HP StorageWorks EVA4100 SAN Starter Kit quick installation

Finding more information

This document provides an overview of the steps to install the HP EVA4100 SAN Starter Kit. For more information, see the list of information sources in the *HP EVA4100 SAN Starter Kit release notes*, available on the Manuals page of the HP Business Support Center website:

http://www.hp.com/support/manuals

Click **Disk Storage Systems** under Storage, and then select **HP StorageWorks 4100/6100/8100 Enterprise Virtual Arrays** under EVA Disk Arrays.

Section 1. Preparing the site

To ensure continuous, safe, and reliable operation, ensure that the EVA4100 operating environment meets the following requirements:

Table 1 Site requirements

Input voltage	180–254 VAC
Input frequency	47–63 Hz
Input Current - Maximum per line	2.7A
Total System Power	638W
Operating Temperature	50°–95°F (10°–35°C)
Humidity	10%–90% non-condensing
Clearance	Front: 16 inch (406 mm) Rear: 11.8 inch (300 mm)

Section 2. Checking kit contents

The following items are included in the HP EVA4100 SAN Starter Kit. Verify that you have all the items listed before beginning the installation.

- **HP StorageWorks EVA4100**—Includes two HSV200-B controllers and one disk enclosure, all preinstalled in the rack
- **HP StorageWorks SAN Switch 4/8 Base**—Provides a connection between the EVA4100 and the servers; preinstalled and cabled in the rack
- **Four HP StorageWorks FC2142SR 4Gb PCI-e HBAs (LPe1150)**—Installed in the servers connected to the EVA4100
- **HP EVA4100 SAN Starter media kit**—Includes Emulex EZPilot and HP StorageWorks Command View EVA management software
- **Fiber optic cables**—Used to connect the switch to the HBAs
- **4 Gb SFP Transceivers**—Inserted into the switch ports
- **License Entitlement Certificate for HP StorageWorks Command View EVA**—Enables up to 4 licenses to use (LTUs), for a total of 4TB

Section 3. Installing HBAs

An HP FC2142SR HBA must be installed in a server PCI-e slot. HBA installation procedures vary by server; however, the following procedure is typical:

1. Ensure the computer is powered off.
2. Open the server cover.
3. Remove the blank panel from an empty x4 or higher PCI-e bus slot.
4. Insert the HBA into the empty PCI-e slot, and then press firmly to seat the HBA.
5. Secure the HBA's mounting bracket to the case with the panel clip.
6. Close the server cover.

Section 4. Connecting the hardware

The EVA4100 and the HP 4/8 Base SAN Switch are installed in the rack and cabled before shipment. The only remaining task is to connect a fiber optic cable from a port on the switch to each server HBA. The non-high availability (HA) SAN connections used with the standard product are shown in Figure 1. This is the configuration used in most installations. The HA SAN connections used with an optional second switch are shown in Figure 2.

📝 **NOTE:**

There are 16 ports on the HP 4/8 Base SAN Switch, but only ports 0 through 7 are licensed for use. The label on the switch indicates which ports are available for use.

1. Remove the dust caps from the connectors on the SFP transceivers and fiber optic cables you will be using.
2. Install an SFP transceiver in a licensed switch port.
3. Connect a fiber optic cable between the SFP and a server HBA.
4. Repeat the previous 3 steps for each HBA that will be connected to the switch.
5. Start the server. For each Found New Hardware dialog box that appears, click **Cancel**.

Section 5. Powering on the components

1. Connect power to the rack.
2. Switch on the circuit breakers on both EVA rack power distribution units. Verify that the drive enclosure is operating properly. The status indicator and the power indicator should be on (green).
3. Wait three minutes and verify that all disk drives are ready. The drive ready indicator and the drive online indicator should be on (green).
4. Set the power switch on the rear of the upper controller to On.
5. Wait 10 seconds, and then power on the lower controller.
6. When the switch and controllers have completed their power-on sequence, continue with Section 6.
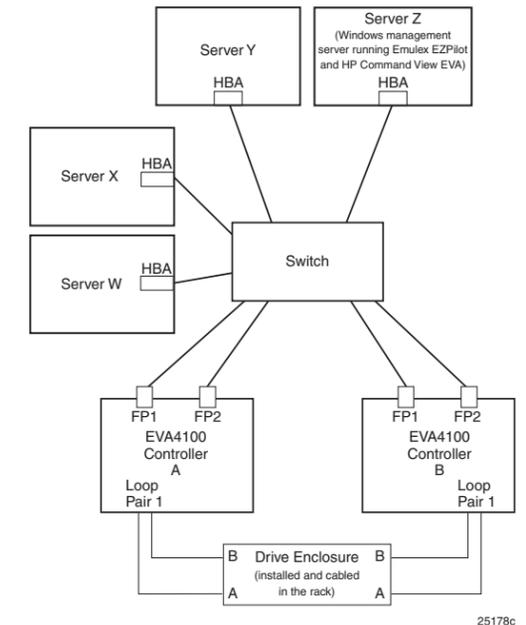
Figure 1 Non-HA (high availability) SAN connections
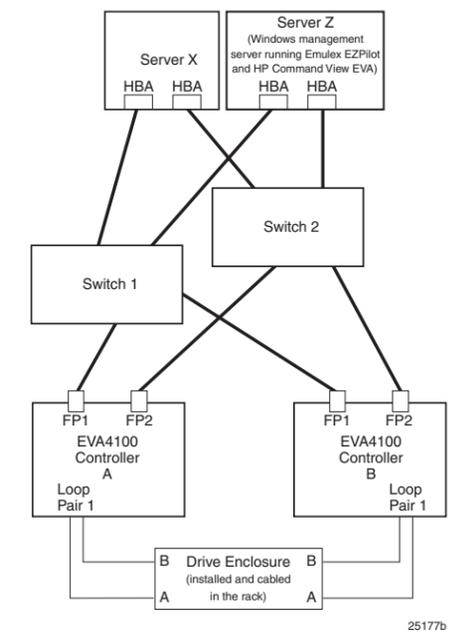
Figure 2 HA (or dual-fabric) SAN connections (requires second switch)

Section 6. Entering the world wide name and checksum

Enter the EVA4100 world wide name (WWN) and checksum using the Operator Control Panel (OCP) on the front of one of the controllers. Labels attached to the front of the rack beside the controllers identify the WWN and checksum.

For more information on using the OCP, refer to the *HP StorageWorks 4x00/6x00/8x00 Enterprise Virtual Array user guide*.

1. Press ▲ or ▼ until the first character of the WWN is displayed. Press ▶ to accept this character and select the next character.

2. Repeat Step 1 to enter the remaining characters.

3. Press **Enter** to accept the WWN and select the checksum entry mode.

4. Verify that the initial WWN checksum displays 0 in both positions.

5. Press ▲ or ▼ until the first checksum character is displayed.

   Press ▶ to accept this character and select the second character.

6. Press ▲ or ▼ until the second character is displayed. Press **Enter** to accept the checksum and exit.

Section 7. Obtaining an HP Command View EVA license

HP recommends that you obtain the license key from the HP Webware website. See your *License Entitlement Certificate* for other options to request a license key if you are unable to use the online option.

NOTE:

If the Windows management server has Internet access, you can obtain a license key during installation of the EZPilot management software See Section 8. The installation procedure includes a link to the HP Webware website in the EVA Setup license options window.

To obtain a license key from HP Webware:

1. Go to http://webware.hp.com and click **Generate license(s)** under **Webware licensing**.

2. Obtain the HP order number from the *License Entitlement Certificate*, enter it in the **Order number** box, and then click **Next**.

   Based on information obtained from the order, a list of available products appears on the Product selection window.

3. Select the product identified on your *License Entitlement Certificate* from the product list, and then click **Next**.

   The Order product(s) detail window opens.

4. Enter the following information:

   • The **Number of LTUs** listed as Quantity Ordered on your *License Entitlement Certificate* (typically 4)

   • The **WWN** for the array

     Use the WWN value that you entered in Section 6. Use the exact format displayed in the OCP (xxxx-xxxx-xxxx-xxxx [19 alphanumeric characters including dashes]).

     If you are obtaining the license key during EZPilot installation, you can copy the WWN from the EZPilot EVA Setup license options window and paste it into the web browser.

   Click **Next**.

   The Members sign-in window opens.

5. Enter your information:

   • If you registered previously, enter your email address and password in the **Existing members** box, and then click **Sign-in**.

   • If you did not register previously, enter your email address, create a password, and then reenter your password in the **First time users** box. Click **Sign-in**.

     The Address Information window opens.

6. Complete the requested information.

   If you are the license owner, select the **I am the License owner** box.

• If you registered previously, **License owner (End-User) information** automatically populates.

• If you did not register previously or if you did not select the **I am the License owner** box, enter your contact information under **License owner (End-User) information**.

Click **Next**.

The License certificate page appears.

7. Click the link on the certificate page to save the license key/password file in the format `filename.dat`.

8. Save the licence key/password file to a location of your choice. You will use it in Section 8.

9. Exit the web browser.

Prerequisites for installing EZPilot

Before installing the EZPilot software, ensure the following conditions are met:

• Record the switch IP address, gateway, and subnet mask. You will use this information during installation.

• Remove any Emulex, Brocade, or HP StorageWorks software currently installed on the server.

Section 8. Installing Emulex EZPilot on the Windows management server

There must be only one Windows management server connected to the EVA4100. During the installation, the SAN components are configured and the EVA4100 is initialized. For more information on EZPilot, see the *Emulex EZPilot User Manual*.

To install Emulex EZPilot Manager and HP Command View EVA on a Windows management server:

1. If you did not save the license key/password file on the server or on a networked drive mapped to the server, copy the license key/password file generated in Section 7 to the management server.

2. Insert the EZPilot Windows Installation CD into the drive on the Windows server you will use as the management server.

   The server must be running Windows Server 2003 SP2.

3. After the file is verified, the EZPilot dialog box opens. Click **Next**.

   The Installation options window opens.
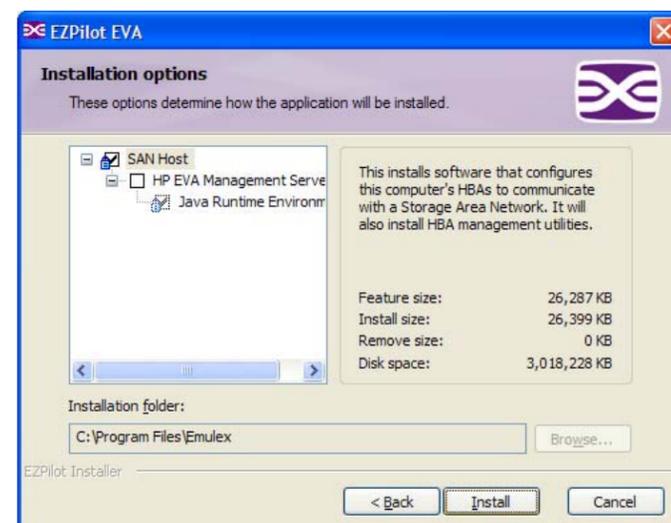
4. Select the **HP EVA Management Server** box, and then click **Install**.

5. Follow the on-screen instructions to install the EZPilot management software.

Section 9. Installing EZPilot on a Windows non-management server

You must install the EZPilot software on all Windows non-management servers connected to the EVA4100.

1. Insert the EZPilot Windows Installation CD into the drive on the Windows non-management server.

   The server must be running Windows Server 2003 SP2.

   The EZPilot dialog box opens.

2. Click **Next**.

   The Installation Options dialog box opens.

3. Click **Install**.

   Do *not* select the HP EVA Management Server box.

4. Follow the on-screen instructions to install the non-management software.

Repeat this procedure to install EZPilot on all Windows non-management servers connected to the EVA4100.

Section 10. Creating logical drives using EZPilot Manager

To make the EVA4100 storage available to your servers, you must create logical drives and assign them to the appropriate host. This is done using EZPilot Manager. For complete information on creating logical drives, see the *Emulex EZPilot User Manual*.

NOTE:

You must install the Emulex driver and utilities on any Linux servers connected to the EVA4100 to make them visible to EZPilot Manager and to assign logical drives to your Linux servers (see Section 11).

1. On your Windows management server, click **Start**.

2. Select **All Programs** > **Emulex** > **EZPilot Manager Utility**.

   EZPilot Manager launches, displaying the Discovery Information screen.

3. If there are no logical drives on the EVA4100, you will be prompted to create them with the EZPilot Add logical Drive Wizard. Click **Yes**.

4. Select the Logical Drive Type you want to create, assign a size, and optionally a name to the new logical drive, and then click **Next**.

   The Logical Drive Host Assignment dialog box opens.

5. Select the host (and its adapters) to which you want to assign the logical drive. If `Assign to this host only` is selected, only the local host and its adapters are displayed. Typically, a logical drive is assigned to only one host. Click **Next**.

   The Logical Drive Initialization and Volume Access dialog box opens.

6. You can optionally format the drive and assign a drive letter or mount directory, and then click **Next**.

   The Logical Drive Creation dialog box opens.

7. To create the logical drive, verify the logical drive parameters, and then click **Create Logical Drive**.

8. When the creation is complete, click **Next**.

   The Finish window opens.

9. To create an additional logical drive, click **Next**, and then repeat Step 4 through Step 8.

10. When you are finished creating logical drives, clear the **Create another logical drive** box, and then click **Finish**.

Section 11. Installing the Emulex driver and utilities on a Linux non-management server

This section applies only if you are connecting Linux servers to the EVA4100. A Linux non-management server must be running one of the following Linux versions:

• Red Hat Enterprise Linux 4 (latest update)

• SUSE Linux Enterprise Server 9 (latest service pack)

• SUSE Linux Enterprise Server 10 (latest service pack)

For complete instructions on installing the Emulex drivers and utilities for Linux, see the documentation on the *Emulex Linux Installation CD* included in the HP EVA4100 SAN Starter Media kit.

To create a Linux non-management server:

1. Ensure a supported version of the Linux operating system is installed on the server.

2. Update with the ProLiant Support Pack (for HP servers).

3. Install the Emulex driver for Linux.

4. Install the Emulex HBAnyware utility to configure the HBAs with the correct firmware/BIOS.

5. Install the Emulex MultiPulse utility on your system to allow for multipathing in a High Availability (HA) environment.