

Shaun Lim

Packet Tracer - Configure Initial Router Settings

Objectives

Part 1: Verify the Default Router Configuration

Part 2: Configure and Verify the Initial Router Configuration

Part 3: Save the Running Configuration File

Background

In this activity, you will perform basic router configuration tasks. You will secure access to the CLI and console port using encrypted and plain-text passwords. You will also configure messages for users who are logging into the router. These banners warn unauthorized users that access is prohibited. Finally, you will verify and save your running configuration.

Instructions

Part 1: Verify the Default Router Configuration

Step 1: Establish a console connection to R1.

- Choose a **Console** cable from the available connections.
- Click **PCA** and select **RS 232**.
- Click **R1** and select **Console**.
- Click **PCA > Desktop** tab > **Terminal**.
- Click **OK** and press **ENTER**. You are now able to configure **R1**.

Step 2: Enter privileged mode and examine the current configuration.

You can access all the router commands from privileged EXEC mode. However, because many of the privileged commands configure operating parameters, privileged access should be password-protected to prevent unauthorized use.

- Enter privileged EXEC mode by entering the **enable** command.

```
Router> enable
Router#
```

Notice that the prompt changed in the configuration to reflect privileged EXEC mode.

- Enter the **show running-config** command.

```
Router# show running-config
```

What is the router's hostname?

Router

How many Fast Ethernet interfaces does the Router have?

4 (FastEthernet0/1/0, FastEthernet0/1/1, FastEthernet0/1/2, FastEthernet0/1/3)

How many Gigabit Ethernet interfaces does the Router have?

2, (GigabitEthernet0/0, GigabitEthernet0/1)

How many Serial interfaces does the router have?

2, (Serial0/0/1, Serial0/0/0)

What is the range of values shown for the vty lines?

0-4

- c. Display the current contents of NVRAM.

```
Router# show startup-config
startup-config is not present
```

Why does the router respond with the **startup-config is not present** message?

Because the configuration file is not yet saved to the NVRAM.

Part 2: Configure and Verify the Initial Router Configuration

To configure parameters on a router, you may be required to move between various configuration modes. Notice how the prompt changes as you navigate through the IOS configuration modes.

Step 1: Configure the initial settings on R1.

Note: If you have difficulty remembering the commands, refer to the content for this topic. The commands are the same as you configured on a switch.

- Configure **R1** as the hostname.
- Configure Message of the day text: **Unauthorized access is strictly prohibited.**
- Encrypt all plain text passwords.

Use the following passwords:

- Privileged EXEC, unencrypted: **cisco**
- Privileged EXEC, encrypted: **itsasecret**
- Console: **letmein**

Step 2: Verify the initial settings on R1.

- Verify the initial settings by viewing the configuration for R1.

What command do you use?

show running-config

- Exit the current console session until you see the following message:

```
R1 con0 is now available
```

Press RETURN to get started.

- Press **ENTER**; you should see the following message:

```
Unauthorized access is strictly prohibited.
```

```
User Access Verification
```

Password:

Why should every router have a message-of-the-day (MOTD) banner?

Setting up an MOTD allows the user to warn unauthorized people that access is prohibited if they do not have the credentials for it. It can also be used as a way to communicate with certain people managing the system.

If you are not prompted for a password before reaching the user EXEC prompt, what console line command did you forget to configure?

R1(config-line)# login

- d. Enter the passwords necessary to return to privileged EXEC mode.

Why would the **enable secret** password allow access to the privileged EXEC mode and **the enable password** no longer be valid?

This is because the enable secret password overrides the enable password.

If you configure any more passwords on the router, are they displayed in the configuration file as plain text or in encrypted form? Explain.

Since I entered the service password-encryption command previously, all future passwords entered on the router will be encrypted.

Part 3: Save the Running Configuration File

Step 1: Save the configuration file to NVRAM.

- a. You have configured the initial settings for **R1**. Now back up the running configuration file to NVRAM to ensure that the changes made are not lost if the system is rebooted or loses power.

What command did you enter to save the configuration to NVRAM?

copy running-config startup-config

What is the shortest, unambiguous version of this command?

copy r s

Step 2: Optional: Save the startup configuration file to flash.

Although you will be learning more about managing the flash storage in a router in later chapters, you may be interested to know that, as an added backup procedure, you can save your startup configuration file to flash. By default, the router still loads the startup configuration from NVRAM, but if NVRAM becomes corrupt, you can restore the startup configuration by copying it over from flash.

Complete the following steps to save the startup configuration to flash.

- a. Examine the contents of flash using the **show flash** command:

```
R1# show flash
```

How many files are currently stored in flash?

3

Which of these files would you guess is the IOS image?

c1900-universalk9-mz.SPA.151-4.M4.bin

Why do you think this file is the IOS image?

Because of the .bin

```
R1# copy startup-config flash
```

```
Destination filename [startup-config]
```

The router prompts you to store the file in flash using the name in brackets. If the answer is yes, then press **ENTER**; if not, type an appropriate name and press **ENTER**.

- b. Use the **show flash** command to verify the startup configuration file is now stored in flash.

```
R1#copy startup-config flash
Destination filename [startup-config]?

1277 bytes copied in 0.416 secs (3069 bytes/sec)
R1#show flash

System flash directory:
File Length Name/status
 3 33591768 c1900-universalk9-mz.SPA.151-4.M4.bin
 2 28282 sigdef-category.xml
 1 227537 sigdef-default.xml
 4 1277 startup-config
[33848864 bytes used, 221895136 available, 255744000 total]
249856K bytes of processor board System flash (Read/Write)

R1#
```