



## Initial Configuration

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This chapter provides instructions for performing the initial configuration of the router, and contains the following sections:

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## Installing Cisco Router and Security Device Manager

Once you have completed the cable connections and powered up the router, we recommend that you use the Cisco Router and Security Device Manager (SDM) web-based application to configure the initial router settings.

To install Cisco SDM for configuring the router, follow these steps:

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- |               |   |
|---------------|---|
| <b>Step 1</b> | Connect a PC to the router console port.  |
| <b>Step 2</b> | Insert the Cisco SDM software CD into the CD drive of the PC to launch an installation wizard. Install Cisco SDM by following the instructions on the installation wizard user interface. |
| <b>Step 3</b> | Use Cisco SDM to configure the router by following the instructions in the <a href="#">Cisco Router and Security Device Manager (SDM) Quick Start Guide</a> .                             |
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## Initial Configuration Using Cisco SDM

If the following messages appear at the end of the startup sequence, Cisco SDM is installed on your router:

```
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](#).

## Initial Configuration Using the Setup Command Facility

This section describes how to use the setup command facility to configure a hostname for the router, set passwords, and configure an interface for communication with the management network.

If the following messages appear at the end of the startup sequence, the setup command facility has been invoked automatically:

```
--- 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]:
```

The setup command facility prompts you for basic information about your router and network, and it creates an initial configuration file. After the configuration file is created, you can use the CLI or Security Device Manager to perform additional configuration.

The prompts in the setup command facility vary, depending on your router model, the installed interface modules, and the software image. The following example 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#).

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**Step 1** To proceed using the setup command facility, enter **yes**:

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

**Step 2** 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 3** Enter a hostname for the router (this example uses Router):

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

- Step 4** 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 5** 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 6** 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 7** 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 8** 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: **fastethernet0**
- Step 9** Respond to the following prompts as appropriate for your network:
- Configuring interface FastEthernet0:  
Use the 100 Base-TX (RJ-45) connector? [yes]: **yes**  
Operate in full-duplex mode? [no]: **no**  
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
- Step 10** The configuration is displayed:
- The following configuration command script was created:
- ```
hostname Router
enable secret 5 $1$D5P6$PYx41/lQIASK.HcSbf05q1
enable password xxxxxx
line vty 0 4
password xxxxxx
snmp-server community public
!
no ip routing
!
interface FastEthernet0
no shutdown
speed 100
half-duplex
ip address 172.1.2.3 255.255.0.0
!
```

**Step 11** 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 12** Verify the initial configuration. See the [“Verifying the Initial Configuration”](#) section for verification procedures.

## Initial Configuration Using the Cisco CLI—Manual Configuration

This section shows how to display a command-line interface (CLI) prompt for configuration using the CLI, and it directs you to documentation for the CLI configuration.

You can use the CLI if the following messages appear at the end of the startup sequence:

```
--- 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]:
```

If these messages do not appear, SDM and a default configuration file were installed on the router. To use SDM to configure the router, see the [“Initial Configuration Using Cisco SDM”](#) section.



### Note

Be sure to save your configuration changes occasionally so that they are not lost 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 1** To proceed with manual configuration using the CLI, enter **no** when the power-up messages end.

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

**Step 2** Press **Return** to terminate autoinstall and continue with manual configuration.

```
Would you like to terminate autoinstall? [yes] Return
```

```
Several messages appear, ending with a line similar to the following:
Copyright (c) 1986-2004 by Cisco Systems, Inc.
Compiled <date> <time> by <person>
```

**Step 3** Press **Return** to display the Router> prompt.

```
...  
flashfs[4]: Initialization complete.  
Router>
```

**Step 4** Enter privileged EXEC mode.

```
Router> enable  
Router#
```

**Step 5** For configuration using the CLI, see the applicable configuration procedures in the [Cisco 850 Series and Cisco 870 Series Access Routers Software Configuration Guide](#).

**Step 6** Verify the initial configuration. See the “[Verifying the Initial Configuration](#)” section for verification procedures.

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## Verifying the Initial Configuration

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

- 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 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 have completed and verified the initial configuration, you can configure your Cisco router for specific functions.

## What to Do Next

For information and instructions on how to perform additional configurations for the router, see the [Cisco 850 Series and Cisco 870 Series Access Routers Software Configuration Guide](#).

