Secure, High Assurance with Nutanix and Gemalto SafeNet KeySecure

Together, Nutanix hyper-converged infrastructure and Gemalto’s SafeNet enterprise key management simplify the secure scaling of data storage while reducing organizational costs and complexity.

Solution
Nutanix hyperconverged infrastructure consolidates server and storage into modules designed for easily scaled clusters. Nutanix’s self-encrypting drives (SED) ensure that data is secured from unauthorized access and under the owner’s full control at all times. SafeNet KeySecure manages the encryption keys to Nutanix SEDs so organizations can scale their data centers efficiently and securely.

Nutanix Hyperconverged Infrastructure
Nutanix natively integrates compute and storage into a single x86-based server deployed in scale-out clusters. It reduces power and space and dramatically eliminates storage complexity. It is 100% software defined with no reliance on special purpose hardware for resilience, performance or availability. Nutanix operates on a “distributed everything” principle [where all data, metadata and operations are distributed across the entire cluster which eliminates performance bottlenecks and enables predictable scalability without limits].

Gemalto SafeNet KeySecure
SafeNet KeySecure is an encryption and key management appliance that centralizes the control of an enterprise’s disparate encryption solutions. KeySecure integrates with Nutanix via the Key Management Interoperability Protocol (KMIP) to store the encryption keys for each self-encrypting drive. By consolidating the policy and key management of application servers, databases, and file servers, security administration is streamlined. Centralized key management improves security in a number of ways, most notably by making key surveillance, rotation, and deletion easier while separating duties so that no single administrator is responsible for the entire environment. Additionally, unifying and centralizing policy management, logging, and auditing makes information more readily accessible and demonstrating compliance with data governance requirements simple.

Benefits
- **Compliance Simplified:** Centralizing key management makes it easier for administrators to account for encryption keys from Nutanix SEDs and disparate encryption solutions, and generate, detailed records for auditors and regulators.
- **Lower Total Cost of Ownership:** Support for a broad ecosystem of third-party KMIP compatible encryption solutions, reduce the amount of time, effort and investment administrators need to manage their enterprise’s encryption deployment.
- **Maximum Key Security:** SafeNet KeySecure is available in a FIPS 140-2 Level 1 algorithm-safe and Level 3 tamper-proof hardware appliance. Additionally, SafeNet KeySecure is available as a virtual hardware appliance supported by SafeNet Luna HSMs for hardware key storage.
- **Secured, Assured Availability:** Flexible high-availability configurations (active-active clusters) suitable for geographically dispersed datacenters or service provider environments ensures that encrypted data is always available to authorized users.
Centralize Management of Encryption Keys
Consolidating encryption key storage and management behind a single appliance simplifies key accounting and administration to make encryption truly scalable. As customers increase the number of Nutanix modules in their environment and encryption keys proliferate, key management remains streamlined, organized and manageable.

Centrally Enforce Key Policy Management for Security of Data
Distributed storage can make data access control more challenging. Meeting compliance mandates in these environments is greatly simplified through verifiable and auditable key storage and management. Data may reside locally (network file server), remotely (as part of Application as a Service offerings), or virtually within the Nutanix infrastructure. However, the keys and user access controls are secured in Gemalto SafeNet KeySecure under the control of the security team rather than the storage administrator. Jointly, customers can benefit from virtualized or distributed storage without sacrificing security or making compliance complicated.

Enable Separation of Administrative Duties
KeySecure supports granular authorization, enabling constraints to be placed on specific key permissions to protect against insider threats (for example, only allowing members of the HR department access to employee PII). This is achieved through segmented key ownership based on individuals or group owners. Ongoing storage management occurs as always; however, storage administrators cannot gain access to sensitive data unless they are also entrusted by policy with access to the encryption keys.

Full Lifecycle Key Support and Automated Operations.
SafeNet KeySecure simplifies the management of encryption keys across the entire lifecycle including secure key generation, storage and backup, key distribution and key deactivation and deletion. SafeNet KeySecure makes automated, policy driven operations easy for tasks such as key expiry and key rotation.

About Gemalto’s SafeNet Identity and Data Protection Solutions
Through its acquisition of SafeNet, Gemalto offers one of the most complete portfolios of enterprise security solutions in the world, enabling its customers to enjoy industry leading protection of data, digital identities, payments and transactions – from the edge to the core. Gemalto’s newly expanded portfolio of SafeNet Identity and Data Protection solutions enables enterprises across many verticals, including major financial institutions and governments, to take a datacentric approach to security by utilizing innovative encryption methods, best-in-class crypto management techniques, and strong authentication and identity management solutions to protect what matters, where it matters. Through these solutions, Gemalto helps organizations achieve compliance with stringent data privacy regulations and ensure that sensitive corporate assets, customer information, and digital transactions are safe from exposure and manipulation in order to protect customer trust in an increasingly digital world.

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