

Converting an InfiniBand HIC from iSER to SRP

You can apply a feature pack in SANtricity Storage Manager to convert the protocol used by the host interface card (HIC) in an E-Series storage array or an EF-Series flash array.

These instructions are intended for system administrators who want to convert the protocol of a 56-Gbps InfiniBand (IB) HIC from iSCSI Extensions for Remote Direct Memory Access (iSER) to SCSI RDMA Protocol (SRP). You can perform this conversion on the following storage systems:

- E5600
- EF560

Before you begin

Be aware of the following:

- You can perform this conversion only on new installations and not on systems with live data. If this is not your situation and you have already created volumes on your system, you must stop host input/output (I/O) and delete these volumes before applying the feature pack. For more information about how to stop host I/O and delete volumes, see the online Help for the SANtricity Storage Manager Array Management Window.
- You do not have to make any changes to your hardware when you convert from iSER to SRP.
- The Data Assurance (DA) feature is not supported for SRP.

Confirm the following:

- SANtricity Storage Manager is installed.
- The storage system is running SANtricity OS (controller firmware) version 08.20.11.00 or later.
 - To determine which firmware you have, check the **Summary** tab in the Array Management Window.
 - To download new firmware, go to [NetApp Downloads](#) and select **Downloads > Software**. Download the correct version of **E-Series/EF-Series SANtricity OS (Controller Firmware)** for your E-Series storage array or EF-Series flash array.

Obtaining the feature pack key file

You can apply a feature pack in SANtricity Storage Manager to convert the protocol of the host interface card (HIC). To obtain the key file for the feature pack, you need a Feature Activation Code, the serial number for your storage system enclosure, and the Feature Enable Identifier for your storage system.

Steps

1. From the following table, locate the Feature Activation Code that applies to your storage system and copy the value to a text file.

Storage system	Feature Activation Code
E5600	MFY-YHR-Z71JA
EF560	TFW-FHR-Z5J8A

2. Locate the serial number for your storage system. You can look at the silver label affixed to the top of your system enclosure, or you can get the serial number from the software, as follows:
 - a. From the Array Management Window, select the **Summary** tab and click **View Storage Array Profile** in the Monitor area.
 - b. On the Storage Array tab, locate the **Chassis Serial Number**.
 - c. Copy and paste the value into a text file.
3. Locate and record the Feature Enable Identifier for your storage system:
 - a. From the Array Management Window, select **Storage Array > Features** to display the **Features and Feature Pack Information** window.

The 32-digit Feature Enable Identifier is displayed under **Storage Array Feature Information**.
 - b. Copy and paste this 32-digit identifier into a text file.
4. Go to [NetApp License Activation: Storage Array Premium Feature Activation](#) and enter the information required to obtain the feature pack.
 - Feature Activation Code from the table
 - Serial number for the storage system
 - Feature Enable Identifier

Note: The Premium Feature Activation web site includes a link to “Premium Feature Activation Instructions.” Do not attempt to use those instructions for this procedure.
5. Choose whether to receive the key file for the feature pack in an email or to download it directly from the site.

Applying the feature pack key file

You can apply a key file for a conversion feature pack to change the protocol of your HIC.

About this task

This task describes how to apply the key file to a single storage array.

Steps

1. From the Array Management Window, select **Storage Array > Features**.
2. In the **Feature Pack** section at the bottom of the screen, click **Change**.

Note: Do not click the **Use Key File** button in the **Enable a Premium Feature** section.

The Select Feature Key File dialog box opens, which lets you select the key file.
3. Select the folder in which you placed the key file.
4. Select the key file, and click **OK**.
5. Click **Close**.

Both controllers automatically reboot to allow the new feature pack to take effect. The storage array returns to a responsive state after the reboot is complete.

Configuring the host to use SRP

After you apply the feature pack key file to convert the protocol used by your InfiniBand HIC from iSER to SRP, you need to configure the host to use SRP.

For step-by-step instructions, see the [InfiniBand Configuration and Provisioning for Linux Express Guide](#) from the *E-Series and EF-Series Systems Documentation Center*. To connect the host to the storage array, you must enable the InfiniBand driver stack with the appropriate options. Specific settings might vary between Linux distributions. Check the NetApp [Interoperability Matrix](#) for specific instructions and additional recommended settings for your solution.

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