Replacing an SFP Transceiver in the 6180 Array Module Configuration

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Replacing an SFP Transceiver in the

Revision History

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Replacing an SFP Transceiver in the 6180 Array Module Configuration

Before you replace a Small Form-factor Pluggable (SFP) transceiver in the an array module or drive module, gather antistatic protection and a replacement SFP transceiver.

**NOTE**  The SFP transceivers for 8-Gb/s Fibre Channel array modules are different than the ones used for 2-Gb/s and 4-Gb/s Fibre Channel array modules, or the 10-Gb/s iSCSI array modules. The SFP transceivers look similar but behave differently.

**ATTENTION**  Possible hardware damage – To prevent electrostatic discharge damage to the module, use proper antistatic protection when handling module components.

1  If possible, use the storage management software to create, save, and print a new storage array profile.

2  Did the Recovery Guru direct you to replace a failed controller CRU?
   - Yes – Go to step 3.
   - No – Run the Recovery Guru to identify the failed component, and go to step 3.

3  Put on antistatic protection.

4  Unpack the new SFP transceiver.
   - Make sure that it is the same type of SFP transceiver that you are replacing.
   - Set the new SFP transceiver on a flat, static-free surface near the array module or the drive module.
   - Save all the packing materials in case you need to return the SFP transceiver.

5  To locate a failed SFP transceiver in the 6180 array module, look at the Host Channel Speed LEDs on the rear of the controller canisters (Figure 1). Both Host Channel Speed LEDs for a particular port are off if an SFP transceiver has failed.
1. If both Host Channel LEDs are off for a particular port – You must replace the SFP transceiver. Go to step 6.

2. If at least one Host Channel LED is on for a particular port – The SFP transceiver is functional. The Host LEDs indicate a channel speed of 1 Gb/s, 2 Gb/s, 4 Gb/s, 8 Gb/s, or 10 Gb/s.

**ATTENTION** Potential degraded performance – To prevent degraded performance, do not twist, fold, pinch, or step on fiber-optic cables. Do not bend the fiber-optic cables tighter than a 5-cm (2-in.) radius.

**NOTE** The Controller Service Action Required LED comes on whenever a loss of a path occurs. The storage management software’s Tray Component information dialog provides both channel and port information to help you identify the components that are in the path.

Check the Drive Channel LEDs on the rear of the 6180 controller CRU to locate the failed SFP transceiver (Figure 2). Both Drive Channel LEDs for a particular port are off if an SFP transceiver has failed.
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Figure 2  Drive LEDs on the 6180 Controller CRU

- **1** Drive Channel Link LED for Port 0 (Amber)
- **2** Drive Channel LED for Port 0 (Green)
- **3** Drive Channel LED for Port 1 (Green)
- **4** Drive Channel Link LED for Port 1 (Amber)
- **5** Controller Service Action Allowed LED (Blue)
- **6** Controller Service Action Required LED (Amber)

- If all of the Drive LEDs are off for a particular port on the array module – You must replace the SFP transceiver. Go to step 7.

- If any Drive Channel Speed LED is on – The SFP transceiver is functional. The Drive Channel Speed LEDs indicate a channel speed of 1 Gb/s, 2 Gb/s, 4 Gb/s, 8 Gb/s or 10 Gb/s. The Drive Channel Link LEDs are amber when a link is not sensed. Go to step 7.

7 On the CSM200 drive module, check the Drive Channel Speed LEDs on the rear of the ESM/IOM CRU to locate the failed SFP transceiver (Figure 3). Both Drive Channel Speed LEDs for a particular port are off if an SFP transceiver has failed.

Figure 3  ESM/IOM LEDs on the CSM200 Drive Module

- **1** ESM Service Action Allowed LED (Blue)
- **2** ESM Service Action Required LED (Amber)
- **3** Drive Channel Speed LEDs
- **4** Link LEDs
4 Replacing an SFP Transceiver in the 6180 Array Module Configuration

- **If all of the Drive Channel Speed LEDs are off for a particular port on the drive module** – You must replace the SFP transceiver. Go to step 8.

- **If any Drive Channel Speed LED is on** – The SFP transceiver is functional. The Drive Channel Speed LEDs indicate a channel speed of 1 Gb/s, 2 Gb/s, or 4 Gb/s. The ESM/IOM Link LED is amber when a link is not sensed.

8 If it is present, disconnect the fiber-optic cable from the failed SFP transceiver (Figure 4).

![Figure 4 SFP Transceiver and Fiber-Optic Cable](image)

1 SFP Transceiver
2 Fiber-Optic Cable

9 Remove the failed SFP transceiver from the appropriate interface port (Figure 5).

![Figure 5 Removing an SFP Transceiver – CSM200 Drive Module](image)

1 Fiber-Optic Cable
2 SFP Transceiver
3 Drive Interface Port

10 Install the new SFP transceiver into the interface port.

11 Reconnect the fiber-optic cable.

12 Look at the Host Channel LEDs, the Drive Channel LEDs, and the Service Action Required LEDs on the array module.

13 Based on the LED status, perform one of these actions:
- At least one of the Host Channel LEDs or Drive Channel LEDs on either a 6180 array module or an CSM200 drive module for each port is on, and the Service Action Required LED is off – Go to step 15.

- Both of the Host Channel LEDs or Drive Channel LEDs on either a 6180 array module or a CSM200 drive module for a particular port are off, and the Service Action Required LED is on – Check that the SFP transceiver has been installed correctly. Reinstall the SFP transceiver if necessary. Go to step 14.

14 Did this action correct the problem?
- Yes – Go to step 15.
- No – If the problem is not resolved, contact your Sun Customer Care Center representative.

15 Complete any remaining Recovery Guru procedures, if needed.

16 Using the LEDs and the storage management software, check the status of all of the modules in the storage array.

17 Does any component have a Needs Attention status?
- Yes – Click the Recovery Guru toolbar button in the Array Management Window, and complete the recovery procedure. If the problem is not resolved, contact your Sun Customer Care Center representative.
- No – Go to step 18.

18 Remove the antistatic protection.

19 Create, save, and print a new storage array profile.