

M5 and M10 Routers Cooling System Replacement Instructions

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This document describes how to remove and replace the fan tray in a Juniper Networks M5 or M10 Internet Backbone Router.

For additional installation and configuration information, refer to the following documentation:

- *M5 and M10 Internet Backbone Routers Hardware Installation Guide*
- JUNOS Internet software configuration guides
- *JUNOS Internet Software Command Reference*

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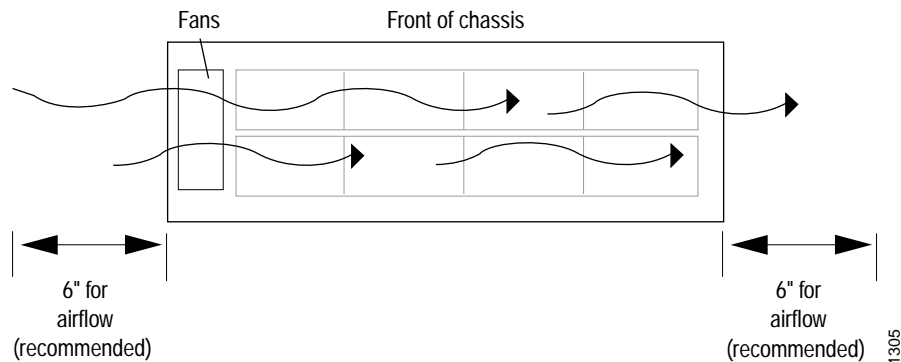
Cooling System Description

The router cooling system consists of a fan tray located along the left side of the chassis. (see Figure 1). The fan tray is a single unit containing four fans, and provides side-to-side cooling. It is hot-removable and hot-insertable. It connects directly to the router midplane.



Caution

The router should not be operated for more than 1 minute without a fan tray. Operating the router without the fan tray can cause the router to exceed recommended operating temperature.

Figure 1: Air Flow through the Chassis

Tools and Parts Required

To replace cooling system components, you need the following tools and parts:

- Phillips (+) screwdrivers, numbers 1 and 2
- ESD grounding wrist strap

Remove the Fan Tray

The fan tray is located along the left side of the chassis (as you face the front of the router), and is removable from the rear. The fan tray houses four separate fans and weighs approximately 4 lbs (1.8 kg).

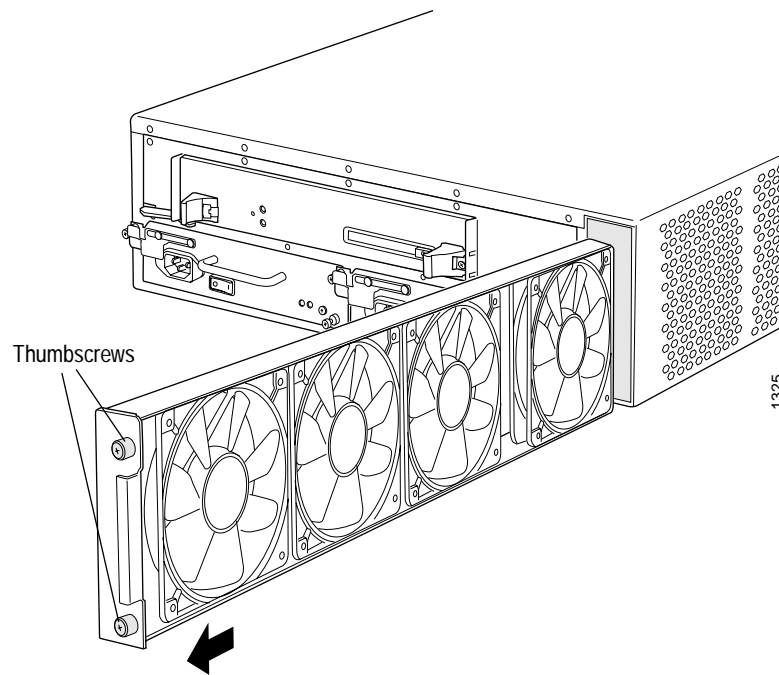
To remove the fan tray, follow this procedure (see Figure 2):

1. Attach an ESD wrist strap to your bare wrist and connect the wrist strap to one of the two ESD points on the chassis.
2. Using a screwdriver, loosen the thumbscrews above and below the fan tray handle.
3. Grasp the fan tray handle and slide the tray three quarters of the way out of the chassis.



If the fans are still spinning, avoid putting your fingers or any tool into the fan tray as you pull it out. To avoid injury, wait until the fans stop spinning before removing the fan tray.

4. Move one of your hands underneath the fan tray to support it and slide the fan tray completely out of the chassis.

Figure 2: Remove the Fan Tray

Install a Replacement Fan Tray

To install a replacement fan tray into the chassis, follow this procedure (see Figure 3):

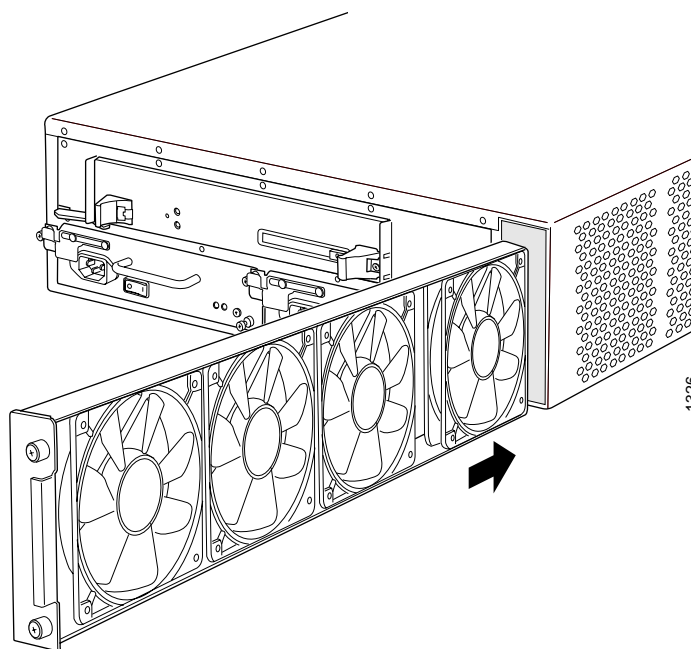
1. Attach an ESD wrist strap to your bare wrist and connect the wrist strap to one of the two ESD points on the chassis.
2. Align the fan tray with the bay on the right side of the chassis. Make sure that the fan tray handle and thumbscrews are on the outside edge of the fan tray, so the fan tray goes into the bay correctly.
3. Slide the fan tray into the bay, aligning the thumbscrews at the corners of the fan tray with the mounting holes on the bay.
4. Using a screwdriver, tighten the thumbscrews.



Note

To seat the fan tray properly, be sure to tighten the thumbscrews adequately.

Figure 3: Install a Replacement Fan Tray



Contact Juniper Networks

For technical support, contact Juniper Networks at support@juniper.net. If you are reporting a software problem, please issue the following command from the CLI before contacting support:

```
user @ host> request support information | save filename
```

For documentation issues, contact Juniper Networks at tech-doc@juniper.net.

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