



## Maintaining the CPT 200 and CPT 600 Shelf

This chapter explains how to maintain the CPT 200 and CPT 600 shelf installations.

### NTP-J95 Replace the Air Filter of the CPT 200 Shelf Assembly

<b>Purpose</b>	This procedure replaces the air filter of the CPT 200 shelf assembly.
<b>Tools/Equipment</b>	None
<b>Prerequisite Procedures</b>	<ul style="list-style-type: none"><li>• “NTP-J84 Install the CPT 600 Shelf” task on page 4-5</li><li>• Connect the chassis to the office ground. For detailed instructions on how to ground the chassis, refer to the <a href="#">Electrostatic Discharge and Grounding Guide for Cisco CPT and Cisco ONS Platforms</a>.</li></ul>
<b>Required/As Needed</b>	As Needed
<b>Onsite/Remote</b>	Remote
<b>Security Level</b>	Provisioning or higher



#### Note

Air filters are replaceable or reusable.



#### Warning

**Do not reach into a vacant slot or chassis while you install or remove a module or a fan. Exposed circuitry could constitute an energy hazard. Statement 206**



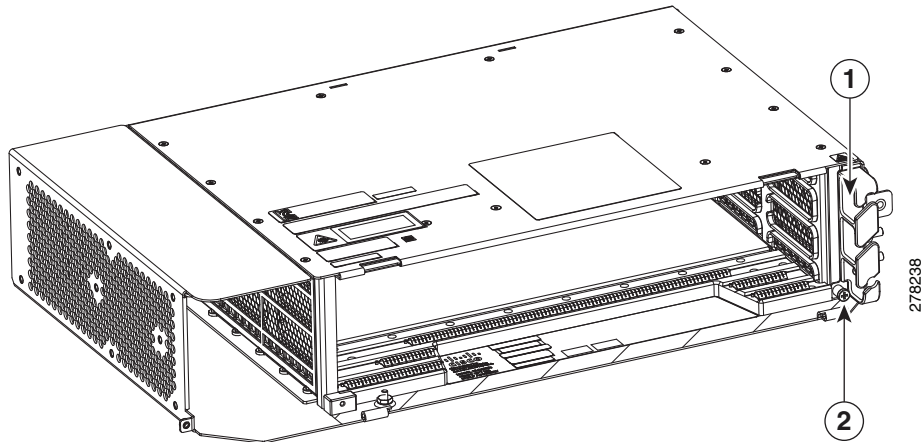
#### Caution

Cisco recommends that you inspect the air filter monthly, and clean the filter every three to six months. Replace the air filter every two to three years. Avoid cleaning the air filter with harsh cleaning agents or solvents.

#### Step 1

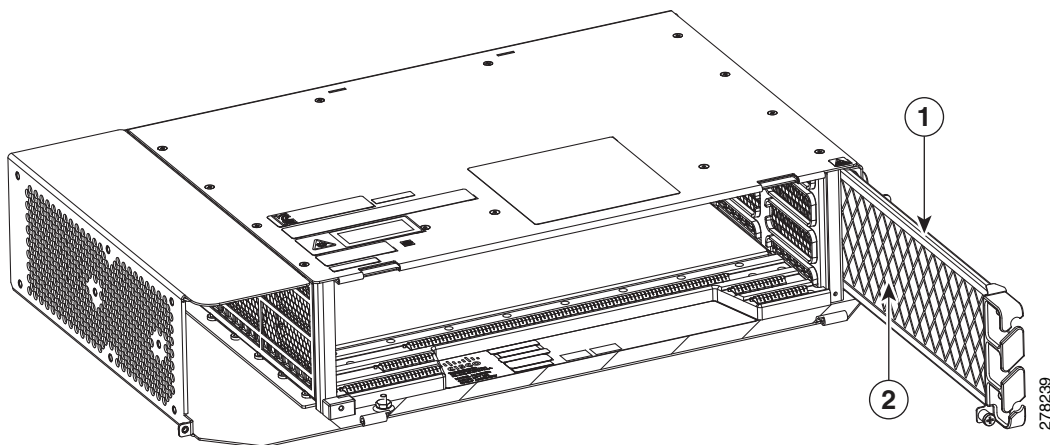
Loosen the screw on the air-filter (see [Figure 5-3](#)).

**Figure 5-1** Replacing the Air Filter



**Step 2** Extract the air filter from the shelf assembly (see [Figure 5-4](#)).

**Figure 5-2** Replacing the Air Filter



**Step 3** Clean or replace the air filter.

**Step 4** Insert the air filter into the shelf assembly (see [Figure 5-4](#)).



**Note** The air filter must be inserted with the grid facing the shelf assembly as shown in [Figure 5-4](#).

**Step 5** Tighten the screw on the air-filter.

**Stop. You have completed this procedure.**

# NTP-J96 Replace the Air Filter of the CPT 600 Shelf Assembly

<b>Purpose</b>	This procedure replaces the air filter of the CPT 600 shelf assembly.
<b>Tools/Equipment</b>	None
<b>Prerequisite Procedures</b>	<ul style="list-style-type: none"> <li>• “<a href="#">NTP-J84 Install the CPT 600 Shelf</a>” task on page 4-5</li> <li>• Connect the chassis to the office ground. For detailed instructions on how to ground the chassis, refer to the <a href="#">Electrostatic Discharge and Grounding Guide for Cisco CPT and Cisco ONS Platforms</a>.</li> </ul>
<b>Required/As Needed</b>	As Needed
<b>Onsite/Remote</b>	Remote
<b>Security Level</b>	Provisioning or higher


**Note**

Air filters are replaceable or reusable.

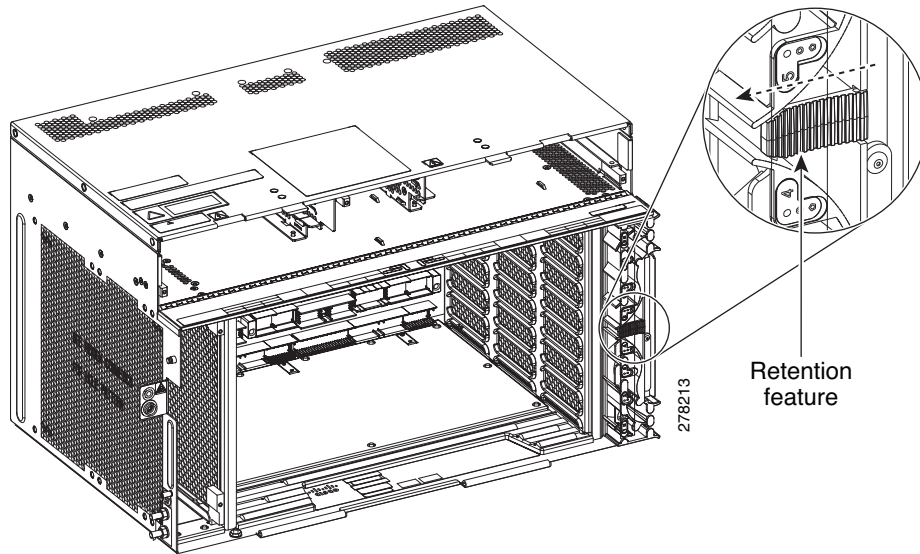

**Warning**

**Do not reach into a vacant slot or chassis while you install or remove a module or a fan. Exposed circuitry could constitute an energy hazard. Statement 206**

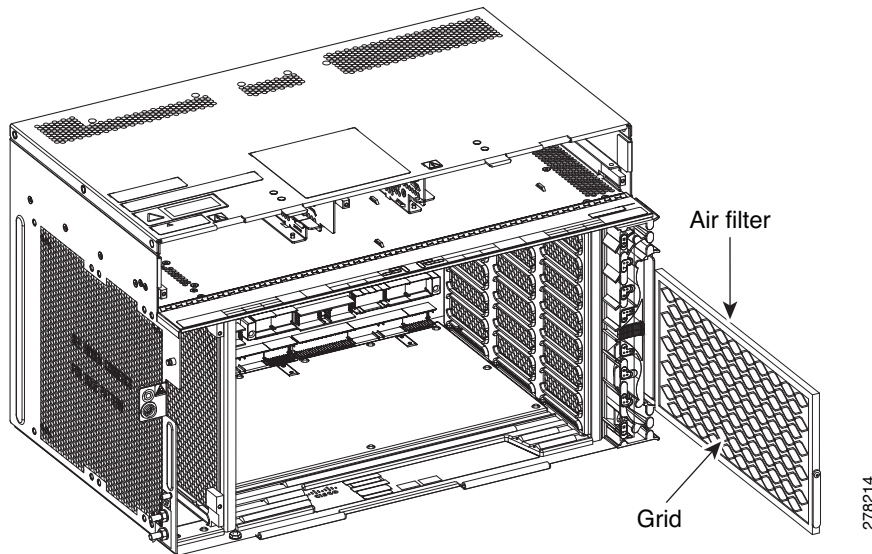

**Caution**

Cisco recommends that you inspect the air filter monthly, and clean the filter every three to six months. Replace the air filter every two to three years. Avoid cleaning the air filter with harsh cleaning agents or solvents.

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- Step 1** Open the front door of the shelf assembly (see “[DLP-J271 Open the Standard Door of the CPT 600 Shelf](#)” task on page 4-31). If the shelf assembly does not have a front door, continue with [Step 3](#).
- Step 2** (Optional) Complete the “[DLP-J272 Remove the Standard Door of the CPT 600 Shelf](#)” task on page 4-32 to remove the front door. If you do not want to remove the door, proceed to [Step 3](#).
- Step 3** Push the retention feature present on the right side of the shelf assembly to the left side (see [Figure 5-3](#)).

**Figure 5-3** Replacing the Air Filter

**Step 4** Extract the air filter from the shelf assembly (see [Figure 5-4](#)).

**Figure 5-4** Extracting the Air Filter

**Step 5** Clean or replace the air filter.

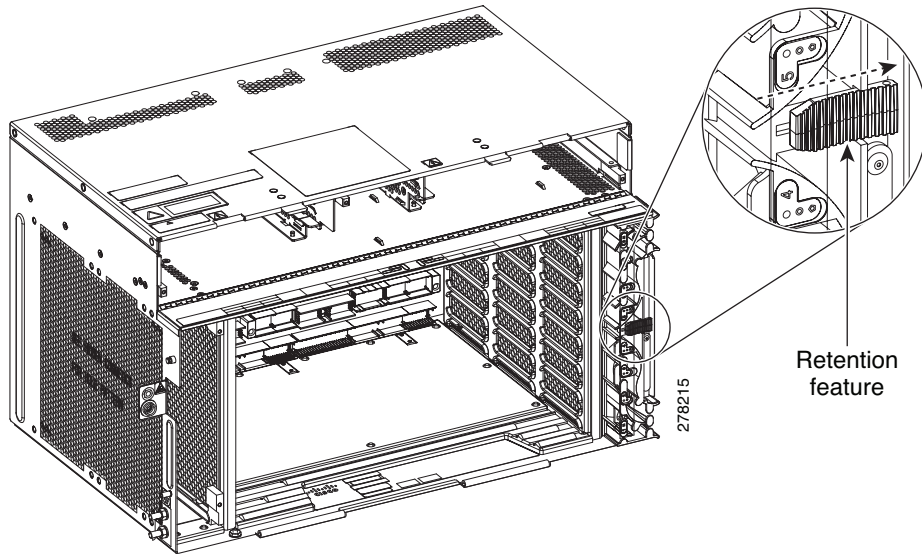
**Step 6** Insert the air filter into the shelf assembly (see [Figure 5-4](#)).



**Note** The air filter must be inserted with the grid facing the shelf assembly as shown in [Figure 5-4](#).

**Step 7** Push the retention feature to the right side (see [Figure 5-5](#)).

Figure 5-5 Replacing the Air Filter



**Step 8** Close the front door. If you removed the door, complete the “[NTP-J85 Install the Standard Door of the CPT 600 Shelf](#)” task on page 4-27.

**Stop.** You have completed this procedure.

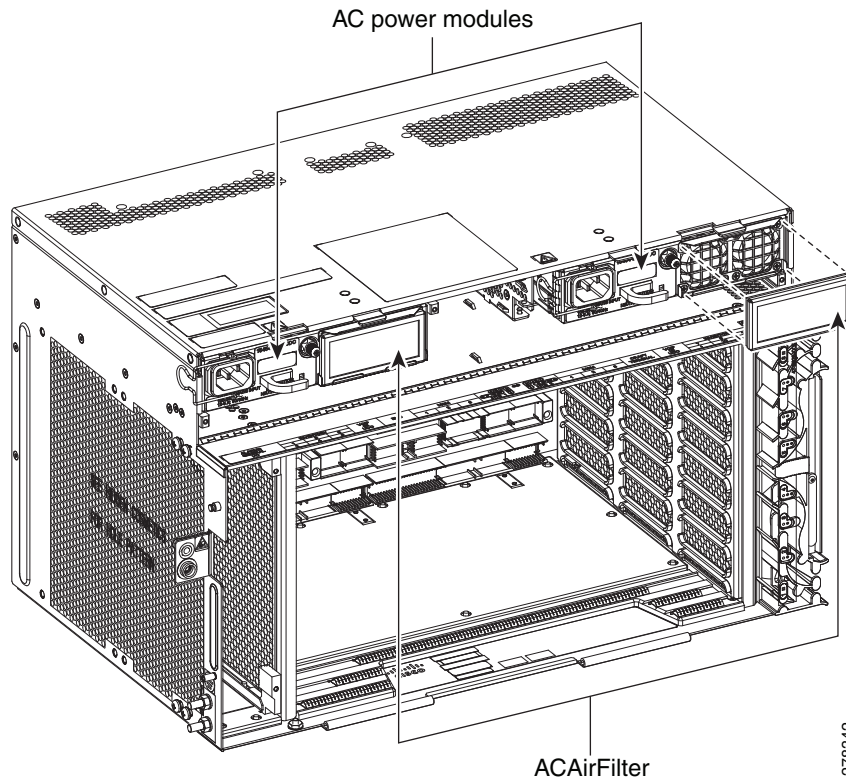
## NTP-J97 Replace the Air Filter of the AC Power Module in the CPT 600 Shelf Assembly

<b>Purpose</b>	This procedure replaces the air filter of the AC power module in the CPT 600 shelf assembly.
<b>Tools/Equipment</b>	None
<b>Prerequisite Procedures</b>	<ul style="list-style-type: none"> <li>• “<a href="#">NTP-J84 Install the CPT 600 Shelf</a>” task on page 4-5</li> <li>• Connect the chassis to the office ground. For detailed instructions on how to ground the chassis, refer to the <a href="#">Electrostatic Discharge and Grounding Guide for Cisco CPT and Cisco ONS Platforms</a>.</li> <li>• “<a href="#">DLP-J273 Install the AC Power Module in the CPT 600 Shelf</a>” task on page 4-51.</li> </ul>
<b>Required/As Needed</b>	As Needed
<b>Onsite/Remote</b>	Remote
<b>Security Level</b>	Provisioning or higher

**Step 1** Open the front door of the shelf assembly (see “[DLP-J271 Open the Standard Door of the CPT 600 Shelf](#)” task on page 4-31). If the shelf assembly does not have a front door, continue with [Step 3](#).

- Step 2** (Optional) Complete the “[DLP-J272 Remove the Standard Door of the CPT 600 Shelf](#)” task on page 4-32 to remove the front door. If you do not want to remove the door, proceed to [Step 3](#).
- Step 3** Remove the air filter on the AC power module (see [Figure 5-3](#)).

**Figure 5-6 Replacing the Air Filter—AC Power Module**



- Step 4** Clean or replace the air filter.
- Step 5** Close the front door. If you removed the door, complete the “[NTP-J85 Install the Standard Door of the CPT 600 Shelf](#)” task on page 4-27.

**Stop. You have completed this procedure.**

## NTP-J98 Clean Fiber Connectors

<b>Purpose</b>	This procedure cleans the fiber connectors.
<b>Tools/Equipment</b>	Inspection microscope Type A Fiber Optic Connector Cleaner (CLETOP reel) Optical swab Optical receiver cleaning stick
<b>Prerequisite Procedures</b>	None
<b>Required/As Needed</b>	Required

Onsite/Remote	Onsite
Security Level	None

**Warning**

**Invisible laser radiation may be emitted from the end of the unterminated fiber cable or connector. Do not view directly with optical instruments. Viewing the laser output with certain optical instruments (for example, eye loupes, magnifiers, and microscopes) within a distance of 100 mm may pose an eye hazard.** Statement 1056

**Step 1** Using an inspection microscope, inspect each fiber connector for dirt, cracks, or scratches.

**Step 2** Replace any damaged fiber connectors.



**Note** Replace all dust caps whenever the equipment is unused for 30 minutes or more.

**Step 3** Complete the [“DLP-J288 Clean Fiber Connectors with CLETOP”](#) task on page 5-8 as necessary.

**Step 4** Complete the [“DLP-J289 Clean the Fiber Adapters”](#) task on page 5-8 as necessary.

**Note**

To clean multi-fiber optic connectors, complete the [“DLP-J287 Clean Multi Fiber-Optic Cable Connectors”](#) task on page 5-7 as necessary.

**Stop. You have completed this procedure.**

## DLP-J287 Clean Multi Fiber-Optic Cable Connectors

<b>Purpose</b>	This task cleans the multi fiber optic connectors
<b>Tools/Equipment</b>	Cleaning Cartridge for multi fiber optic connectors
<b>Prerequisite Procedures</b>	None
<b>Required/As Needed</b>	Required
<b>Onsite/Remote</b>	Onsite
<b>Security Level</b>	None

**Warning**

**Invisible laser radiation may be emitted from disconnected fibers or connectors. Do not stare into beams or view directly with optical instruments.** Statement 1051

**Step 1** Remove the protective cap on the optical fiber cable connector.

**Step 2** Read the manufacturer (cleaning cartridge) instructions to insert the connector into the cleaning cartridge.

**Step 3** Slide the lever on the cartridge to swipe the connector surface.

**Step 4** Insert the fiber connector into the applicable adapter or attach a dust cap to the fiber connector.




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**Note** If you must replace a dust cap on a connector, first verify that the dust cap is clean.

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**Step 5** Return to your originating procedure (NTP).

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## DLP-J288 Clean Fiber Connectors with CLETOP

<b>Purpose</b>	This task cleans the fiber connectors with CLETOP.
<b>Tools/Equipment</b>	Type A Fiber Optic Connector Cleaner (CLETOP reel) Optical receiver cleaning stick
<b>Prerequisite Procedures</b>	None
<b>Required/As Needed</b>	Required
<b>Onsite/Remote</b>	Onsite
<b>Security Level</b>	None

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**Step 1** Remove the dust cap from the fiber connector.

**Step 2** Press the lever up to open the shutter door. Each time you press the lever, you expose a clean wiping surface.

**Step 3** Insert the connector into the CLETOP cleaning cassette slot, rotate one quarter turn, and gently swipe downwards.

**Step 4** Use an inspection microscope to inspect each fiber connector for dirt, cracks, or scratches. If the connector is not clean, repeat Steps 1 to 3.

**Step 5** Insert the fiber connector into the applicable adapter or attach a dust cap to the fiber connector.




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**Note** If you must replace a dust cap on a connector, first verify that the dust cap is clean. To clean the dust cap, wipe the outside of the cap using a dry, lint-free wipe and the inside of the dust cap using a CLETOP stick swab (14100400).

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**Step 6** Return to your originating procedure (NTP).

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## DLP-J289 Clean the Fiber Adapters

<b>Purpose</b>	This task cleans the fiber adapters.
<b>Tools/Equipment</b>	CLETOP stick swab
<b>Prerequisite Procedures</b>	None
<b>Required/As Needed</b>	Required
<b>Onsite/Remote</b>	Onsite
<b>Security Level</b>	None



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- Step 1** Remove the dust plug from the fiber adapter.
- Step 2** Insert a CLETOP stick swab (14100400) into the adapter opening and rotate the swab.
- Step 3** Place dust plugs on the fiber adapters when not in use.
- Step 4** Return to your originating procedure (NTP).
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## NTP-J100 Replace the Fan-Tray Assembly of the CPT 200 Shelf Assembly

<b>Purpose</b>	This procedure replaces the fan-tray assembly of the CPT 200 shelf assembly.
<b>Tools/Equipment</b>	Small slot-head screwdriver
<b>Prerequisite Procedures</b>	<a href="#">“NTP-J79 Install the Fan-Tray Assembly in the CPT 200 Shelf” task on page 3-47</a>
<b>Required/As Needed</b>	Required
<b>Onsite/Remote</b>	Onsite
<b>Security Level</b>	None



### Caution

Do not force a fan-tray assembly into place. Doing so can damage either the connectors on the fan-tray or the connectors on the back panel of the shelf assembly, or both.

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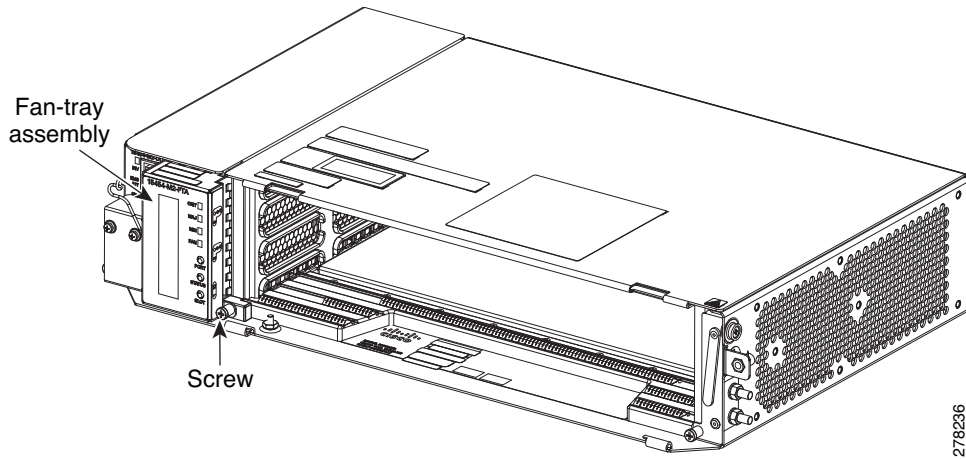
### Note

The estimated time required to change a fan-tray assembly is 2 minutes.

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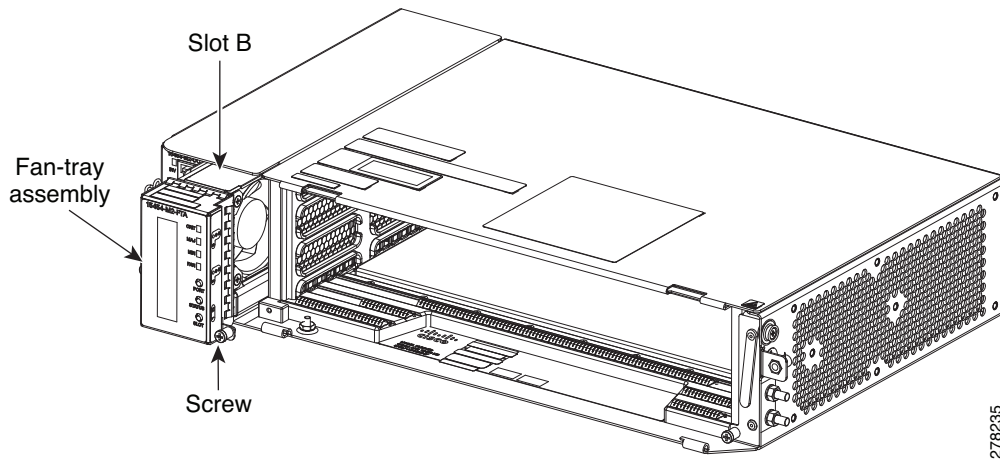
- Step 1** Loosen the screw on the fan-tray assembly (see [Figure 5-7](#)).

**Figure 5-7** Fan-Tray Assembly installed in the CPT 200 Shelf Assembly



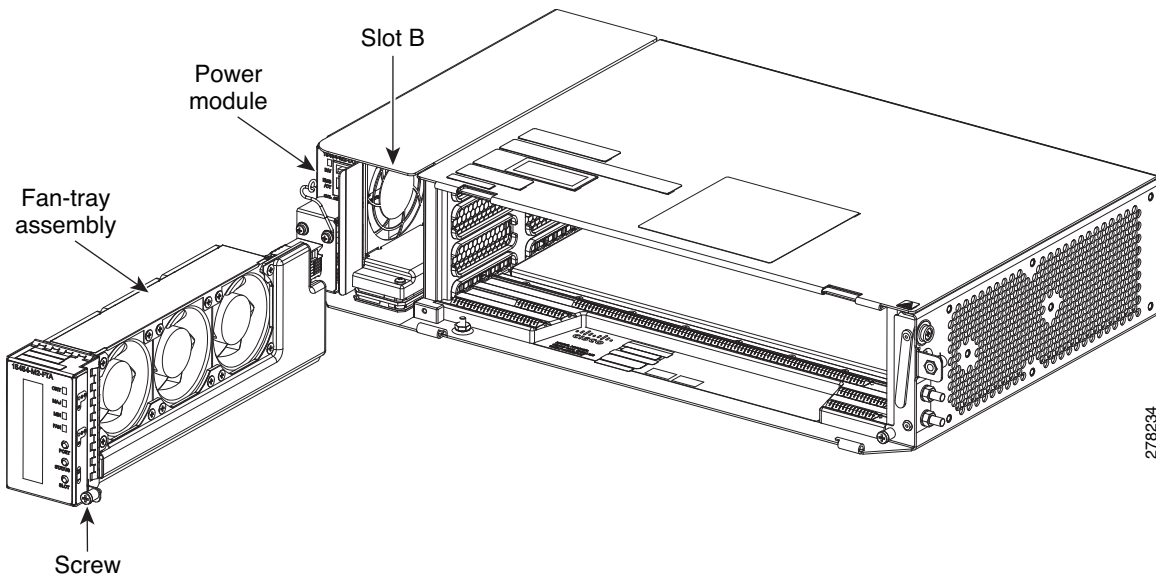
- Step 2** Extract the fan-tray assembly partially to disconnect the backplane connector and wait until the fan stops (see [Figure 5-8](#))

**Figure 5-8** Fan -Tray Extracted Partially with Power Connector Disconnected



- Step 3** When the fans have stopped, pull the fan-tray assembly completely out of the shelf assembly (see [Figure 5-9](#)).

Figure 5-9 Fan-Tray Extracted



- Step 4** Slide the new fan-tray assembly into the shelf assembly until the electrical plug at the rear of the tray plugs into the corresponding receptacle on the backplane.
- Step 5** To verify that the tray has plugged into the backplane, ensure that the LCD on the front of the fan-tray is activated.

**Stop.** You have completed this procedure.

## NTP-J101 Replace the Fan-Tray Assembly of the CPT 600 Shelf Assembly

<b>Purpose</b>	This procedure replaces the fan-tray assembly of the CPT 600 shelf assembly.
<b>Tools/Equipment</b>	Small slot-head screwdriver
<b>Prerequisite Procedures</b>	<a href="#">“NTP-J91 Install the Fan-Tray Assembly in the CPT 600 Shelf” task on page 4-78</a>
<b>Required/As Needed</b>	Required
<b>Onsite/Remote</b>	Onsite
<b>Security Level</b>	None



### Caution

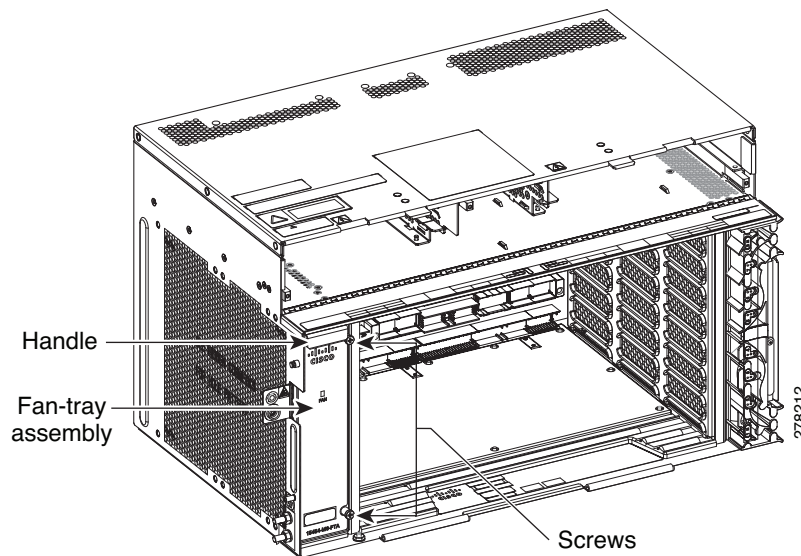
Do not force a fan-tray assembly into place. Doing so can damage either the connectors on the fan-tray or the connectors on the back panel of the shelf assembly, or both.

**Note**

The estimated time required to change a fan-tray assembly is 2 minutes.

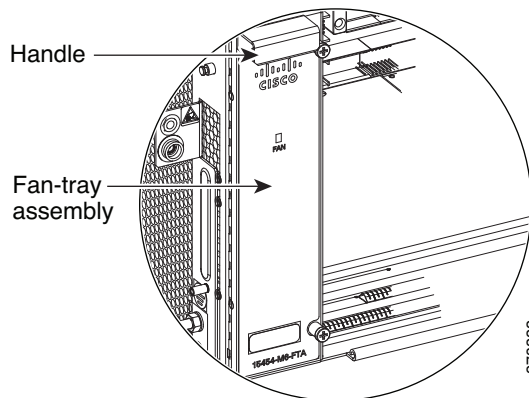
- Step 1** Open the front door of the shelf assembly (see “DLP-J271 Open the Standard Door of the CPT 600 Shelf” task on page 4-31). If the shelf assembly does not have a front door, continue with **Step 3**.
- Step 2** (Optional) Complete the “DLP-J272 Remove the Standard Door of the CPT 600 Shelf” task on page 4-32 to remove the front door. If you do not want to remove the door, proceed to **Step 3**.
- Step 3** Loosen the screws on the fan-tray assembly (see [Figure 5-10](#)).

**Figure 5-10** Extract the Fan-Tray Assembly



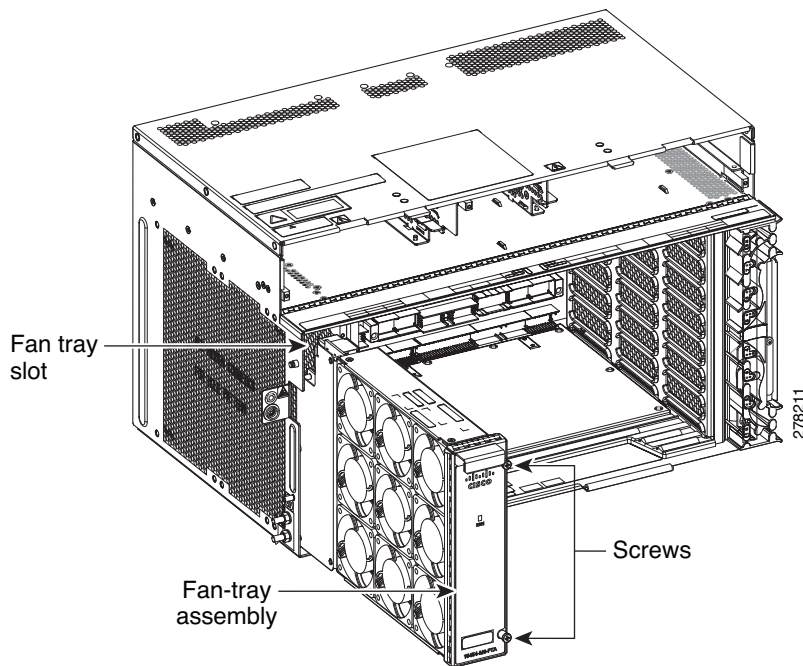
- Step 4** Extract the fan-tray partially using the handle in order to disconnect the backplane connector and wait until the fan stops (see [Figure 5-11](#)).

**Figure 5-11** Fan-Tray Assembly Extracted Partially with Power Connector Disconnected



- Step 5** When the fans have stopped, pull the fan-tray assembly completely out of the shelf assembly (see [Figure 5-12](#)).

Figure 5-12 Fan-Tray Extracted



- Step 6** Slide the new fan-tray into the shelf assembly until the electrical plug at the rear of the tray plugs into the corresponding receptacle on the backplane.
- Step 7** To verify that the tray has plugged into the backplane, ensure that the LED on the front of the fan-tray is activated.
- Step 8** If you removed the door, complete the “[NTP-J85 Install the Standard Door of the CPT 600 Shelf](#)” task on page 4-27.

**Stop. You have completed this procedure.**

