DATASHEET

# Web Application Firewall (WAF)

## NEXT GEN TECH TO STOP NEXT GEN ATTACKS

### OVERVIEW

Attacks on web applications and servers are more complex and frequent than ever. Organizations continue to suffer costly data breaches using WAFs that still rely on signatures and pattern matching as their primary defenses; technologies that are easily evaded. And moving applications to the cloud does not make them any safer.

The NSFOCUS WAF uses next generation technologies to provide comprehensive application layer security, eliminating these problems and completely protecting your critical web applications. With full out-of-the-box protection against the OWASP Top Ten, the WAF is specifically engineered to protect not just web applications, but their underlying infrastructure, plug-ins, protocols, and more.

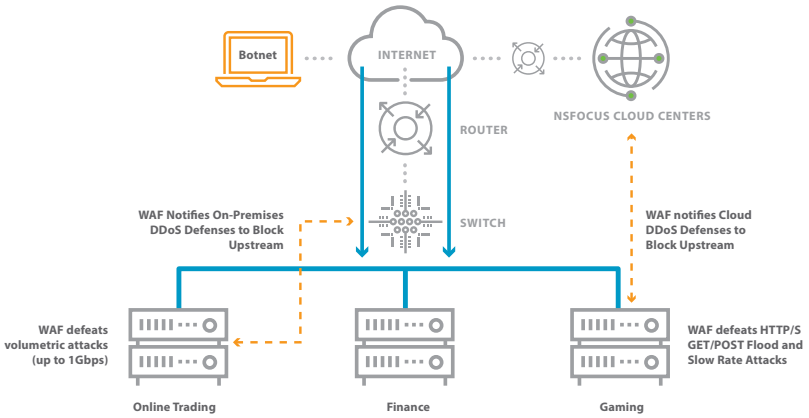
### ADVANCED, INNOVATIVE TECHNOLOGY

The NSFOCUS WAF technology is powered by an internationally-recognized research lab and developed with over 10 years of experience protecting the world's largest banks, telecommunications, gaming, and social media companies. The WAF uses **Intelligent Detection**™ advanced machine learning technology that is far superior for identifying web attacks and minimizing false positives/negatives than traditional positive and negative security models to deliver next-gen real-time web security.

| SQLi | False Negative (based on 7442 payloads) | False Positive (based on 1458625 payloads) |
|---|---|---|
| Intelligent Detection | 0.026874% | 0.000745% |
| Signature-based Detection | 0.604676% | 0.342720% |

### COMPREHENSIVE, MULTI-LAYER SECURITY

The WAF serves as an essential part of a multi-layer security strategy by providing advanced inspection and specialized security for the web application layer. It also includes up to 1 Gbps of DDoS protection from volumetric layer 7 attacks, including TCP flood and HTTP/S GET/POST floods. When deployed together with higher capacity NSFOCUS on-premises or cloud Anti-DDoS Defenses, the WAF can direct traffic flows in real time to the ADS to keep your servers running under the most extreme DDoS attacks.




### WEB SECURITY MADE SMART AND SIMPLE

The NSFOCUS WAF is the ideal solution for safeguarding your critical web infrastructure whether on-prem or in the cloud. With Intelligent Detection, Smart Patch, Threat Intelligence and Anti-DDoS System, the WAF delivers high quality application layer security for organizations of any size.

NSFOCUS

### KEY BENEFITS

**Eliminate costly data breaches**

**Reduce false positives to ensure business continuity**

**Simplify PCI compliance efforts**

### KEY FEATURES

**Semantic analysis engine**
Semantic analysis and contextual logic-based attack detection identifies unknown threats and minimizes false positive and false negative

**API security**
API security detection and protection against API abuse

**Patches for code vuln.**
Integration with the 3rd-party code audit products and capability of providing patches for source code vulnerabilities

**Hybrid management and solution**
Open API configuration; on-premises and cloud management through centralized management platform; Integration with NSFOCUS on-prems & cloud DDoS solutions for ensuring performance during the largest DDoS attacks

**Closed Loop vulnerability mitigation**
Integration with NSFOCUS web scanner (WVSS) for fastest time for 0-day vulnerability mitigation by automatically creating virtual patching policies for most found vulnerabilities

## SOFTWARE SPECIFICATIONS

### Security Analysis

- Intelligent Detection™ next-gen advanced machine learning for lower false positive/negative rates identifying web attacks
- Automated False Positive Behavioral Analysis
- Positive behavior-based protection model with enhanced dynamic profile learning and whitelist security
- Negative signature-based model

### Application Attack Prevention

- OWASP Top 10 including Cross-site Scripting (XSS), Cross Site Request Forgery (CSRF), Command & SQL Injection, Remote File Inclusion (RFI), Web Page Defacement, Malicious Scanning, Botnet Protection, XML Attack Protection and HSTS

### Virtual Machine & Cloud Support

- VMware, KVM, Xen, Hyper-V
- AliCloud, AWS, Microsoft Azure (China), HUAWEI, ZTE, Wo Cloud, Softbank (Japan), OpenStack

### Web Server and Network Security

- Web server and app plug-in vulnerability modules, Layer 4 ACL and ARP spoofing protection

### Anti-DDoS

- TCP flood, HTTP/S GET/POST floods (up to 1Gbps), low-and-slow attacks, brute force

### Certification

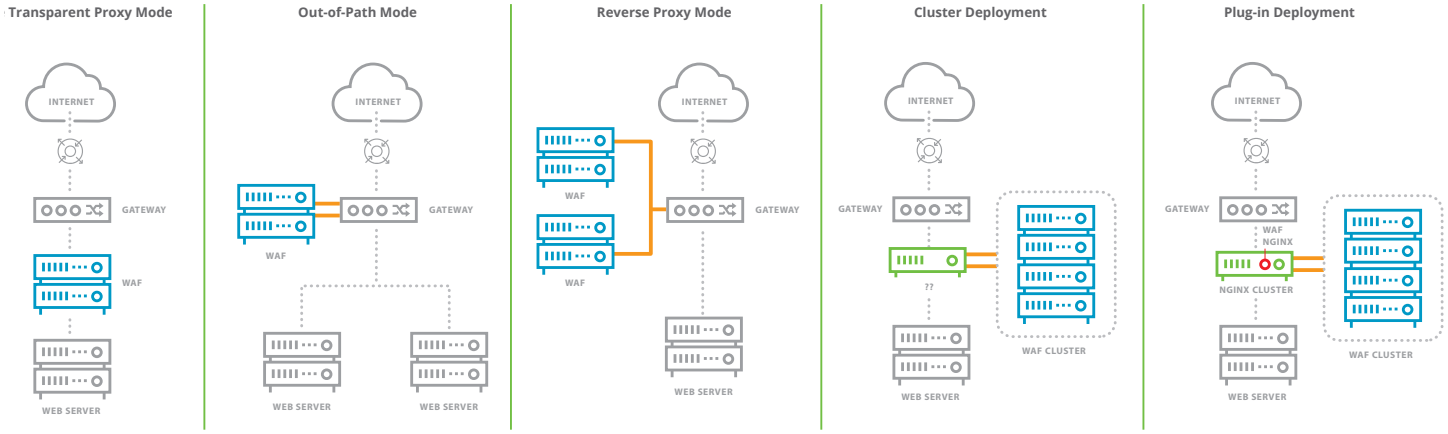
- Compliance reporting and support for PCI DSS 3.2
- ICSA certified
- Veracode VL4 certified

### High Availability Configuration

- Active/active; active/passive; VRRP
- Internal "software" bypass to pass traffic without inspection (HW appliance)
- Fail-open hardware bypass NIC interfaces

## DEPLOYMENT OPTIONS

Shown here are the most popular deployment options, with no changes to applications or networks




## PERFORMANCE – CLOUD/VIRTUAL WAF

| Model | WAF (C)V1000B | WAF (C)V500B | WAF (C)V200B | WAF (C)V100B | WAF (C)V50B |
|---|---|---|---|---|---|
| Application Layer Throughput | 1 Gbps | 500 Mbps | 200 Mbps | 100 Mbps | 50 Mbps |

## PERFORMANCE – HARDWARE

| Model | WAF 6000 | WAF 2020 | WAF 1600 | WAF 1000 |
|---|---|---|---|---|
| Application Layer Throughput | 10 Gbps | 6 Gbps | 3 Gbps | 1 Gbps |
| HTTP Transactions/sec (TPS) | 180,000 TPS | 110,000 TPS | 55,000 TPS | 30,000 TPS |