**C H A P T E R 4**

# Initial Configuration

This chapter provides instructions for initial configuration of the Cisco 819, 860, 880, 890 Series Integrated Services Routers (ISRs), and contains the following sections:

## Cisco 810 Series

### Cisco 819 Series

This section provides instructions for initial configuration of the Cisco 819 ISRs. For the initial configuration, we recommend using Cisco Configuration Professional Express. For instructions on how to use Cisco Configuration Professional Express to configure the router, see *Cisco Configuration Professional Express User's Guide*.

You may also initially configure your router by using the Cisco IOS command-line interface (CLI) or by using the setup command facility. To create the initial configuration, the setup command facility prompts you for basic information about your router and network.

This section contains the following topics:

### Cisco IOS CLI

To configure the initial router settings by using the Cisco IOS CLI, you must set up a console connection. To configure the initial router settings using the Cisco IOS CLI, refer to the Cisco IOS CLI, page 4-2.

For instructions on how to set up a console connection, see the "Connecting a Terminal or PC to the Console Port" section on page 3-16.

### Setup Command Facility

For more information, refer to the "Setup Command Facility" section on page 4-4.

## Verifying the Initial Configuration

For more information, refer to the "Verifying the Initial Configuration" section on page 4-6.

# Cisco 860, 880, 890 Series

This section provides instructions for initial configuration of the Cisco 860 series, 880 series, and 890 series ISRs. You may also initially configure your router by using the Cisco IOS command-line interface (CLI) or by using the setup command facility. To create the initial configuration, the setup command facility prompts you for basic information about your router and network.

This section contains the following topics:

> **Note** Some SKUs may not include a default configuration file. If your router does not have a default configuration file, go to the "Setup Command Facility" section on page 1 to configure the initial router settings.

# Cisco Configuration Professional Express

After you connect the cables and power up the router, we recommend that you use the Cisco Configuration Professional Express web-based application to configure the initial router settings.

For instructions on how to use Cisco Configuration Professional Express to configure the router, see *Cisco Configuration Professional Express User's Guide*.

# Cisco IOS CLI

To configure the initial router settings by using the Cisco IOS CLI, you must set up a console connection. For instructions on how to set up a console connection, see the "Connecting a Terminal or PC to the Console Port" section on page 3-16.

To configure the initial router settings using the Cisco IOS CLI, follow these steps:

**Step 1** Set up a console connection to your router. The following message is displayed:

```
...
router con0 is now available
```

**Step 2** Press **Return**. The following message is displayed:

```
Cisco Configuration Professional Express (Cisco CP Express) is installed on this device.
This feature requires the one-time use of the username "username1"
with the password "password1." The default username and password have a privilege level of
15.
```

```
Please change these publicly known initial credentials using Cisco CP Express or the Cisco
IOS CLI.

Here are the Cisco IOS commands.

username <myuser>  privilege 15 secret 0 <mypassword>
no username username1

Replace <myuser> and <mypassword> with the username and password you want to use.

For more information about Cisco CP please follow the instructions in the QUICK START
GUIDE for your router...
...
User Access Verification
Username:
```

**Step 3**  Enter the username **username1,** and press **Return** or **Enter**. The following prompt is displayed:

```
Password:
```

**Step 4**  Enter the password **password1,** and press **Return** or **Enter**. The following prompt is displayed:

```
Router#
```

A message is displayed that is similar to the first warning message. The message directs you to change the username and password.

You are now in privileged EXEC mode.

✎

**Note**    You must change the username and password before you log off the router. You cannot use the username **username1** or password **password1** after you log off from this session.

**Step 5**  Enter configuration mode using the following commands.

```
Router#
Router#config t
Router(config)#
Router(config)#username username privilege 15 secret 0 password
```

**Step 6**  To change the username and password, enter the following at the prompt:

**username** *username* **privilege 15 secret 0** *password*

The *username* and *password* are the username and password that you determine.

To continue using the Cisco IOS CLI for initial configuration, see the applicable configuration procedures in *Cisco 860 Series, Cisco 880 Series, and Cisco 890 Series Integrated Services Routers Software Configuration Guide*.

✎

**Note**    Save your configuration changes regularly to avoid losing them during resets, power cycles, or power outages. Use the **copy running-config startup-config** command at the privileged EXEC mode prompt (Router#) to save the configuration to NVRAM.

**Step 7**  Verify the initial configuration. See the "Verifying the Initial Configuration" section on page 4-2.

# Setup Command Facility

The setup command facility guides you through the configuration process by prompting you for the specific information that is needed to configure your system. Use the setup command facility to configure a hostname for the router, to set passwords, and to configure an interface for communication with the management network.

To use the setup command facility, you must set up a console connection with the router and enter the privileged EXEC mode.

**Note** For instructions on how to set up a console connection, see the "Connecting a Terminal or PC to the Console Port" section on page 3-16.

To configure the initial router settings by using the setup command facility, follow these steps:

**Step 1** Set up a console connection to your router, and enter privileged EXEC mode. For instructions on how to enter privileged EXEC mode, see Step 1 through Step 4 in the "Cisco IOS CLI" section on page 4-1.

**Step 2** In privileged EXEC mode, at the prompt, enter **setup**.

```
yourname# setup
```

The following message is displayed:

```
--- System Configuration Dialog ---

Continue with configuration dialog? [yes/no]:
```

You are now in the setup command facility.

The prompts in the setup command facility vary, depending on your router model, on the installed interface modules, and on the software image. The following steps and the user entries (in **bold**) are shown as examples only.

**Note** If you make a mistake while using the setup command facility, you can exit and run the setup command facility again. Press **Ctrl-C**, and enter the **setup** command at the privileged EXEC mode prompt (Router#). For more information on using the setup command facility, see "The Setup Command" chapter in *Cisco IOS Configuration Fundamentals Command Reference, Release 12.2T*.

**Step 3** To proceed using the setup command facility, enter **yes.**

```
Continue with configuration dialog? [yes/no]: yes
```

**Step 4** When the following messages appear, enter **yes** to enter basic management setup.

```
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 '[]'.

Basic management setup configures only enough connectivity
for management of the system, extended setup will ask you
to configure each interface on the system

Would you like to enter basic management setup? [yes/no]: yes
```

**Step 5**    Enter a hostname for the router (this example uses Router).

```
Configuring global parameters:
Enter host name [Router]: Router
```

**Step 6**    Enter an enable secret password. This password is encrypted (more secure) and cannot be seen when viewing the configuration.

```
The enable secret is a password used to protect access to
privileged EXEC and configuration modes. This password, after
entered, becomes encrypted in the configuration.
Enter enable secret: xxxxxx
```

**Step 7**    Enter an enable password that is different from the enable secret password. This password is *not* encrypted (less secure) and can be seen when viewing the configuration.

```
The enable password is used when you do not specify an
enable secret password, with some older software versions, and
some boot images.
Enter enable password: xxxxxx
```

**Step 8**    Enter the virtual terminal password, which prevents unauthenticated access to the router through ports other than the console port.

```
The virtual terminal password is used to protect
access to the router over a network interface.
Enter virtual terminal password: xxxxxx
```

**Step 9**    Respond to the following prompts as appropriate for your network.

```
Configure SNMP Network Management? [yes]:
    Community string [public]:
```

A summary of the available interfaces is displayed.

**Step 10**    Choose one of the available interfaces for connecting the router to the management network.

```
Enter interface name used to connect to the
management network from the above interface summary: fastethernet4
```

**Step 11**    Respond to the following prompts as appropriate for your network.

```
Configuring interface FastEthernet4:
Use the 100 Base-TX (RJ-45) connector? [yes]: yes
Operate in full-duplex mode? [no]: yes
Configure IP on this interface? [yes]: yes
    IP address for this interface: 172.1.2.3
    Subnet mask for this interface [255.255.0.0] : 255.255.0.0
    Class B network is 172.1.0.0, 26 subnet bits; mask is /16
```

The configuration is displayed:

```
The following configuration command script was created:

hostname Router
enable secret 5 $1$D5P6$PYx41/lQIASK.HcSbfO5q1
enable password xxxxxx
line vty 0 4
password xxxxxx
snmp-server community public
!
no ip routing
!
interface FastEthernet4
no shutdown
speed 100
duplex auto
ip address 172.1.2.3 255.255.0.0
!
```

**Step 12**    Respond to the following prompts. Enter **2** to save the initial configuration.

```
[0] Go to the IOS command prompt without saving this config.
[1] Return back to the setup without saving this config.
[2] Save this configuration to nvram and exit.

Enter your selection [2]: 2
Building configuration...
Use the enabled mode 'configure' command to modify this configuration.

Press RETURN to get started! RETURN

The user prompt is displayed.
Router>
```

**Step 13**    Verify the initial configuration. See the "Verifying the Initial Configuration" section on page 4-2 for verification procedures.

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After the initial configuration file is created, you can use the Cisco IOS CLI to perform additional configuration.

# Verifying the Initial Configuration

To verify that the new interfaces are operating correctly, perform the following tests:

- To verify that the interfaces and line protocol are in the correct state—up or down—enter the **show interfaces** command.

- To display a summary status of the interfaces configured for IP, enter the **show ip interface brief** command.

- To verify that you configured the correct hostname and password, enter the **show configuration** command.

After you complete and verify the initial configuration, you can configure your Cisco router for specific functions.

# Initial Configuration of the Wireless Access Point

The embedded wireless access point (AP) runs its own IOS. You can initially configure the embedded wireless AP by using one of the following methods:

- Cisco Configuration Professional Express

- Setup command facility on the embedded wireless device

For information on how to do basic wireless configuration on your router see the *"Basic Wireless Device"* chapter of the *Cisco 860 Series, Cisco 880, and Cisco 890 Series Integrated Services Routers Software Configuration Guide*.