

Program 10

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

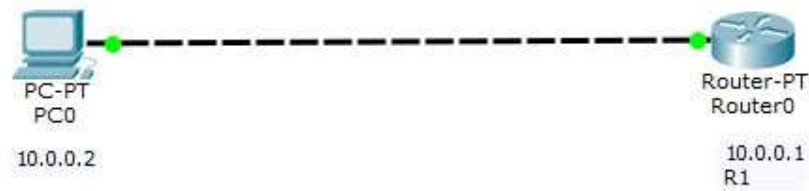


Figure 62: Topology

```
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
Router(config-if)#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)#ip name R1
Router(config-if)#
% Invalid input detected at '^' marker.
Router(config)#ip name R1
Router(config)#
% Invalid input detected at '^' marker.
Router(config)#hostname R1
R1(config)#
R1(config)#
R1(config)#router rip
R1(config-router)#enable config
R1(config-router)#
% 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 63: 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
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>telnet 10.0.0.1
Trying 10.0.0.1 ...Open

User Access Verification

Password:
R1>enable
Password:
R1#

```

Figure 64: Output

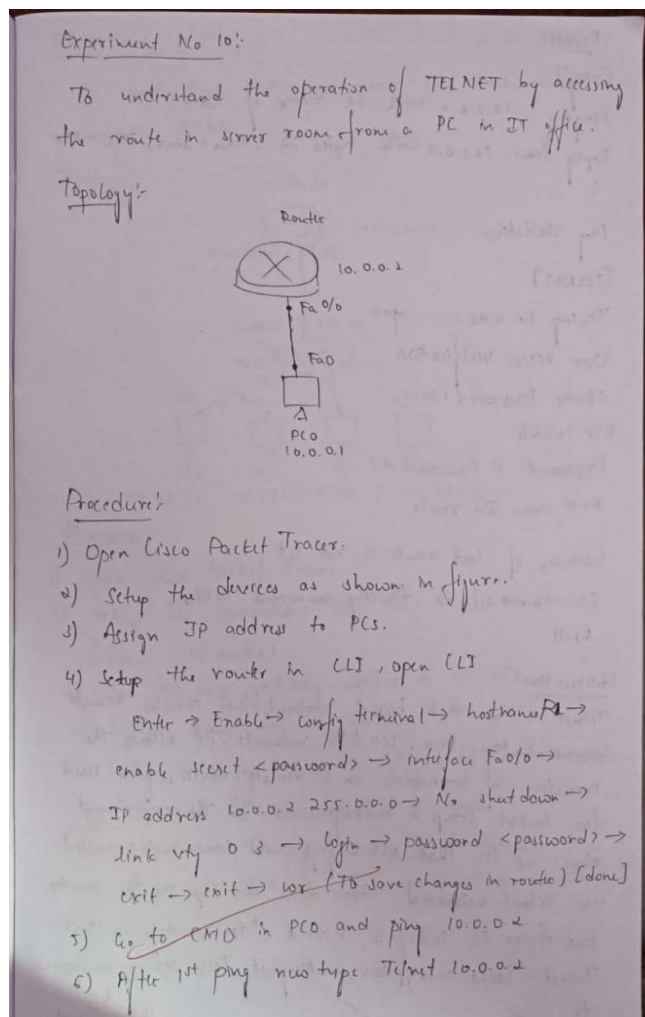


Figure 65: Observation Book 1

Result:

[Cping]
ping 10.0.0.2 with 32 bytes of data
Reply from 10.0.0.2 with bytes 32, time = 0ms, TTL = 255
!

Any statistics.

[TELNET]

Trying 10.0.0.2 ... open

User access verification

<Enter Password 1>

R1> enable

Password: <Password 2>

R1# show IP route

Gateway of last route is not set

C: 10.0.0.0/8 is directly connected. Fa0/0

R1#

Observation:

Telnet is a text based protocol that enables remote communication over TCP/IP networks. It allows the execution of commands on a remote device, often used for initial setup or management. In the experiment above we see that all configs and commands executed via Telnet mirrored those done directly on the router but from PC interface instead. Disadvantage is that Telnet lacks encryption making it less secure compared to SSH.

Handwritten signature: ~~AF~~ 31/12/24

Figure 66: Observation Book 2