

SOLUTION BRIEF

Secure Web Applications and APIs with Fortinet FortiAppSec Cloud

Executive Summary

Protecting modern applications is complex because of multi-cloud environments, emerging architectures, agile development, evolving threats, and skills shortages. This complexity leads to an expanded attack surface and blind spots. The distributed nature of the information across environments increases the likelihood of misconfiguration, inconsistency, and human error. These issues, in turn, can lead to data breaches, service disruptions, and policy enforcement problems.

Fortinet FortiAppSec Cloud enhances security, ensures availability, and optimizes performance across hybrid and cloud environments by simplifying operations. It simplifies application security operations by unifying and consolidating multiple services and tools, including web application and application programming interface (API) security, advanced bot protection, threat analytics, content delivery network (CDN), distributed denial-of-service (DDoS), and global server load balancing.



78% of organizations are using a multi-cloud or hybrid environment.¹

Application Security Challenges

Running applications in multiple environments leads to application security and delivery challenges. Multiple contributing factors include the interconnected API ecosystem, the use of third-party code in SaaS applications or open-source modules, and generative artificial intelligence (GenAI), which accelerates vulnerability discovery and exploits creation when in the wrong hands. In addition, public cloud providers operate differently and require adjustability. To manage these challenges, organizations need:

- **Complexity reduction:** Consolidated solutions help simplify management across hybrid and multi-cloud environments, reducing the need for multiple point products, experts, tools, and adjustments.
- **Comprehensive protection:** Dynamically adaptive security protects against increasing zero-day exploits and sophisticated bot attacks targeting web and API applications.
- **Global availability:** Always-on integrated, scalable services provide consistent application availability across diverse global environments.
- **Compliance:** Cloud-agnostic technology provides observability for compliance and risk management across applications.

Protect Applications No Matter Where They Are Located

FortiAppSec Cloud safeguards applications from vulnerability exploits, bots, malware uploads, DDoS attacks, advanced persistent threats, and zero-day attacks. It is powered by FortiGuard Labs threat intelligence, including continuous signatures updates, antivirus, intellectual property reputation, and sandboxing. Machine learning (ML) algorithms for detecting and prioritizing threats minimize manual efforts, freeing staff to focus on other business operations and reducing the total cost of ownership. FortiAppSec Cloud includes the following services:

Complete web application and API security

FortiAppSec Cloud ensures web applications and APIs remain secure from known attacks and AI-generated zero-day attacks using real-time threat detection covering the OWASP Top 10 security risks. It also uses dual ML, complemented by threat intelligence from FortiGuard Labs.

Advanced bot protection

It protects applications from evolving bot threats, ensuring data integrity and user trust. It provides comprehensive defense against automated attacks, using AI-driven analytics for real-time bot detection and mitigation.

Global server load balancing

FortiAppSec Cloud enhances application availability and user experience with intelligent traffic routing for optimal application performance using DNS-based load balancing with seamless failover and synthetic testing.

CDN and service acceleration

It uses a network of images on globally distributed servers for caching, content routing, and service acceleration.

DDoS protection

It mitigates network and application-layer attacks with real-time customizations, automation, and a 24×7 security operations center.

Threat analytics

FortiAppSec Cloud correlates what may appear as random events to identify attack patterns and sequences to help security teams focus on high-risk threats and minimize investigation time.

Unified management

It provides a single, intuitive interface that consolidates web application security and delivery services into a unified control plane for all services in all environments.

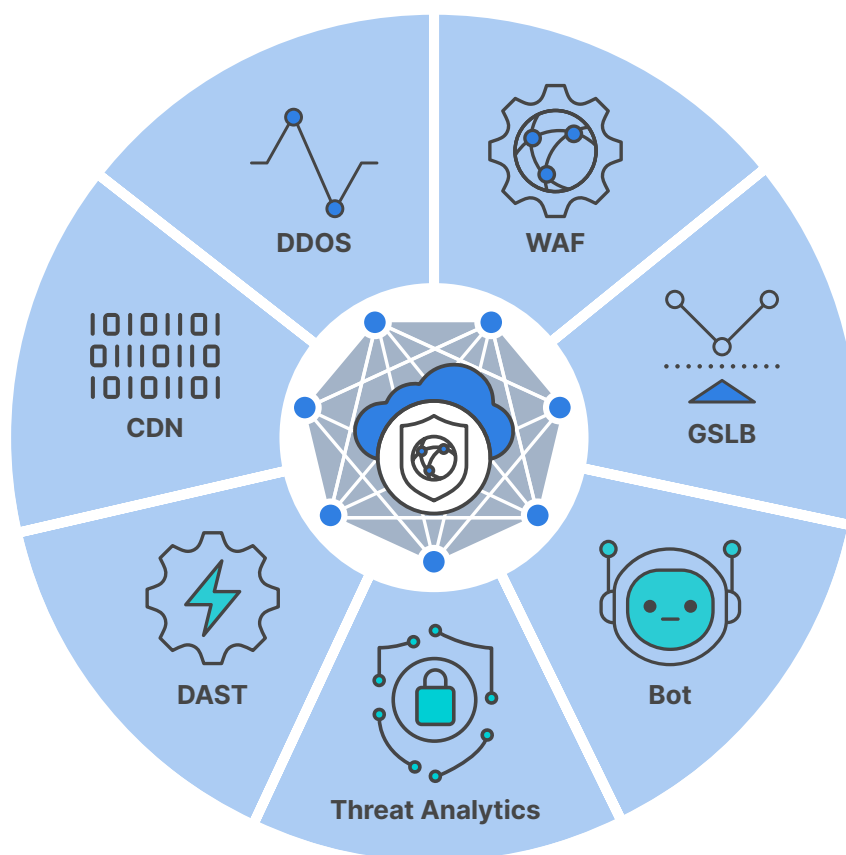


Figure 1: FortiAppSec Cloud Services

Optimize Application Security, Availability, and Performance

Meeting compliance requirements and retaining brand image requires maintaining security, quality of service, user experience, and data integrity related to employees, customers, and internet users. FortiAppSec Cloud provides unified control of web applications across the information network, on-premises, and in the cloud. It provides visibility and observability to security managers to make educated decisions concerning risk mitigation, traffic management, and resource allocation to reduce downtime costs.

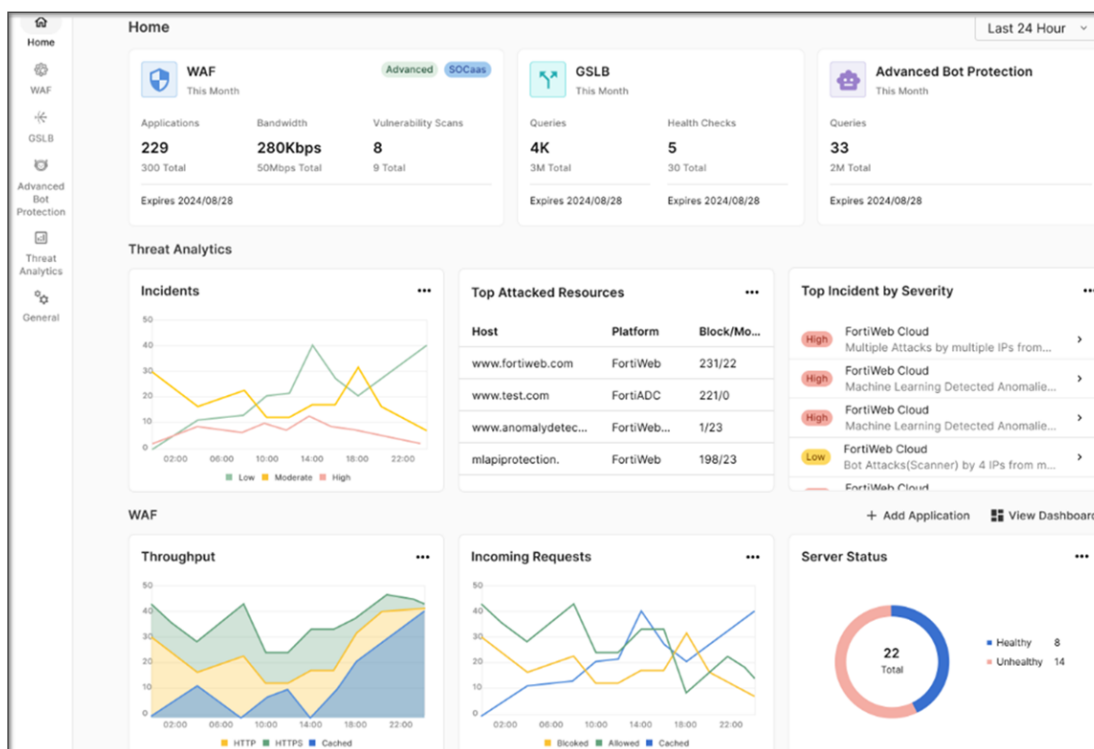


Figure 2: The FortiAppSec Cloud interface

As part of the broader portfolio of Fortinet Cloud Security solutions, FortiAppSec Cloud can be complemented by FortiCNAPP cloud-native application protection platform for infrastructure protection, the FortiSASE secure access service edge solution for controlling application users and access, and Fortinet Secure Networking solutions such as FortiGate VM Next-Generation Firewall (NGFW) or the FortiCNF cloud-native managed firewall service. FortiAppSec Cloud offers a number of key benefits:

Superior zero-day detection

Most cloud application security providers only protect applications from known attacks, leaving organizations exposed. The dual ML in FortiAppSec Cloud detects known and unknown attacks, accurately classifies incoming requests as legitimate or suspicious, and correlates between random events to show attack campaigns.

Fortinet Security Fabric integration

FortiAppSec Cloud shares information with FortiGate NGFWs; FortiSOAR security orchestration, automation, and response; the FortiClient Fabric Agent; FortiSandbox Cloud threat analysis; and other Fortinet solutions to address a broad spectrum of threats, attacks, and exploits.

Consistent security

With FortiAppSec Cloud, a single application security policy can be deployed and rolled out over different platforms, data centers, and cloud infrastructures.

Lower total cost of ownership

Staff can focus on high-priority tasks instead of manual event analysis and exception handling, and flexible licensing allows organizations to start with a lower investment and grow as resources become available.

Cost-Effective Security

FortiAppSec Cloud delivers full-featured, cost-effective security for web applications and APIs with minimal configuration and management overhead. It consolidates services for efficient multi-cloud secure application delivery with high scalability and flexible pricing and onboarding options. FortiAppSec Cloud protects applications no matter where they are deployed, accelerates performance, and protects availability. It offers consistency, centralized management, reduced latency, simplified compliance, and lower bandwidth costs than other options and integrates with the Fortinet Security Fabric to cover the entire attack surface.



60% of organizations point to cloud and application security as the skill they lack the most.²

¹ Fortinet, [2024 Cloud Security Report](#), 2024.

² Ibid.