NetApp™
Go further, faster

Infrastructure

NetApp Lifetime Key Management

Improve access to encrypted data by simplifying key management

THE CHALLENGE

Managing keys for encrypted data that you need to store for many years is a complex task. Not only must you always maintain the security of encryption keys, but you must also make them available at a moment's notice to acess encrypted data. As encryption proliferates throughout your environment, you must also be able to scale your ability to manage encryption keys.

Therefore a key management system has to:

- Protect keys from all threats, including accidental exposure, malicious users, and predictive programs
- Keep your encrypted data secure even if multiple components in the key management system fail
- Facilitate the quick location of correct keys for encrypted data sets for users and applications
- Make sure that keys are accessed only by the right people to protect your encrypted data
- Provide a nonrepudiative audit of key management actions to help you meet compliance requirements
- Make sure that security policies are consistent and easy to implement

THE SOLUTION

With our NetApp® Lifetime Key Management™ solution, you can simplify the management of encryption keys while keeping your keys secure and accessible at a moment's notice. To enable access to your data in the years to come, our NetApp KM500 Lifetime Key Management appliance securely automates the backup and distribution of encryption keys across your organization. This security hardened appliance protects keys in the event of theft, tampering, and unexpected hardware component failures of the appliance. Using our management console, you can simultaneously manage multiple NetApp KM500 Lifetime Key Management appliances and NetApp® DataFort encryption appliances from a central location.

SIMPLIFY KEY MANAGEMENT

Our Lifetime Key Management appliances help simplify key management. They are designed to give you the flexibility you need to secure data over time and across your infrastructure. NetApp's KM500 Lifetime Key Management appliance enables you to:

- Create hierarchical key-sharing groups to control the direction of key movement between end points in child versus parent groups

- Compartmentalize management access and provide granular role-based administration

MAXIMIZE SECURITY

We have designed our Lifetime Key Management appliances to store keys securely, protecting them against both electronic and physical attacks. We use such measures as tamper-proof hardware enclosure, key signing, role-based administration and quorum control, and others to maximize the security of your sensitive data.

- Appliances can be configured to automatically delete all key materials upon intrusion
- Keys and associated attributes are signed to protect their integrity for their lifetimes
- Prevent any single user from having broad access to key material by using 2-factor role-based administration and smart card quorum control
- Protect against run-time attacks through a vulnerable operating system by processing encryption keys within our secure hardware
- Encrypt with full end-to-end 256-bit security to prevent any process that handles or moves a key from reducing its original strength
- Eliminate any single point of failure with multilevel redundancy

SHARE SENSITIVE DATA SECURELY

During audits and legal discovery, you might be required to share sensitive data externally. Our granular key technology lets you share encrypted data without compromising the security of your environment. You can extract a single key and send it securely to a third party to restore the required data, without exposing any other data in your environment.

REDUCE COSTS OF KEY MANAGEMENT

A single management console allows you to configure, upgrade or monitor all KM500 or DataFort appliances within your global storage security infrastructure. Furthermore, our transparent, but secure key movement saves you from the burden of manually moving keys to wherever your data may need to be restored.

PARTNER FOR SUCCESS

When you partner with our Professional Services and Global Support teams, you gain access to our extensive storage and security expertise, innovative technologies, and best practices.

Get up and running quickly

The NetApp DataFort and Lifetime Key Manager Design and Implementation Service is a fixed-scope, fixed-price service offering that can help you efficiently deploy NetApp DataFort and Lifetime Key Management appliances in your storage environment. With our professionals on your team, you can quickly reap benefits from your storage security solution while simultaneously reducing its impact on your daily business operations.

Get just the support you need

We share with you the experience we have gained by working with hundreds of organizations just like yours. We respond quickly to your problems, no matter where in the world they occur. With one of the most flexible support programs in the industry, you always get just the support you need for your unique IT and business requirements.

SECURITY

NetApp Storage Encryption

Processor	Feature
Encryption Key	AES-256
Generation	True random number generator
Certification	FIPS 140-2 Level 3
Operating System	Hardened NetApp Security Appliance OS

Role-Based Management Control	Feature
Granular Role-Based Administration	Multiple restricted roles can be defined for each admin

SCALABILITY

Number of Clients Supported	Up to 100 clients per LKM
Max # of LKM appliances in a redundant configuration	Up to 16 LKM appliances. Up to 1,000 DataFort appliances
Number of keys stored	Up to 10 million
Number of key sharing groups	Up to 100 unique key sharing groups

REDUNDANCY AND FAILOVER

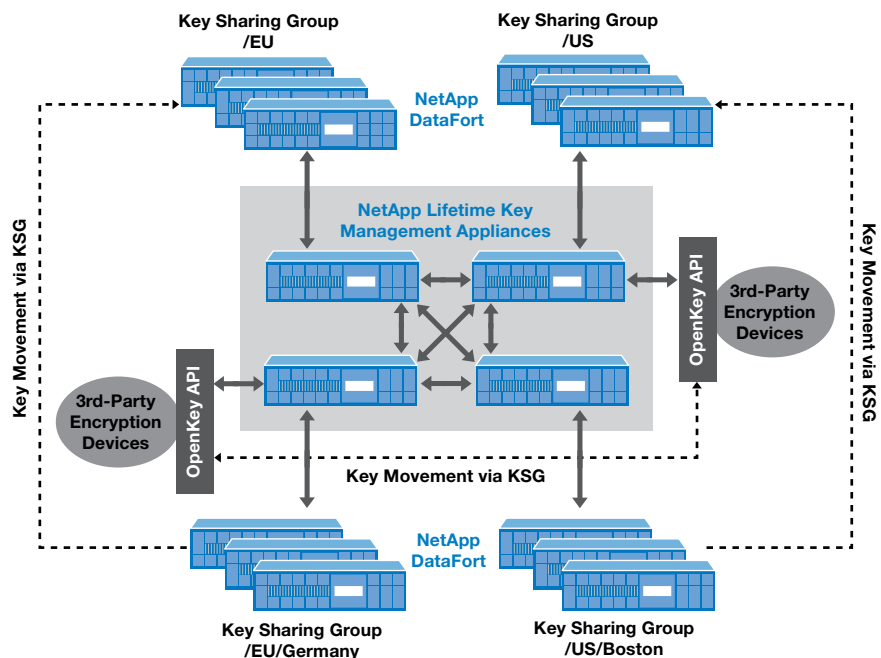|	
Hardware Redundancy	(2) hot-swappable power supplies
	(3) hot-swappable fan assemblies
	(2) hot-swappable disk drives (SCSI RAID 1)
Key Availability	Secure key replication to multiple LKM appliances Intelligent key sharing via key sharing groups

Figure 1
An example of high-availability configuration of NetApp encryption and key management appliances.

NetApp creates innovative storage and data management solutions that accelerate business breakthroughs and deliver outstanding cost efficiency. Discover our passion for helping companies around the world go further, faster at netapp.com.

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