

DATASHEET
.....

Webscale CloudEDGE PWA

Simplify and accelerate the deployment and delivery of Progressive Web Applications

Merchants wanting to adopt a “mobile-first” user experience, to drive competitive differentiation and better sales conversions, are evaluating the benefits of developing a native mobile application versus a progressive web app, or PWA. With their ability to deliver a mobile app-like user experience, without the need to download or set up an app on a smartphone, PWAs offer a fast track to mobile.

PWAs separate the frontend or the ‘presentation layer’ in an ecommerce application from the backend, allowing merchants, and their developers, to conceive and manage creative vision without frequent changes that impact the backend platform. This allows frontend developers to run at their own pace, unencumbered by the complexity of the backend. Disconnecting the frontend from the backend also enables a faster ecommerce storefront, dramatically improving Core Web Vitals.

Built on the Webscale distributed CloudEDGE platform, CloudEDGE PWA is a delivery platform to support our merchants and partners in their transformation of existing commerce storefronts into market-proven and cost-effective PWAs.



Webscale CloudEDGE PWA

Webscale CloudEDGE PWA is the industry's first end-to-end progressive web application (PWA) delivery solution. With frontend DevOps and delivery decoupled from the monolithic commerce backend, including platforms such as Adobe/Magento, Shopify, Hybris, Salesforce Commerce Cloud or BigCommerce, or any microservices or packaged business capability, CloudEDGE PWA offers broad support for all enterprise, custom, and open-source PWA frameworks.

With real-time code execution at the edge of the CDN, Webscale CloudEDGE PWA provides personalized control over the entire PWA application infrastructure, coupled with powerful computing capabilities that enable a wide range of modern commerce use cases, and analytics to deliver the code, security, and on-the-fly image handling.

Product Benefits



Improving Lighthouse Scores and Sales Conversions

Mobile accounts for over **60%** of all ecommerce traffic, yet only **16%** of all ecommerce conversions can be attributed to mobile. With its dynamic and distributed delivery platform, Webscale CloudEDGE PWA enables fast, reliable, responsive mobile applications for improved Lighthouse scores, without the overhead.

60% of all online sales come from mobile, yet only 16% convert on mobile

50% of desktop transactions deliver higher AOV (average order value) than mobile

51% of users have purchased from a different site due to an improved user experience



Cost-effective Resources and Lower OpEx

CloudEDGE PWA eliminates the need for non-standard development practices, decreasing time-to-market, while maintaining full manageability, security assurance, and programmability.



Headless Architecture for Omnichannel

Implementing a headless architecture is the perfect opportunity to develop an omnichannel presence. The use of PWAs and headless commerce allows storefronts to deliver a range of new front-end experiences without having to alter their existing backend.



Peace of mind

An integrated, programmable global CDN, enterprise-grade security, performance, and deep expertise are all included, leaving development agencies free to focus on frontend design and realizing their client's brand vision.



Enterprise-grade Security for PWA

Integrated Webscale CloudEDGE Security provides stringent security protocols against new and emerging threats, such as cross-site scripting (XSS) attacks and problematic bots. The built-in programmability can be invoked at the cloud edge as an autonomous security service to detect hijacking connection attempts, prevent modified responses, and eliminate persistent man-in-the-middle attacks.



End-to-end Image Handling

CloudEDGE PWA also includes device-aware, image optimization at scale to deliver sub-second mobile page load times, boosting Core Web Vitals and dramatically improving conversion rates. The importance of fast page load times is critical on mobile, where consumers have little tolerance for sluggish performance. Webscale enables highly durable, seamless, dynamic asset delivery from upload, management, conversion, and compression, to on-the-fly optimization for PWA logic and endpoint device compatibility.



The 24x7x365 Experience

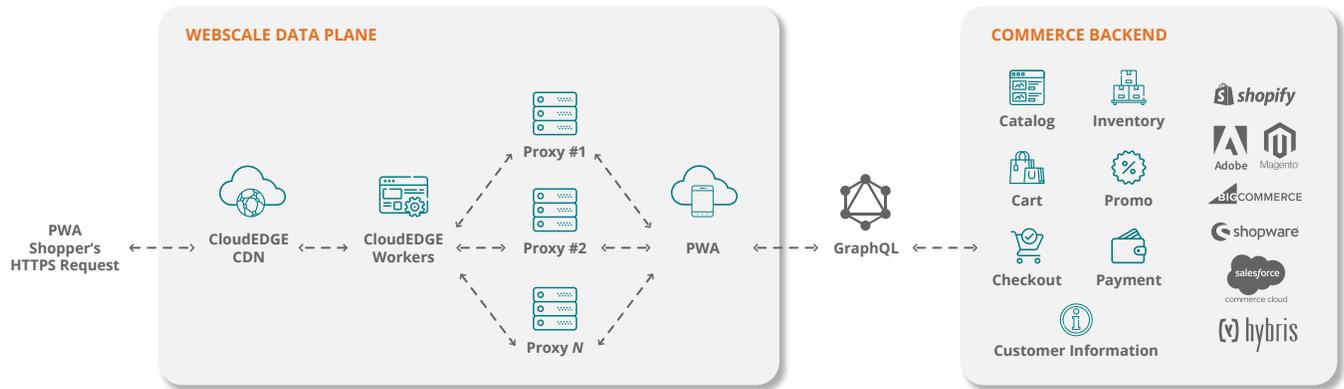
Website uptime, Core Web Vital metrics monitoring and alerting, CDN traffic metrics, real user monitoring (RUM), performance, and security are fully managed around the clock within our portal and backed by a team of multi-cloud-certified, commerce, and DevSecOps experts available 24/7/365. With modern commerce environments becoming more complex, particularly around the delivery of headless websites and PWAs, Webscale leverages automation and highly-defined DevSecOps protocols to create a reliable CI/CD pipeline for secure application delivery.

How It Works

With Webscale CloudEDGE PWA, every element of your infrastructure is optimized to work together seamlessly, eliminating the need for merchants or developers to learn and configure tedious build toolchains.

New frontend code is automatically tested and deployed at Webscale’s global CloudEDGE locations, without any IT or DevSecOps constraints around the provisioning, scaling, or management of origin servers.

CloudEDGE PWA seamlessly bridges GraphQL translation and PWA API programmability, simplifying the addition of new personalized, high-performance customer touchpoints



Webscale CloudEDGE PWA

Features

Performance and User Experience



Intelligent Caching

The required intelligence for optimal PWA GraphQL-type API caching comes from the Webscale patented software stack. With intelligent caching in its data plane, Webscale uses real user monitoring (RUM) and content optimization techniques to accelerate web page asset delivery per device type, while providing layered caching from the edge to the website.



Application and Container Load Balancer

Webscale CloudEDGE PWA provides a cloud-agnostic layer on top of distributed container workloads, delivering advanced traffic management and visibility, as well as built-in security for large production workloads. Webscale CloudEDGE PWA leverages its built-in ingress controller, which is a specialized load balancer designed to manage the L4-L7 traffic entering and exiting the application clusters where your PWA frameworks reside.



Device-aware Image Optimization

Webscale’s serverless image optimization engine delivers high-speed image processing without sacrificing image quality. This solution also provides flexible storage and compute options for file reprocessing, so modern commerce storefronts can deliver improved Core Web Vitals, faster page loads, higher search engine rankings and enhanced user experiences that result in higher conversion rates.



Dynamic Site Cache

Webscale’s Dynamic Site Cache feature delivers lightning-fast page loads for users when they visit a storefront for the first time, by allowing caching of HTML pages and content for anonymous sessions. It also ensures the application origin is no longer processing bot traffic, significantly increasing the efficiency of the application infrastructure, improving performance, and reducing operating costs.

Layered Security



Application Awareness

Webscale CloudEDGE PWA features the only purpose-built WAF designed with application awareness, including specific optimizations for ecommerce and enterprise web applications. Each application may have different security needs and the ability to apply custom security policies is critical for application owners and IT. Webscale enables predefined security rule-sets based on the application.



Web Controls

Webscale’s Web Controls is a DIY no-code policy and rules engine that allows site administrators, or users of any skill level, to use pre-defined, pre-tested security rulesets based on their ecommerce application. They can also create their own equivalent of firewall rules, with no limits on how many can be enabled at any point in time.



Cloud-based Managed WAF Protection

Webscale Web Controls and auto-scaling data plane serve as a reverse proxy used to analyze all HTTP traffic bound to a web cluster, filtering out any malicious traffic. As a result, it offers automatic protection of critical web applications from the most common vulnerabilities, such as SQL Injections, Cross-Site Scripting (XSS), Cross-Site Request Forgery (CSRF), and other OWASP Top 10 threats. For compliance, an additional layer in the Webscale Data Plane can also screen outbound traffic.



Content Security Policies (CSP) Violation Detection

Webscale monitors, collects stats and applies source controls so browser applications can download JavaScript only from authorized domains, reducing potential exposure from inherent issues like 3rd party Magento plug-ins.



Block/Allow Listing

Superior flexibility to block or allow requests and sessions by IP address, user agent, or the user's origin country through advanced web controls is easy to deploy. Webscale allows merchants to block known bad actors, or even entire geographical regions that merchants may not serve, while building a trusted model that only allows authorized personnel to access the most secure parts of the application (such as administrative sites).



PCI and GDPR Compliant

Webscale is Level 1 Service Provider-grade PCI-DSS and GDPR compliant, ensuring your web applications are adhering to the latest PCI security standards. With Webscale, you can quickly and easily protect your customers' sensitive data from external threats, without making any changes to your web application.



SOC2 Compliant with HIPAA

Webscale is a SOC2 Compliant provider with HIPAA protection included within the entire delivery platform.



Regional Compliance and Governance

As laws and regulations continue to evolve, Webscale's unique ability to deliver service in any of our 75 cloud regions across AWS, Azure and GCP allows you to confirm compliance of your data and delivery.

Deep Insight and Control



Real-time Logging

Real-time logging provides a view into every request delivered through Webscale and presented within the Webscale Portal and through Traffic Viewer, Event Viewer and Log Viewer. The application-centric data can be further viewed as a combination of requests, page views and sessions with specific detailed data available on each group of requests eliminating the need for general purpose and expensive log monitoring and management systems.



Customer portal

The Webscale Portal offers end-to-end, real-time visibility into your website's hosting infrastructure and user experience. It delivers a comprehensive single pane of glass view into website traffic, providing granular insight into all performed tasks, detailed analysis on potential cyberthreats and issues that may be affecting performance, as well as Web Controls, our powerful DIY policy, and rules engine for the easy creation of firewall-equivalent rules.



Commerce API Observability

Webscale advances and captures dependencies, and interactions, between all observability PWA APIs to intelligently combine metrics, logs, traces, and user experience data from the centralized management plane.