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

## Verify the Default Router Configuration

### Establish a console connection to R1.

* + - 1. Choose a **Console** cable from the available connections.
      2. Click **PCA** and select **RS 232**.
      3. Click **R1** and select **Console**.
      4. Click **PCA** > **Desktop** tab > **Terminal**.
      5. Click **OK** and press **ENTER**. You are now able to configure **R1**.

### 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.

* + - 1. Enter privileged EXEC mode by entering the **enable** command.

Open a configuration window

Router> **enable**

Router#

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

* + - 1. Enter the **show running-config** command.

Router# **show running-config**

Text

Description automatically generated

Text

Description automatically generated

#### Questions:

What is the router’s hostname?

Router

How many Fast Ethernet interfaces does the Router have?

0

How many Gigabit Ethernet interfaces does the Router have?

2

How many Serial interfaces does the router have?

2

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

0-4

* + - 1. Display the current contents of NVRAM.

Router# **show startup-config**

startup-config is not present

#### Question:

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

The config file was not saved.

Close a configuration window

## 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.

### Configure the initial settings on R1.

**Note**: If you have difficulty remembering the commands, refer to the content for this topic.

Open a configuration window

* + 1. Configure **R1** as the hostname.
    2. Configure Message of the day text: **Unauthorized access is strictly prohibited.**
    3. Encrypt all plain text passwords.

Use the following passwords:

* + - 1. Privileged EXEC, encrypted: **itsasecret**
      2. Console: **letmein**

### Verify the initial settings on R1.

* + - 1. Verify the initial settings by viewing the configuration for R1.

#### Question:

What command do you use?

Text

Description automatically generated

Text

Description automatically generated

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

R1 con0 is now available

Press RETURN to get started.

* + - 1. Press **ENTER**; you should see the following message:

Unauthorized access is strictly prohibited.

User Access Verification

Password:

#### Questions:

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

To disway people from doing nefarious things.

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***

* + - 1. Enter the passwords necessary to return to privileged EXEC mode.

#### Questions:

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

Encrypted because I made them that way

Close a configuration window

## Save the Running Configuration File

### Save the configuration file to NVRAM.

Open a configuration window

* + - 1. 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.

#### Questions:

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?

***cop r st***

Which command displays the contents of the NVRAM?

***show startup-configuration or show start***

* + - 1. Verify that all the parameters configured are recorded. If not, analyze the output and determine which commands were not executed or were entered incorrectly. You can also click **Check Results** in the instruction window.

### 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.

* + - 1. Examine the contents of flash using the **show flash** command:

R1# **show flash**

#### Questions:

How many files are currently stored in flash?

Type your answers here.

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

Type your answers here.

Why do you think this file is the IOS image?

Type your answers here.

* + - 1. Save the startup configuration file to flash using the following commands:

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**.

* + - 1. Use the **show flash** command to verify the startup configuration file is now stored in flash.

Close a configuration window

# Answer Key

## Verify the Default Router Configuration

### Establish a console connection to R1.

### Enter privileged mode and examine the current configuration.

What is the router’s hostname?

Router

How many Fast Ethernet interfaces does the Router have?

none

How many Gigabit Ethernet interfaces does the Router have?

2

How many Serial interfaces does the router have?

2

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

0 - 4

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

It displays this message because the configuration file was not saved to NVRAM. Currently it is only located in RAM.

## Configure and Verify the Initial Router Configuration

### Configure the initial settings on R1.

### Verify the initial settings on R1.

What command do you use?

show running-config

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

Every router should have a banner to warn unauthorized users that access is prohibited. MOTD Banners can also be used to send messages to network personnel (such as impending system shutdowns or who to contact for access).

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

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

The service password-encryption command encrypts all current and future passwords.

## Save the Running Configuration File

### Save the configuration file to NVRAM.

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?

cop r st

Which command displays the contents of the NVRAM?

show startup-configuration or show start

### Optional: Save the startup configuration file to flash.

How many files are currently stored in flash?

3

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

isr4300-universalk9.03.16.05.S.155-3.S5-ext.SPA.bin

Why do you think this file is the IOS image?

Answers may vary, but two clues are the file length compared to the others and the .bin at the end of the file name.

End of document