Experiment-7

Basic Router Configuration using Cisco Packet Tracer.

Objectives

1. Verify the Default Router Configuration
2. Configure and Verify the Initial Router Configuration using command-line interface (CLI).
3. Save the Running Configuration File.
4. Configure Router Interfaces.
5. Verify connectivity between the two end devices.

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.

Topology:

Instructions:

Part 1: Verify the Default Router Configuration

- Step 1: Establish a console connection to R1.

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

Part 2: Configure and Verify the Initial Router Configuration

- **Step 1: Configure the initial settings on R1.**

- 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.

Part 3: Save the Running Configuration File

Configuration Command:

enable

show running-config

show startup-config

config terminal

hostname R1

banner motd #Unauthorized access to this device is prohibited!#

enable password cisco

enable secret itsasecret

line console 0

password letmein

login

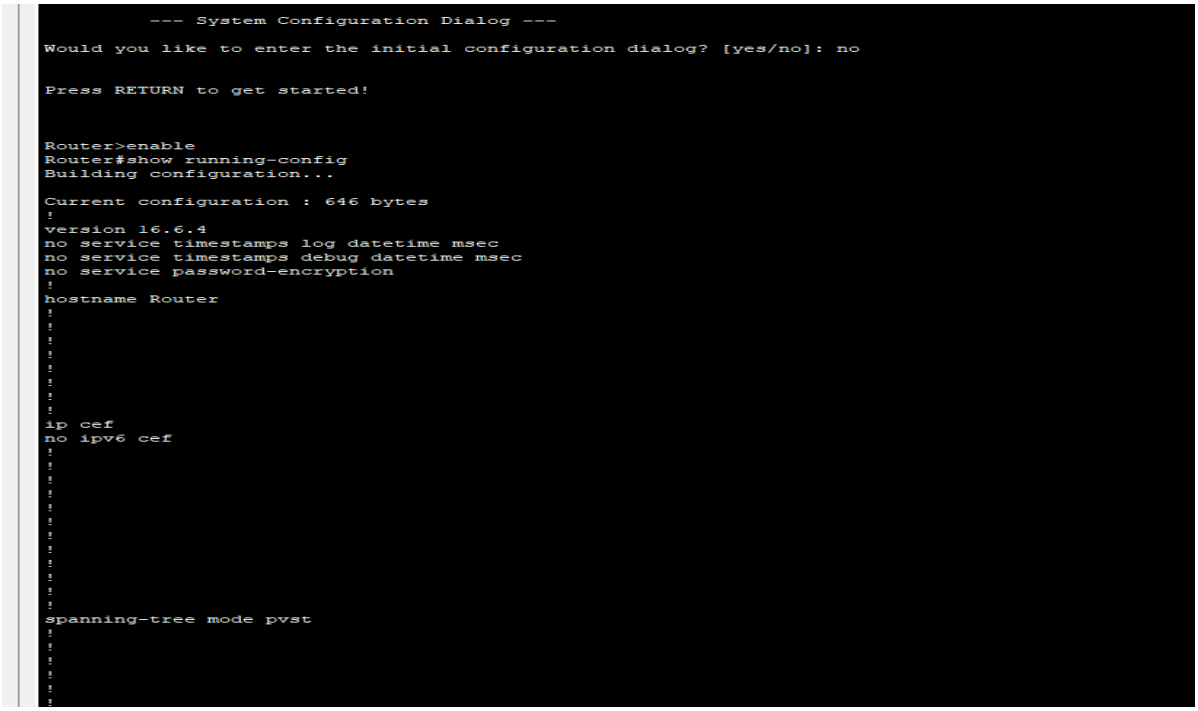
service password-encryption

Press Control Z to end

show running-config

copy running-config startup-config

exit



```
spanning-tree mode pvst
!
!
!
!
!
!
interface GigabitEthernet0/0/0
 no ip address
 duplex auto
 speed auto
 shutdown
!
interface GigabitEthernet0/0/1
 no ip address
 duplex auto
 speed auto
 shutdown
!
interface GigabitEthernet0/0/2
 no ip address
 duplex auto
 speed auto
 shutdown
!
interface Vlan1
 no ip address
 shutdown
!
ip classless
!
ip flow-export version 9
!
!
!
!
!
!
!
line con 0
!
line aux 0
!
line vty 0 4
 login
!
!
!
end
```

```
end


Router#
Router#show startup-config
startup-config is not present
Router#config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R1
R1(config)#banner motd #Unauthorized access to this device is prohibited!#
R1(config)#enable password cisco
R1(config)#enable secret itsasecret
R1(config)#line console 0
R1(config-line)#password letmein
R1(config-line)#login
R1(config-line)#service password-encryption
R1(config)#^Z
R1#
%SYS-5-CONFIG_I: Configured from console by console

R1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R1#exit









R1 con0 is now available




Press RETURN to get started.
```

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

```
R1 con0 is now available

Press RETURN to get started.
```

c. Press **ENTER**; you should see the following message:

```
Unauthorized access is strictly prohibited.

User Access Verification

Password:
```

Password: letmein

Password: itssecret

Part 4: Configure Router Interfaces.

Router R1

enable

config terminal

hostname R1

interface Serial0/0

ip address 192.100.100.1 255.255.255.0

clock rate 64000 (Clock Rate will set only DCE Interface)

no shutdown

Router R2

enable

config terminal

hostname R2

interface Serial0/0

ip address 192.100.100.2 255.255.255.0

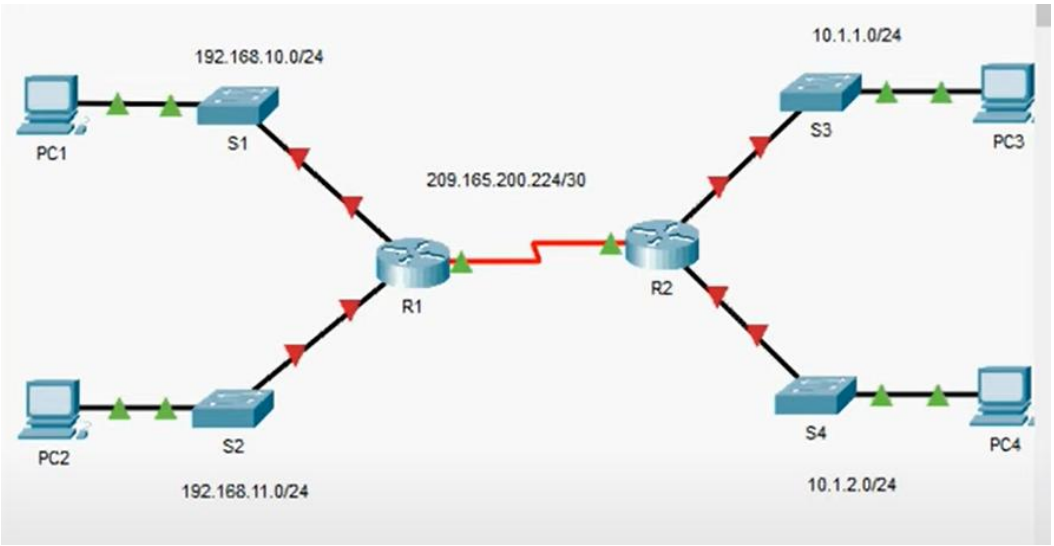
no shutdown

- Use Command **show running-config** to check the running configuration.

EXERCISE:

In this lab activity, you will create a network that is similar to the one shown in the Topology Diagram. Begin by cabling the network as shown in the Topology Diagram. You will then perform the initial router configurations required for connectivity. Use the IP addresses that are provided in the addressing table to apply an addressing scheme to the network devices. When the network configuration is complete, verify that the network is operating properly.

TOPOLOGY:



Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
R1	G0/0	192.168.10.1	255.255.255.0	N/A
	G0/1	192.168.11.1	255.255.255.0	N/A
	S0/0/0 (DCE)	209.165.200.225	255.255.255.252	N/A
R2	G0/0	10.1.1.1	255.255.255.0	N/A
	G0/1	10.1.2.1	255.255.255.0	N/A
	S0/0/0	209.165.200.226	255.255.255.252	N/A
PC1	NIC	192.168.10.10	255.255.255.0	192.168.10.1
PC2	NIC	192.168.11.10	255.255.255.0	192.168.11.1
PC3	NIC	10.1.1.10	255.255.255.0	10.1.1.1
PC4	NIC	10.1.2.10	255.255.255.0	10.1.2.1

Part 5: Verify connectivity between the two end devices.

Reference:

Chapter-10, Introduction to Networks Labs and Study Guide by Allan Johnson, Cisco