

**SOLUTION BRIEF**

# FortiWeb WAF and Thales Luna HSM

## High-Speed Application Security and Vulnerability Protection

### Executive Summary

Enterprise applications continue to be a top target for attacks as they can be an easy method to bypass traditional network-based security defenses. Externally facing applications, such as e-commerce or healthcare systems, are the highest risk, no matter how many layers of network security are in place. A simple login screen can cut through these measures and put sensitive proprietary, customer, and financial information within easy reach of an attacker. In an era when more and more organizations are securing their external and internal applications, traditional SSL and TLS can be compromised, leaving sensitive application traffic exposed for the taking.

### The Challenge

Organizations seeking the highest level of defense against these attacks need to automatically protect their applications from known and unknown vulnerabilities while employing the best cryptographic tools available.

### Joint Solution Description

Fortinet FortiWeb WAFs provide robust and effective protection for web-based applications. They integrate with Thales Luna HSMs to use the advanced security certificates managed by the HSM to encrypt secure communication traffic sent to the end application. Although FortiWeb offers certificate management, this arrangement lets organizations that use Thales Luna HSMs deploy a high-performance WAF solution using a strong, centrally managed set of certificates and encryption keys.

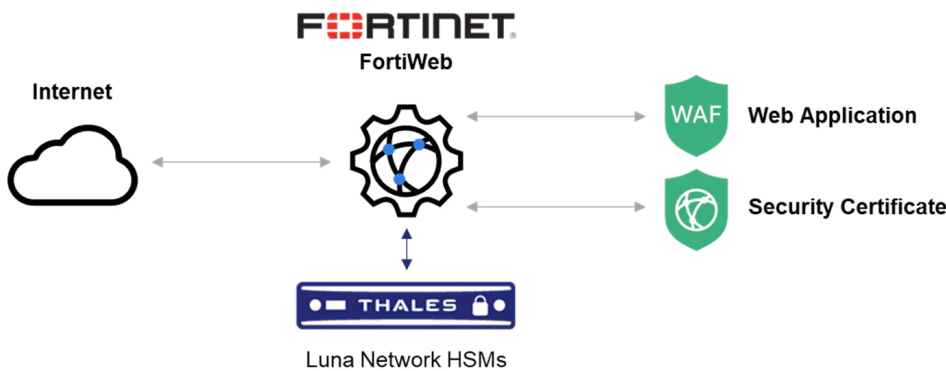


Figure 1: FortiWeb can be configured to use SSL/TLS certificates and encryption keys stored and managed by the Thales Luna HSM.

### Solution Components

- Fortinet FortiWeb
- Thales Luna HSM

### Solution Benefits

- Industry-leading web application firewall (WAF) performance for enterprise mission-critical applications
- Tamper-proof FIPS 140-2 Level 3 and Common Criteria (EAL 4+) security compliance provided by Luna Hardware Security Modules (HSMs)
- Centralized management of SSL/TLS security certificates and encryption keys
- Enhanced security through a single set of certificates used on multiple devices to maximize performance, scale, and key durability
- Many deployment options, including hardware and virtual appliances, to meet enterprise network needs



## Solution Components

Fortinet FortiWeb defends web applications and APIs against OWASP Top 10 threats, DDoS attacks, and malicious bot attacks. Advanced ML-powered features improve security and reduce administrative overhead. Capabilities include anomaly detection, API discovery and protection, bot mitigation, and advanced threat analytics to identify the most critical threats across all protected applications.

Thales Luna HSMs are robust, high-availability, and high-performance appliances that store cryptographic materials (such as certificates, encryption keys, and more) in a secure FIPS 140-2 Level 3 tamper-proof hardware appliance to meet compliance mandates globally. Storing these materials in a hardware appliance keeps them out of harm's way and ensures that only authorized users and applications have access to important encryption keys. Thales Luna HSMs offer a security-infrastructure-trusted root, enabling administrators to ensure the integrity of their cryptographic operations. Easily integrate Luna HSMs into various applications to accelerate cryptographic operations, secure the crypto key life cycle, and act as a root of trust for your entire crypto infrastructure. Thales Luna HSMs can be deployed on-premises, in the cloud, as a service, or across multiple environments to create a purpose-built hybrid HSM solution.

## Joint Use Case

### Secure credential storage:

FortiWeb utilizes Thales Luna HSMs to securely store credentials, API keys, and other sensitive data needed for web application operations. This ensures that even if the FortiWeb appliance is compromised, the sensitive data remains protected within the HSM.

### Secure PKI (certificate management, digital signatures, and authentication):

Thales Luna HSMs can securely store SSL/TLS certificates used by FortiWeb, ensuring the protection of private keys. This prevents unauthorized access to certificates, reducing the risk of compromise and ensuring the authenticity of the web application. Luna HSMs can also be used to generate and verify digital signatures, enhancing the authentication and integrity of data exchanged between users and the web application. This is particularly important for validating the legitimacy of transactions and user interactions.

### Regulatory compliance:

For organizations subject to regulatory requirements, such as PCI DSS, the combination of Thales Luna HSMs and FortiWeb can provide strong security controls that aid in compliance with data protection standards.

## About Thales

Thales is the worldwide leader in data protection, providing everything an organization needs to protect and manage its data, identities, and intellectual property: encryption, advanced key management, tokenization, and authentication and access management. Whether it is securing the cloud, digital payments, blockchain, or the Internet of Things, security professionals around the globe rely on Thales to confidently accelerate their organization's digital transformation. Thales Cloud Protection & Licensing is part of Thales Group.

