalleled user experience. It optimizes content delivery, enhances page render times, and minimizes latency, making your customers' websites blazing fast.

Key Performance and SEO Improvements

Performance Improvements

- Faster Page Load Times
- Reduced Latency
- Increased Conversion Rates

SEO Improvements

- Better User Experience
- Reduced Bounce Rates
- Higher Click-Through Rates
- Mobile Responsiveness

Expected Performance Improvements



Faster Page Load Times: Studies have shown that implementing Varnish Cache at the edge can result in up to 10x faster page load times. With VelocityEDGE's Intelligent Varnish Caching, critical page elements are intelligently cached and delivered, leading to immediate performance enhancements.



Increased Conversion Rates: Websites with faster load times experience higher conversion rates. It's estimated that even a one-second delay in page load time can lead to a 7% reduction in conversions. With VelocityEDGE's performance enhancements, digital brands can expect a positive impact on their conversion rates.



Reduced Latency: By optimizing content delivery and leveraging edge caching, VelocityEDGE reduces latency for website visitors, resulting in quicker response times and improved user experiences.

Expected SEO Ranking Improvements



Better User Experience: Search engines, including Google, consider user experience as a ranking factor. Websites that offer better user experiences, including faster load times and seamless navigation, are more likely to receive favorable rankings in search results.



Higher Click-Through Rates: Faster loading websites are more likely to attract clicks from search engine result pages. Higher click-through rates (CTR) indicate to search engines that the content is relevant and valuable to users, positively influencing rankings.



Reduced Bounce Rates: With improved page load times and engaging user experiences facilitated by VelocityEDGE, digital brands can reduce bounce rates. Lower bounce rates signal to search engines that visitors find the content valuable, contributing to improved SEO rankings.



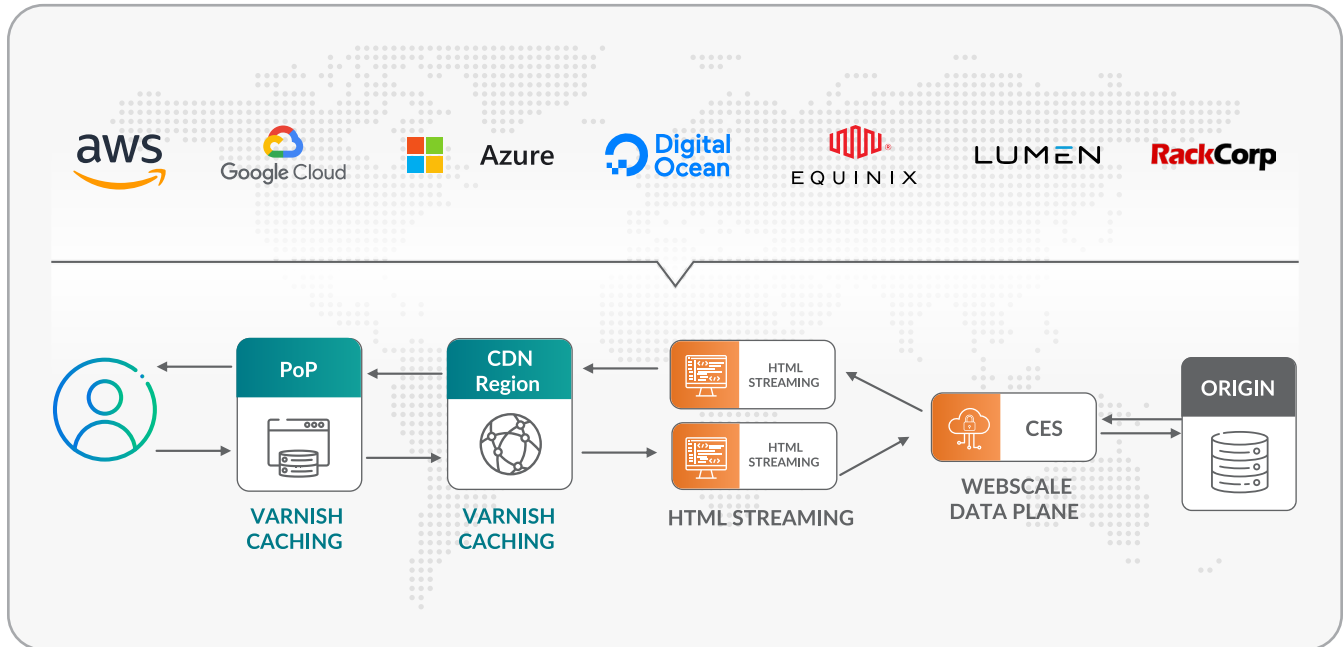
Mobile Responsiveness: With more users accessing websites via mobile devices, mobile responsiveness is crucial for SEO. VelocityEDGE's optimization of content delivery ensures seamless mobile experiences, which can lead to improved mobile rankings.

It's important to note that the actual impact of VelocityEDGE on performance improvement and SEO rankings will depend on factors such as the website's existing performance, content, and competition within the industry. For the best results, a comprehensive analysis and implementation of VelocityEDGE tailored to the specific needs of each digital brand are recommended.

As a powerful performance module, VelocityEDGE empowers digital brands to achieve faster, more responsive websites, leading to improved user experiences, increased conversions, and enhanced SEO rankings.

How Does it Work?

VelocityEDGE is deployed on top of any ecommerce platform as a replacement for other website performance point solutions, and alongside a traditional CDN. It involves no complex code changes and can be set up easily.



Features and Capabilities

Intelligent Varnish Caching: VelocityEDGE intelligently caches critical page elements at edge locations, reducing origin server requests and delivering content with minimal latency.

Advanced HTML Streaming: Accelerates page render times by streaming essential HTML content to users as it becomes available, providing an instant and engaging browsing experience.

Zero-Ops Management: Webscale's Intelligent CloudOps platform handles all Varnish Cache operations, version upgrades, and configurations, allowing customers to focus on their core business.

Global Scalability: VelocityEDGE's edge caching ensures that website content is delivered from the closest server to users worldwide, providing consistent performance across regions.

Target Audience

VelocityEDGE is ideal for online businesses of all sizes, including ecommerce, SaaS, media, and other dynamic web applications. It caters to merchants seeking superior website performance, improved user experiences, and increased revenue.

Use Cases



Ecommerce

- Faster load times lead to reduced cart abandonment and increased conversion rates.
- A seamless user experience results in higher customer satisfaction and repeat business.



Digital Brands

- Faster page rendering for rich content attracts and retains more users, increasing customer engagement.
- Improved SEO leads to higher organic traffic and better visibility in the market.

While specific performance improvement and SEO ranking data may vary depending on individual website configurations and content, the implementation of VelocityEDGE is expected to yield significant improvements for digital brands. Here are some data points based on industry studies and customer feedback.

VelocityEDGE is not just a product; it's a game-changer for digital brands striving for a world class online experience. With its Intelligent Varnish Caching at the edge and Advanced HTML Streaming, VelocityEDGE empowers marketing teams to attract and retain more customers, while development teams benefit from reduced latency and simplified content delivery. In the journey to unparalleled user experiences, VelocityEDGE unlocks the true potential of every brand's online presence and presents a clear path to seeing higher conversions.

Adrian Luna
Head of Product Marketing, Webscale

Technical Information

How does HTML streaming work?

HTML streaming, a core feature of VelocityEDGE, is an innovative technique that enhances website performance by delivering web page content in a progressive and optimized manner. Here's how HTML streaming works:



Progressive Rendering: Instead of waiting for the entire web page to load, VelocityEDGE progressively streams essential HTML content to users as it becomes available. This allows the web page to start rendering almost instantly, providing a faster and more engaging user experience.



Optimized Content Prioritization: VelocityEDGE intelligently prioritizes the delivery of critical HTML elements, such as headers, navigation menus, and calls-to-action. These elements are essential for the initial rendering of the page, ensuring that users can start interacting with the website without delay.



Reduced Time to Interactivity: By prioritizing and delivering crucial HTML content early in the loading process, VelocityEDGE significantly reduces the time it takes for the page to become interactive. Users can interact with buttons, forms, and other elements sooner, leading to a seamless browsing experience.



Seamless User Experience: HTML streaming creates a smooth and uninterrupted user experience, even for content-heavy pages. As users scroll and interact with the website, VelocityEDGE continues to stream additional HTML content, ensuring a continuous and engaging browsing experience.



Bandwidth Optimization: With HTML streaming, VelocityEDGE optimizes bandwidth usage by delivering only the necessary HTML elements in the initial response. This efficient use of bandwidth benefits users, especially those on slower internet connections or mobile devices.



Enhanced Mobile Performance: HTML streaming is particularly beneficial for mobile users, as it minimizes the time it takes to load critical content. With faster load times, mobile visitors enjoy improved page responsiveness and overall satisfaction.



Compatibility with Dynamic Content: HTML streaming seamlessly adapts to websites with dynamic or personalized content. Whether the content changes based on user interactions or real-time data, VelocityEDGE ensures that relevant and up-to-date HTML elements are prioritized and delivered promptly.

How does Varnish Cache work?

Varnish Cache, a fundamental component of VelocityEDGE, is an open-source HTTP accelerator that sits between the web server and the client, acting as a reverse proxy. Here's how Varnish Cache works:



Caching Mechanism: Varnish Cache stores copies of web pages, images, CSS, and other static assets in its high-speed memory, known as the cache. When a user requests content from a website, Varnish Cache first checks if the requested content is already stored in its cache.



Fast Content Delivery: If the requested content is available in the cache, Varnish Cache delivers it directly to the user without having to query the origin web server. This significantly reduces the time it takes to retrieve and serve the content, resulting in faster page load times and improved user experiences.



Cache Invalidation: To ensure users receive the most up-to-date content, Varnish Cache employs cache invalidation mechanisms. When content on the origin server is updated or changes, Varnish Cache automatically refreshes the cache for that specific content, ensuring users always access the latest version.



Strategic Caching: Varnish Cache can be configured to cache specific content strategically. It allows website administrators to set cache rules based on URLs, HTTP headers, or cookies. This intelligent caching approach ensures that critical content is cached, while dynamic or personalized content is fetched directly from the origin server.



Load Balancing: Varnish Cache can also perform load balancing across multiple backend servers, distributing user requests to optimize server resource usage and ensure efficient content delivery.



HTTP Purging: Varnish Cache supports HTTP purging, allowing website administrators to invalidate specific cache entries manually. This enables rapid cache invalidation in response to content updates or changes.



Grace Mode: In the event of backend server failures or temporary unavailability, Varnish Cache can operate in Grace Mode. It serves cached content for a short period, ensuring continued access to critical resources while the origin server is restored.



Customization and Configuration: Varnish Cache is highly customizable and can be configured to suit specific website requirements. Website owners can tailor caching policies, rules, and behaviors to optimize cache efficiency and performance.

Varnish Cache is a powerful HTTP accelerator that dramatically enhances website performance by caching and delivering content directly to users from its high-speed cache. Its strategic caching approach, coupled with features like cache invalidation and load balancing, ensures swift content delivery, reduced server load, and improved user experiences. Embrace the capabilities of Varnish Cache within VelocityEDGE to unlock the true potential of your website's performance!

For more information or to schedule a demonstration, please reach out to our Sales team at sales@webscalenetworks.com