TELNET & SSH - Full Overview

What is Telnet?

Telnet (TCP Port 23) is a remote access protocol that allows you to connect and manage network devices (like routers or switches) through a text-based session.

- You can execute commands remotely as if you were directly on the console.
- It sends data (including passwords) in plain text, which makes it insecure.

What is SSH?

SSH (Secure Shell, TCP Port 22) is a secure replacement for Telnet. It encrypts all data-including login credentials and commands - so no one can intercept or read your session.

- Provides authentication + encryption + integrity
- Securely used for remote device management

Comparison: Telnet vs SSH

Feature	Telnet	SSH
Port	23	22
Encryption	None	Encrypted
Authentication	Basic (plaintext password)	Secure (RSA or local user auth)
Protocol	TCP	TCP
Security	Low	High
Recommended Use	Labs/testing only	Real networks / production

Configuration Steps:

Step 1: Assign IP address

```
Router(config)# interface fastEthernet0/0
Router(config-if)# ip address 192.168.1.1 255.255.255.0
Router(config-if)# no shutdown
```

Step 2: Set a password for Telnet access

Router(config)# line vty 0 4
Router(config-line)# password cisco
Router(config-line)# login

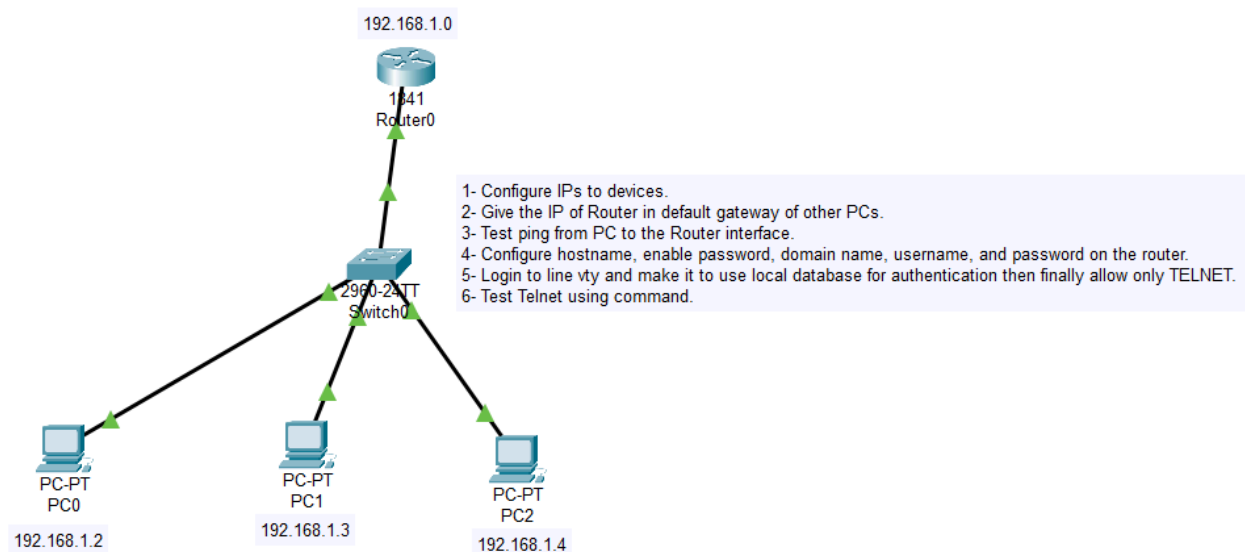## Step 3: (Optional) Set an enable password for privileged access

Router(config)# enable secret admin123

Step 4: Verify from another device

From another router/PC: Router# telnet 192.168.1.1

Then enter password cisco.

You should now be connected remotely.

192.168.1.0

1841
Router0

1- Configure IPs to devices.
2- Give the IP of Router in default gateway of other PCs.
3- Test ping from PC to the Router interface.
4- Configure hostname, enable password, domain name, username, and password on the router.
5- Login to line vty and make it to use local database for authentication then finally allow only TELNET.
6- Test Telnet using command.

2960-24TT
Switch0

PC-PT
PC0
192.168.1.2

PC-PT
PC1
192.168.1.3

PC-PT
PC2
192.168.1.4

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
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)#ip add 192.168.1.0 255.255.255.0
Bad mask /24 for address 192.168.1.0
Router(config-if)#ip add 192.168.1.1 255.255.255.0
Router(config-if)#
```

PC1

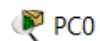| Physical	Config	Desktop	Programming	Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

PC0

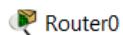| Physical	Config	Desktop	Programming	Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

PC2

Physical   Config   Desktop   Programming   Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Router0   —   □   ✕

Physical   Config   CLI   Attributes

IOS Command Line Interface

```
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
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)#ip add 192.168.1.0 255.255.255.0
Bad mask /24 for address 192.168.1.0
Router(config-if)#ip add 192.168.1.1 255.255.255.0
Router(config-if)#
Router(config-if)#ex
Router(config)#hostname r1
r1(config)#enable password cisco
r1(config)#ip domain-name cisco.com
r1(config)#username Admin password cisco
r1(config)#line vty 0 15
r1(config-line)#login local
r1(config-line)#transport input telnet
r1(config-line)#exit
r1(config)#DO WR
Building configuration...
[OK]
r1(config)#
```

Copy   Paste

Applying telnet on router, you need to give the IP of the router as default gateway of every PC.

PC0

Physical   Config   Desktop   Programming   Attributes

Command Prompt

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>telent 192.168.1.1
Invalid Command.

C:\>telnet 192.168.1.1
Trying 192.168.1.1 ...Open


User Access Verification

Username:
% Username:  timeout expired!

[Connection to 192.168.1.1 closed by foreign host]
C:\>telent 192.168.1.1
Invalid Command.

C:\>telnet 192.168.1.1
Trying 192.168.1.1 ...Open


User Access Verification

Username: Admin
Password:
r1>en
Password:
r1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
r1(config)#hostname PC0R1
PC0R1(config)#
```

Physical	Config	Desktop	Programming	Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>telnet 192.168.1.1
Trying 192.168.1.1 ...Open


User Access Verification

Username: Admin
Password:
PC0R1>en
Password:
PC0R1#
```

Applying telnet on a switch:
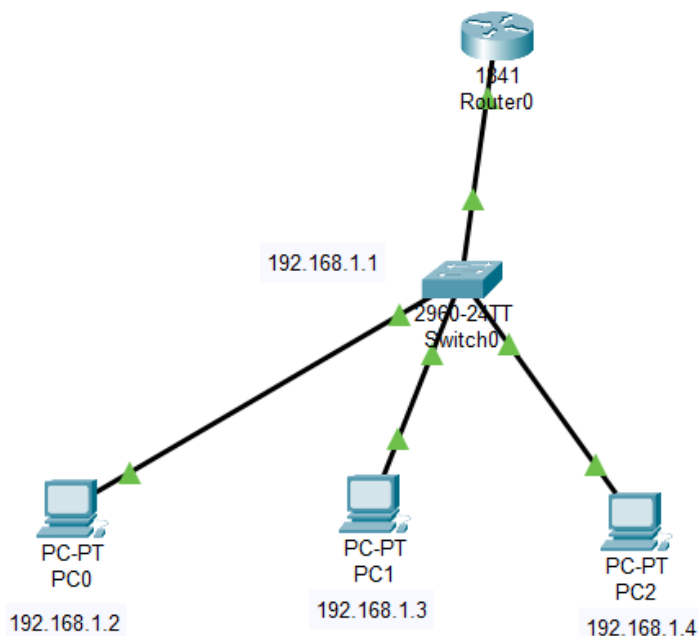
Switch>en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname S0
S0(config)#enable secret pass
S0(config)#interface vlan 1
S0(config-if)#ip add 192.168.1.1 255.255.255.0
S0(config-if)#no shutdown
S0(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
S0(config-if)#exit
S0(config)#line vty 0 4
S0(config-line)#password pass1
S0(config-line)#login
S0(config-line)#exit
S0(config)#

Switch0

```
Switch>en
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname S0
S0(config)#enable secret pass
S0(config)#interface vlan 1
S0(config-if)#ip add 192.168.1.1 255.255.255.0
S0(config-if)#no shutdown

S0(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

S0(config-if)#exit
S0(config)#line vty 0 4
S0(config-line)#password pass1
S0(config-line)#login
S0(config-line)#exit
S0(config)#
%SYS-5-CONFIG_I: Configured from console by console
```

PC0

Physical	Config	Desktop	Programming	Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

○ DHCP   ● Static

IPv4 Address: 192.168.1.2

Subnet Mask: 255.255.255.0
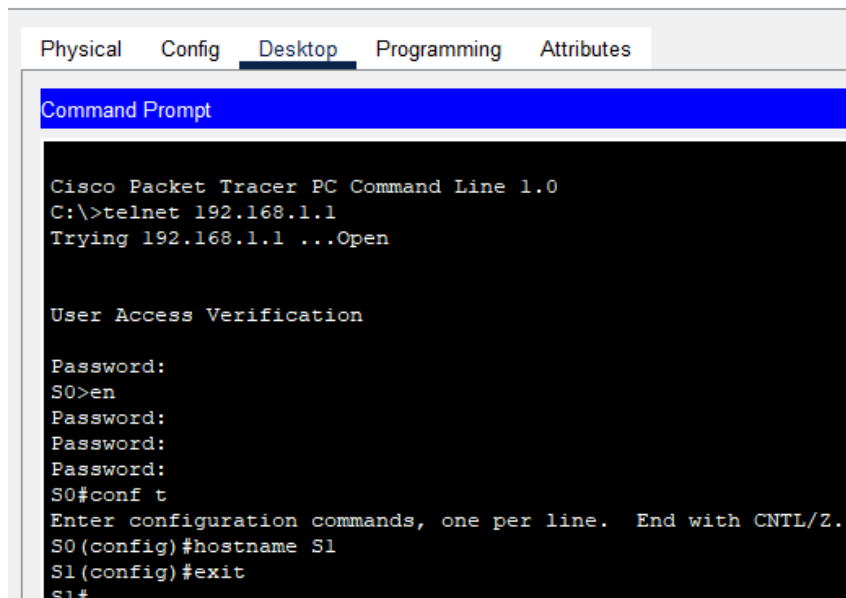
Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

PC1

Physical	Config	Desktop	Programming	Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

○ DHCP   ● Static

IPv4 Address: 192.168.1.3

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

PC2

Physical	Config	Desktop	Programming	Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

○ DHCP   ● Static

IPv4 Address: 192.168.1.4

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

PC0

Physical   Config   Desktop   Programming   Attributes
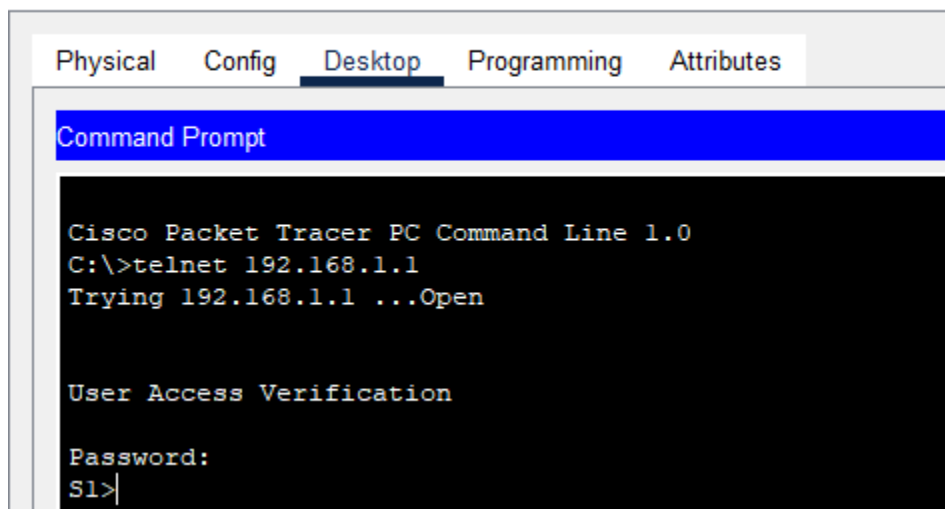
Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>telnet 192.168.1.1
Trying 192.168.1.1 ...Open


User Access Verification

Password:
S0>en
Password:
Password:
Password:
S0#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
S0(config)#hostname S1
S1(config)#exit
S1#
```

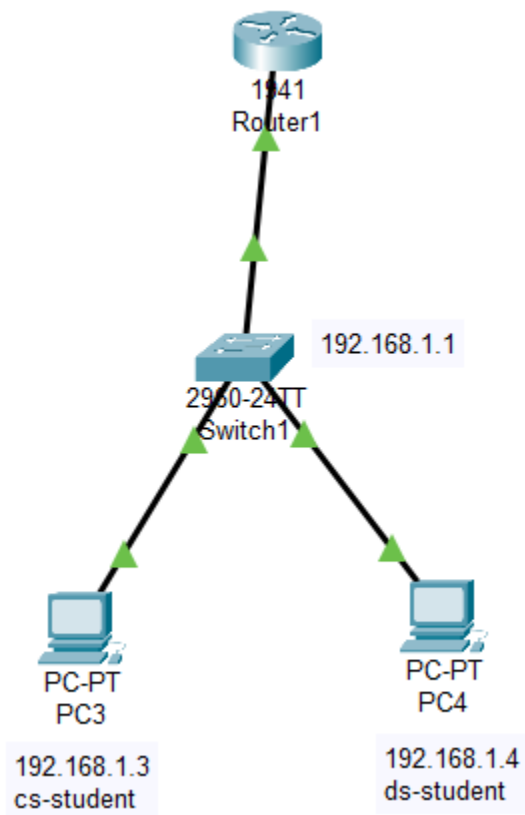We can change the hostname from this. Now if i do telnet on any PC it will open S1 not S0.

PC1

Physical   Config   Desktop   Programming   Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>telnet 192.168.1.1
Trying 192.168.1.1 ...Open


User Access Verification

Password:
S1>
```
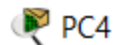
Applying ssh on Switch:

PC3

| Physical | Config | Desktop | Programming | Attributes |

IP Configuration

Interface   FastEthernet0

IP Configuration

○ DHCP   ● Static
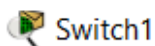
IPv4 Address   192.168.1.3

Subnet Mask   255.255.255.0

Default Gateway   0.0.0.0

DNS Server   0.0.0.0

PC4

Physical	Config	Desktop	Programming	Attributes

IP Configuration

Interface	FastEthernet0

IP Configuration

○ DHCP   ● Static

IPv4 Address	192.168.1.4
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0

Switch1

Physical	Config	CLI	Attributes

IOS Command Line Interface

```
Switch>en
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#interface vlan 1
Switch(config-if)#ip add 192.168.1.1 255.255.255.0
Switch(config-if)#no shutdown

Switch(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

Switch(config-if)#exit
Switch(config)#show run
                   ^
% Invalid input detected at '^' marker.

Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#show run
```

Switch>en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.

```
Switch(config)#interface vlan 1
Switch(config-if)#ip add 192.168.1.1 255.255.255.0
Switch(config-if)#no shutdown
Switch(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
Switch(config-if)#exit
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console
Switch#show run
Building configuration...
Current configuration : 1093 bytes
!
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Switch
!
!
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
!
interface FastEthernet0/2
!
interface FastEthernet0/3
!
interface FastEthernet0/4
!
interface FastEthernet0/5
!
interface FastEthernet0/6
```

```
!
interface FastEthernet0/7
!
interface FastEthernet0/8
!
interface FastEthernet0/9
!
interface FastEthernet0/10
!
interface FastEthernet0/11
!
interface FastEthernet0/12
!
interface FastEthernet0/13
!
interface FastEthernet0/14
!
interface FastEthernet0/15
!
interface FastEthernet0/16
!
interface FastEthernet0/17
!
interface FastEthernet0/18
!
interface FastEthernet0/19
!
interface FastEthernet0/20
!
interface FastEthernet0/21
!
interface FastEthernet0/22
!
interface FastEthernet0/23
!
interface FastEthernet0/24
!
interface GigabitEthernet0/1
!
interface GigabitEthernet0/2
```

!
interface Vlan1
ip address 192.168.1.1 255.255.255.0
!
!
!
!
line con 0
!
line vty 0 4
login
line vty 5 15
login
!
!
!
!
end

To check the connectivity.

PC3

Physical	Config	Desktop	Programming	Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Request timed out.
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

PC4

Physical   Config   Desktop   Programming   Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Request timed out.
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Switch>en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname SW1
SW1(config)#ip domain-name LabMid
SW1(config)#crypto key generate rsa
The name for the keys will be: SW1.LabMid
Choose the size of the key modulus in the range of 360 to 4096 for your
General Purpose Keys. Choosing a key modulus greater than 512 may take
a few minutes.
How many bits in the modulus [512]: 1024
% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]
SW1(config)#enable password pass1
*Mar 1 0:30:12.55: %SSH-5-ENABLED: SSH 1.99 has been enabled
SW1(config)#username cs-student password 123
SW1(config)#username ds-student password 123
SW1(config)#ip ssh version 2
SW1(config)#line vty 0 4
SW1(config-line)#transport input ssh
SW1(config-line)#login local
SW1(config-line)#exit
SW1(config)#exit

SW1#
%SYS-5-CONFIG_I: Configured from console by console
SW1#show ssh
%No SSHv2 server connections running.
%No SSHv1 server connections running.
SW1#

Switch1

```
Switch>en
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname SW1
SW1(config)#ip domain-name LabMid
SW1(config)#crypto key generate rsa
The name for the keys will be: SW1.LabMid
Choose the size of the key modulus in the range of 360 to 4096 for your
  General Purpose Keys. Choosing a key modulus greater than 512 may take
  a few minutes.

How many bits in the modulus [512]: 1024
% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

SW1(config)#enable password pass1
*Mar 1 0:30:12.55: %SSH-5-ENABLED: SSH 1.99 has been enabled
SW1(config)#username cs-student password 123
SW1(config)#username ds-student password 123
SW1(config)#ip ssh version 2
SW1(config)#line vty 0 4
SW1(config-line)#transport input ssh
SW1(config-line)#login local
SW1(config-line)#exit
SW1(config)#exit
SW1#
%SYS-5-CONFIG_I: Configured from console by console

SW1#show ssh
%No SSHv2 server connections running.
%No SSHv1 server connections running.
SW1#
```

Physical   Config   Desktop   Programming   Attributes

Command Prompt

```
C:\>ssh -l cs-student 192.168.1.1

Password:


SW1>en
Password:
Password:
SW1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
SW1(config)#exit
SW1#exit

[Connection to 192.168.1.1 closed by foreign host]
C:\>ssh -l ds-student 192.168.1.1

Password:


SW1>en
Password:
SW1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
SW1(config)#exit
SW1#exit

[Connection to 192.168.1.1 closed by foreign host]
C:\>ssh -l cs-student 192.168.1.1

Password:


SW1>en
Password:
SW1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
SW1(config)#interface vlan 1
SW1(config-if)#ip add 192.168.1.2 255.255.255.0
% Connection refused by remote host
C:\>telnet 192.168.1.2
Trying 192.168.1.2 ...Open

[Connection to 192.168.1.2 closed by foreign host]
C:\>
```

This shows that we can change the IP of switch interface vlan 1 by using ssh and PC.

PC4

| Physical | Config | Desktop | Programming | Attributes |

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Request timed out.
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ssh -l ds-student 192.168.1.2

Password:



SW1>en
Password:
SW1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
SW1(config)#
```
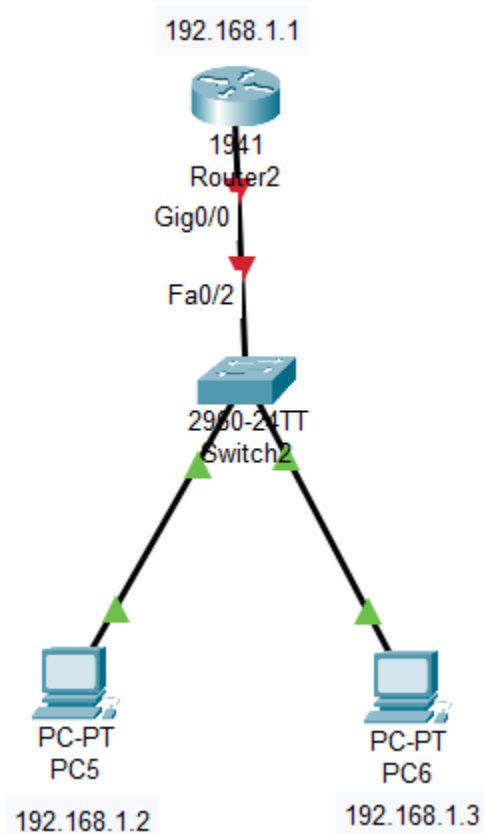
Applying ssh on Router:

192.168.1.1

1941
Router2
Gig0/0

Fa0/2

2950-24TT
Switch2

PC-PT   PC-PT
PC5   PC6
192.168.1.2   192.168.1.3

Steps:
1- Give ip address to the Router.
2- Give IP addresses to PCs and Default Gateway.
3- Check the connectivity from PCs to the Router using ping command.
4- Configure hostname, enable password, domain name, username and password on the router.
5- Generate crypto keys using RSA with key length of 1024.
6- Login to line vty and make it to use local database for authentication and finally allow only SSH.
7- Enable ssh version 2.
8- Test ssh using command ssh -l username 192.168.1.1

Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface Gig0/0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up
Router(config-if)#ip add 192.168.1.1 255.255.255.0
Router(config-if)#exit
Router(config)#

PC5

| Physical | Config | Desktop | Programming | Attributes |

IP Configuration

Interface   FastEthernet0

IP Configuration

○ DHCP   ◉ Static

IPv4 Address   192.168.1.2

Subnet Mask   255.255.255.0

Default Gateway   192.168.1.1

DNS Server   0.0.0.0

PC6

| Physical | Config | Desktop | Programming | Attributes |

IP Configuration

Interface   FastEthernet0

IP Configuration

○ DHCP   ◉ Static

IPv4 Address   192.168.1.3

Subnet Mask   255.255.255.0

Default Gateway   192.168.1.1
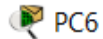
DNS Server   0.0.0.0

Checking the connectivity using ping:

PC5

| Physical | Config | Desktop | Programming | Attributes |

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Physical   Config   Desktop   Programming   Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time=10ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 10ms, Average = 2ms
```

Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname R1ssh
R1ssh(config)#enable password pass
R1ssh(config)#ip domain-name CNlab.com
R1ssh(config)#username cs-student password 123
R1ssh(config)#crypto key generate rsa
The name for the keys will be: R1ssh.CNlab.com
Choose the size of the key modulus in the range of 360 to 4096 for your
General Purpose Keys. Choosing a key modulus greater than 512 may take
a few minutes.
How many bits in the modulus [512]: 1024
% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]
R1ssh(config)#
*Mar 1 0:39:21.111: %SSH-5-ENABLED: SSH 1.99 has been enabled
R1ssh(config)#line vty 0 15
R1ssh(config-line)#login local
R1ssh(config-line)#transport input ssh
R1ssh(config-line)#exit
R1ssh(config)#ip ssh version 2
R1ssh(config)#

Router2

Physical   Config   CLI   Attributes

IOS Command Line Interface

```
Router>en
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R1ssh
R1ssh(config)#enable password pass
R1ssh(config)#ip domain-name CNlab.com
R1ssh(config)#username cs-student password 123
R1ssh(config)#crypto key generate rsa
The name for the keys will be: R1ssh.CNlab.com
Choose the size of the key modulus in the range of 360 to 4096 for your
  General Purpose Keys. Choosing a key modulus greater than 512 may take
  a few minutes.

How many bits in the modulus [512]: 1024
% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

R1ssh(config)#
*Mar 1 0:39:21.111: %SSH-5-ENABLED: SSH 1.99 has been enabled
R1ssh(config)#line vty 0 15
R1ssh(config-line)#login local
R1ssh(config-line)#transport input ssh
R1ssh(config-line)#exit
R1ssh(config)#ip ssh version 2
R1ssh(config)#
%SYS-5-CONFIG_I: Configured from console by console
```

```
C:\>ssh -l cs-student 192.168.1.1

Password:



R1ssh>en
Password:
R1ssh#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1ssh(config)#exit
R1ssh#exit

[Connection to 192.168.1.1 closed by foreign host]
```