

## Citrix Web Application and API Protection Service

Citrix Web Application and API Protection (CWAAP) is a holistic, comprehensive, and easy to use web-based service that offers protection against a broad range of security threats across the world.

The Citrix Web Application and API Protection (CWAAP) service is a layered security solution that consists of a full-featured, always-on distributed denial of service (DDoS) defense, denial of service (DoS) protection, and a web application firewall (WAF).

As a cloud service with 14 points of presence (PoPs) across the world, CWAAP offers a consistent security posture across all clouds as well as private datacenters, with unparalleled low latency and application responsiveness.

### Addressing Application Security Challenges

Applications and APIs are valuable business assets. It is reported that the overwhelming majority of security vulnerabilities are in the applications, which means they are also the most vulnerable asset. Applications are attractive targets for cyber criminals because they have direct connectivity to databases of sensitive data. A comprehensive cloud service solution that combines DDoS and WAF is required to mitigate the combination of threats prevalent today.

### Holistic, Integrated, and Layered Solution

CWAAP provides holistic, proven and layered protection for all your applications. The integrated solution layers DDoS protection on top of WAF to offer comprehensive protection against modern cyber threats.

#### Ease of Use

CWAAP offers a single portal for customers to self-serve and administer their applications, across the entire world.

#### Low Latency, High Performance

With 14 PoPs across the globe in private, highly redundant and fault tolerant datacenters, CWAAP extends ultra low latency for applications hosted anywhere in the world. Coupled with high throughput, CWAAP is the obvious choice for a DDoS & WAF cloud service provider.

#### Modernized Robust Reporting

CWAAP provides its own onboard reporting and dashboarding, and also integrates with popular external SIEM products, like Splunk. CWAAP also offers a Slack integration, for the modern enterprise leveraging tools like Slack to administer their environment.

---

## CWAAP: Proven Robust Security

CWAAP provides proven, robust security to all your applications types wherever you choose to deploy them. As a cloud service, CWAAP is constantly evolving to enhance protection and security performance.

### Meeting PCI Compliance and Auditing Requirements

CWAAP can be used to meet the Payment Card Industry Data Security Standard (PCI-DSS) requirements that stipulate that the deployment of an application security system in front of public-facing applications is a suitable method of maintaining a proper security posture.

To support this further CWAAP generates dedicated reports that detail all the security protections defined in the WAF policy that pertain to PCI-DSS. Additionally, CWAAP can prevent the inadvertent leakage of sensitive data, like credit card numbers, by removing them or masking them, prior to sending a response.

### Defeating JSON & XML Based Attacks

Citrix Web App Firewall includes a rich set of JSON and XML-specific security protections.

These include schema validation to thoroughly verify SOAP messages and XML payloads, and a powerful XML attachment check to block attachments containing malicious executables or viruses. It also thwarts a variety of DoS attacks, including external entity references, recursive expansion, excessive nesting, and malicious messages containing either long or a large number of attributes and elements.

## Citrix Web Application and API Protection (CWAAP) Technical Aspects

### WAF Protections for Applications & APIs

- SQL injection
- Cross-site scripting (XSS)
- Cross-site request forgery (CSRF)
- Buffer overflow
- Form/hidden field manipulation
- Forceful browsing protection
- Cookie or session poisoning
- Command injection
- Error triggering sensitive information leak
- Insecure use of cryptography
- Server misconfiguration
- Back doors and debug options
- Rate-based policy enforcement
- Well-known platform vulnerabilities

- 
- SOAP array attack protection
  - Content rewrite and response control
  - Authentication, authorization and auditing (AAA)
  - L4-7 DoS & DDoS protection

### **Comprehensive Web Server and Web Services Security**

- Deep stream inspection; bi-directional analysis
- HTTP & HTML header and payload inspection
- Full HTML parsing; semantic extraction
- Session-aware and stateful
- HTTP Signature scanning
- Scan thousands of signatures
- Response side checks
- Protocol neutrality
- HTML form field protection:
  - Required fields returned; no added fields allowed; read-only and hidden field enforcement
  - Drop-down list & radio button field conformance
  - Form-field max-length enforcement
- Cookie protection – Signatures to prevent tampering; cookie encryption and proxying
- Legal URL enforcement – Web application content integrity
- Configurable back-end encryption
- Support for client-side certificates
- XML data protection:
  - XML security: protects against XML denial of service (xDoS), XML SQL and
  - Xpath injection and cross site scripting
  - XML message and schema validation, format checks, WS-I basic profile compliance, XML attachments check
- URL transformation

### **DDoS Attack Protections**

- Invalid packets
- Fragment Flood Detection
- Multicast Blocking
- Private Address Blocking
- ICMP Flood Detection
- Filter List
- Payload Regular Expression
- Rate-based Blocking

- 
- TCP SYN Flood Detection
  - TCP Connection Limiting/Reset
  - Traffic Shaping
  - Malformed HTTP Filtering
  - Application Misbehavior
  - HTTP Rate Limiting
  - Botnet Prevention
  - Includes AIF signatures
  - Payload Regular Expression “Regex”
  - Spoofed SYN Flood Prevention
  - HTTP Authentication option
  - HTTP Header Regular Expression
  - DNS Authentication
  - Malformed DNS Traffic
  - DNS Rate Limiting
  - DNS NXDomain Rate Limiting
  - DNS Regular Expression



**Enterprise Sales**

North America | 800-424-8749

Worldwide | +1 408-790-8000

**Locations**

Corporate Headquarters | 851 Cypress Creek Road, Fort Lauderdale, FL 33309, United States

Silicon Valley | 4988 Great America Parkway, Santa Clara, CA 95054, United States

©2020 Citrix Systems, Inc. All rights reserved. Citrix, the Citrix logo, and other marks appearing herein are property of Citrix Systems, Inc. and/or one or more of its subsidiaries, and may be registered with the U.S. Patent and Trademark Office and in other countries. All other marks are the property of their respective owner(s).