

## LAB WEEK 4

i) To understand the operation of TELNET by accessing their router placed in the server room from a PC in IT office.

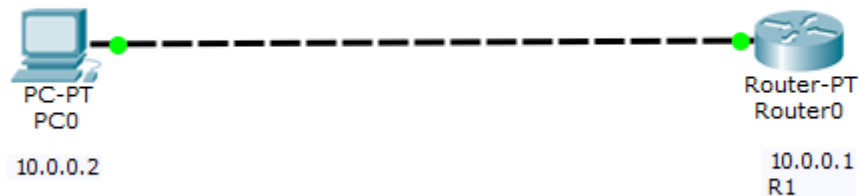


Figure 1: Topology

```
Router0
Physical Config CLI
IOS Command Line Interface

--- System Configuration Dialog ---
Continue with configuration dialog? [yes/no]: n

Press RETURN to get started!

Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
no ip address
Router(config-if)#no ip address
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 10.0.0.1 255.0.0.0
Router(config-if)#post name R1
^
% Invalid input detected at '^' marker.

Router(config-if)#postname R1
^
% Invalid input detected at '^' marker.

Router(config-if)#hostname R1
R1(config)#
R1(config)#
R1(config)#router rip
R1(config-router)#enable config
^
% Invalid input detected at '^' marker.

R1(config-router)#enable secret P0
R1(config)#line vty 0 5
R1(config-line)#login
% Login disabled on line 132, until 'password' is set
% Login disabled on line 133, until 'password' is set
% Login disabled on line 134, until 'password' is set
% Login disabled on line 135, until 'password' is set
% Login disabled on line 136, until 'password' is set
% Login disabled on line 137, until 'password' is set
R1(config-line)#password P1
R1(config-line)#exit
R1(config)#exit
R1#
$SYS-5-CONFIG_I: Configured from console by console
vr
Building configuration...
[OK]
R1#
```

Figure 2: Router CLI

## Command Prompt

```
Packet Tracer PC Command Line 1.0
PC>PING 10.0.0.1

Pinging 10.0.0.1 with 32 bytes of data:

Reply from 10.0.0.1: bytes=32 time=0ms TTL=255
Reply from 10.0.0.1: bytes=32 time=0ms TTL=255
Reply from 10.0.0.1: bytes=32 time=0ms TTL=255
Reply from 10.0.0.1: bytes=32 time=0ms TTL=255

Ping statistics for 10.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>PING 10.0.0.1

Pinging 10.0.0.1 with 32 bytes of data:

Reply from 10.0.0.1: bytes=32 time=0ms TTL=255
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Ping statistics for 10.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>telnet 10.0.0.1
Trying 10.0.0.1 ...Open

User Access Verification

Password:
R1>enable
Password:
R1#
```

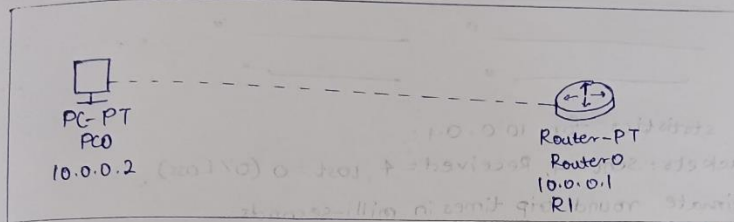
Figure 3: PC Command Prompt

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To understand the operation of TELNET by accessing the router based placed in the server room from a PC in IT office

#### \*Topology



#### \*Configuration Steps:

Step 1: Select a PC and a Router.

Step 2: Set IP addresses and configure them.

PC IP addr - 10.0.0.2 (Gateway: 10.0.0.1)

Router IP addr - 10.0.0.1

Step 3: Go to the CLI section of the Router

Step 4: Enter the configuration mode.

```
#hostname R1
```

```
#enable secret P0
```

```
#line vty 0 5
```

```
#login
```

```
#password P1
```

```
#exit
```

```
#exit
```

```
#wr
```

Step 5: Go to the command prompt of the PC

Step 6: Verify if the Ping 10.0.0.1 works or not.

Step 7: In the command prompt,

```
PC> telnet 10.0.0.1
```

```
enter password P1>
```

```
R1> enable
```

```
enter password P0>
```

```
R1 #
```

Now the Router configurations can be done in this

\*observation:

PC>ping 10.0.0.1

pinging 10.0.0.1 with 32 bytes of data:

Reply from 10.0.0.1: byte=32 time=0ms TTL=255

u \_\_\_\_\_ u  
" \_\_\_\_\_ u  
" \_\_\_\_\_ u  
" \_\_\_\_\_ u

Ping statistics for 10.0.0.1:

Packets: Sent=4, Received=4, Lost=0 (0% Loss).

Approximate round trip times in milli-seconds:

Minimum=0ms, Maximum=0ms, Average=0ms

PC>telnet 10.0.0.1

Trying 10.0.0.1 ... Open

User Access Verification

Password: <P1>

R1>enable

Password: <P0>

R1#

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ii) To understand the operation of TTL by sending a simple PDU from one network to different network

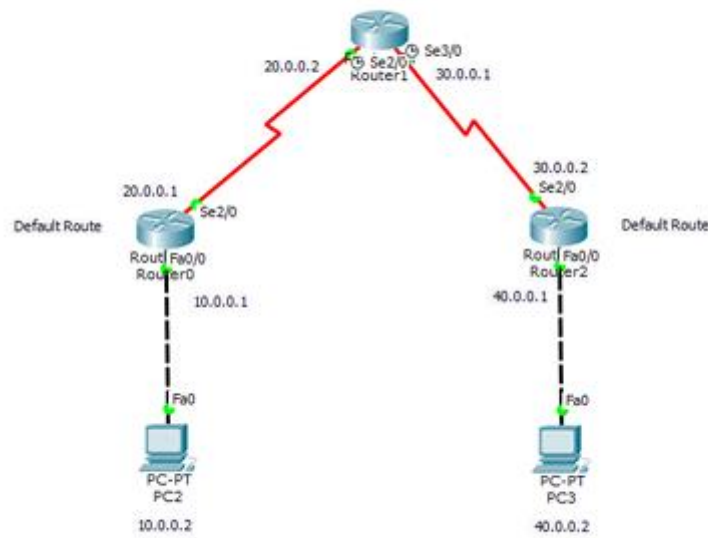


Figure 4: Topology

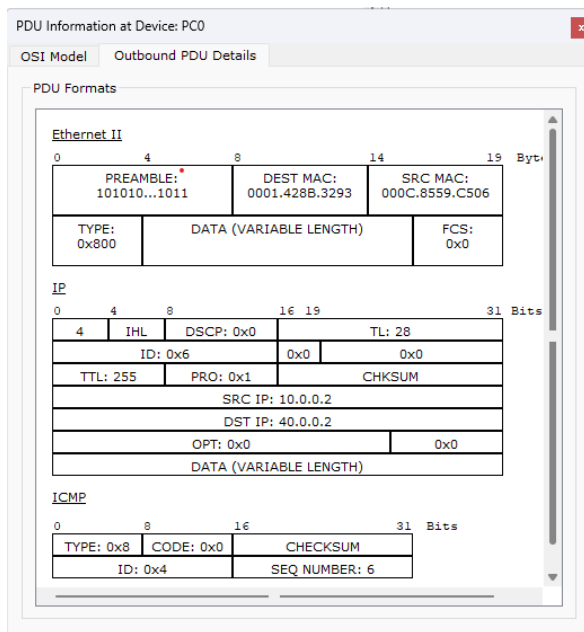


Figure 5: TTL of PC0

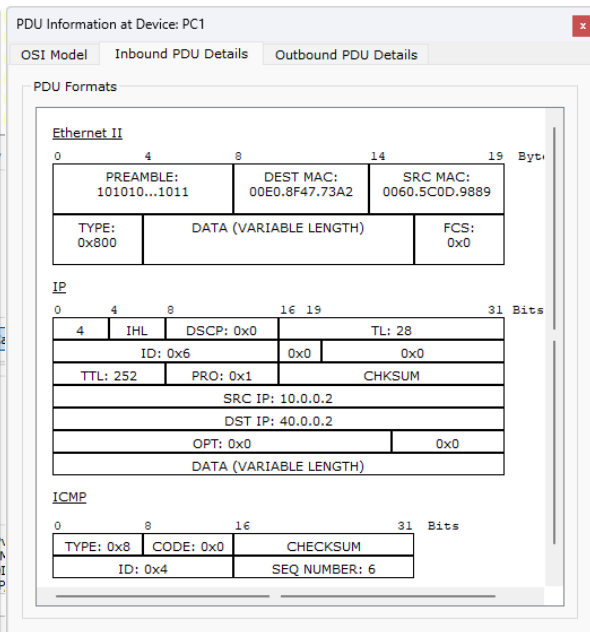


Figure 6: Inbound TTL of PC1

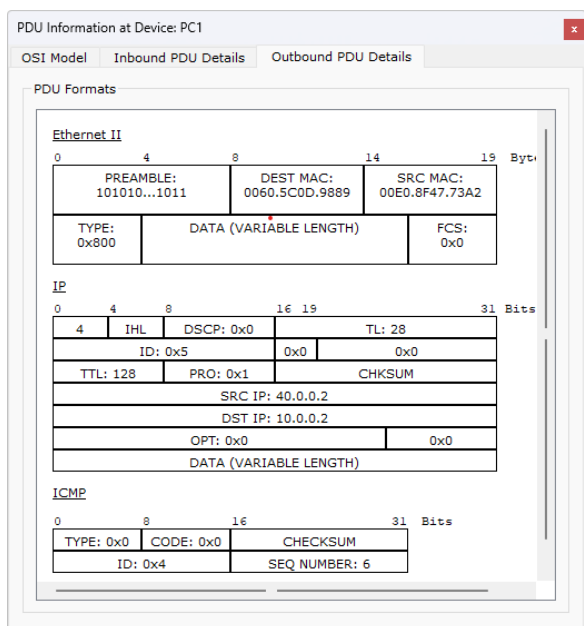


Figure 7: Outbound TTL of PC1

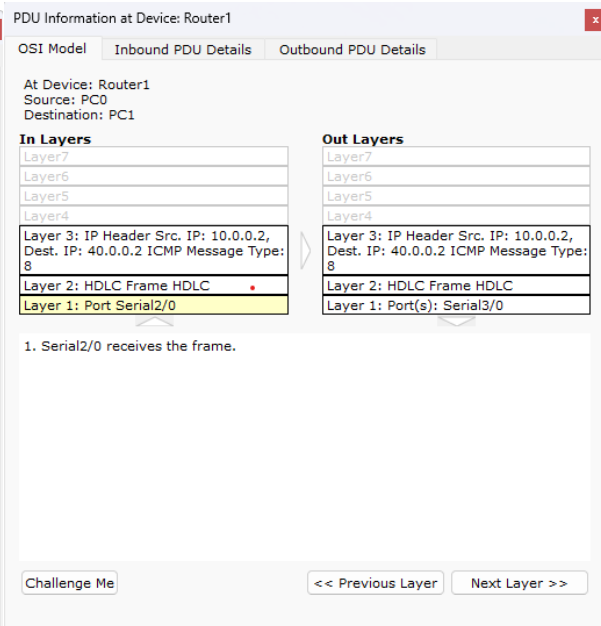


Figure 8: OSI Model of Router 1