

18/10/24

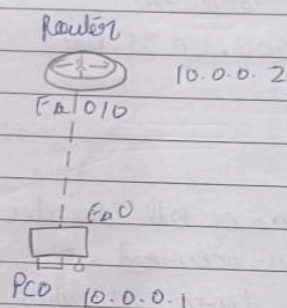
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- ⑤) To understand the operation of TELNET by accessing the router in server room from a PC in IT office.

Aim: To understand the op of TELNET protocol & its usage for remote access

Topology:



Procedure

- 1) Open Cisco Packet Tracer
- 2) ~~Set up~~ Setup the devices as shown in figure
- 3) Assign IP address to PC's
- 4) Setup the Router in CLI, open CLI.
 Enter Enable → config Terminal → hostname R1 →
 enable secret (password 1) → interface Fa0/0 →
 IP address 10.0.0.2 255.0.0.0 → No Shutdown →
 link vty 0 3 → login → password (password 2) →
 exit → exit → ~~won't work~~ [done]
 ↳ no save changes in router
- 5) Go to CMD in PC & ping 10.0.0.2
- 6) After hit ping menu ~~press~~ type Telnet 10.0.0.2
 →

Results

[Ping]

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 10.0.0.2: bytes=32 time=0 ms TTL=255

ping statistics

[Telnet]

Trying 10.0.0.2 ... open

User Access Verification

<Enter Password>

R1> enable

~~R1> show ip route~~

Password: <Password>

R1# show ip route

Codes: ..

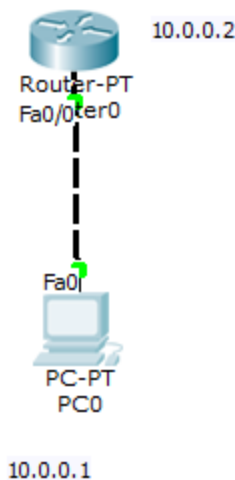
Gateway of last resort is not set.

C 10.0.0.0/8 is directly connected, Fa 0/0

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 configurations & commands executed via Telnet mirrored those done directly on the router but from the PC interface instead. Only disadvantage is that Telnet lacks encryption, making it less secure compared to SSH.



```
--- System Configuration Dialog ---

Continue with configuration dialog? [yes/no]: no

Press RETURN to get started!

Router>enable
Router#config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R1
R1(config)#enable secret black@121
R1(config)#interface fa0/0
R1(config-if)#ip address 10.0.0.2 255.0.0.0
R1(config-if)#no shutdown

R1(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

R1(config-if)#line vty 0 3
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
R1(config-line)#password black@12
R1(config-line)#exit
R1(config)#exit
R1#
%SYS-5-CONFIG_I: Configured from console by console

R1#wr
Building configuration...
[OK]
R1#
```

Command Prompt

Packet Tracer PC Command Line 1.0

PC>ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 10.0.0.2: bytes=32 time=0ms TTL=255

Reply from 10.0.0.2: bytes=32 time=0ms TTL=255

Reply from 10.0.0.2: bytes=32 time=0ms TTL=255

Reply from 10.0.0.2: bytes=32 time=0ms TTL=255

Ping statistics for 10.0.0.2:

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

Approximate round trip times in milli-seconds:

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

PC>telnet 10.0.0.2

Trying 10.0.0.2 ...Open

User Access Verification

Password:

% Password: timeout expired!

[Connection to 10.0.0.2 closed by foreign host]

PC>telnet 10.0.0.2

Trying 10.0.0.2 ...Open

User Access Verification

Password:

R1>enable

Password:

R1#show ip route

Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP

i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area

* - candidate default, U - per-user static route, o - ODR

P - periodic downloaded static route

Gateway of last resort is not set

C 10.0.0.0/8 is directly connected, FastEthernet0/0

R1#