

Preventive Maintenance

This chapter describes preventive maintenance procedures for the Cisco 6200 advanced digital subscriber line access multiplexer (DSLAM).

6.1 Making PCMCIA Backup Cards

This section tells you how to create Personal Computer Memory Card International Association (PCMCIA) backup cards.

Cisco recommends that you maintain two PCMCIA Flash memory cards with copies of the Cisco 6200's current boot software image and the current software configuration. Keep one backup card in the PCMCIA slot of the MPC, and keep the other card in a safe place.

A PCMCIA backup card enables you to recover from a fault in the management processor card (MPC) with minimal disruption. If you have a backup card, you can use that card to load a new MPC without interrupting the flow of traffic passing through the Cisco 6200 system. If you have to install a replacement MPC without a backup card, the Cisco 6200 system resets itself, which briefly halts traffic.

Before you begin, obtain a PCMCIA Flash card with at least 4 MB of memory.

Follow these steps to format a new PCMCIA card and copy Cisco IOS software and configuration files to it.

Step 1 Place the backup PCMCIA card in the right PCMCIA slot (slot 1) in the MPC.

Step 2 Locate the PCMCIA card that shipped with the Cisco 6200 system. If that card is currently in the other PCMCIA slot, remove it while you format the new card.



Caution If you format the PCMCIA card with the Cisco IOS software image, the software image will be lost.

Step 3 Enter the **format** command to format the new PCMCIA card in PCMCIA slot 1. When the system prompts you to confirm, press **Return**. When the system prompts you to enter a volume ID, press **Return** again.

```
c6200# format slot1:
All sectors will be erased, proceed? [confirm] [Return]
Enter volume id (up to 30 characters): [Return]
Formatting sector 1
Format device slot1 completed
```

Step 4 Replace the PCMCIA card with the Cisco IOS software image in the left PCMCIA slot (slot 0).

Step 5 Enter this command at the console to display the name of the Cisco IOS software file on the PCMCIA card in slot 0:

```
6200# dir slot0:
-#- -length- -----date/time----- name
1...1166308..Jun 10 1998 10:50:18..c6200-dcm-mz.113-1.DA1.bin

15197704 bytes available (1186296 bytes used)
```

Step 6 Write down the file name. In this example, the file name is c6200-dcm-mz.113-1.DA1.bin.

Step 7 Enter the **copy** command to copy the file on the PCMCIA card in slot 0 to the backup PCMCIA card in slot 1. The name of the file may vary from the name used in this example; use the file name you wrote down in Step 6. When the system prompts you to confirm, press **Return**.

```
6200# copy slot0:c6200-dcm-mz.113-1.DA1.bin slot1:c6200-dcm-mz.113-1.DA1.bin
7602048 bytes available on device slot1, proceed? [confirm] [Return]
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
```

Step 8 Use the **copy** command to copy the system's running configuration file to the backup PCMCIA card in slot 1.

```
6200# copy running-config slot1:6200-config
Building configuration...
```

Step 9 Use the **dir** command to confirm that the files are present on the card in slot 1:

```
6200# dir slot1:
-#- -length- -----date/time----- name
1...1166308..Jul 06 1998 14:33:55..c6200-dcm-mz.113-1.DA1.bin
2.....1121..Jul 06 1998 14:44:30..6200-config

19410616 bytes available (1167688 bytes used)
```

Step 10 Use the **copy** command to copy the system's running configuration file to the original PCMCIA card in slot 0:

```
6200# copy running-config slot0:6200-config
Building configuration...
```

Step 11 Use the **dir** command to confirm that the files are present on the card in slot 0:

```
6200# dir slot0:
-#- -length- -----date/time----- name
1...1166308..Jul 06 1998 14:33:55..c6200-dcm-mz.113-1.DA1.bin
2.....1121..Jul 06 1998 14:44:30..6200-config

19410616 bytes available (1167688 bytes used)
6200#
```

You have created two identical PCMCIA cards. Leave one card in the MPC. Store the other card in a safe place, and remember to update it whenever you change the configuration or upgrade the software for the DSLAM.

6.2 Air Filter Maintenance

You must periodically clean the Cisco 6200 air filter. If the filter becomes damaged or worn, you should replace it. This chapter describes both filter cleaning and filter replacement.

6.2.1 Developing a Cleaning Schedule for the Air Filter

Your schedule for cleaning the air filter depends on how dirty the Cisco 6200 shelf's environment is. Check the filter every week or every other week after you install the system. Clean the filter whenever you notice a significant accumulation of dust on the filter. In a very dusty environment, you might need to clean the filter every week or two; in a cleaner environment, you might go several months between cleanings.

Check the filter frequently until you have a good sense of how often it needs to be cleaned. Then establish and follow a regular cleaning schedule.

Keep a log recording the date of each filter cleaning and filter replacement.

6.2.2 Cleaning and Replacing the Air Filter

This section consists of the following procedures:

- Removing the air filter from the shelf
- Cleaning the air filter
- Reinstalling the air filter

If you need to replace the air filter, skip the procedure on cleaning.

Required Tools and Equipment

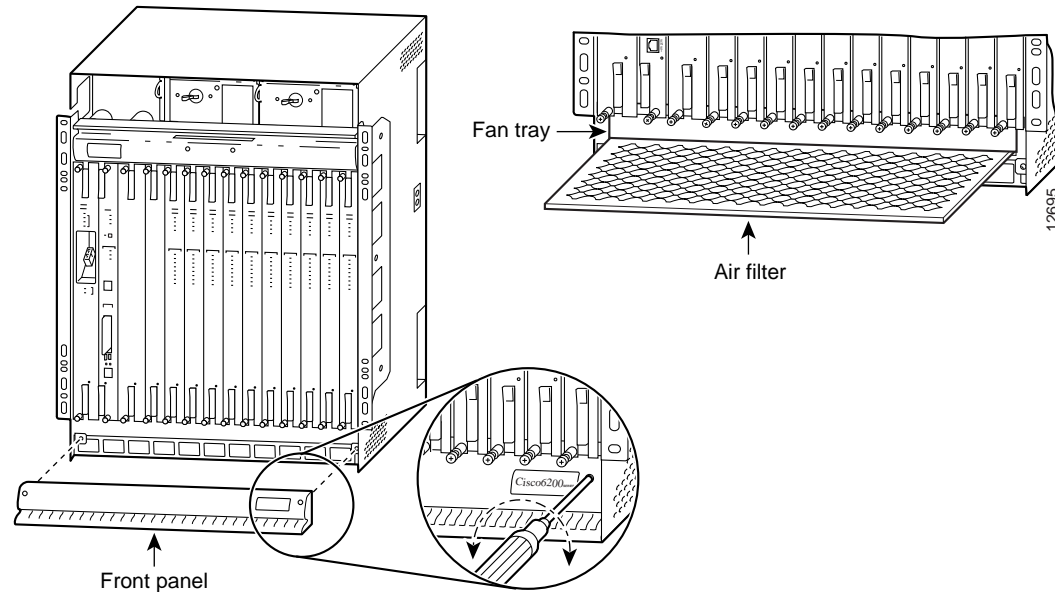
Have the following items on hand before you start:

- A Phillips screwdriver to remove the plastic cover of the fan tray
- Clean water or a vacuum cleaner for cleaning the filter

Removing the Air Filter

This procedure tells you how to remove the air filter from the Cisco 6200 chassis. Use this procedure whether you are cleaning the air filter or replacing it.

- Step 1** Use the Phillips screwdriver to remove the plastic cover plate at the bottom of the chassis' front panel (see Figure 6-1). The air filter is at the bottom of the fan tray, with the cooling fans above it.

Figure 6-1 Location of Fan Tray and Air Filter

Step 2 The air filter slides out from the bottom of the fan tray. Gently pull the filter toward you to remove it from the fan tray.

Note The fan tray might disengage from its connector and come out with the filter. If this happens:

- The fans lose power and you will hear them slowing down.
- When the fans lose power, an alarm is triggered.

Push the fan tray back into place and hold it there while you remove the filter. Use the Cisco 6200 Manager or the command line interface to disable the alarm.



Caution It is important that the Cisco 6200's cooling fans run continuously. The system may suffer thermal damage if the fans stop for more than ten minutes. (At ambient temperatures above 104 F (40 C), thermal damage may occur sooner.)

Step 3 If you are replacing the filter, discard it and skip to “Replacing the Air Filter.”

Step 4 If you wish to clean the air filter, go to the next procedure, “Cleaning the Air Filter.”

Cleaning the Air Filter

This section tells you how to clean the Cisco 6200 air filter. Skip to the next procedure if you are replacing an old filter with a new one.

Use one of the following methods to clean the air filter:

- Vacuum cleaning is preferred because it is not necessary to dry the filter afterwards. Vacuum the filter until it is clean and free of dust.

- Running the filter under a stream of plain water is equally effective. Hold the filter under the water with the metal grille facing up and let the water flow down through the filter. (This orientation causes the water to flow through the filter in the direction opposite from the usual air flow, which will dislodge rather than embed matter trapped in the filter.) Allow the filter to dry thoroughly before re-installing it.
- If the filter is too dirty to be completely cleaned with a vacuum or with plain water, immerse the filter in a solution of hot water and mild detergent. Rinse the filter thoroughly in clear water and allow it to dry completely before re-installing it.

Replacing the Air Filter

This procedure tells you how to insert the air filter into the chassis. Use this procedure if you have just cleaned the filter, or if you are replacing an old filter with a new one.

- Step 1** Hold the air filter so that the side with the metal grille is facing up (so it will be closest to the fans in the tray).
- Step 2** Slide the filter into its slot at the bottom of the fan tray.
- Step 3** Replace the panel that covers the fan tray and use a Phillips screwdriver to secure it.

