



CHAPTER 7

Power-Up Procedures for Cisco 1800 Series Routers (Modular)

This chapter describes how to power up Cisco 1800 series integrated services routers (modular) and perform an initial configuration to provide network access. It includes the following sections:

[Powering Up Cisco 1800 Series Routers, page 7-1](#)

[Verifying the LED Indicators on the 1841 Router, page 7-4](#)

[Verifying the Hardware Configuration, page 7-5](#)

[Initial Configuration of the Router, page 7-5](#)

[Software Components of the Cisco 1861 Integrated Services Router, page 7-7](#)



Note

To see translations of the warnings that appear in this publication, see the [Regulatory Compliance and Safety Information for Cisco 1840 Routers](#).



Note

The Cisco 1861 Integrated Services Router supports a maximum of 12 user licenses based on different models.

Powering Up Cisco 1800 Series Routers



Warning

The plug-socket combination must be accessible at all times because it serves as the main disconnecting device. Statement 1019



Warning

Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; they contain electromagnetic interference (EMI) that might disrupt other equipment; and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and rear covers are in place. Statement 1029.



Caution

To ensure adequate cooling, never operate the router unless the unit is completely closed.

This section covers the following topics:

- [Checklist for Power Up, page 7-2](#)
- [LED Indicators, page 7-2](#)
- [Power-Up Procedure, page 7-2](#)

Checklist for Power Up

You may power up the Cisco router if the following steps have been completed:

- Mount and ground the chassis securely.
- Connect the power and interface cables.
- Make sure that the external CompactFlash memory card is properly seated into its slot. For installation instructions, see *“Installing and Replacing CompactFlash Memory Cards on Cisco 1800 Series Routers (Modular)”*.
- Connect a PC to the router’s console port.
- Start HyperTerminal or a similar terminal emulation program on your PC. Select the appropriate PC COM port. Set the terminal emulation program configuration for 9600 baud, 8 data bits, 1 stop bit, no flow control, and no parity.



Note

For initial power up, we recommend a direct console connection. After the initial configuration is completed, a remote modem connection can be used for router management.



Caution

To ensure adequate cooling, never operate the router unless the cover and all modules and cover plates are installed.



Caution

To prevent damage to the ejector mechanism, the ejector button next to the CompactFlash memory card must remain fully seated when not being used to eject a CompactFlash memory card.

LED Indicators

The meanings of the LED indicators for Cisco 1800 series routers are summarized in [Table 2-5](#). For more detailed information about the LEDs, see [Chapter 8, “Troubleshooting Cisco 1800 Series Routers \(Modular\)”](#).

Power-Up Procedure

To power up your Cisco router and verify that it completes its initialization and self-test, follow this procedure. When you have completed the procedure you may begin configuring the router.

If you encounter problems when you power up the router, see *Chapter 8, “Troubleshooting Cisco 1800 Series Routers (Modular)”*. For information about the ROM monitor and the bootstrap program, see the “Using the ROM Monitor” section of the *Cisco 1800 Series Router Software Configuration*. For information about the configuration register, see the “Changing the Configuration Register Settings” section of *Cisco 1800 Series Router Software Configuration*.

**Note**

To view the boot sequence through a terminal session, you must have a console connection to the Cisco router *before* the router powers up.

To power up the router, perform the following steps:

Step 1 Make sure that your PC is powered up and connected as described in the “Checklist for Power Up” section on page 7-2.

Step 2 Move the power switch to the ON position.

The following indications appear:

- The green SYS PWR LED on the front of the chassis comes on.
- The fan operates.

The LEDs on the chassis come on (although not necessarily at the same time), and some LEDs may go off again. The actual LED activity depends on your installation.

If you encounter problems when you power up the router, see “*Troubleshooting Cisco 1800 Series Routers (Modular)*”

Startup messages appear in your terminal emulation program window.

**Caution**

Do not press any keys on the keyboard until the messages stop. Any keys pressed during this time are interpreted as the first command typed when the messages stop, which might cause the router to power off and start over. It takes a few minutes for the messages to stop.

The startup messages vary, depending on the software installed on your router.

- If the startup messages end with the following lines, you know that the Cisco Router and Security Device Manager (SDM) software is installed on the router.

```
yourname con0 is now available
```

```
Press RETURN to get started!
```

For instructions on configuring your router by using SDM, see *Cisco Router and Security Device Manager (SDM) Quick Start Guide*.

**Note**

Because SDM is installed on your router by default, we recommend using SDM to perform the initial configuration.

- If the startup messages end with the following lines, the router is ready for initial configuration using the setup facility (system configuration dialog) or the command-line interface (CLI). Enter **yes** to continue with the setup facility; enter **no** to continue with the CLI.

```

.
--- System Configuration Dialog ---

```

```

At any point you may enter a question mark '?' for help.
Use ctrl-c to abort configuration dialog at any prompt.
Default settings are in square brackets '['].

```

```

Would you like to enter the initial configuration dialog? [yes/no]:

```

**Note**

If the `rommon 1>` prompt appears, your system has booted in ROM monitor mode. For information about the ROM monitor and the bootstrap program, see the “Using the ROM Monitor” section in *Cisco 1800 Series Router Software Configuration*.

Verifying the LED Indicators on the 1841 Router

Verify that you have correctly installed the router by checking the LEDs shown in [Table 7-1](#).

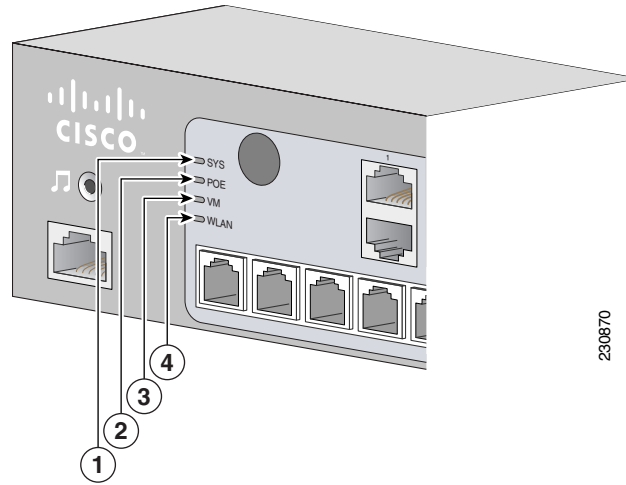
Table 7-1 LED Indicators

LED	Color	Status
SYS PWR	Green	Router has successfully booted up and the software is functional. Slow, steady blinking when system is booting or in the ROM monitor.
SYS ACT	Green	Blinking when packets are transmitted or received on any WAN or LAN interface, or when monitoring system activity.
CF	Blinking green	Flash memory is busy. Do not remove the CompactFlash memory card when this light is on.

Verifying the LED Indicators on the 1861 Integrated Services Router

Verify that you have correctly installed the router by checking the LEDs shown in [Figure 7-1](#).

Figure 7-1 LEDs on the Front Panel of the Cisco 1861 Integrated Services Router



1	SYS	Solid green	Online
2	POE	Solid green	Connected
3	VM	Solid green	Online
4	WLAN	Blinking green	Connected

Verifying the Hardware Configuration

Verify the router hardware configuration by using the following commands:

- **show version**—Displays the system hardware version, the installed software version, the names and sources of configuration files, the boot images, and the amount of installed DRAM and flash memory.
- **show diag**—Lists and displays diagnostic information about the installed controllers and interface processors. Typical examples are interface cards (VWICs, WICs, HWICs), and advanced integration modules (AIMs).

Initial Configuration of the Router

This section covers the following topics:

- [Initial Configuration, page 7-5](#)
- [Verifying the Initial Configuration, page 7-6](#)
- [Completing the Configuration, page 7-6](#)

Initial Configuration

You can configure your router by using one of the following tools:

- Cisco Router and Security Device Manager—See the “Cisco Router and Security Device Manager” section on page 7-6
- Setup command facility—See the “Initial Configuration Using the Setup Command Facility” section in the *Cisco 1800 Series Integrated Services Routers (Modular) Quick Start Guide*.
- Command-line interface (CLI)—See the “Initial Configuration Using Cisco CLI—Manual Configuration” section in the *Cisco 1800 Series Integrated Services Routers (Modular) Quick Start Guide*.

Cisco Router and Security Device Manager

If the Cisco Router and Security Device Manager (SDM) has been installed on your router, the following messages appear at the end of the startup sequence:

```
yourname con0 is now available
```

```
Press RETURN to get started.
```

For instructions on configuring your router by using SDM, see the *Cisco Router and Security Device Manager (SDM) Quick Start Guide*. To use SDM, you can download the latest version of SDM and instructions for installing it on your router:

<http://www.cisco.com/cgi-bin/tablebuild.pl/sdm>

To obtain the SDM quick start guide, SDM release notes, and other SDM documentation, go to www.cisco.com/go/sdm.

Verifying the Initial Configuration

Verify that the new interfaces are operating correctly by performing the following tests:

- Enter the **show interfaces** command to verify that the interfaces are operating correctly and that the interfaces and line protocol are in the correct state—up or down.
- Enter the **show ip interface brief** command to display a summary status of the interfaces configured for IP.
- Enter the **show configuration** command to verify that you configured the correct hostname and password.

When you have completed and verified the initial configuration, your Cisco router is ready to be configured for specific functions. See the “Completing the Configuration” section on page 7-6 for information about locating documentation for advanced configuration procedures.

Completing the Configuration

When you have completed and verified the initial configuration, your Cisco router is ready to be configured for specific functions. For advanced configuration procedures, use either SDM or the CLI.

For configuration procedures using SDM, see *Cisco Router and Security Device Manager (SDM) Quick Start Guide*.


For configuration procedures using the CLI, see *Cisco 1800 Series Router Software Configuration*. The software configuration documents include information about the following topics:

- Basic software configuration

- Feature documentation
- Troubleshooting and maintenance
- Cisco 1800 series cards and modules

Powering up the Cisco 1861 Integrated Services Router

To power up the Cisco 1861 Integrated Services Router, perform the following steps:

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- Step 1** Verify that the AC power cord is connected to the power supply.
- Step 2** Power up the power supply and the Cisco 1861 ISR, by connecting the power cord plug to a grounded AC outlet.
-  **Note** There is no external Power On/Off switch on the power supply.
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- Step 3** Verify the LED indicators on the front panel of the Cisco 1861 Integrated Services Router, as required. See [Figure 7-1](#).

Software Components of the Cisco 1861 Integrated Services Router

The Cisco 1861 Integrated Services Router is shipped with a factory-installed software configuration for a basic IP telephony system that enables phone users to make and receive calls using the preconfigured numbers on their IP phones within minutes after connecting the Cisco 1861 Integrated Services Router to the Ethernet and their IP phones to the platform. [Table 7-2](#) summarizes the software components of the Cisco 1861 Integrated Services Router.

Table 7-2 Cisco 1861 Integrated Services Router Software Components

Software Component	Description	Benefits
Cisco Unified Communications Manager Express (Cisco Unified CME)	Entry-level call processing system that provides a wide range of IP telephony features for small to medium-sized business customers and autonomous small enterprise branch offices.	All files and configurations for IP phones are stored internally on the Cisco 1861 Integrated Services Router for a cost-effective, highly reliable, IP communications solution.
Cisco Unity Express	Provides voice mail and automated attendant services specifically designed for the small and medium-sized branch office environment.	Users can easily and conveniently manage their voice messages and greetings with intuitive telephone prompts and a straightforward web-based GUI that allows simple administration

Table 7-2 Cisco 1861 Integrated Services Router Software Components (continued)

Software Component	Description	Benefits
Security	Protects against information theft, virus outbreaks, and application abuse, whether from known or unknown threats, internal or external sources.	Integrated for a robust array of security features.
Cisco IOS Firewall	Protects customer networks against network and application layer attacks, viruses, and worms, and at the same time provides effective control on various application traffic flowing through the network.	Help businesses guarantee network uptime and security.
Cisco Secure VPN	Carries private data over a public network and extends remote access to users over a shared infrastructure.	Most cost-effective method to provide increased VPN throughput with minimal effect on processing.