



# WEBSCALE

## WEBSCALE CONVERGED APPLICATION DELIVERY PLATFORM

BLAZING PERFORMANCE, HIGH AVAILABILITY AND ROBUST SECURITY FOR YOUR CRITICAL WEB APPLICATIONS

### OVERVIEW

Webscale is a converged multi-cloud application delivery platform, built on a foundation of software-defined application delivery controllers (ADC) and incorporating powerful features, such as automated content optimization for performance, predictive auto-scaling for right-sized infrastructure and lower costs.

### A CONVERGED MULTI-CLOUD PLATFORM

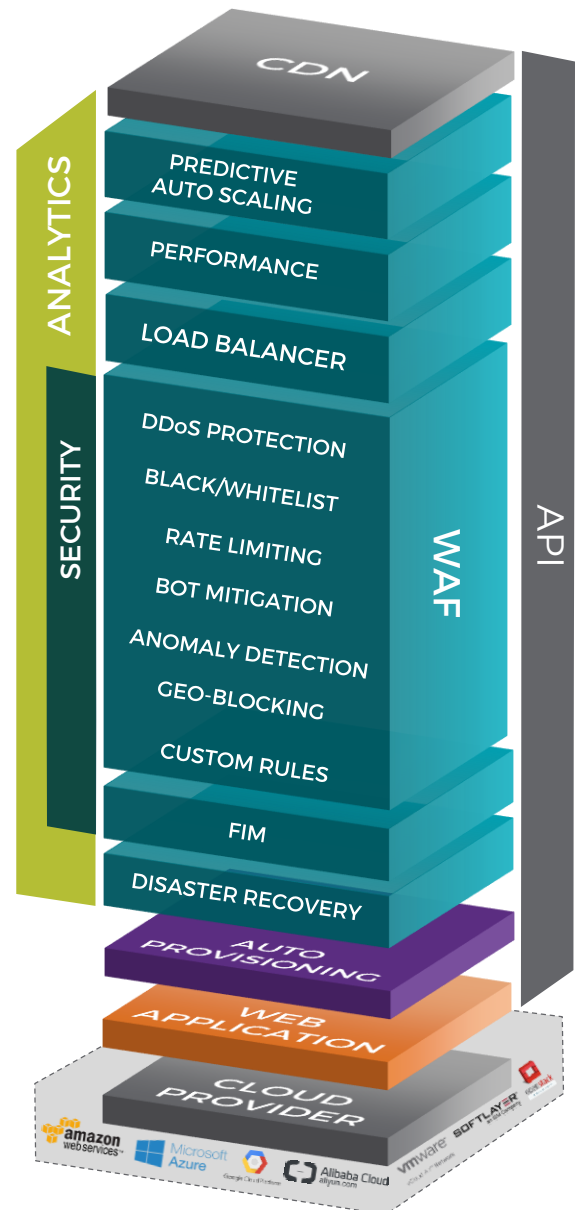
Webscale is a software as-a-service (SaaS) with a simple monthly subscription plan. Any web application (HTTP/HTTPS) hosted in a public, private or hybrid cloud, or architected over multiple clouds, can be delivered, accelerated, stabilized and secured using the Webscale platform. Delivered as a true cloud-based Software-as-a-Service, Webscale’s solutions require no hardware, software or cloud instance to install and maintain.

### ROBUST FEATURE SET FOR APPLICATION DELIVERY IN THE CLOUD

Webscale offers a portfolio of capabilities designed to address the application delivery needs of mid-market businesses. From blazing fast performance through web and mobile content optimization, and high availability through load balancing, to seamless integration with content delivery networks (CDN), predictive auto-scaling, and self-healing of cloud infrastructure, Webscale ensures web applications stay fast and available at all times. Security is provided via a programmable web application firewall (WAF), together with disaster recovery provided by Webscale’s 24x7 SLA-based support team.

### DOCUMENT CONTENTS:

- > FAST, SECURE APPLICATION DELIVERY
- > ALWAYS FAST, RIGHT-SIZED INFRASTRUCTURE
- > POWERFUL PROTECTION FOR CRITICAL APPS
- > MULTI-CLOUD RESILIENCY
- > SOFTWARE-DEFINED INFRASTRUCTURE
- > PERFORMANCE, AVAILABILITY & SECURITY



# APPLICATION DELIVERY CONTROLLER

## FAST, SECURE APPLICATION DELIVERY ACROSS CLOUDS

*The Webscale ADC is the foundation of the converged application delivery platform. It provides Layer 7 load balancing across application server instances using load, request and session patterns at both the ADC and the application layers. Webscale enables multi-data center and multi-cloud deployments and routes requests with the smallest network latency, leading to more efficient use of cloud infrastructure. The Webscale ADC also provides dramatically better performance with web and mobile content optimizations and enhanced security with a programmable web application firewall (WAF).*

### CONTENT OPTIMIZATION & ACCELERATION

Webscale maximizes the performance of websites for all workloads, including mobile, delivering a fast, consistent user experience. Webscale uses content optimization techniques to accelerate applications, automatically optimizing assets for each web request, reducing page size and number of server requests. Webscale also improves performance through the use of its own caches and through integration with popular content delivery networks (CDNs), delivering web content in the fastest way possible to application users.

### MULTI-CLOUD ENABLED

The Webscale ADC is truly cloud agnostic, making it the ideal solution if you are considering a multi-cloud strategy or have multiple workloads or applications in different clouds. Built and delivered as-a-Service, the Webscale ADC delivers load balancing, performance and security across all public, private or hybrid cloud infrastructures, as well as static hosting environments, including Amazon Web Services, Google Cloud, Microsoft Azure, Aliyun, Rackspace and many more.

### LOAD BALANCING

The Webscale ADC delivers application-aware Layer 7 (L7) load balancing across an application, by routing requests with the smallest network latency to the appropriate application server instance. This ensures the efficient use of cloud infrastructure, delivering an optimal user experience.

### SSL OFFLOAD

The Webscale ADC can terminate SSL/TLS (HTTPS) transactions thereby offloading the decryption of traffic sent via the SSL security protocol. This improves processing capacity at the application layer, freeing up resources for other critical tasks. Webscale also manages SSL/TLS certificates, automatically procuring, deploying and managing certificates on the customer's behalf.

### KEY FEATURES

- L7 Cloud Load balancing
  - Content-based routing
  - Path-based routing
  - Sticky sessions
- Acceleration
  - SSL Offloading
  - Content Routing
  - Content Caching
  - SSL offloading
  - Caching and compression
- Management features
  - Centralized management
  - Real-time traffic statistics
  - Web firewall, access, audit, and system logs
  - RESTful API
- Predictive scaling
- High availability
- Active application monitoring
- Multi-cloud support
  - AWS
  - Google Cloud
  - Microsoft Azure
  - Aliyun
  - OpenStack
  - VCloud Air
  - Others as needed
- SSL/TLS Support
  - TLS 1.1
  - TLS 1.2
  - Certificate management
- Supported protocols
  - HTTP(S)
  - HTTP/2

# PREDICTIVE APPLICATION AUTO-SCALING

MAXIMIZE PERFORMANCE, MINIMIZE COST

*Webscale's application auto-scaling uses predictive analytics and big data to constantly monitor traffic, predict changes in user demand, and proactively scale out and scale in application infrastructure, in real-time. This ensures high performance delivering an optimal user experience even under heavy load or surge traffic. Webscale will automatically scale out its own optimization resources as well, to meet network and CPU demands and offload the backend for critical tasks.*

## PREDICTIVE APPLICATION AUTO-SCALING

Traditional “elastic” scaling technology only scales out once you have exceeded pre-determined thresholds or capacity, resulting in slow page loads, lost customers and frustrated users. Webscale’s patented, predictive auto-scaling technology looks ahead of increasing user demand, and scales out the application layer, keeping websites fast and available, even during traffic surges.

## RIGHT-SIZED INFRASTRUCTURE

Reactive scaling technologies are likely to under-provision during scale out, and over-provision during scale in, resulting in incorrectly sized infrastructures and increased costs. Webscale’s application layer auto-scaling ensures infrastructure is always right-sized and optimally used for the lowest cost and the highest ROI, without compromising on user experience and application loyalty.

## SELF-HEALING

Webscale actively monitors the status of application resources. This enables the real-time identification of failing applications, immediately halting traffic to that instance, as well as replacing the faulty application server before it causes disruption.

## ACTIVE APPLICATION MONITORING

Webscale improves visibility into web applications by monitoring the status of the active resources behind the cloud load balancer, as well as delivering analytics on traffic being served. Webscale can also identify, in real-time, a failing application instance and immediately stop directing traffic to that instance, as well as alert administrators to the critical condition.

## KEY FEATURES

- Proactive Auto-Scaling
  - Load, request and session based policies
- Customized policies for scale out and scale in
- Time and event based schedule for scale out and scale in
- Self-healing
- High availability across Webscale and application layer
- Multi-cloud support
  - AWS
  - Google Cloud
  - Microsoft Azure
  - Aliyun
  - OpenStack
  - VCloud Air
  - Additional cloud providers may be supported
- RESTful API
- SSL/TLS support
  - TLS 1.1
  - TLS 1.2
  - Certificate management
- Supported Web Protocols
  - HTTP/S
  - HTTP2

# WEB APPLICATION FIREWALL

## POWERFUL PROTECTION FOR CRITICAL APPLICATIONS

*Webscale is the world's first application-aware cloud WAF, designed to address the individual needs of a wide range of web-based applications, and apply innovative security features to protect a businesses' brand reputation and revenue. One-click DDoS mitigation, pre-defined and pre-tested security rulesets based on the application, and real-time traffic analysis simplify workflows for customers and more rapidly address security threats.*

### APPLICATION-AWARE POLICIES

Each application may have different security needs and the ability to apply custom security policies is critical for application owners and IT. The Webscale WAF enables pre-defined security rulesets based on the e-commerce application. Web application vulnerabilities are addressed by identifying and applying custom policies, and enforcing real-time protection.

### SSL and TLS

HTTPS enables better security for web applications and has also become a critical requirement for SEO. Webscale will use your certificates or procure and manage certificates on your behalf and automatically enable forced HTTPS without any changes to your application infrastructure. This will also enable termination, offloading all setup and encryption from the application servers allowing for more efficient use of infrastructure, higher security and improved revenues.

### DDoS MITIGATION

Fully-integrated with DDoS mitigation with deep session analysis, the Webscale WAF prevents and blocks millions of attacks daily, automatically learning from each new threat. One-click Shield Mode instantly protects you from application flood attacks. The Webscale WAF also includes the ability to analyze sessions in real-time and identify ongoing threats for bot mitigation through pattern recognition and machine learning.

### ACCESS CONTROL

Webscale protects your applications against well-known vulnerabilities (OWASP Top 10) with standard or custom WAF rules. Access control mechanisms enable blacklisting and whitelisting by IP addresses or device types, or geo-location. Web application owners and IT may block requests for a short duration or rate limit long running user sessions to mitigate their impact on the overall user experience.

### KEY FEATURES

- Compliance: Level 1 PCI-DSS 3.1 service provider
- Supported Web Protocols
  - HTTP/S
  - HTTP/2
- Protection against common attacks
  - OWASP Top 10
- SSL/TLS support and termination
  - Session encryption and authentication
  - Support for TLS 1.1, TLS 1.2
  - Procuring and managing certificates
- Web Application Firewall (WAF)
  - Ability to manage custom WAF rules
- DDoS attack mitigation and protection
  - Shield Mode
  - Automatic support for multiple DNS nameservers for DDoS
- Web Access Control Lists
  - Ability to block, suspend, allow
  - Rate limit sessions based on IP
  - Restrict based on geography and user-agents
- Dynamic session profiling
  - Real-time session and traffic analytics
  - Bot identification and control
- Custom rules engine
  - Application-specific rulesets (Magento, Wordpress, WooCommerce, and others)
  - Virtual application patching for all supported e-commerce platforms
  - URL-specific
  - Compatible with Modsecurity

# DISASTER RECOVERY

## COMPLETE MULTI-CLOUD RESILIENCY FOR WEB APPLICATIONS

*Every major cloud provider has experienced unexpected downtime, often resulting in multiple hours of unavailability, costing not only revenue, but a loss of brand reputation and consumer trust. Webscale Multi-Cloud Disaster Recovery (DR) addresses these challenges, helping businesses remain always-on and high performing, even if their primary cloud provider is suffering from operational downtime, a cyber-attack or worse.*

### BATTLE-TESTED FOR E-COMMERCE

With many e-commerce businesses servicing a global customer base, the need for their storefront application to be resilient to changes in the cloud provider's level of service has never been more prominent. Webscale's portfolio of multi-cloud DR services, which includes Cloud Backup and Cloud Mirror is the first of its kind to focus on the needs of e-commerce, with features designed to get online storefronts back up and running as fast as possible.

### CLOUD BACKUP

As an integral component of the Webscale's DR portfolio, Cloud Backup enables customers to make a copy of their entire backend—the application and data server—on a periodic basis. For Cloud Backup users, the new region will be up and running with live traffic as soon as possible, with the data server state synchronized from the time of the last backup.

### CLOUD MIRROR

For many mission critical e-commerce applications, even a daily backup taken a few hours ago is insufficient. Cloud Mirror enables e-commerce customers to keep a near real-time replica of their backend in an alternate location, usually recommended to be in another region or cloud.

### SLA

Webscale provides an SLA for its Cloud Mirror service. Users are guaranteed to have their site up and running in the alternate location within 60 minutes and with no more than 15 minutes of data loss. These service guarantees are commonly referred to as a recovery time objective (RTO) and a recovery point objective (RPO) respectively.

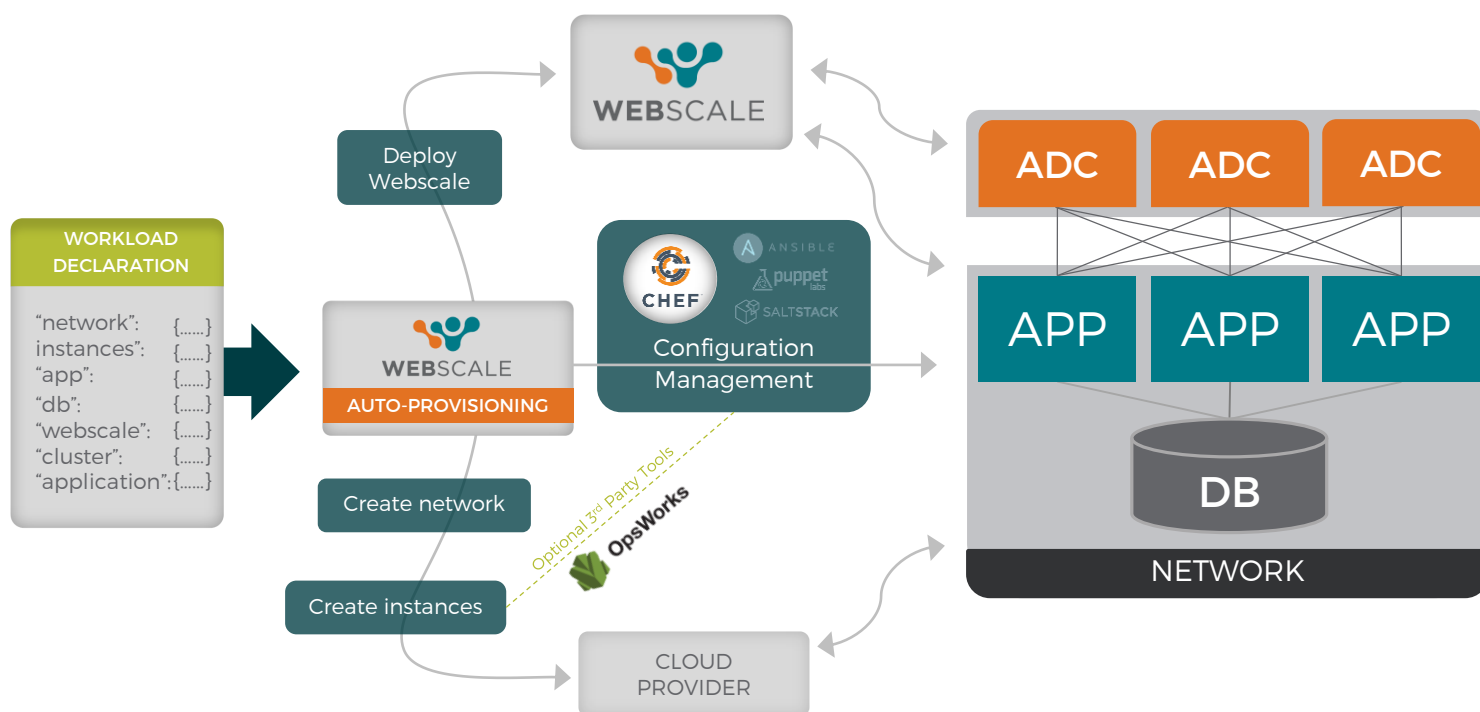
### KEY FEATURES

- Supported Web Protocols
  - HTTP/S
  - HTTP/2
- 24-hour daily backup
- Real-time replication
- Granular time-based backup options
- Cold, Warm and Hot standby modes
- Always-on, multi-cloud Webscale platform.
  - AWS
  - Google Cloud Platform
- SLAs on failover recovery
  - Cloud Mirror
  - Cloud Rescue
- RTO (Recovery Time Objective)
  - Length of time that your application is offline
  - 60-minute SLA
- RPO (Recovery Point Objective)
  - Length of time during which data might be lost due to a major incident.
  - 15-minute SLA
- Innovative customer-friendly pricing
  - Low-cost ongoing DR fee
  - Incident-based pricing

# SOFTWARE-DEFINED INFRASTRUCTURE

## AUTO-PROVISIONING FOR RESILIENT MULTI-CLOUD APPLICATIONS

Webscale's approach to cloud migration takes into consideration the critical elements needed to determine where and how to migrate an application to the cloud: scalability, security, flexibility, availability, performance and management. This is achieved by adopting an auto-provisioning model whereby the entire application is migrated into the cloud as a software-defined infrastructure, moving cloud deployments from weeks to minutes and automating application monitoring and control, delivering 100% available, blazing fast web applications.



### RESILIENT DISTRIBUTED SYSTEMS

As more businesses run workloads across multiple environments – on premise, private, public or multi-cloud – the need for workload portability, simplified policies and single pane of glass management is critical. SDIC technology delivers a tightly integrated and controlled environment, from auto-provisioning that converts an application from a simple list of requirements to a cloud deployment in minutes, to complete source control for the entire infrastructure.

Deploying truly resilient distributed systems in a software defined infrastructure controlled (SDIC) deployment model allows Webscale to treat all aspects of an application deployment as software, with version control across entire deployments in a cloud provider independent manner.

### CONTINUOUS INTEGRATION

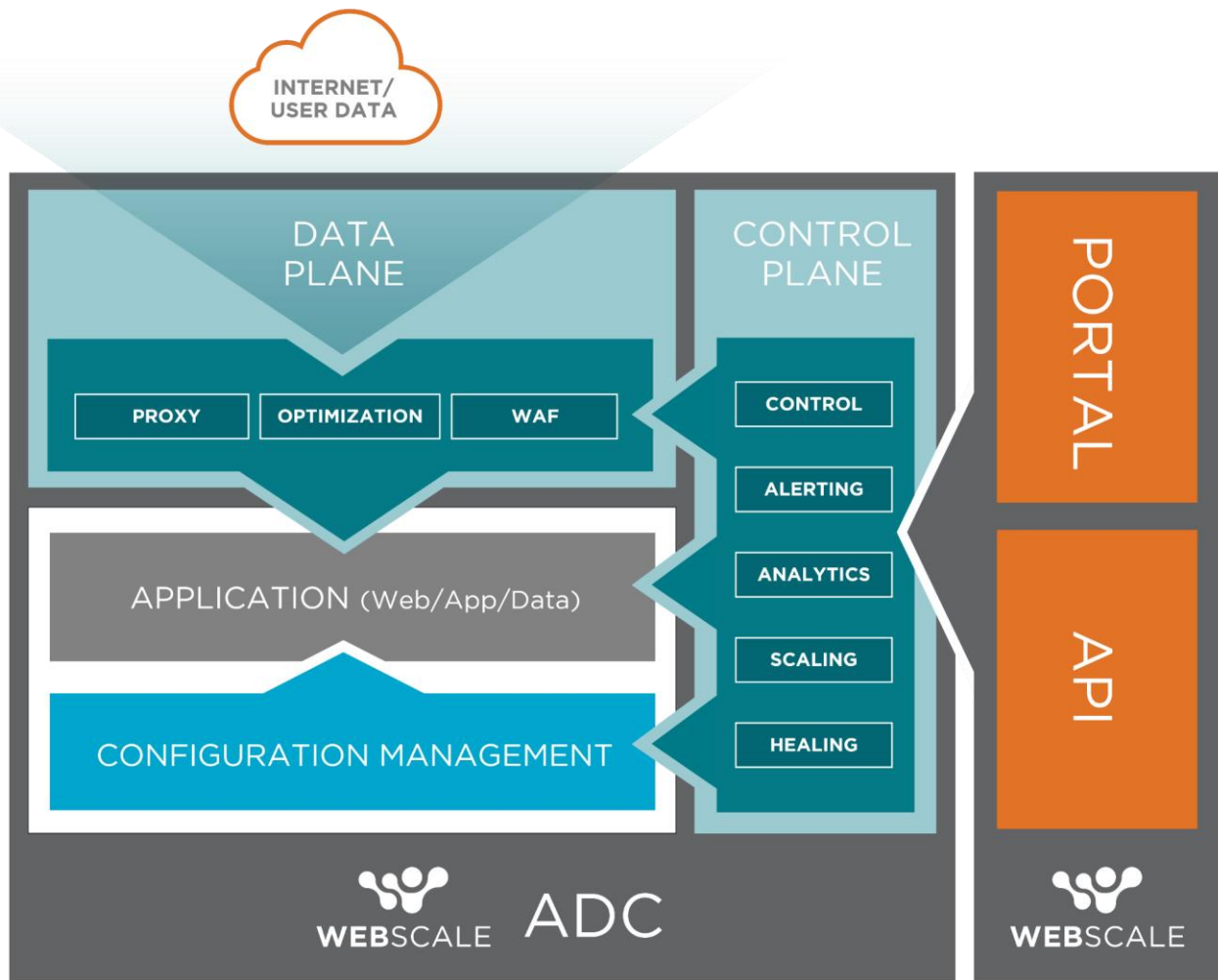
Establishing an automated workflow enables continuous integration and brings unprecedented levels of resilience for workloads. For example, if your web application is returning errors after a code change, simply launch a rolled back system in minutes, and get back up and running with minimal disruption.

Continuous integration also facilitates complete control up and down the stack, from performance features like content optimization, intelligent CDN usage and security features like web application firewalls (WAF), file integrity monitoring (FIM) and Distributed Denial of Service (DDoS) mitigation, to advanced infrastructure management features like right-sizing, predictive scaling and server self-healing.



## WEBSCALE ARCHITECTURE

EXTREME PERFORMANCE, HIGH AVAILABILITY AND POWERFUL SECURITY



## BUILT FOR MULTI-CLOUD

SUPPORTS ALL PUBLIC, PRIVATE OR HYBRID CLOUD INFRASTRUCTURE

