APPENDIX **B**

Disaster Recovery in SME

This appendix includes the following sections:

Disaster Recovery Sequence for SME Tape

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Caution Use this procedure only if the SME cluster cannot be recovered to an online / active state. A new SME Cluster must be created and existing keys imported into the new SME Cluster.

Detailed Steps

To recover SME tape, follow these steps:

Step 1 Ensure that all backup operations are stopped.

Step 2 If the ASCII configuration of the SME Cluster exists on the switches, you must removed it. Save the show SME tech support and **show running config** commands off the switches before any changes are done. These files are useful when configuring the new SME Cluster.

Step 3 Log in to the Key Manager (DCNM Web Client) with credentials that allow you to do key operations (admin, sme-kmc-admin, network-operator).

Step 4 Export all volume groups from the original cluster. If you already have an up to date exported backup, you can skip this step. The Master Key of the old SME Cluster is required to complete this step. If the Cluster's security mode is Basic, you must have the Master Key file. If the Cluster's security mode is Standard or Advanced, you must supply the required number of smart cards to reconstitute the Master Key.

- View the tape group, select each volume group and click **export**. The web client will guide you through an offline export requiring the input of the master key for each export.

- The keys are exported to a passwor- protected file.

- If there is more than one tape group, this procedure must be done for each tape group, including every volume group. The files should be clearly labelled so that you know which tape group the export belongs to.

Step 5 Using the DCNM UI, create a new cluster with a new name, with the same cluster settings.

Step 6   Create a new tape group to match each old tape group.

- Create a new volume group to match each volume group from the original Cluster.
- Add the tape devices.

Step 7   If you want to continue writing to existing tapes, modify **smeserver.properties** in the FMS conf directory. If you skip this step, the existing tapes will be read only.

   a.   Edit **smeserver.properties** and add **sme.retain.imported.key.state=true**

   b.   Restart the DCNM Server.

   c.   Wait for FMS to restart and log in again.

Step 8   Import the volume groups from step 3 into the new cluster in their respective tape groups volume groups.

Step 9   If you did not skip step 7, complete these steps:

   a.   Edit **smeserver.properties** and remove **sme.retain.imported.key.state=true**

   b.   Restart Fabric Manager Server.

   c.   Wait for FMS to restart and log in again.

The new SME Cluster should now be online, with a stable connection to the KMC. The keys from the old SME Cluster have now been imported into the new SME Cluster. Backup operations can be resumed.

Disaster Recovery Sequence for SME Disk

Detailed Steps

To recover SME disk, follow these steps:

Step 1   Ensure that all backup operations are stopped.

Step 2   If the ASCII configuration of the SME Cluster exists on the switches, you must remove it. save the show sme tech support and **show running config** commands of the switches before any changes are done. These files will be useful when configuring the new SME Cluster.

Step 3   Log in to the Key Manager (DCNM Web Client) with credentials that allow you to do key operations (admin, sme-kmc-admin, network-operator).

Step 4   Export all of the disk keys from the original cluster. If you already have an up-to-date exported backup, you can skip this step. The Master Key of the old SME cluster is required to complete this step. If the cluster's security mode is Basic, you must have the Master Key file. If the cluster's security mode is Standard or Advanced, you must supply the required number of smart cards to reconstitute the Master Key.

- View the Disk Group, select all Disks, and click **export**. The web client guides you through an offline export requiring the input of the master key for each export.
- The keys are exported to a password-protected file.
- If there is more than one disk group, this procedure must be done for each disk group. The files should be clearly labelled so that you know which disk group the export belongs to.

Step 5   Using the DCNM GUI, create a new cluster with a new name with the same cluster settings.

Step 6   Create a new disk group to match each old disk group.

- Create a new disk to match each disk from the original cluster.

Step 7   If you want to continue writing to existing disks, modify **smeserver.properties** in the FMS conf directory. If you skip this step, the existing Disks will be read only.

    a.   Edit **smeserver.properties** and add **sme.retain.imported.key.state=true**

    b.   Restart Fabric Manager Server.

    c.   Wait for FMS to restart and log in again.

Step 8   Import the keys from step 3 into the new cluster in their respective disk groups. Match each disk name as appropriate.

Step 9   If you did not skip step 7, complete these steps:

    a.   Edit **smeserver.properties** and remove **sme.retain.imported.key.state=true**

    b.   Restart Fabric Manager Server.

    c.   Wait for FMS to restart and log in again.

The new SME Cluster should now be online with a stable connection to the KMC. The keys from the old SME Cluster have now been imported into the new SME Cluster. Backup operations can be resumed.