Ankara University

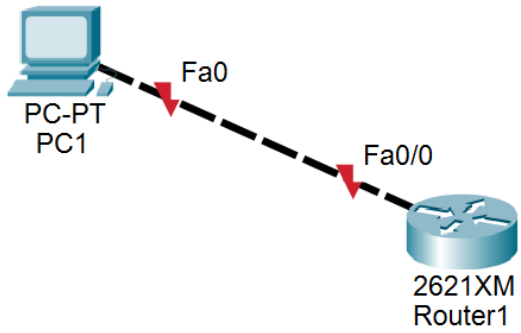
Department of Computer Engineering

BLM332-3032 (2021)

LAB 3

SECTION 1

Configuring Router Passwords



Objective:

- Configure a password for console login to user EXEC mode
- Configure a password for virtual terminal (Telnet) sessions
- Configure a secret password for privileged EXEC mode

Step 1: Design the configuration show above.

Step 2: Enter the CLI of Router.

Step 3: Login to the router in user EXEC mode

Step 4: Login to the router in privileged EXEC mode

Router>enable

Step 5: Enter global configuration mode

Router#configure terminal

Step 6: Enter a hostname of "R1" for this router

Router(config)#hostname R1

Step 7: Configure and exit

R1(config)#line console 0

R1(config-line)#password **auciscolab**

R1(config-line)#login

R1(config)#exit

Step 8: Return to the user EXEC mode.

R1#exit

Step 9: Enter the privileged EXEC mode again and observe the password.

*Password:**auciscolab***

R1>enable

R1#show running-config

(Observe! Password can be seen.)

Step 10: Return to the configuration mode.

R1#configure terminal

Step 11: Delete the password.

R1(config)#line console 0

R1(config-line)# no password

R1(config-line)# exit

R1(config)# exit

R1#disable

R1>enable *(Observe! Password is not required to login.)*

Step 12: Configure the enable secret password

R1(config)#enable secret **ausecretpass**

R1(config)#exit

Step 12: Return to the user EXEC mode.

R1#exit

Step 13: Enter the privileged EXEC mode again.

R1>enable

Password:**ausecretpass**

R1#

Step 14: Show the routers running configuration.

R1#show running-config

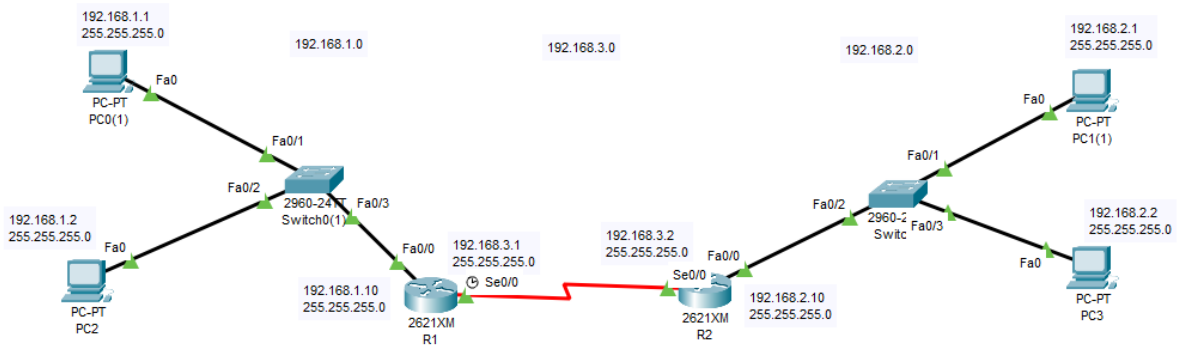
Step 15: Delete the secret password.

R1#configure terminal

R1(config)#no enable secret

SECTION 2

Configuring the Serial and the FastEthernet Interface and Message-of-the-Day (MOTD) of a Router



Router Designation	Router Name	Interface Type	Serial 0/0 Address	Subnet Mask
Router1	**R1**	**DCE**	**192.168.3.1**	**255.255.255.0**
Router2	**R2**	**DTE**	**192.168.3.2**	**255.255.255.0**

Device	IP Address	Subnet Mask	Default Getaway
Router1	**(Fa0/0) – 192.168.1.10**	**255.255.255.0**	**N/A**
Router2	**(Fa0/0) – 192.168.2.10**	**255.255.255.0**	**N/A**
PC1	**192.168.1.1**	**255.255.255.0**	**192.168.1.10**
PC2	**192.168.1.2**	**255.255.255.0**	**192.168.1.10**
PC3	**192.168.2.1**	**255.255.255.0**	**192.168.2.10**
PC4	**192.168.2.2**	**255.255.255.0**	**192.168.2.10**

Objective: Configure a serial interface on each of two routers so they can communicate.

Step 1: Identify and connect the proper Ethernet cable from the PCs to the switches and from the switches to routers

Step 2: Configure Workstation IP, subnet mask, default gateway settings

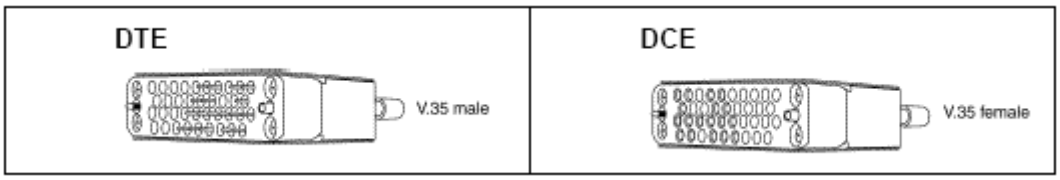
Step 3: Connect routers:

You need to mount **WIC-1T** or **WIC-2T** serial module to connect two routers.

DCE / DTE and Clocking

To provide this clocking signal, one of the routers will need a DCE cable instead of the normal DTE that is used on the other router. Therefore, the connection between routers needs to be done using one DCE cable and one

DTE cable between routers.



Step 4: Configure the names of Router 1 and Router 2 as R1 and R2, respectively.

Router1>**enable**
Router1#**configure terminal**
Router1(config)#**hostname R1**
R1(config)#**exit**

Router2>**enable**
Router2#**configure terminal**
Router2(config)#**hostname R2**
R2(config)#**exit**

Then find out whether your connection is DCE or DTE?

R1# **show controller serial 0/0**
R2# **show controller serial 0/0**

Step 5: Identify the serial interfaces on each router.

Configure serial interface serial 0/0 for Router 1 by CLI code:

R1(config)#**interface serial 0/0**
R1(config-if)#**ip address 192.168.3.1 255.255.255.0**
R1(config-if)#**clock rate 56000**
R1(config-if)#**no shutdown**
R1(config-if)#**exit**

Configure serial interface serial 0/0 for Router 2 by CLI code:

(Note that there is no need for *clockrate* since the serial connection of Router 2 is a DTE interface.)

R2(config)#**interface serial 0/0**

R2(config-if)#**ip address 192.168.3.2 255.255.255.0**

R2(config-if)#**no shutdown**

R2(config-if)#**exit**

Step 6: Identify the Ethernet or Fast Ethernet interfaces on the routers. Configure fastEthernet interface 0/0 of R1 by CLI code:

R1(config)#**interface fastEthernet 0/0**

R1(config-if)#**ip address 192.168.1.10 255.255.255.0**

R1(config-if)#**no shutdown**

R1(config-if)#**exit**

Configure fastEthernet interface 0/0 of R2 by CLI code:

R2(config)#**interface fastEthernet 0/0**

R2(config-if)#**ip address 192.168.2.10 255.255.255.0**

R2(config-if)#**no shutdown**

R2(config-if)#**exit**

Step 7: Verify the configuration

R1# **show running-config**

R2# **show running-config**

Step 8: Display information about interfaces on R1 and R2:

R1# **show ip interface brief**

R2# **show ip interface brief**

Step 9: Verify that all connections are functioning (It will not work, probably. We will see how to make it work in the next week.)

PC1>ping 192.168.2.2

PC3>ping 192.168.1.2

Step 10: Display help for the **banner motd** command

R1(config)#**banner motd ?**

Step 11: Choose the text for the MOTD

Step 12: Enter the desired banner message

R1(config)#**banner motd ! message !**

Step 13: Test the MOTD display

Enter the console session. Reenter the router to display the message of the day. This is done by pressing the **Enter** key. This will display the message entered into the configuration.

Step 14: Verify the MOTD by looking at the router configuration

R1#**show running-config**