

Configure the Device

Before you begin this task, ensure that you have read and understood the safety warnings in the *Safety with Electricity* section of the Safety Warnings handout.

Note This equipment is designed to boot up in less than 30 minutes, depending on its neighbouring devices that must be fully up and running.

Note You can experience CPRI and MPLS traffic failure with load and unload configurations once in 40 power cycles.

Configuring the Cisco router involves these tasks:

- Create the Initial Router Configuration, on page 1
- Verify Device Installation, on page 3

Create the Initial Router Configuration

You must assign an IP address to the router management interface so that you can then connect the router to the network.

When you initially power up the router, it boots up and asks a series of questions to help configure the router. To enable you to connect the router to the network, you can use the default choices for each configuration except for the IP address, which you must provide.

Note Be aware of the router's unique name to identify it among the other devices in the network.

Before you begin

- A console device must be connected with the router.
- The router must be connected to a power source.

- Determine the IP address and netmask needed for the Management interfaces: `MgmtEth0/RP0/CPU0/0` and `MgmtEth0/RP1/CPU0/0`:

Procedure

Step 1 Power up the router.

The LEDs on each power supply light up (green) when the power supply units are sending power to the router, and the software asks you to specify a password to use with the router.

Step 2 When the system is booted up for the first time, a new username and a password is to be created. The following prompt appears:

```
!!!!!!!!!!!!!!!!!!!! NO root-system username is configured. Need to configure root-system username.
 !!!!!!!!!!!!!!!!!!!!

--- Administrative User Dialog ---


Enter root-system username:
% Entry must not be null.

Enter root-system username: root
Enter secret:
Use the 'configure' command to modify this configuration.
User Access Verification

Username: root
Password:


RP/0/RP0/CPU0:ios#
```

Step 3 Enter a new password to use for this router.

The software checks the security strength of it and rejects your password if it is not considered to be a strong password. To increase the security strength of your password, make sure that it adheres to the following guidelines:

- At least eight characters
- Minimizes or avoids the use of consecutive characters (such as "abcd")
- Minimizes or avoids repeating characters (such as "aaa")
- Does not contain recognizable words from the dictionary
- Does not contain proper names
- Contains both uppercase and lowercase characters
- Contains both numbers and letters

Note
Clear text passwords cannot include the dollar sign ($) special character.

Tip

If a password is trivial (such as a short, easy-to-decipher password), the software rejects the password configuration. Be sure to configure a strong password as described by the guidelines in this step. Passwords are case sensitive.

If you enter a strong password, the software asks you to confirm the password.

Step 4 Reenter the password.

When you enter the same password, the software accepts the password .

Step 5 Enter the IP address for the management interface.

Step 6 Enter a network mask for the management interface.

Step 7 The software asks whether you want to edit the configuration. Enter **no** to not edit the configuration.

Step 8 The software asks whether you want to save the configuration. Enter **yes** to save the configuration.

Verify Device Installation

After installing the Cisco router, you use the **show** commands to verify the installation and configuration. If any issue is detected, take corrective action before continuing with further configurations.

1. **show inventory**

   Displays information about the field replaceable units (FRUs), including product IDs, serial numbers, and version IDs.

   Example:

   ```
   #show inventory
   ```

2. **admin show environment**

   Displays all environment-related router information.

   Example:

   ```
   #admin show environment
   ```

3. **show environment temperature**

   Displays temperature readings for on-board temperature sensors and for PSU. Each temperature sensor has three thresholds:

   - Minor temperature threshold: When a minor threshold is exceeded, a minor alarm occurs and the following actions occur for all sensors:
     - System messages are displayed
     - SNMP notifications (if configured) are sent
     - Log environmental alarm event is triggered (Run the **show alarm** command to review this.)
   - Major temperature threshold: When a major threshold is exceeded, a major alarm occurs and the following actions occur for all sensors:
     - System messages are displayed
     - SNMP notifications (if configured) are sent

- Log environmental alarm event is triggered (Run the **show alarm** command to review this.)

- Critical temperature threshold: When a critical threshold is exceeded, a critical alarm occurs and the following actions occurs:
  - For all the main board sensors the system is shut down.
  - For the PSU sensor, the particular PSU is turned off .

4. **show environment power**

   Displays the power usage information for the entire router.

   Example:

   ```
   #show environment power
   ```

5. **show environment voltage**

   Displays the voltage for the entire router.

   Example:

   ```
   #show environment voltage
   ```

6. **show environment current**

   Displays current for different voltage rails of the router.

   Example:

   ```
   #show environment current
   ```

7. **show environment fan**

   Displays the speed of all the fans including the fan in PSU.

   Example:

   ```
   #show environment fan
   ```