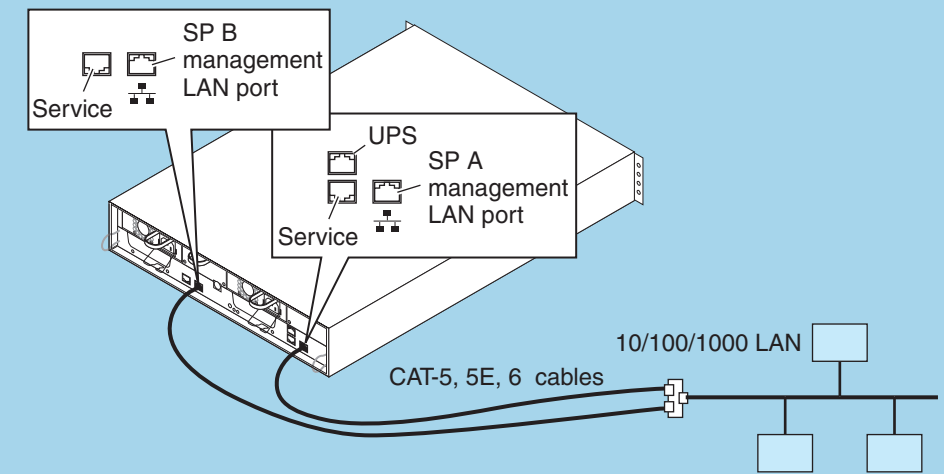## 7 Connect management ports to a network

☐ Connect the LAN port for each SP (one in an SSR212PP2f, two in an SSR212PPf) to the network on which you will manage the storage system with the Navisphere* Express software.

For dual-SP systems, both connections must be on the same subnet.

Be sure to connect your management network to the **LAN** port(s) on the storage system. The service and UPS ports use the same connector type but are not LAN ports.

If you connect your storage-system management port(s) directly to a switch, make sure to use switch ports that support autonegotiation or are configured for half-duplex operation.

SP B management LAN port
Service
UPS
SP A management LAN port
Service
10/100/1000 LAN
CAT-5, 5E, 6 cables

8 Initialize the storage system

After the storage system is powered up for the first time, use the Initialization Utility on the Resource CD to initialize it.

☐ Install the Navisphere* Storage System Initialization Utility on a workstation or server connected to the same network subnet as the storage system.

Windows Servers - Follow the online instructions to install the utility.

Linux Servers - You cannot run the Initialization Utility from the CD. You must install the utility on the server.
   a. Open a terminal and go to the directory where you have mounted the CD-ROM device.
   b. Install the Initialization Utility with the **rpm -i naviinittool-version.i386.rpm** command.

☐ Start the Navisphere* Storage System Initialization Utility.
Windows Servers - Click **Start > Programs > EMC > Navisphere > Navisphere Storage System Initialization**

Linux Servers - Open a terminal window and enter
   cd /opt/Navisphere/bin
   ./naviinittoolcli

☐ After the discovery, the utility displays the serial number for each storage system it finds on the network subnet. (The display lists new, uninitialized systems in the *left* pane.) Select the serial number you recorded in Step 3.

☐ Use the Navisphere* Storage System Initialization Utility to set network parameters and define a user account for the storage system. To use the Initialization Utility, follow the instructions on the screen.

The storage system will reboot automatically after initialization, a process that may take several minutes to complete. Make certain the SP boot/fault light on each SP has stopped blinking and is off before running the Navisphere* Server Utility.
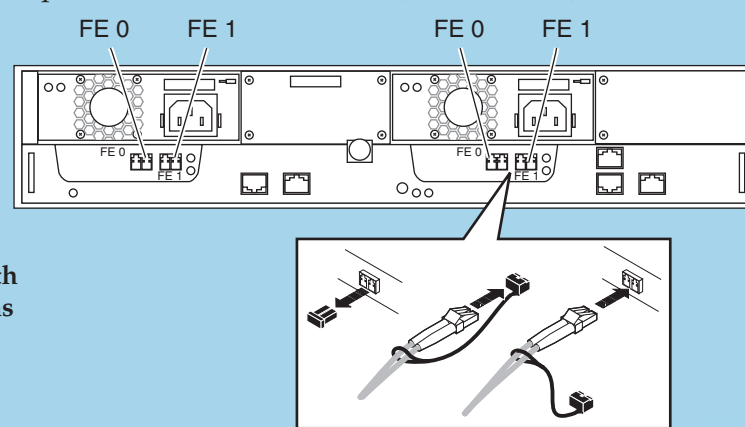
9 Connect data ports to servers (hosts)

☐ For a direct connection to a server:
Connect the FE 0 and FE 1 ports to HBAs in the server with optical Fibre Channel cables (not included).
For highest availability with a multiple-HBA server:
• On an SSR212PPf (single SP), connect FE 0 to one HBA and FE 1 to another HBA.
• On an SSR212PP2f (dual SP), connect either FE port on SP A to one HBA and either FE port on SP B to another HBA.
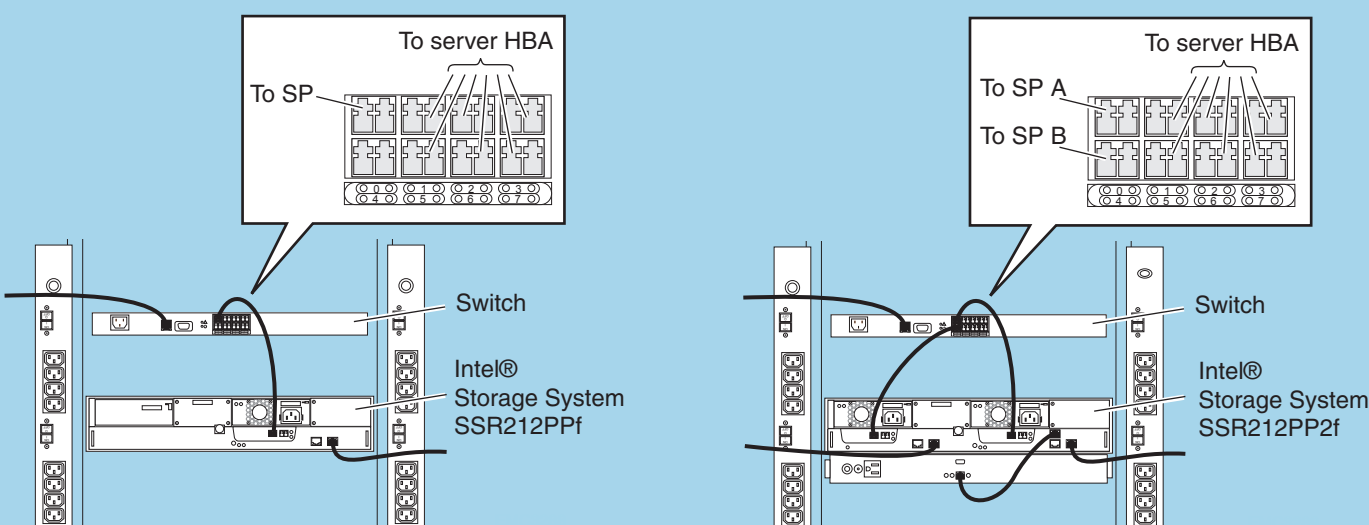
FE 0   FE 1   FE 0   FE 1

The illustration shows an Intel® Storage System SSR212PP2f with four FE data ports; the Intel® Storage System SSR212PPf only has two Fibre Channel ports (FE 0 and FE 1) on storage processor A.

☐ For a switch connection to a server:
To connect the storage system to a supported switch, refer to the documentation that came with the switch. Customer-installable switches are easily configured (some are preconfigured) so any HBA connected to switch ports other than 0 and 4 communicates with storage processors connected to switch ports 0 or 4. With switches set up in such "hard zones," you can connect FE 0 or FE 1 only to ports 0 and 4, and HBAs only to ports 1, 2, 3, 5, 6, or 7...16.

For the highest availability with one preconfigured switch:
• On an SSR212PPf (single SP), connect FE 0 to switch port 0 and FE 1 to switch port 4.
• On an SSR212PP2f (dual SP), connect either FE port on SP A to port 0 and either FE port on SP B to switch port 4.

To server HBA
To SP
Switch
Intel® Storage System SSR212PPf

To server HBA
To SP A
To SP B
Switch
Intel® Storage System SSR212PP2f

10 Register servers with the storage system

☐ Install the Navisphere* Server Utility (version 6.20 or higher) from the Resource CD on each server connected (either directly or through a switch) to the storage system.

Windows Servers - Follow the online instructions to install the utility. Accept all defaults; *do not disable* the **Registration Service** (enabled by default).

Linux Servers -
   a. Open a terminal window and go to the directory where you have mounted the CD-ROM device.
   b. Install the Server Utility with the **rpm -i naviserverutil-*version-build-platform*.rpm** command, where:
      - *version* and *build* are the version number and build number for the Navisphere* Server Utility on the CD. For example, **6.20.2.2.27-1**.
      - *platform* is your Linux platform number. For example, **i386**, **ia64**, or **x86-64**.

For a SuSE* ia64 system, use the rpm -i naviserverutil_suse-*version-build-platform*.rpm command.

The storage system rebooted automatically after initialization. Make certain the SP boot/fault light on each SP has stopped blinking and is off before running the Navisphere* Server Utility.

☐ Start the Navisphere* Server Utility on each server attached to the storage system.

Windows Servers - Click **Start > Programs > EMC > Navisphere > Navisphere Server Utility**

Linux Servers - Open a terminal and enter
   cd /opt/Navisphere/bin
   ./naviserverutilcli

Use the instructions on the Server Utility screen to register the server host bus adapter (HBA) with the storage system.

You must install and run the Server Utility on every server that connects to the storage system.

11 Configure storage

☐ Start Navisphere* Express:
   a. Open an Internet browser, such as Microsoft Internet Explore* or Netscape*.
   b. In the browser navigation window, enter the IP address of either SP in the storage system. (You recorded the IP addresses in Step 1 and initialized the storage system with them in Step 8.)
   c. When Navisphere* Express opens, log in with the username and password you specified with the Initialization wizard (Step 8).

☐ Follow the online help to configure the storage system as follows:
   • create a hot spare
   • create disk pools and virtual disks
   • assign virtual disks to a server
   • configure the Event Notification page to send you email notification when the storage system encounters a problem

☐ Reboot your server.

12 What next?

☐ Register the storage system to receive alerts and software downloads.

☐ Follow your operating system's instructions to prepare the virtual disks to receive data.

For more details, refer to the Navisphere* Express online help.

☐ If your configuration includes a Fibre Channel switch that you want to manage over the local area network, follow the instructions that came with it to assign an IP address to the switch.