FORTINET | Red Hat

Fortinet and Red Hat Security Solution

ML and AI-based Application Security With Fortinet and Red Hat

Executive Summary

The Fortinet–Red Hat partnership enables innovative and high-performance security solutions on the Red Hat OpenShift platform. The architectural approach of the Fortinet Security Fabric connects the FortiWeb solution to the OpenShift platform, allowing for dynamic build and adaptation to the evolving application infrastructure.

Challenge

Modern application delivery incorporates a continuous cycle of developing and deploying applications at a rapid pace. Organizations today deliver speed and agility by automating the orchestration process and implementing a "shift left" practice to embed security early in the software development life cycle.

Joint Solution

The Fortinet FortiWeb solution is validated on Red Hat OpenShift to be adopted as a cloud-native network function early in the continuous integration/continuous deployment (CI/CD) life cycle for organizations to instill and scale their multi-cloud and hybrid cloud applications with unparalleled security. Customers benefit from protection against known and unknown threats, integrations with leading CI/CD tools to secure application build cycles, automated policy enforcement for response actions, and overall compliance to security best practices using industry-leading benchmark baselines.

Joint Solution Components

Red Hat OpenShift

Red Hat OpenShift is the Kubernetes platform that provides a trusted foundation for the on-premises, hybrid, and multi-cloud deployments today's enterprises demand. With automated operations and streamlined life-cycle management, Red Hat OpenShift empowers development teams to build and deploy new applications and helps operations teams provision, manage, and scale a Kubernetes platform.

Fortinet FortiWeb

FortiWeb is a web application firewall (WAF) that protects hosted web applications from attacks that target known and unknown exploits. Using artificial intelligence (AI)-enhanced multilayer and correlated detection methods, FortiWeb defends applications from known vulnerabilities and from zero-day threats. It can run as a container on the Docker container platforms. The new solution allows easy provisioning of the FortiWeb into the microservices architecture and its use as a cloud-native, DevOps-enabled, and containerized WAF.

Solution Integration

Red Hat OpenShift built a unified, automated CI/CD platform to develop, manage, and deploy cloud-native products across on-site and cloud environments. By creating key security applications as microservices, Fortinet enables delivery of new features and services to market faster while reducing downtime for end customers and maintaining infrastructure freedom.

Joint Solution Components

- Fortinet FortiWeb
- Red Hat OpenShift

Joint Solution Benefits

- Application protection
- API protection
- Bot mitigation
- DDoS protection

FORTINET FABRIC-READY

Machine learning (ML) and AI establishes FortiWeb as a leading web application firewall solution that provides protection for enterprises building and deploying on Red Hat OpenShift environments. Using ML to model each application, FortiWeb defends applications from known vulnerabilities and zero-day threats, including OWASP Top 10 web vulnerabilities. FortiWeb takes a dual-layer approach to behavior detection, intended to block threats without limiting application access, or increasing security management overhead. This dual-layer approach minimizes false positives by ensuring that only true attacks are blocked rather than every single anomaly, as can happen with application-learning-based WAFs.
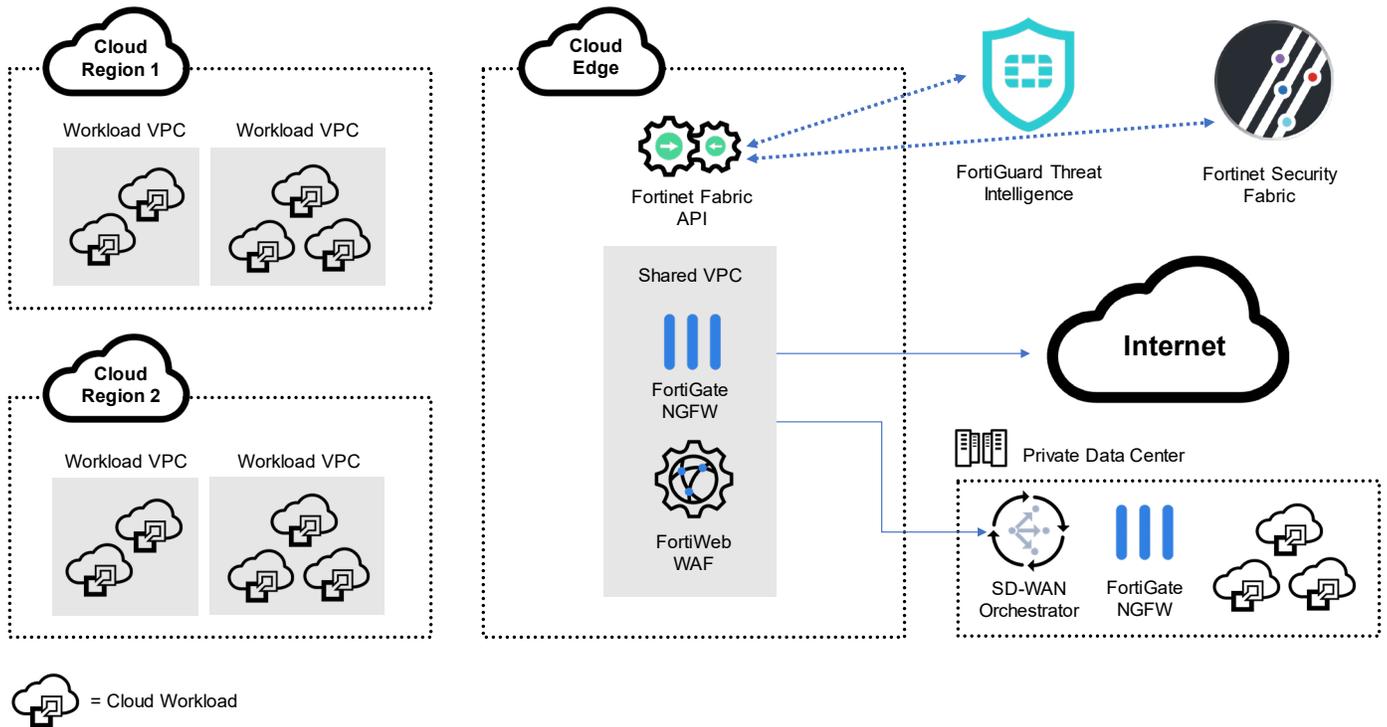

Figure 1: Securing internet-facing web applications and application programming interfaces (APIs).

About Red Hat

Red Hat is the world's leading provider of enterprise open-source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.

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