Q-EKM To SKM Key Migration Considerations

Quantum offers a Quantum Encryption Key Manager (Q-EKM) to Scalar Key Manager (SKM) Key Migration service to those customers needing to import their Q-EKM keys to their SKM servers. To purchase this service, contact Quantum Service and Support (http://www.quantum.com/serviceandsupport/index.aspx).

This document details information that should be taken under consideration before migrating encryption keys from Q-EKM to SKM.

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Q-EKM Migration Considerations

Before migrating encryption keys from Q-EKM to SKM, we recommend that you review the following information.

Encryption Key Import/Export Functionality

Because the Q-EKM export file format differs from the SKM import file format, you cannot use the library's encryption key import/export functionality to import Q-EKM keys to SKM. After Q-EKM keys have been successfully migrated to SKM, the migrated keys are eligible for export and import operations between SKM servers.

Key Requests

When a tape requests a migrated Q-EKM key, the SKM server will do the following:

Request Type	Action
Existing key request	SKM server provides the imported Q-EKM key.
New key request	SKM server provides a new key from the set of SKM generated keys, unless the library is configured for key-reuse, in which case the SKM server requests an existing Q-EKM key.

Q-EKM vs. SKM: Functional Disparities

SKM does not support the sharing of encryption keys between tapes. Instead it assigns unique keys to each tape cartridge, simultaneously associating those unique keys with the tape cartridge's barcode. Through this unique-key methodology, the library is able to identify the keys that are assigned to a tape cartridge. This identification allows for the following key export functionality:

- For the export of a single tape cartridge, the library exports only the one key assigned to the tape.
- For an export of all used encryption keys, the library exports only those keys assigned to tape cartridges existing within the library.

Q-EKM shares keys between multiple tape cartridges, meaning that keys are not associated with unique tape cartridge barcodes. This sharing prevents the library from identifying the unique keys needing to be exported.

So during an export of a single Q-EKM tape cartridge, all Q-EKM keys must also be exported, rather than just the one key assigned to the tape.

If you want the library to be able to identify the encryption keys that have been used, you will need to re-write the tape to receive new, unique SKM keys. The library can then identify used encryption keys based on their association with existing tape cartridge barcodes.