Govt. Graduate College
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PROJECT REPORT

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PROJECT TITLE: [TELNET CONNECTION **]**

COURSE: COMPUTER NETWORKS

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Introduction

Telnet is a protocol that enables remote access to a computer or device over a network. It allows users to access and control a remote system as if they were sitting in front of it. Telnet is a fundamental technology that has been widely used for decades, and its history dates back to the early days of computer networking.

History of Telnet

Telnet was first developed in the late 1960s as part of the United States Department of Defense's Advanced Research Projects Agency Network (ARPANET) project.

In 1972, the first Telnet specification was published as RFC 318, and it quickly became a widely adopted standard for remote access.

Working of telnet

Telnet uses the Transmission Control Protocol/Internet Protocol (TCP/IP) to establish a connection between a local computer and a remote device. The connection is made over port 23, which is the default port for Telnet.

Once the connection is established, the remote device prompts the user for a username and password. After authentication, the user can access the remote

system's command-line interface and execute commands as if they were sitting in front of the device.

Advantages and Disadvantages of Telnet

Advantages:

1. Remote access: Telnet enables users to access and control remote devices from anywhere in the world.

2. Simple to use: Telnet is a straightforward protocol that is easy to use and understand.

3. Wide compatibility: Telnet is supported by most operating systems and devices.

Disadvantages:

1. Security risks: Telnet transmits passwords and data in plain text, making it vulnerable to eavesdropping and interception.

2. Limited functionality: Telnet provides a basic command-line interface, but it lacks the functionality and features of more modern remote access protocols.
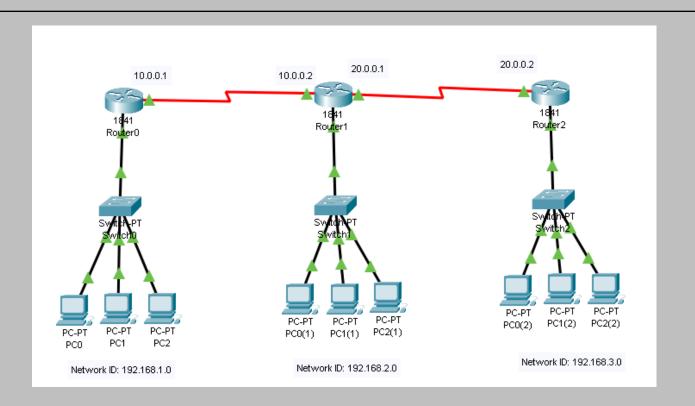
Key components

We take 3 routers.

Take 3 pt switches

We take 3 pcs for indivisual lan connection

Then we connected them and creat a wan connection.

Network and design topology

Design

Ip address plan.

For first lan.

Gateway = 192.168.1.1

Pco ip = 192.168.1.2

Pc 1 IP = 192.168.1.3

Pc 2 Ip = 192.168.1.4

Router configuration= 192.168.1.1

For second lan.

Gateway = 192.168.2.1

Pco ip = 192.168.2.2

Pc 1 IP = 192.168.2.3

Pc 2 Ip = 192.168.2.4

Router configuration= 192.168.2.1

For Third lan.

Gateway = 192.168.3.1

Pco ip = 192.168.3.2

Pc 1 IP = 192.168.3.3

Pc 2 Ip = 192.168.3.4

Router configuration= 192.168.1.1

Serial configuration in routers

Serial 1=10.0.0.1

Serial 2=10.0.0.2

Serial 3=20.0.0.1

Serial 4=20.0.0.2

HARDWARE AND SOFTWARE CONFIGRUATION

Device configuration

Router configuration.

Router will we configure through CLI .

We will setup some telnet configuration in router.

We will setup a telnet connection through password.

We access our computer through any computer.

The same configuration we apply on all routers.

Switch configruation

We use pt switches .

Its mean we will not configure our switch.

Devices models

Router : 1841

Switch : pt switch

Pcs : simple pc

IMPLEMENTATION AND SERVICES

IP CONFIGURATION: we use static IP address

FILE SHARING: only authorized person via telnet connection

SECURITY PROTOCOLS: use secure vpn connection.

Testing and validation

Testing

We will test our network through ping command and also check the validation of telnet in network.

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time=1ms TTL=254
Reply from 192.168.2.1: bytes=32 time=1ms TTL=254
Reply from 192.168.2.1: bytes=32 time=1ms TTL=254
Reply from 192.168.2.1: bytes=32 time=2ms TTL=254

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 2ms, Average = 1ms

C:\>telnet 192.168.2.1
Trying 192.168.2.1 ...Open


User Access Verification

Password:
Password:
R2>telnet 192.168.1.1
Trying 192.168.1.1 ...Open


User Access Verification

Password:
R1>telnet 192.168.3.1
```

This picture will show that the all pcs will be access through any computer via telnet connection when we know the correct code.
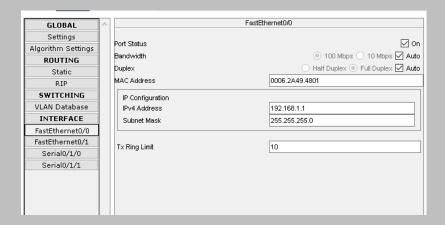
Conclusion

In this project we will design a remote access telnet connection to access the pcs through any computer .

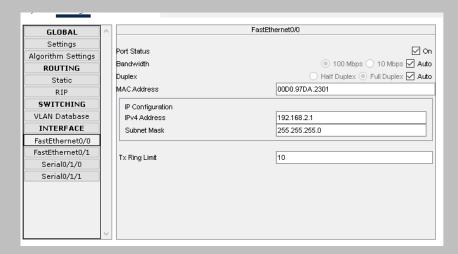We will assign a ips address to the computer and gateway to the routers.

The main purpose of this project to creat a telnet connection to send our message securely.
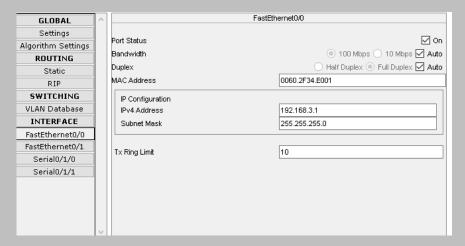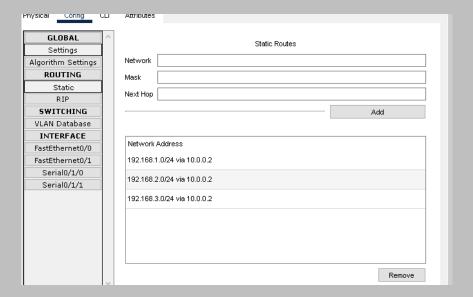
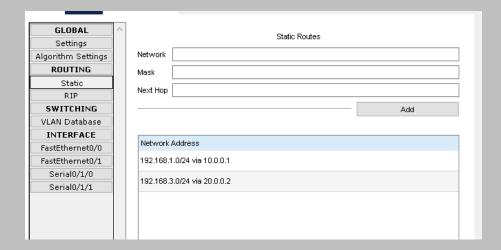# Appendix

Router 0 configruation

Router 1 configruation

Router 2 configruation

Static connection.

Static connection 2

This is the overall configuration of our telnet connection on remote access.