WEBSCALE

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

Merchant

Deliver PWA at Scale

Designed from the ground up to deliver lightning-fast performance at scale, for any ecommerce platform, including Adobe/Magento, Shopify, Hybris, Salesforce Commerce Cloud or BigCommerce.

Improve Lighthouse Performance Metrics

CloudEDGE PWA delivers browser requests and responses directly from the edge, with full page caching for faster page loads and improved Lighthouse scores.

Fully Configurable and Programmable

Enable intelligent code execution and testing processes, from development to production, all from within the Webscale Portal.

Support for all PWA Stacks

CloudEDGE PWA supports any PWA stack from open-source to custom packaged or licensed solutions, including Jamstack environments.

PWA API Observability and Control

The Webscale Portal and Web Controls together allow deep observability into traffic trends, threat analytics, forensics, and troubleshooting from the edge to the origin.

Digital Agency

Turnkey PWA Delivery

Enable commerce customers with an easily scalable solution that delivers instantaneous mobile performance, and Lighthouse score improvements.

Pre-integrated with PWA Microservices

CloudEDGE PWA natively integrates and consumes a variety of commerce PWA services delivered via GraphQL, REST, and other APIs, out of the box.

Image Handling, Edge Caching, Load Balancing

Image optimization at scale, per request context, with load balancing, edge caching, and service handling – all located at the edge – without cloud deployment bottlenecks and resource constraints.

Security Against Zero Day Attacks

From WAF, Fraud Detection and Bot Management for carding attack protection, CloudEDGE PWA integrates advanced security handling, at scale, all the way to the origin.

WEBSCALE

Single Pane of Glass Observability

The Webscale Portal and Web Controls allow deep observability into traffic trends, threat analytics, and troubleshooting from the edge nodes to the origin.
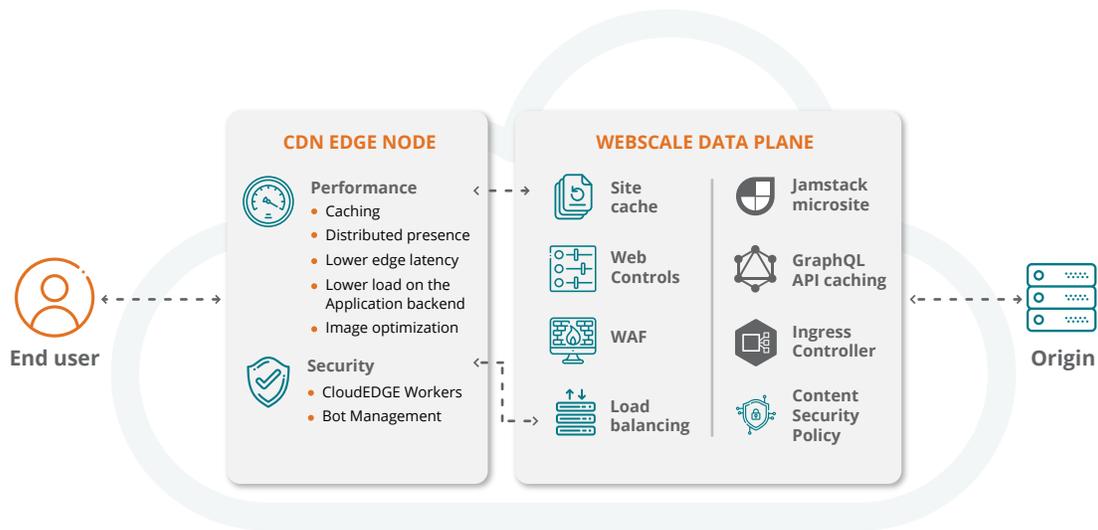
DevSecOps and Continuous Edge Delivery

Webscale leverages automation and highly-defined DevSecOps protocols to enable fast setup of a reliable CI/CD pipeline for commerce 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 tool chains.

New frontend code can be 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.

CDN EDGE NODE

Performance
- Caching
- Distributed presence
- Lower edge latency
- Lower load on the Application backend
- Image optimization

Security
- CloudEDGE Workers
- Bot Management

End user

WEBSCALE DATA PLANE

Site cache

Web Controls

WAF

Load balancing

Jamstack microsite

GraphQL API caching

Ingress Controller

Content Security Policy

Origin

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 observability into your website's hosting infrastructure and user experience. It delivers a comprehensive single pane of glass 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.