

**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.**

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**.

**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.

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**

Questions:

What is the router’s hostname? Router

***Type your answers here.***

How many Fast Ethernet interfaces does the Router have? 4

***Type your answers here.***

How many Gigabit Ethernet interfaces does the Router have? 2

***Type your answers here.***

How many Serial interfaces does the router have? 2

***Type your answers here.***

What is the range of values shown for the vty lines? 0 4

***Type your answers here.***

c. 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? Because we didn’t save anything to the startup config yet

***Type your answers here.***

*Close a configuration window*

# 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.

*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, unencrypted: **cisco**
  2. Privileged EXEC, encrypted: **itsasecret**
  3. Console: **letmein**

**Step 2: Verify the initial settings on R1.**

*Open a configuration window*

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

Question:

What command do you use? Show running config

***Type your answers here.***

1. 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? In order to protect router from some threats of hacking by other bad guys and also it is information for people that router is protected

***Type your answers here.***

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

***Type your answers here.***

1. Enter the passwords necessary to return to privileged EXEC mode.

Questions:

Why would the **enable secret** password allow access to the privileged EXEC mode and **the enable password** no longer be valid? When you configure enable secret then enable password will be overwritten. So when you try to access privileged mode you should enter secret password

***Type your answers here.***

If you configure any more passwords on the router, are they displayed in the configuration file as plain text or in encrypted form? Explain. They will be shown as plain text, because we didn’t use service password-encryption. So we need to encrypt them in order to change plain text

***Type your answers here.***

*Close a configuration window*

# 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.

*Open a configuration window*

Questions:

What command did you enter to save the configuration to NVRAM? R1#copy running-config stratup-config

***Type your answers here.***

What is the shortest, unambiguous version of this command? R1(config)#do wr

R1#copy r s

***Type your answers here.***

***Type your answers here.***

*Close a configuration windowVerify that all of 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.*

**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.

*Open a configuration window*

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

R1# **show flash**

Questions:

How many files are currently stored in flash? 3

***Type your answers here.***

Which of these files would you guess is the IOS image? c1900-universalk9-mz.SPA.151-4.M4.bin

***Type your answers here.***

Why do you think this file is the IOS image? Because file length is bigger that others and also file format .bin

***Type your answers here.***

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.

*Close a configuration window*

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