**Net 1060 Introduction to Networks Lab: # 10.1.4**

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**Follow the instructions down below for the lab itself. For this lab, all answers need to be in blue font. For the questions right below, answer in complete sentences. Ensure you paste the screen shot of your score page at the bottom of the document. Even if this does not let you see your grade, still take a screen shot of the score page showing congratulations “your name” you have completed the exercise is pasted at the bottom of this document. You will then need to upload both this word document and your packet tracer file to the assignments link within Netacad. Let the instructor know if you have any questions.**

***Lab Analysis Report***

1. Using complete sentences summarize work you completed during the lab.

I did the initial config of a router.

2. Using complete sentences describe what you learned from the lab. Hint; look at the lab objectives listed at the top of the lab section.

I learned how to do the initial config of a router similar to a switch

***Problems Encountered***

1. Using complete sentences describe any problem(s) experienced during lab.

No problems

2. Using complete sentences describe how you solved your problem(s).

No problems

3. Using complete sentences explain if you needed any assistance with the lab; then list what you learned from that assistance. No problems

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**

#### Questions:

What is the router’s hostname?

Type Router answers here.

How many Fast Ethernet interfaces does the Router have?

Type your 4 here.

How many Gigabit Ethernet interfaces does the Router have?

Type your 2 here.

How many Serial interfaces does the router have?

Type your 2 here.

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

Type 0 - 4 answers here.

* + - 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?

Type We haven’t configured it yet answers here.

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. 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**

### 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?

Type show running-config 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? To let unauthorized users know what they’re trying to access. Or to send messages to another admin using the system in the future.

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?

Type you’re the the login command 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? The enable secret password overrides the enable 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. Encrypted because we enabled password-encryption

Type your answers here.

Close a configuration window

## Save the Running Configuration File

### Save the configuration file to NVRAM.

* + - 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.

Open a configuration window

#### Questions:

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

Type your copy run start here.

What is the shortest, unambiguous version of this command?

Type your copy r s 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.

### 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

* + - 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 3 here.

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

Type your sigdef-default.xml here.

Why do you think this file is the IOS image?

Type your answers here.It says default

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

End of documentText

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

R1#show run

R1#show running-config

Building configuration...

Current configuration : 1277 bytes

!

version 15.1

no service timestamps log datetime msec

no service timestamps debug datetime msec

service password-encryption

!

hostname R1

!

!

!

enable secret 5 $1$mERr$ILwq/b7kc.7X/ejA4Aosn0

enable password 7 0822455D0A16

!

!

!

!

!

!

ip cef

no ipv6 cef

!

!

!

!

license udi pid CISCO1941/K9 sn FTX152459PZ

!

!

!

!

!

!

!

!

!

!

!

spanning-tree mode pvst

!

!

!

!

!

!

interface GigabitEthernet0/0

no ip address

duplex auto

speed auto

shutdown

!

interface GigabitEthernet0/1

no ip address

duplex auto

speed auto

shutdown

!

interface Serial0/0/0

no ip address

clock rate 2000000

shutdown

!

interface Serial0/0/1

no ip address

clock rate 2000000

shutdown

!

interface FastEthernet0/1/0

switchport mode access

switchport nonegotiate

shutdown

!

interface FastEthernet0/1/1

switchport mode access

switchport nonegotiate

shutdown

!

interface FastEthernet0/1/2

switchport mode access

switchport nonegotiate

shutdown

!

interface FastEthernet0/1/3

switchport mode access

switchport nonegotiate

shutdown

!

interface Vlan1

no ip address

shutdown

!

ip classless

!

ip flow-export version 9

!

!

!

no cdp run

!

banner motd ^CUnauthorized access is strictly prohibited.^C

!

!

!

!

line con 0

password 7 082D495A041C0C19

login

!

line aux 0

!

line vty 0 4

login

!

!

!

end