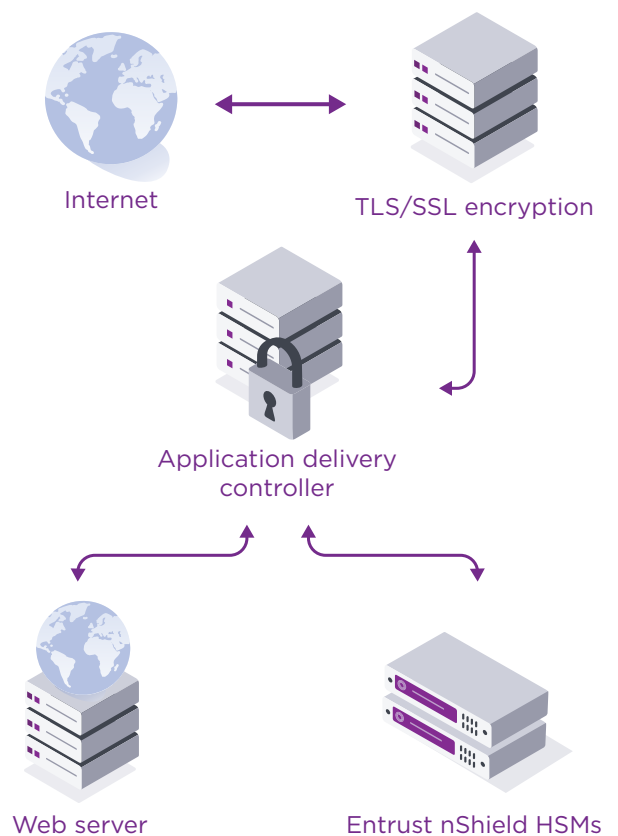# Enhanced security of application delivery controllers with Entrust nShield hardware security modules

nShield HSMs help ensure the confidentiality and integrity of web traffic to applications

HIGHLIGHTS

- Secures keys and certificates within cryptographic boundaries with robust access control mechanisms, so keys are only used for their authorized purpose

- Supports virtual and cloud-based environments

- Provides FIPS-certified, centralized protection of keys and certificates

- Meets the demand for high application performance

- Ensures availability by using sophisticated key management, storage, and redundancy to guarantee keys are always accessible when needed

- Facilitates compliance with regulatory requirements across industries

Internet

TLS/SSL encryption

Application delivery controller

Web server

Entrust nShield HSMs

Entrust nShield HSMs protect TLS/SSL encryption/decryption keys and certificates.

Enhanced security of application delivery controllers with nShield HSMs

The challenge: attackers seek opportunities to exploit web applications

The rapid rise of online transactions has resulted in similar growth of sensitive and confidential information exchanged online and in the cloud. And where there is valuable information, there are cybercriminals attempting to intercept and exploit it.

Transport layer security/secure sockets layer (TLS/SSL) connections encrypt information but are resource-intensive. They demand high server utilization to meet application performance and availability requirements. This results in higher costs. In addition, encrypting the data is not enough to truly secure it. A compromise of TLS/SSL encryption keys can lead to compromised sessions, potentially exposing the encrypted data flowing between end user devices and web servers. And the increased encrypted traffic over multiple channels and simultaneous connections creates a key management nightmare. Encryption keys must be protected and managed in a trusted manner for security and compliance with regulations.

The solution: application delivery controllers integrated with nShield HSMs

Application delivery controllers (ADCs) are designed to optimize web application performance by providing load balancing and management of sensitive traffic. Entrust partners with ADC providers to deploy high-security TLS/SSL systems that enable customers to deliver secure connectivity while meeting operational demands.

Entrust nShield® Connect hardware security modules (HSMs) deliver both operational efficiency and certified security for encryption keys and operations. Entrust nShield Connect HSMs protect critical TLS/SSL encryption keys and certificates within a dedicated, hardened device. This ensures keys are never exposed to unauthorized entities.

Enhanced security of application delivery controllers with nShield HSMs

Entrust nShield HSMs

Entrust nShield HSMs protect encryption keys in a certified, tamper-resistant environment. Keys handled outside the cryptographic boundary of HSMs are significantly more vulnerable to attacks, which can lead to disclosure of confidential information. HSMs are the only proven and auditable way to secure valuable cryptographic material. Entrust nShield HSMs:

- Protect keys and certificates within carefully designed cryptographic boundaries

- Use robust access control mechanisms so keys are only used for their authorized purpose

- Ensure availability by using sophisticated key management, storage and redundancy features to guarantee keys are always accessible when needed

- Deliver high performance to support increasingly demanding transaction rates

- Comply with regulatory requirements for financial services, retail and other industries

ADC partners

Learn more

To find out more about Entrust nShield HSMs visit **entrust.com/HSM**. To learn more about Entrust's digital security solutions for identities, access, communications and data visit **entrust.com**

To find out more about Entrust nShield HSMs

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ABOUT ENTRUST CORPORATION

Entrust keeps the world moving safely by enabling trusted identities, payments and data protection. Today more than ever, people demand seamless, secure experiences, whether they're crossing borders, making a purchase, accessing e-government services or logging into corporate networks. Entrust offers an unmatched breadth of digital security and credential issuance solutions at the very heart of all these interactions. With more than 2,500 colleagues, a network of global partners, and customers in over 150 countries, it's no wonder the world's most entrusted organizations trust us.

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