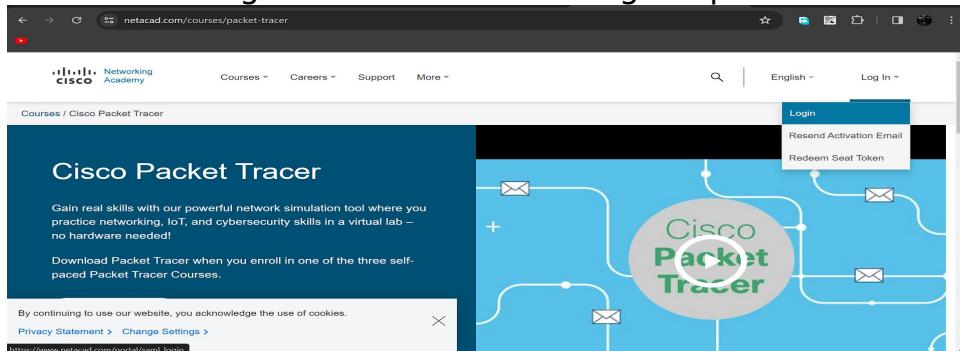
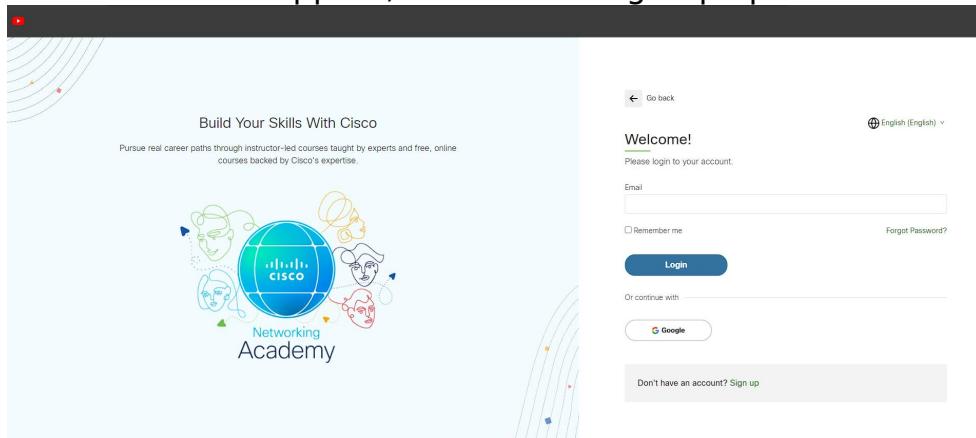


## Cisco packet tracer download:

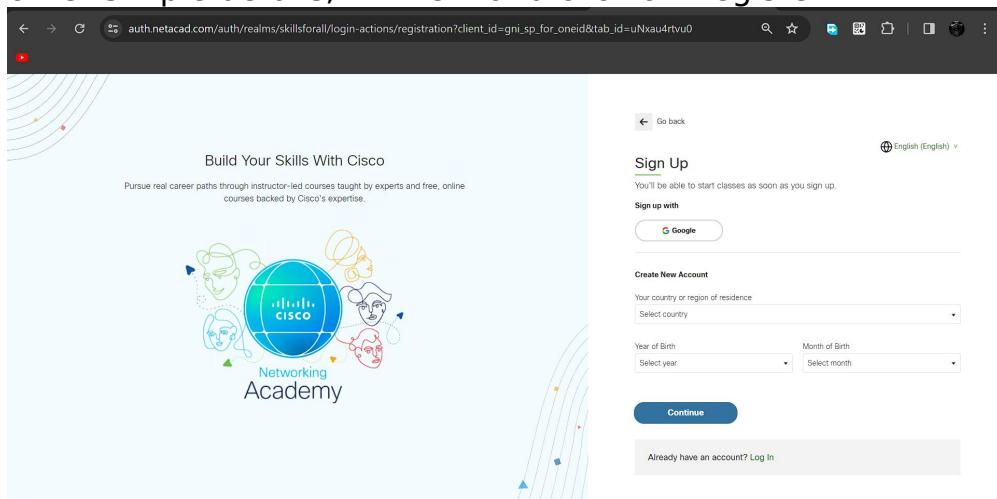
1. Visit the official website of Netacad using any web browser & Press the login button and select log In option.



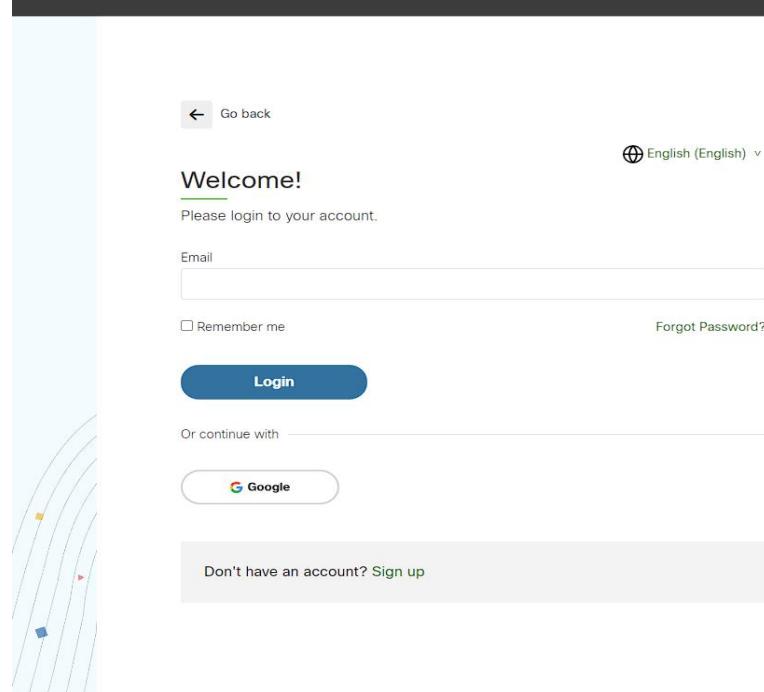
2. Next screen will appear, click on the sign-up option.



3. Next screen will appear and will ask for email and password and other simple details, fill them and click on Register.



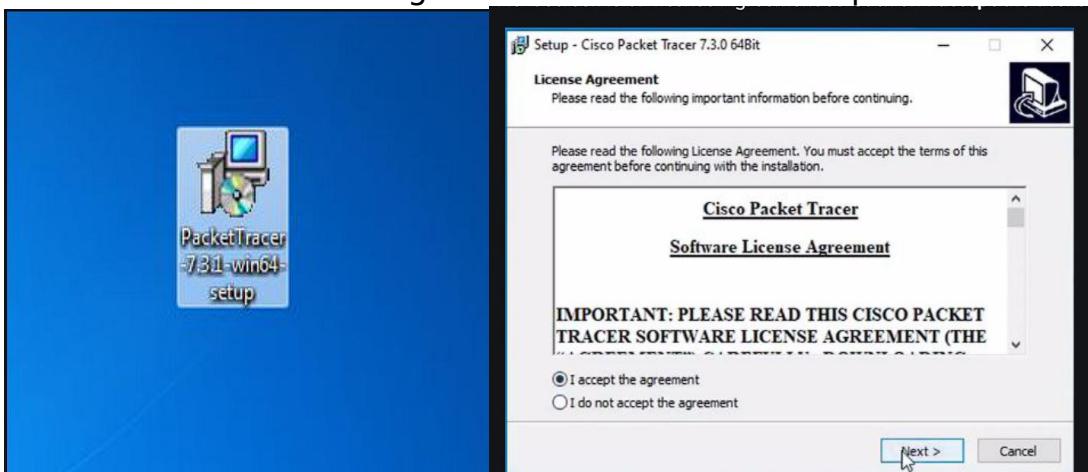
4. Now the login screen appears again so fill in the Email id & On the next screen enter the password and press the Login button.



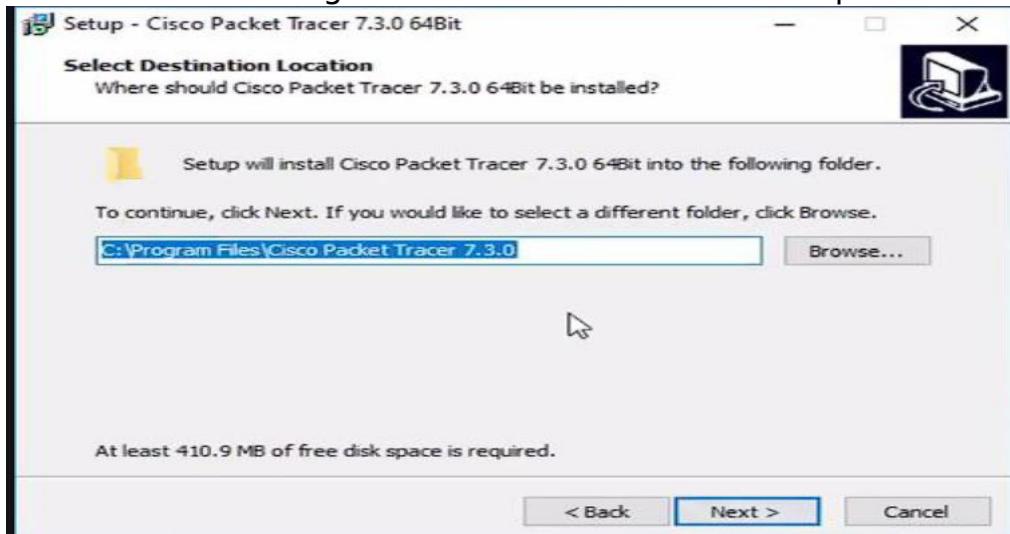
5. Dashboard will initialize, now click on Resources and choose Download Packet Tracer Option.

6. On the next web page choose the operating system to download the packet tracer. Downloading will start automatically.

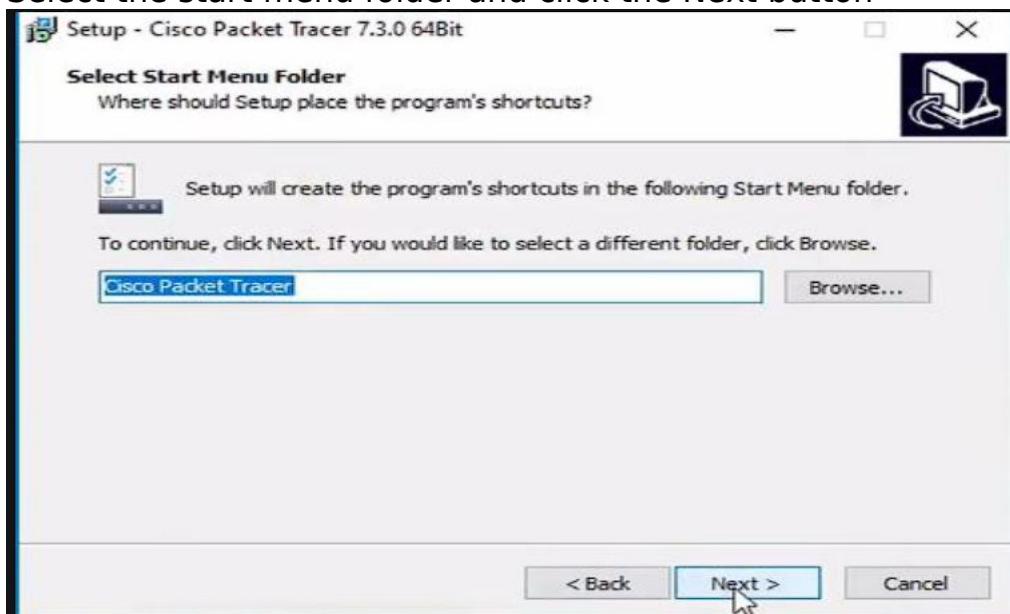
7. Check for the executable file in your system and run it. Next screen is of License Agreement so Click on I accept the license.



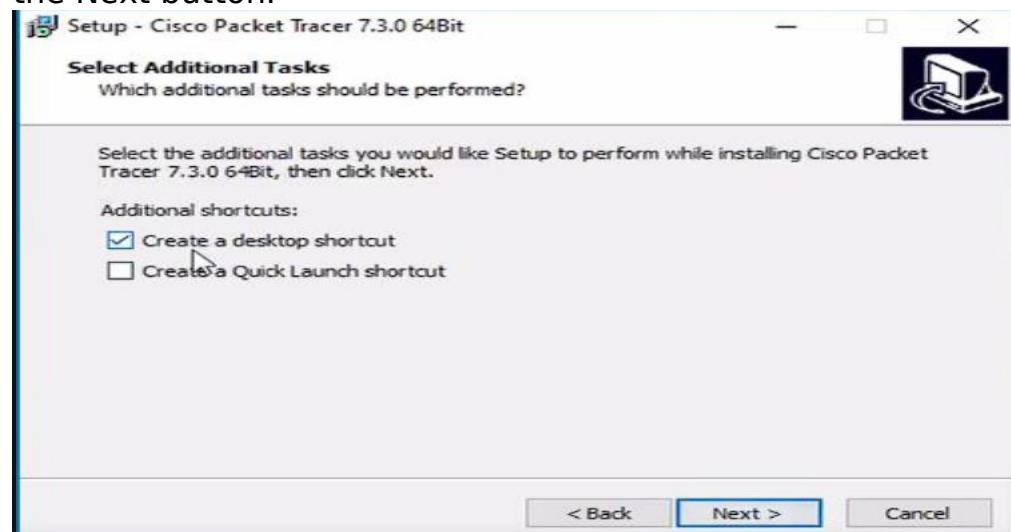
8. Choose the installing location which has sufficient space.



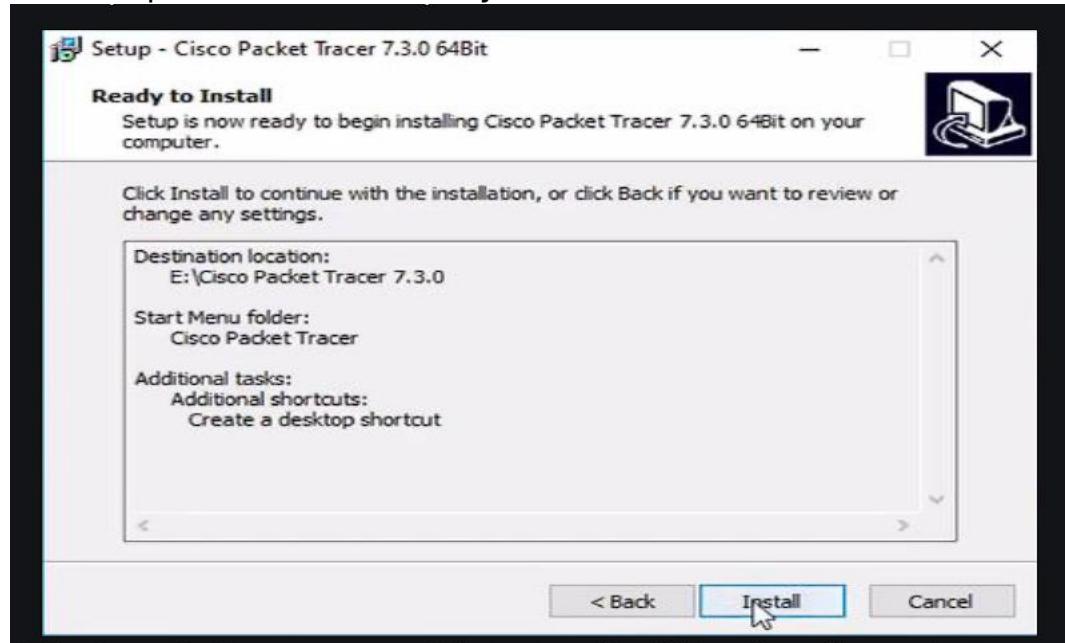
9. Select the start menu folder and click the Next button



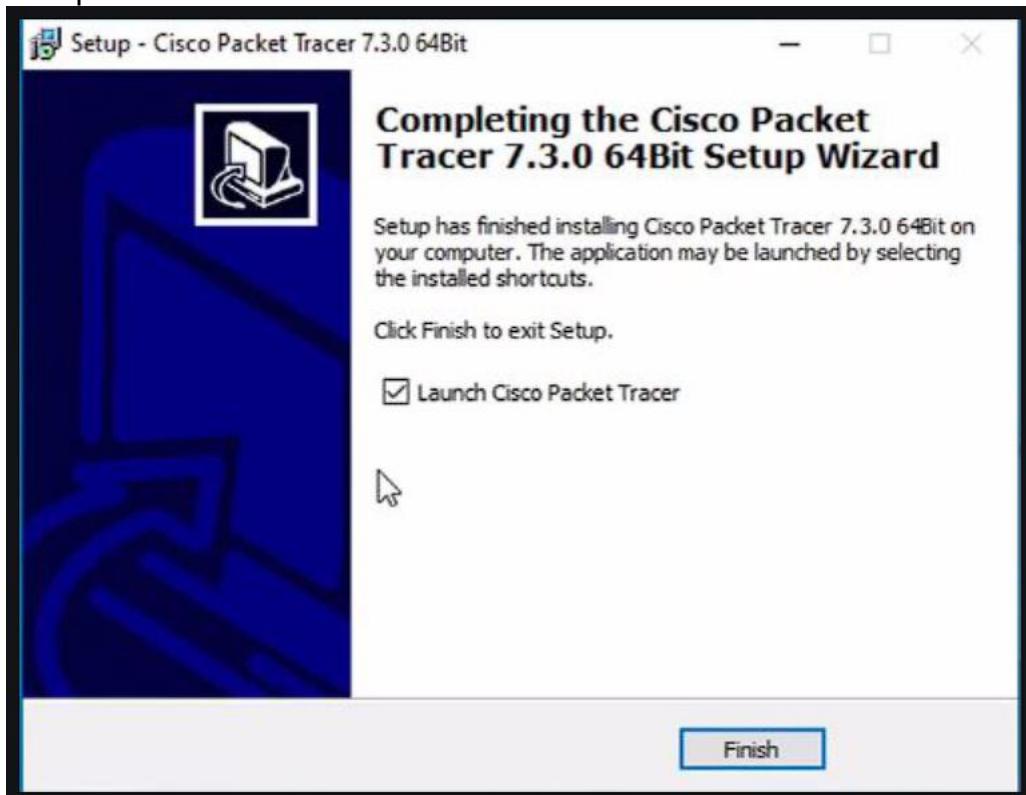
10. Check the box for creating a desktop icon and click on the Next button.



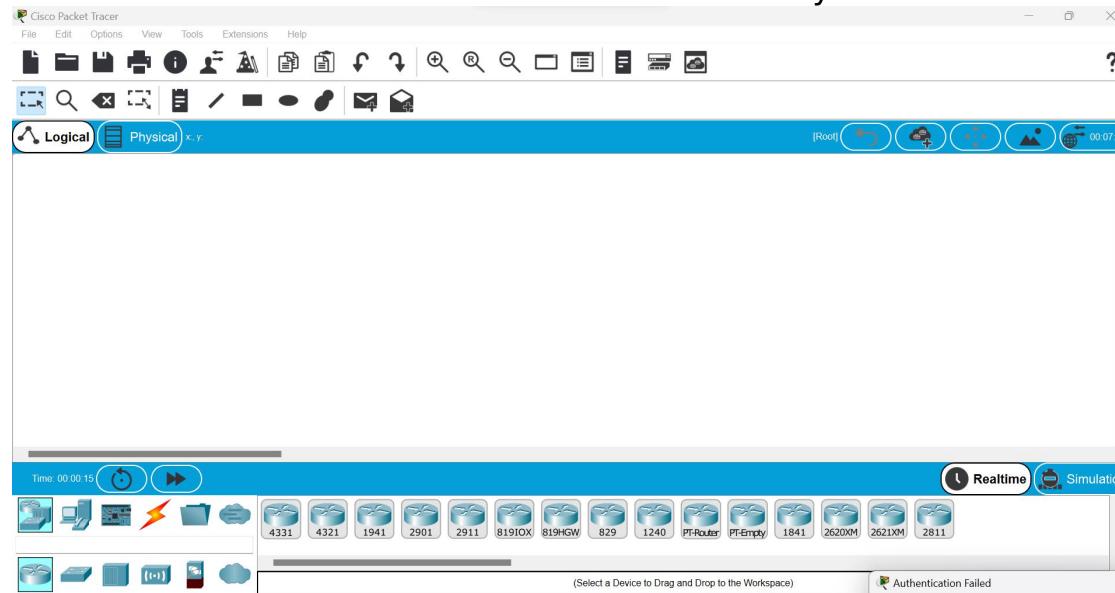
11. Now packet tracer is ready to install so click on the Install button



12. After the installation is completed click on the Finish button to complete the installation.

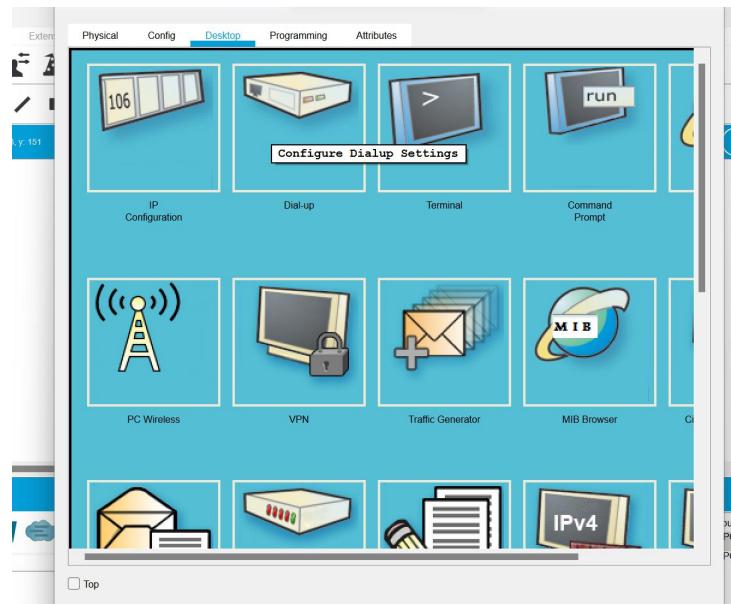
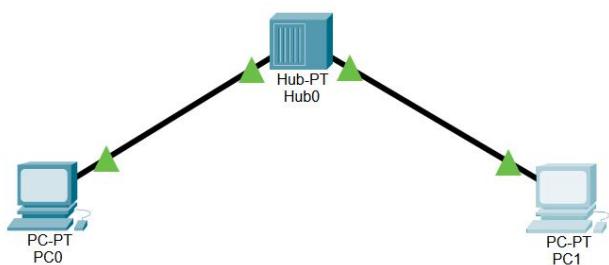


13. Interface is initialized and the software is ready to use.



## **Implement the uses of subnet masks(static IP-design) with a switch and two end devices.**

- Start
- Take two host and a switch for network connection between them
- Connect them using connecting wire
- Configure IP statically of one end devices.
- Enter the class-c ip address at Pv4 and sub-net it making only 2 valid host(/30)
- Pass the message packet from one end device to other end device.
- Ping any one device ip address using command prompt
- End.



**IP Configuration (FastEthernet0)**

**IP Configuration**

Interface: FastEthernet0

**IP Configuration**

- DHCP  Static
- IP Address: 192.168.1.1
- Subnet Mask: 255.255.255.248
- Default Gateway: 0.0.0.0
- DNS Server: 0.0.0.0

**IPv6 Configuration**

- DHCP  Auto Config  Static
- IPv6 Address: FE80::2D0:D3FF:FE9C:6573
- Link Local Address: FE80::2D0:D3FF:FE9C:6573
- IPv6 Gateway:
- IPv6 DNS Server:

802.1X

Use 802.1X Security

Authentication: MD5

Username:

Password:

Top

**IP Configuration (FastEthernet0)**

**IP Configuration**

Interface: FastEthernet0

**IP Configuration**

- DHCP  Static
- IP Address: 192.168.1.2
- Subnet Mask: 255.255.255.248
- Default Gateway: 0.0.0.0
- DNS Server: 0.0.0.0

**IPv6 Configuration**

- DHCP  Auto Config  Static
- IPv6 Address: FE80::2D0:D3FF:FE0C:283E
- Link Local Address: FE80::2D0:D3FF:FE0C:283E
- IPv6 Gateway:
- IPv6 DNS Server:

802.1X

Use 802.1X Security

Authentication: MD5

Username:

Password:

Top

**Cisco Packet Tracer**

File Edit Options View Tools Extensions Help

Logical Physical x 269 y 0

Hub-PT Hub0

PC-PT PC0

PC-PT PC1

Time: 00:05:11

Realtime Simulation

Automatically Choose Connection Type

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic
Successful		PC0	PC1	IC...	Blue	0.000	N
Successful		PC1	PC0	IC...	Red	0.000	N

Physical    Config    **Desktop**    Programming    Attributes

Command Prompt    X

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

Pinging 192.168.1.1 with 32 bytes of data:

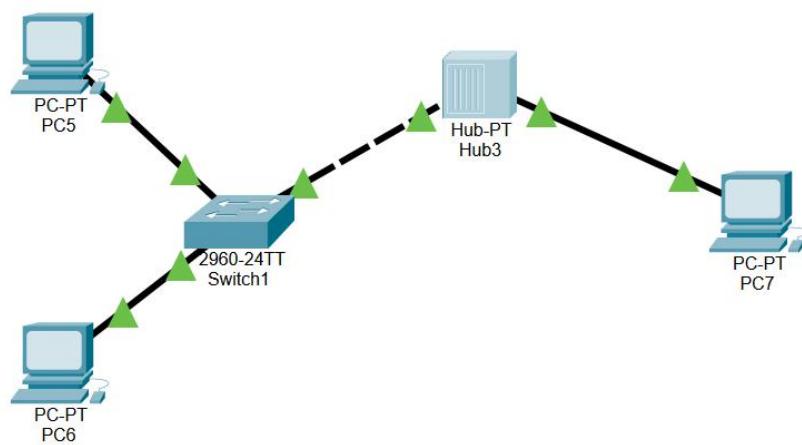
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128

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:\>
```

## Switch hub and end devices

- Start
- Take 3 host/end devices,a hub and a switch for network connection between them
- Connect them using connecting write.
- Configure Ip statically of each end devices
- Enter class-c Ip address at ipv4 and sub-net it(/24)
- Repeat step 3-4 for other end devices
- Pass the message packet from one end devices to other end devices
- Ping any one device IP address using command prompt
- End



Physical Config Desktop Programming Attributes

### IP Configuration

X

Interface: FastEthernet0

IP Configuration

DHCP  Static

IP Address: 192.168.1.1

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

DHCP  Auto Config  Static

IPv6 Address: /

Link Local Address: FE80::260:47FF:FE25:CDA0

IPv6 Gateway:

IPv6 DNS Server:

Physical Config Desktop Programming Attributes

### IP Configuration

X

Interface: FastEthernet0

IP Configuration

DHCP  Static

IP Address: 192.168.1.2

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

DHCP  Auto Config  Static

IPv6 Address: /

Link Local Address: FE80::201:97FF:FECC:CB2B

IPv6 Gateway:

IPv6 DNS Server:

802.1X

**Physical Config Desktop Programming Attributes**

### IP Configuration

Interface: FastEthernet0

**IP Configuration**

DHCP  Static IP Address: 192.168.1.3 Subnet Mask: 255.255.255.0 Default Gateway: 0.0.0.0 DNS Server: 0.0.0.0

**IPv6 Configuration**

DHCP  Auto Config  Static IPv6 Address: FE80::205:5EFF:FE2B:7EEE Link Local Address: FE80::205:5EFF:FE2B:7EEE IPv6 Gateway: IPv6 DNS Server:

**802.1X**

Use 802.1X Security Authentication: MD5 Username: Password:

**Cisco Packet Tracer**

File Edit Options View Tools Extensions Help

Logical Physical x: 341, y: 194 [Root] 06:31:00

Time: 00:13:00 Realtime Simulation

Automatically Choose Connection Type

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic
Successful		PC5	PC6	IC...	Green	0.000	N
Successful		PC5	PC7	IC...	Yellow	0.000	N
Successful		PC6	PC7	IC...	Brown	0.000	N

The screenshot shows a NetworkMiner interface with a tab bar at the top labeled 'Physical', 'Config', 'Desktop' (which is selected), 'Programming', and 'Attributes'. Below the tab bar is a 'Command Prompt' window with the following text:

```
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=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128

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 = 1ms, Average = 0ms

C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

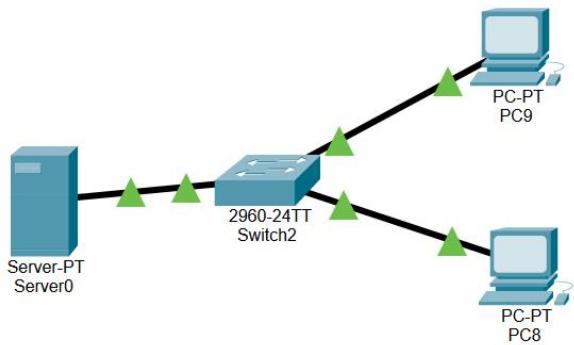
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

## Server, switch, hub and end devices

- Start Take 2 Host, a server & a switch for network connection between them.
- Connect them using connection wire.
- Click on server>services>HTTP and make both HTTP and HTTPS on.
- Click on DHCP and turn on services
- Enter the starting IP address and its subnet mask and save it.
- No, server>Desktop and configure the IPv4 address in statically.
- Click on end device>Desktop and turn on DHCP(server will automatically generate the IP address for end device)
- Repeat step 7 for each end device.
- Pass the message packet from one end device to other end device(if it shows successful the design is valid and error less)
- Ping any one device IP address using command prompt
- End



## Server:

Physical    Config    Services    **Desktop**    Programming    Attributes

**IP Configuration**

IP Configuration

DHCP       Static

IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0

IPv6 Configuration

DHCP       Auto Config       Static

IPv6 Address	/
Link Local Address	FE80::290:2BFF:FEC6:9CAB
IPv6 Gateway	
IPv6 DNS Server	

802.1X

Use 802.1X Security

Authentication	MD5
Username	
Password	

Physical Config Services Desktop Programming Attributes

### SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

### HTTP

HTTP

On  Off

HTTPS

On  Off

### File Manager

File Name	Edit	Delete
1 copyrights.html	(edit)	(delete)
2 cscoplogo177x111.jpg		(delete)
3 helloworld.html	(edit)	(delete)
4 image.html	(edit)	(delete)
5 index.html	(edit)	(delete)

Physical Config Services Desktop Programming Attributes

### SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

### DHCP

Interface: FastEthernet0 Service:  On  Off

Pool Name: serverPool

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

Start IP Address: 192.168.1.1

Subnet Mask: 255.255.255.0

Maximum Number of Users: 255

TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

Add Save Remove

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
serverPool	0.0.0.0	0.0.0.0	192.168....	255.255....	255	0.0.0.0	0.0.0.0

Physical    Config    **Desktop**    Programming    Attributes

### IP Configuration

Interface: FastEthernet0

IP Configuration

DHCP     Static

IP Address: \_\_\_\_\_

Subnet Mask: \_\_\_\_\_

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

DHCP     Auto Config     Static

IPv6 Address: \_\_\_\_\_ / \_\_\_\_\_

Link Local Address: FE80::207:ECFF:FE6:1C7

IPv6 Gateway: \_\_\_\_\_

IPv6 DNS Server: \_\_\_\_\_

802.1X

Use 802.1X Security

Physical    Config    **Desktop**    Programming    Attributes

### IP Configuration

Interface: FastEthernet0

IP Configuration

DHCP     Static    DHCP request successful.

IP Address: 192.168.1.2

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

DHCP     Auto Config     Static

IPv6 Address: \_\_\_\_\_ / \_\_\_\_\_

Link Local Address: FE80::20B:BEFF:FE1B:945A

IPv6 Gateway: \_\_\_\_\_

IPv6 DNS Server: \_\_\_\_\_

802.1X

Use 802.1X Security

**Physical Config Desktop Programming Attributes**

### IP Configuration

Interface: FastEthernet0

IP Configuration

DHCP  Static      DHCP request successful.

IP Address: 192.168.1.3  
Subnet Mask: 255.255.255.0  
Default Gateway: 0.0.0.0  
DNS Server: 0.0.0.0

IPv6 Configuration

DHCP  Auto Config  Static  
IPv6 Address: /  
Link Local Address: FE80::230F:FFFE:42:47DA  
IPv6 Gateway:  
IPv6 DNS Server:

802.1X

Use 802.1X Security  
Authentication: MD5  
Username:  
Password:

**Cisco Packet Tracer**  
File Edit Options View Tools Extensions Help

Logical Physical x 396 y 66 Add Simple PDU (P)

Server-PT  
2960-24T Switch  
PC1, PC2, PC3

Realtime Simulation

Time: 00:13:44

Automatically Choose Connection Type

Physical Config Desktop Programming Attributes

### Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

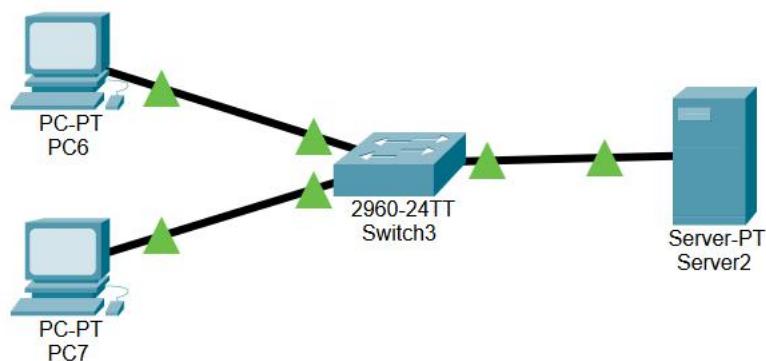
Reply from 192.168.1.3: bytes=32 time=6ms TTL=128
Reply from 192.168.1.3: bytes=32 time=4ms TTL=128
Reply from 192.168.1.3: bytes=32 time=5ms TTL=128
Reply from 192.168.1.3: bytes=32 time=3ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 3ms, Maximum = 6ms, Average = 4ms

c:\>
```

## DNS:

1. Start
2. Take 1/2 host, a server and a switch for network connection between them.
3. Connect them using connection wire.
4. Click on server>IP configuration and set its IP statically:(192.168.1.1) and give DNS server address:(192.168.1.1)
5. Click on server>services>HTTP and make both HTTP & HTTPS on.
6. Click on edit of index.html and edit its content and save it.
7. Click on DNS and turn it on.
8. Give name:(www.test.com) and DNS server:(192.168.1.1)
9. Give static IP address to hosts and give the same DNS server:(192.168.1.1)
10. Click on host>desktop>web browser and search with DNS name/server i.e. (www.test.com)/(192.168.1.1)
11. End



## Server:

The screenshot shows a software interface for managing network configurations. The top navigation bar includes tabs for Physical, Config, Services, Desktop (which is highlighted in blue), Programming, and Attributes. A sub-menu window titled "IP Configuration" is open under the Desktop tab. This window contains sections for IP Configuration (with radio buttons for DHCP and Static, and fields for IP Address, Subnet Mask, Default Gateway, and DNS Server), IPv6 Configuration (with radio buttons for DHCP, Auto Config, and Static, and fields for IPv6 Address, Link Local Address, IPv6 Gateway, and IPv6 DNS Server), and 802.1X (with checkboxes for Use 802.1X Security, Authentication method (MD5), Username, and Password). The IP Address field is set to 192.168.1.1, Subnet Mask to 255.255.255.0, Default Gateway to 0.0.0.0, and DNS Server to 192.168.1.1.

Physical    Config    **Services**    Desktop    Programming    Attributes

**SERVICES**

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

HTTP

HTTPS

File Manager

File Name	Edit	Delete
1 copyrights.html	(edit)	(delete)
2 cscopologo177x111.jpg		(delete)
3 helloworld.html	(edit)	(delete)
4 image.html	(edit)	(delete)
5 index.html	(edit)	(delete)

Physical    Config    **Services**    Desktop    Programming    Attributes

**SERVICES**

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

File Name:

```
<html>
<center><h1>Hello World</h1></center>
</html>
```

File Manager    Save

Physical    Config    **Services**    Desktop    Programming    Attributes

**SERVICES**

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS**
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

**DNS**

DNS Service  On  Off

Resource Records

Name	Type
www.test.com	A Record

Name: www.test.com    Type: A Record    Address: 192.168.1.1

Add    Save    Remove

No.	Name	Type	Detail
0	www.test.com	A Record	192.168.1.1

DNS Cache

Physical    Config    **Desktop**    Programming    Attributes

### IP Configuration

X

Interface: FastEthernet0

IP Configuration

DHCP     Static

IP Address: 192.168.1.2  
Subnet Mask: 255.255.255.0  
Default Gateway: 0.0.0.0  
DNS Server: 192.168.1.1

IPv6 Configuration

DHCP     Auto Config     Static

IPv6 Address: /  
Link Local Address: FE80::250:FFF:FEBA:514A  
IPv6 Gateway:  
IPv6 DNS Server:

802.1X

Physical    Config    **Desktop**    Programming    Attributes

### IP Configuration

X

Interface: FastEthernet0

IP Configuration

DHCP     Static

IP Address: 192.168.1.3  
Subnet Mask: 255.255.255.0  
Default Gateway: 0.0.0.0  
DNS Server: 192.168.1.1

IPv6 Configuration

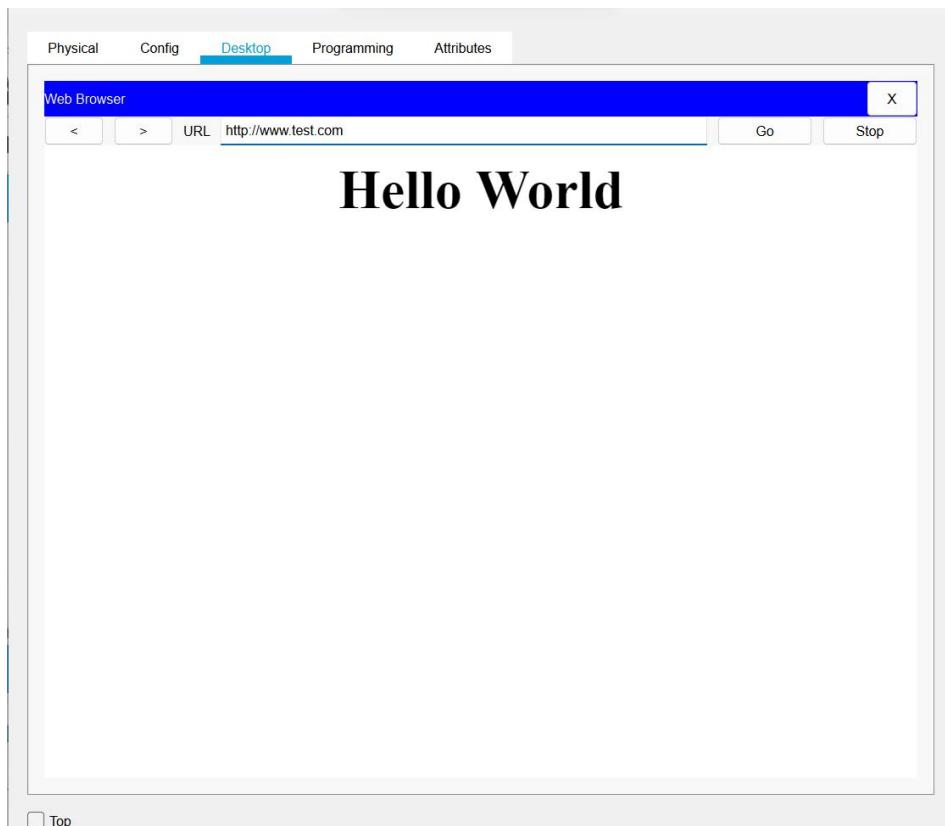
DHCP     Auto Config     Static

IPv6 Address: /  
Link Local Address: FE80::201:42FF:FE8C:BB40  
IPv6 Gateway:  
IPv6 DNS Server:

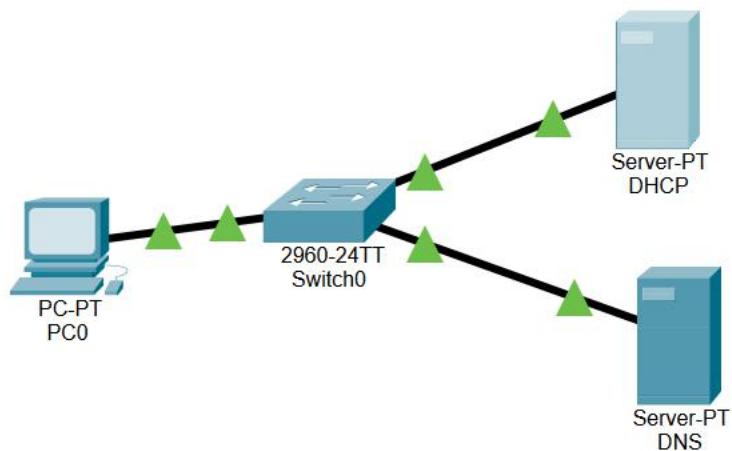
802.1X

Use 802.1X Security

Authentication: MD5  
Username:   
Password:



## DNS & DHCP server :



## DNS:

The screenshot shows a network configuration interface with two main sections: "IP Configuration" and "Services".

**IP Configuration:**

- IP Address: 192.168.1.10
- Subnet Mask: 255.255.255.0
- Default Gateway: 0.0.0.0
- DNS Server: 0.0.0.0

**Services:**

- SERVICES:** HTTP, DHCP, DHCPv6, TFTP, **DNS**, SYSLOG, AAA, NTP, EMAIL, FTP, IoT, VM Management, Radius EAP.
- DNS:**
  - DNS Service: On
  - Resource Records:
 

No.	Name	Type	Detail
0	test	A Record	192.168.1.10

## DHCP:

Physical   Config   Services   **Desktop**   Programming   Attributes

**IP Configuration**

IP Configuration

DHCP    Static

IP Address: 192.168.1.1  
Subnet Mask: 255.255.255.0  
Default Gateway: 192.168.1.10  
DNS Server: 0.0.0.0

IPv6 Configuration

DHCP    Auto Config    Static

IPv6 Address: FE80::202:4AFF:FE16:6686  
Link Local Address: FE80::202:4AFF:FE16:6686  
IPv6 Gateway:  
IPv6 DNS Server:

802.1X

Use 802.1X Security

Authentication: MD5  
Username:  
Password:

Physical   Config   **Services**   Desktop   Programming   Attributes

**SERVICES**

HTTP	HTTP	HTTP
DHCP	Off	On
DHCPv6		
TFTP		
DNS		
SYSLOG		
AAA		
NTP		
EMAIL		
FTP		
IoT		
VM Management		
Radius EAP		

File Manager

File Name	Edit	Delete
1 copyrights.html	(edit)	(delete)
2 cscoptlogo177x111.jpg		(delete)
3 helloworld.html	(edit)	(delete)
4 image.html	(edit)	(delete)
5 index.html	(edit)	(delete)

New File Import

Physical	Config	Services	Desktop	Programming	Attributes																																																																																																																														
<table border="1"> <thead> <tr> <th colspan="9">SERVICES</th> </tr> </thead> <tbody> <tr><td>HTTP</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>DHCP</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>DCHPv6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>TFTP</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>DNS</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SYSLOG</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>AAA</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>NTP</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>EMAIL</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>FTP</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>IoT</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>VM Management</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Radius EAP</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>						SERVICES									HTTP									DHCP									DCHPv6									TFTP									DNS									SYSLOG									AAA									NTP									EMAIL									FTP									IoT									VM Management									Radius EAP								
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<p style="text-align: center;">DHCP</p> <hr/> <table border="1"> <tr> <td>Interface</td> <td>FastEthernet0</td> <td>Service</td> <td><input checked="" type="radio"/> On</td> <td><input type="radio"/> Off</td> </tr> <tr> <td>Pool Name</td> <td colspan="4">serverPool</td> </tr> <tr> <td>Default Gateway</td> <td colspan="4">0.0.0.0</td> </tr> <tr> <td>DNS Server</td> <td colspan="4">192.168.1.10</td> </tr> <tr> <td>Start IP Address :</td> <td>192</td> <td>168</td> <td>1</td> <td>0</td> </tr> <tr> <td>Subnet Mask:</td> <td>255</td> <td>255</td> <td>255</td> <td>0</td> </tr> <tr> <td>Maximum Number of Users :</td> <td colspan="4">255</td> </tr> <tr> <td>TFTP Server:</td> <td colspan="4">0.0.0.0</td> </tr> <tr> <td>WLC Address:</td> <td colspan="4">0.0.0.0</td> </tr> <tr> <td colspan="2" style="text-align: center;"><a href="#">Add</a></td> <td colspan="2" style="text-align: center;"><a href="#">Save</a></td> <td colspan="2" style="text-align: center;"><a href="#">Remove</a></td> </tr> <tr> <th>Pool Name</th> <th>Default Gateway</th> <th>DNS Server</th> <th>Start IP Address</th> <th>Subnet Mask</th> <th>Max User</th> <th>TFTP Server</th> <th>WLC Address</th> </tr> <tr> <td>serverPool</td> <td>0.0.0.0</td> <td>192.168....</td> <td>192.168....</td> <td>255.255....</td> <td>255</td> <td>0.0.0.0</td> <td>0.0.0.0</td> </tr> </table>						Interface	FastEthernet0	Service	<input checked="" type="radio"/> On	<input type="radio"/> Off	Pool Name	serverPool				Default Gateway	0.0.0.0				DNS Server	192.168.1.10				Start IP Address :	192	168	1	0	Subnet Mask:	255	255	255	0	Maximum Number of Users :	255				TFTP Server:	0.0.0.0				WLC Address:	0.0.0.0				<a href="#">Add</a>		<a href="#">Save</a>		<a href="#">Remove</a>		Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address	serverPool	0.0.0.0	192.168....	192.168....	255.255....	255	0.0.0.0	0.0.0.0																																																											
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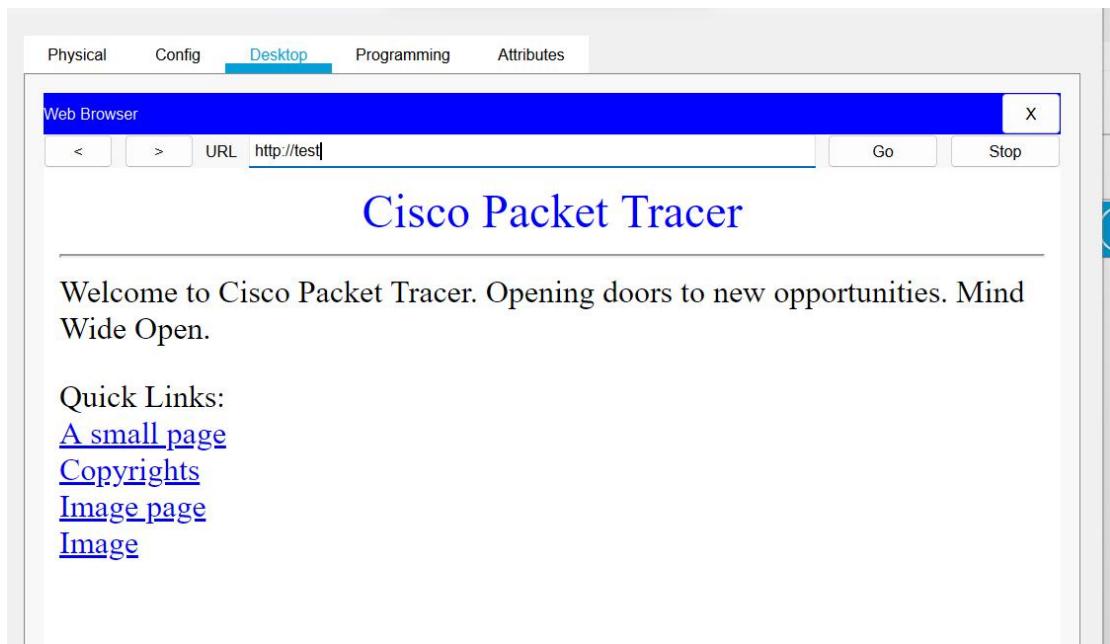
PC:

Physical    Config    **Desktop**    Programming    Attributes

### IP Configuration

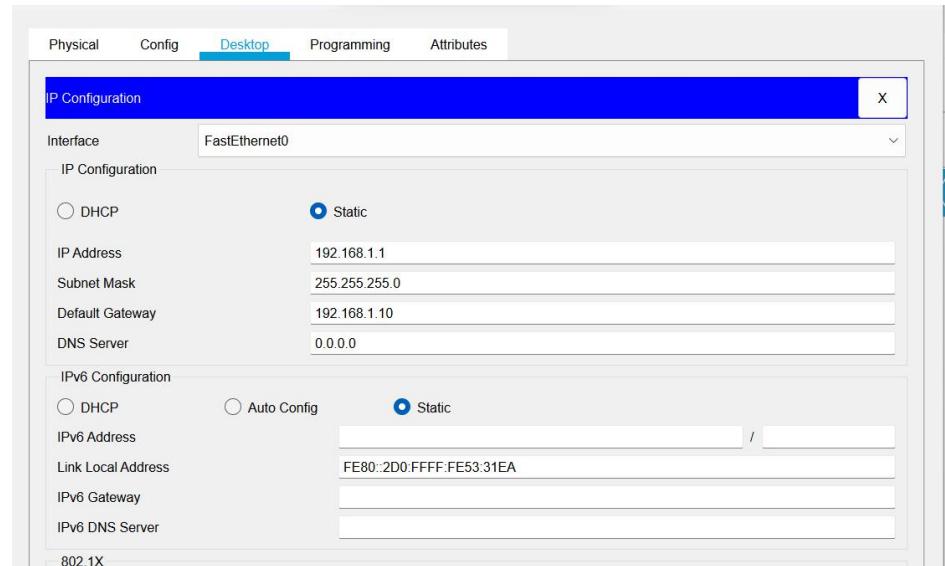
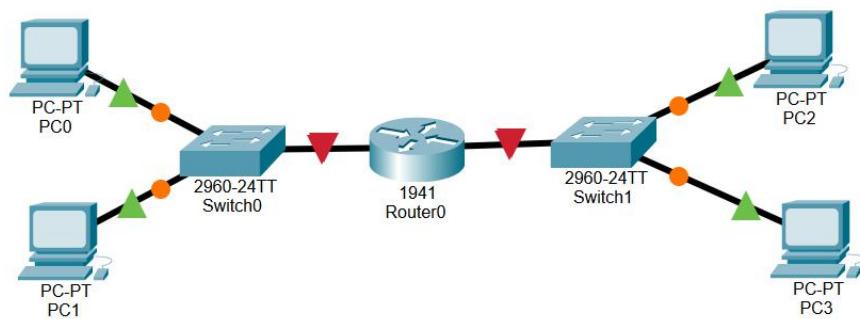
X

Interface	FastEthernet0	
IP Configuration		
<input checked="" type="radio"/> DHCP	<input type="radio"/> Static	DHCP request successful.
IP Address	192.168.1.2	
Subnet Mask	255.255.255.0	
Default Gateway	0.0.0.0	
DNS Server	192.168.1.10	
IPv6 Configuration		
<input type="radio"/> DHCP	<input type="radio"/> Auto Config	<input checked="" type="radio"/> Static
IPv6 Address		
Link Local Address	FE80:204:9AFF:FE50:171	
IPv6 Gateway		
IPv6 DNS Server		
802.1X		
<input type="checkbox"/> Use 802.1X Security		
Authentication	MD5	
Username		
Password		



**Router:**

- Start
- Take 4 host, 2 switch and a router for network connection between them
- Connect them using connection wire
- Give each host IP address of class c and subnet them & default gateway
- Click router>Interface>GigabitEthernet 0/0 and set IP which was default gateway
- Click GigabitEthernet 0/1 and set IP which was default gateway
- Pass the message packet from one end device to other and from end device to router
- Perform ping test
- End



Physical    Config    **Desktop**    Programming    Attributes

**IP Configuration**

Interface: FastEthernet0

**IP Configuration**

DHCP       Static

IP Address: 192.168.1.2  
Subnet Mask: 255.255.255.0  
Default Gateway: 192.168.1.10  
DNS Server: 0.0.0.0

**IPv6 Configuration**

DHCP       Auto Config       Static

IPv6 Address: FE80::260:70FF:FEB1:CA32  
Link Local Address: FE80::260:70FF:FEB1:CA32  
IPv6 Gateway:  
IPv6 DNS Server:

802.1X

Use 802.1X Security

Physical    Config    **Desktop**    Programming    Attributes

**IP Configuration**

Interface: FastEthernet0

**IP Configuration**

DHCP       Static

IP Address: 192.168.2.1  
Subnet Mask: 255.255.255.0  
Default Gateway: 192.168.2.10  
DNS Server: 0.0.0.0

**IPv6 Configuration**

DHCP       Auto Config       Static

IPv6 Address: FE80::202:4AFF:FE4D:5C67  
Link Local Address: FE80::202:4AFF:FE4D:5C67  
IPv6 Gateway:  
IPv6 DNS Server:

802.1X

Physical    Config    **Desktop**    Programming    Attributes

**IP Configuration**

Interface: FastEthernet0

**IP Configuration**

DHCP       Static

IP Address: 192.168.2.2  
Subnet Mask: 255.255.255.0  
Default Gateway: 192.168.2.10  
DNS Server: 0.0.0.0

**IPv6 Configuration**

DHCP       Auto Config       Static

IPv6 Address: FE80::2E0:8FFF:FEDA:B868  
Link Local Address: FE80::2E0:8FFF:FEDA:B868  
IPv6 Gateway:  
IPv6 DNS Server:

802.1X

Physical    **Config**    CLI    Attributes

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**SWITCHING**

VLAN Database

**INTERFACE**

GigabitEthernet0/0

GigabitEthernet0/1

**GigabitEthernet0/0**

Port Status  On

Bandwidth  1000 Mbps  100 Mbps  10 Mbps  Auto

Duplex  Half Duplex  Full Duplex  Auto

MAC Address 00D0.FF5C.7501

IP Configuration

IP Address 192.168.1.10

Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0
Router(config-if)#ip address 192.168.1.10 255.255.255.0
Router(config-if)#ip address 192.168.1.10 255.255.255.0
Router(config-if)#ip address 192.168.1.10 255.255.255.0
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
```

Physical    **Config**    CLI    Attributes

**GIGABITETHERNET0/1**

<b>Port Status</b>	<input checked="" type="checkbox"/> On
<b>Bandwidth</b>	<input type="radio"/> 1000 Mbps <input checked="" type="radio"/> 100 Mbps <input type="radio"/> 10 Mbps <input checked="" type="checkbox"/> Auto
<b>Duplex</b>	<input type="radio"/> Half Duplex <input checked="" type="radio"/> Full Duplex <input checked="" type="checkbox"/> Auto
<b>MAC Address</b>	00D0.FF5C.7502
<b>IP Configuration</b>	
<b>IP Address</b>	192.168.2.10
<b>Subnet Mask</b>	255.255.255.0
<b>Tx Ring Limit</b>	10

**Equivalent IOS Commands**

```

Router(config)#exit
Router(config)#interface GigabitEthernet0/0
Router(config-if)#ip address 192.168.1.10 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/1
Router(config-if)#ip address 192.168.2.10 255.255.255.0
Router(config-if)#ip address 192.168.2.10 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up

Router(config-if)#exit
Router(config)#interface GigabitEthernet0/1
Router(config-if)#

```

Cisco Packet Tracer

File Edit Options View Tools Extensions Help

Logical Physical x: 28 y: 46

1941 Router  
2960-24T Switch0  
2960-24T Switch1

Time: 00:16:36    **Realtime**    **Simulation**

Automatically Choose Connection Type

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic
Successful	PC0	Router0	ICMP	ICMP	Red	0.000	N
Successful	PC1	Router0	ICMP	ICMP	Red	0.000	N
Successful	PC0	PC2	ICMP	ICMP	Blue	0.000	N
Successful	PC3	Router0	ICMP	ICMP	Red	0.000	N

Physical Config Desktop Programming Attributes

Command Prompt X

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

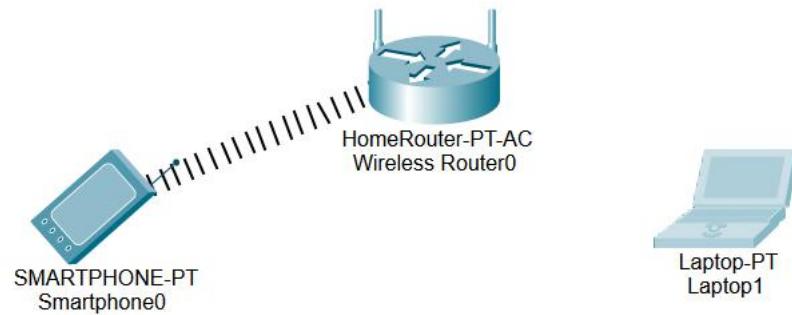
C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time<1ms TTL=127
Reply from 192.168.2.1: bytes=32 time<1ms TTL=127
Reply from 192.168.2.1: bytes=32 time=1ms TTL=127
Reply from 192.168.2.1: bytes=32 time<1ms TTL=127

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

## Wireless Connection:



Physical    Config    Desktop    Programming    Attributes

MODULES

- WPC300N
- PT-LAPTOP-NM-1AM
- PT-LAPTOP-NM-1CE
- PT-LAPTOP-NM-1CFE
- PT-LAPTOP-NM-1CGE
- PT-LAPTOP-NM-1FFE
- PT-LAPTOP-NM-1FGE
- PT-LAPTOP-NM-1W
- PT-LAPTOP-NM-1W-A
- PT-LAPTOP-NM-1W-AC
- PT-LAPTOP-NM-3G/4G
- PT-HEADPHONE
- PT-MICROPHONE

Physical Device View

Zoom In    Original Size    Zoom Out

Customize Icon in Physical View    Customize Icon in Logical View

The Linksys-WPC300N module provides one 2.4GHz wireless interface suitable for connection to wireless networks. The module supports protocols that use Ethernet for LAN access.

**Physical** Config Desktop Programming Attributes

**MODULES**

- WPC300N
- PT-LAPTOP-NM-1AM
- PT-LAPTOP-NM-1CE
- PT-LAPTOP-NM-1CFE
- PT-LAPTOP-NM-1CGE
- PT-LAPTOP-NM-1FFE
- PT-LAPTOP-NM-1FGE
- PT-LAPTOP-NM-1W
- PT-LAPTOP-NM-1WA
- PT-LAPTOP-NM-1W-AC
- PT-LAPTOP-NM-3G/4G
- PT-HEADPHONE
- PT-MICROPHONE

**Physical Device View**

Zoom In Original Size Zoom Out



Customize Icon in Physical View

Customize Icon in Logical View

The Linksys-WPC300N module provides one 2.4GHz wireless interface suitable for connection to wireless networks. The module supports protocols that use Ethernet for LAN access.

**Physical** Config Desktop Programming Attributes

**MODULES**

- WPC300N
- PT-LAPTOP-NM-1AM
- PT-LAPTOP-NM-1CE
- PT-LAPTOP-NM-1CFE
- PT-LAPTOP-NM-1CGE
- PT-LAPTOP-NM-1FFE
- PT-LAPTOP-NM-1FGE
- PT-LAPTOP-NM-1W
- PT-LAPTOP-NM-1WA
- PT-LAPTOP-NM-1W-AC
- PT-LAPTOP-NM-3G/4G
- PT-HEADPHONE
- PT-MICROPHONE

**Physical Device View**

Zoom In Original Size Zoom Out



Customize Icon in Physical View

Customize Icon in Logical View

Customize Device Image in Logical View

The Linksys-WPC300N module provides one 2.4GHz wireless interface suitable for connection to wireless networks. The module supports protocols that use Ethernet for LAN access.

