



# Secure Your Backup Infrastructure with Storage Media Encryption (SME)



**Cisco Systems**

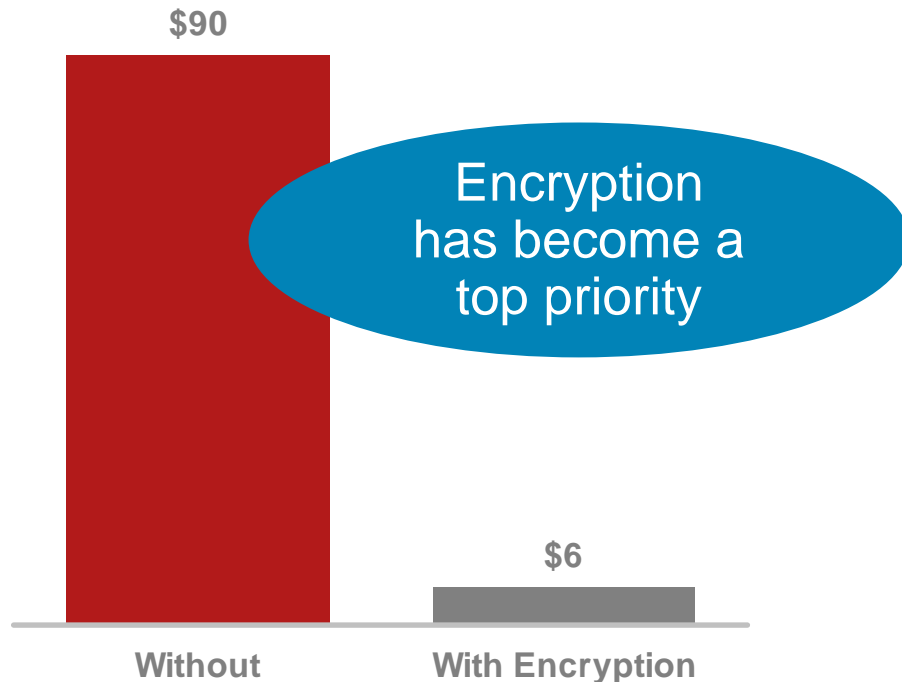
# Session Objectives for Cisco SME

At the end of this session, you should be able to:

- Understand how SME can be seamlessly integrated into a heterogeneous backup environment
- Learn how it can leverage EMC / RSA's centralized Key Manager
- Understand how SME can work with EMC's NetWorker
- How Cisco Services can help customers with SME

# Storage Media Encryption Business Case

## Cost of Handling a Lost Customer Record



### Encryption of data at rest is essential for:

- Compliance with HIPAA , Sarbanes-Oxley, state laws ....
- Maintaining client confidence and avoiding high profile data loss
- Limiting financial exposure for handling lost information

Gartner estimate of cost savings with encryption enabled for each lost customer record. Cost includes notification costs, credit reporting services, and legal fees

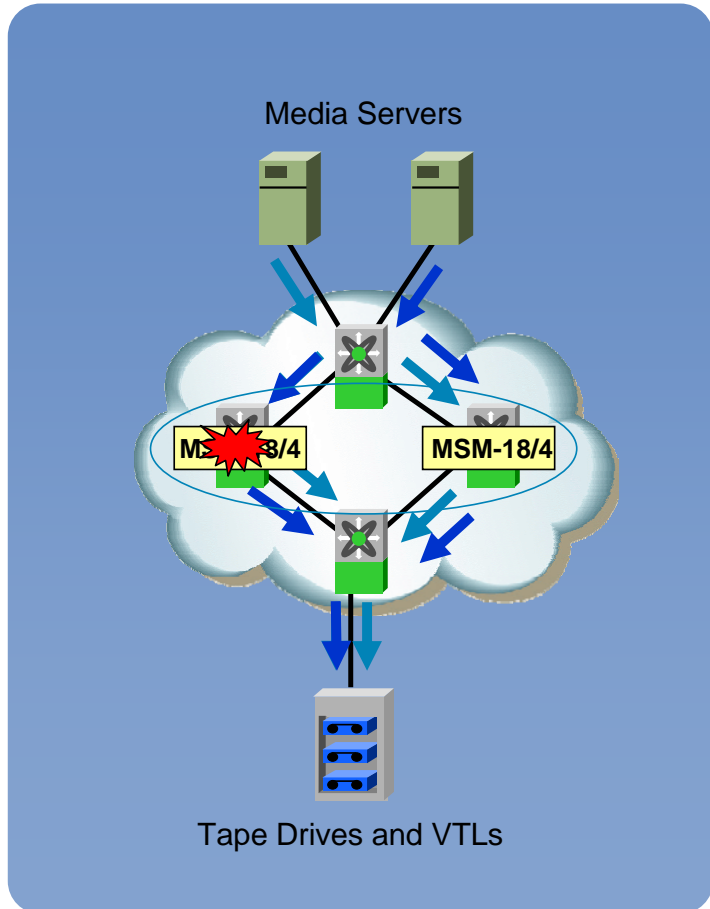


# Secure FIPS 140-2 Level-3 Architecture

- Hardware and software architecture designed to meet FIPS 140-2 Level-3 certification requirements
- Common Criteria EAL-3 platform (MDS 9000)
- Tamper-proof hardware: attempts to tamper with system destroys the sensitive information
- Media keys never leave system un-encrypted
- Strong, standard AES-256 algorithms for encryption
- Smart cards provide advanced master key protection
- Role-based access control enables secure management
- Centralized user credentials management and auditing available using RADIUS and TACACS+ servers



# Cisco SME – Scaleable, Highly Available

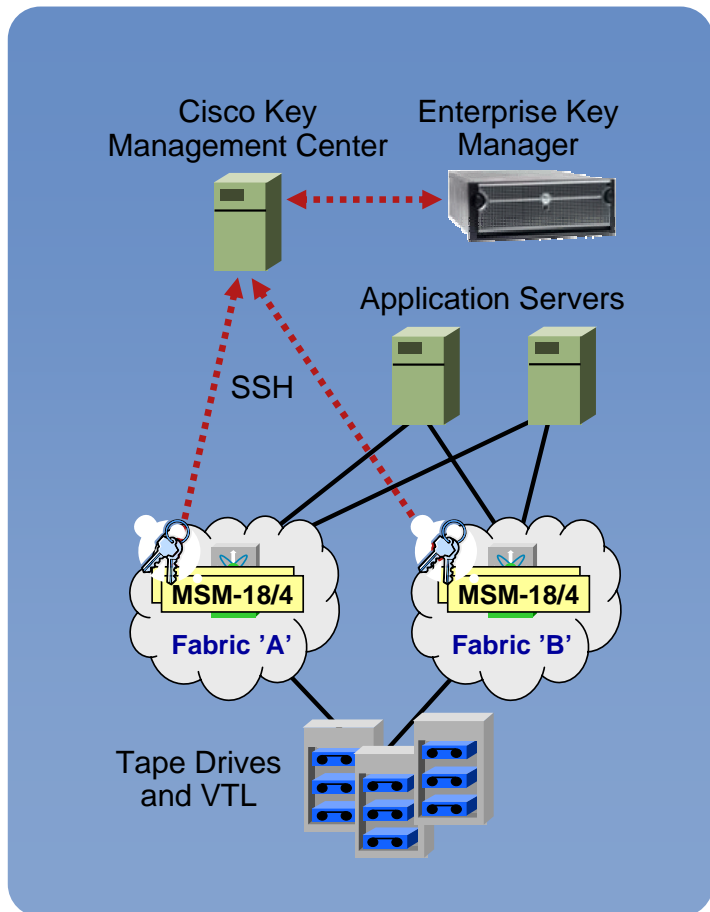


- Integrates transparently in MDS fabrics
- Dramatically reduces deployment time
  - No SAN re-configuration or re-wiring to insert appliances
  - Provisioning becomes a simple, logical process of selecting what to encrypt
- Modular, clustered solution offers highly scaleable and reliable performance
- Load balances automatically
- Redirects traffic if a failure occurs
- Provisions quickly with Cisco Fabric Manager wizards

# Rapid, Wizard Based Provisioning

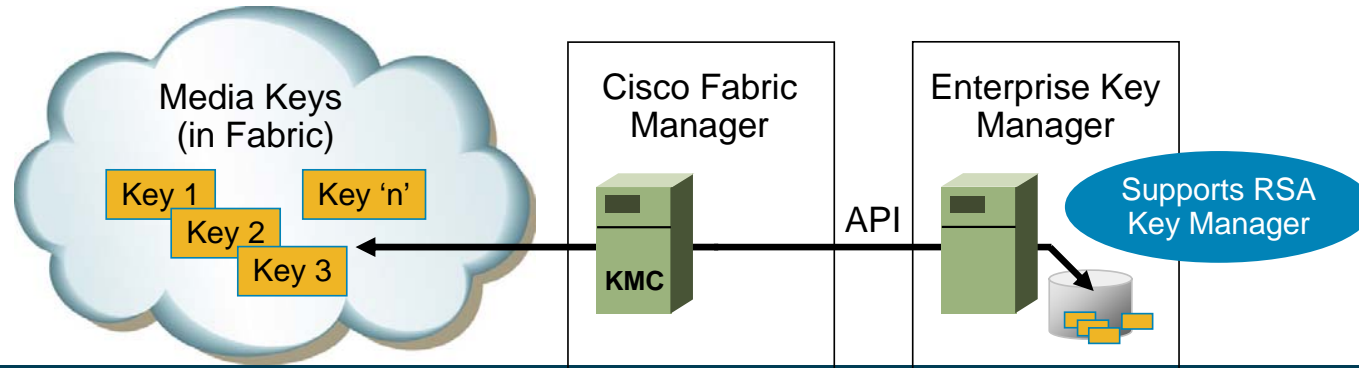
The screenshot displays the Cisco Storage Media Encryption web interface. On the left, a tree view shows the hierarchy: Clusters > fourth > Tape Groups > bkpggrp1 > Volume Groups > Default. The main content area shows a wizard with steps 1 through 8. Three browser windows are open, showing the wizard steps: '1 - Choose Name' for the cluster, '1 - Choose Name' for the tape group, and '1 - Group Info' for the volume group. The '1 - Group Info' window is the active one, showing a 'Volume Group Name' field with the value 'OffSiteTapes' and a 'Filtering' section with a radio button selected. A blue callout box is overlaid on the 'Filtering' section, containing the text: 'Wizard 3 – Creating a volume group Defines a set of tape volumes - Sharing a common group key'. The interface includes a 'Refresh' button, a 'Create Cluster' button, and a 'Logout | About' link in the top right corner. The browser's address bar shows the URL: 'http://ips-host20:8080/sme/createvolume.group.do?clusterName=fourth&tapeGroupN...'. The taskbar at the bottom shows 'Local intranet'.

# Cisco Key Management Center



- Cisco KMC provisions and transports keys securely
  - No new software type to install, based on Cisco Fabric Manager
  - Intuitive provisioning and management through web browser interface
- Provides essential key management functions for Cisco SME
  - Archives, recovers, distributes, and shreds media keys
  - Accommodates single and multiple site environments
- Option to use an enterprise-class key management solution: EMC / RSA Key Manager for the Data Center

# Enterprisewide Lifecycle Key Management



- Media keys generated and cached in fabric by Cisco SME enable access to encrypted media
- Copies of media keys are sent to Cisco KMC for long term retention
- Open API allows vaulting and enterprisewide key lifecycle management with industry leading software

# SME with EMC Networker

- Cisco SME Auto-volume Group feature works with EMC Networker
- SME automatically categorizes tapes into Networker volume groups

No need to manually create volume groups in SME

When Networker performs a tape backup, the encryption key for that tape is added to appropriate volume group on Cisco KMC

Simplifies provisioning and management of keys

# Cisco SME Service Offerings

## Service Offerings include:

- **Assess** the SAN for SME readiness
- **Recommend** NX-OS version
- **Plan, Design, and Implement** SME into the SAN
- **Document** the SAN environment and the detailed configuration of the MDS switches
- **Train** the customer on the use of SME, key management as well as operational use of the SME feature set

Learn More:  
[www.cisco.com/go/datacenter](http://www.cisco.com/go/datacenter)



**Cisco SME whitepaper and more**

[www.cisco.com/en/US/products/ps8502/index.html](http://www.cisco.com/en/US/products/ps8502/index.html)

**Cisco Storage Networking**

[www.cisco.com/go/storagenetworking](http://www.cisco.com/go/storagenetworking)

**Cisco Data Center Networking**

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