

## EXPERIMENT – 10

**AIM:** - a) Internetworking with routers in CISCO PACKET TRACER simulator.

### OUTPUT: -

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PC0

Physical Config Desktop Programming Attributes

Command Prompt

Cisco Packet Tracer PC Command Line 1.0
C:\>ping 10.0.0.3

Pinging 10.0.0.3 with 32 bytes of data:

Reply from 10.0.0.3: bytes=32 time<1ms TTL=128
Reply from 10.0.0.3: bytes=32 time<1ms TTL=128
Reply from 10.0.0.3: bytes=32 time<1ms TTL=128
Reply from 10.0.0.3: bytes=32 time<1ms TTL=128

Ping statistics for 10.0.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 10.0.0.2: bytes=32 time<1ms TTL=128
Reply from 10.0.0.2: bytes=32 time<1ms TTL=128
Reply from 10.0.0.2: bytes=32 time<1ms TTL=128
Reply from 10.0.0.2: bytes=32 time<1ms TTL=128

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

C:\>
```

```
10.0.0.2

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.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

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=10ms TTL=127
Reply from 192.168.1.1: bytes=32 time=1ms TTL=127
Reply from 192.168.1.1: bytes=32 time<1ms TTL=127

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 = 10ms, Average = 3ms

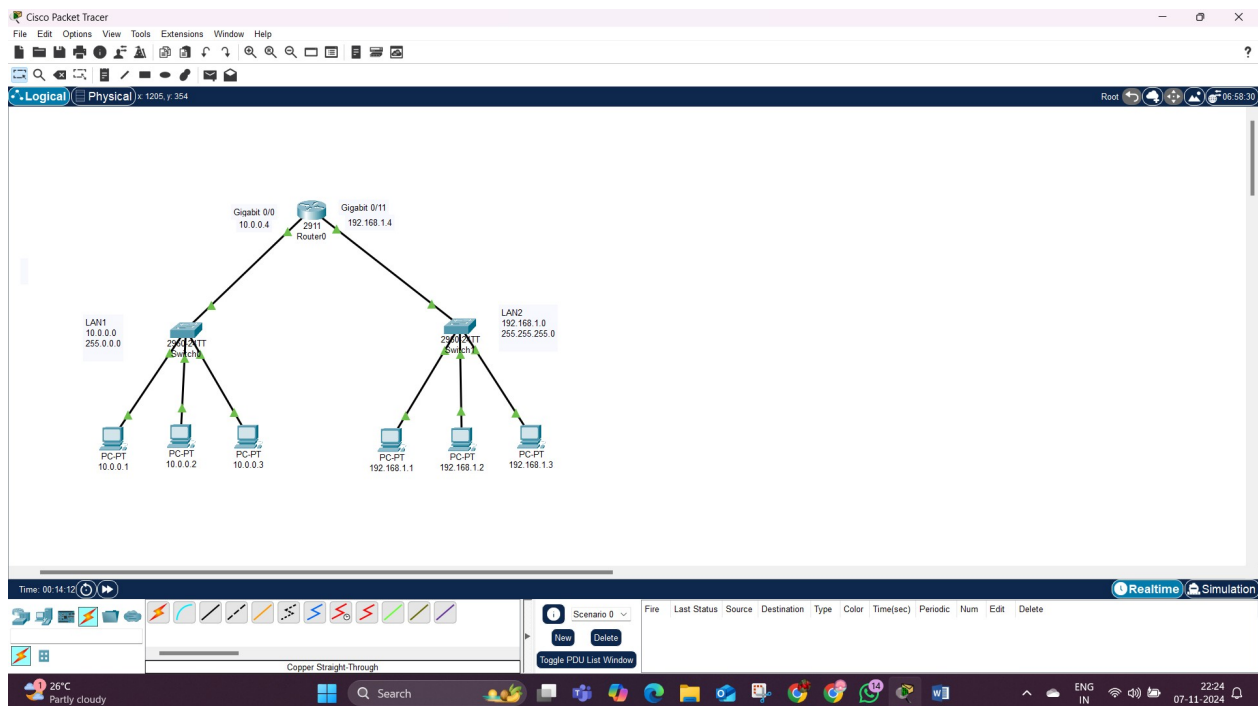
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Request timed out.
Reply from 192.168.1.2: bytes=32 time<1ms TTL=127
Reply from 192.168.1.2: bytes=32 time<1ms TTL=127
Reply from 192.168.1.2: bytes=32 time=12ms TTL=127

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 12ms, Average = 4ms

C:\>
```



Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x: 1812, y: 455

Simulation Panel

Event List

Vis.	Time(sec)	Last Device
	0.000	--
	0.000	--
	0.001	10.0.0.1
	0.002	Switch0
	0.002	Switch0
	0.002	Switch0
	0.003	Router0

Reset Simulation Constant Delay Captured to: 0.003 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TOP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PaGP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPv2, RIPv3, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Time: 00:18:51.600 PLAY CONTROLS

Scenario 0

New Delete

Toggle PDU List Window

Copper Straight-Through

26°C Partly cloudy

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Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x: 108, y: 57

Simulation Panel

Event List

Vis.	Time(sec)	Last Device
	0.000	--
	0.000	--
	0.001	10.0.0.1
	0.002	Switch0
	0.002	Switch0
	0.002	Switch0
	0.003	Router0
	0.004	Switch0
	0.004	--

Reset Simulation Constant Delay Captured to: 0.004 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TOP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PaGP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPv2, RIPv3, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Time: 00:18:51.601 PLAY CONTROLS

Scenario 0

New Delete

Toggle PDU List Window

Copper Straight-Through

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Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x 895, y 23

Root 10:08:30

Simulation Panel

Event List

Vis.	Time(sec)	Last Device
0.000	-	-
0.000	-	-
0.001	10.0.0.1	-
0.002	Switch0	-
0.002	Switch0	-
0.003	Router0	-
0.004	Switch0	-
0.004	-	-
0.005	10.0.0.1	-

Reset Simulation Constant Delay Captured to: 0.005 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Event List Realtime Simulation

Time: 00:18:51.604 PLAY CONTROLS

Scenario 0

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

In Progress 10.0.0.1 192.168.1.1 ICMP 0.000 N 0 (edit) (delete)

Toggle PDU List Window

26°C Partly cloudy

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x 891, y 4

Root 10:25:00

Simulation Panel

Event List

Vis.	Time(sec)	Last Device
0.000	-	-
0.000	-	-
0.001	10.0.0.1	-
0.002	Switch0	-
0.002	Switch0	-
0.003	Router0	-
0.004	Switch0	-
0.004	-	-
0.005	10.0.0.1	-
0.006	Switch0	-
0.007	Router0	-

Reset Simulation Constant Delay Captured to: 0.007 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Event List Realtime Simulation

Time: 00:18:51.604 PLAY CONTROLS

Scenario 0

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

In Progress 10.0.0.1 192.168.1.1 ICMP 0.000 N 0 (edit) (delete)

Toggle PDU List Window

26°C Partly cloudy

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x:1152, y:9

Root 10:33:30

Simulation Panel

Event List

Vis.	Time(sec)	Last Device
	0.000	-
	0.001	10.0.0.1
	0.002	Switch0
	0.002	Switch0
	0.003	Router0
	0.004	Switch0
	0.004	-
	0.005	10.0.0.1
	0.006	Switch0
	0.007	Router0
	0.008	Switch1

Reset Simulation Constant Delay Captured to: 0.008 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PaGP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPv2, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Time: 00:18:51.605 PLAY CONTROLS

Scenario 0

New Delete

Toggle PDU List Window

Copper Straight-Through

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Search

ENG IN 22:32 07-11-2024

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x:478, y:90

Root 10:43:00

Simulation Panel

Event List

Vis.	Time(sec)	Last Device
	0.002	Switch0
	0.002	Switch0
	0.002	Switch0
	0.003	Router0
	0.004	Switch0
	0.004	-
	0.005	10.0.0.1
	0.006	Switch0
	0.007	Router0
	0.008	Switch1
	0.009	192.168.1.1
	0.010	Switch1

Reset Simulation Constant Delay Captured to: 0.010 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PaGP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPv2, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Time: 00:18:51.607 PLAY CONTROLS

Scenario 0

New Delete

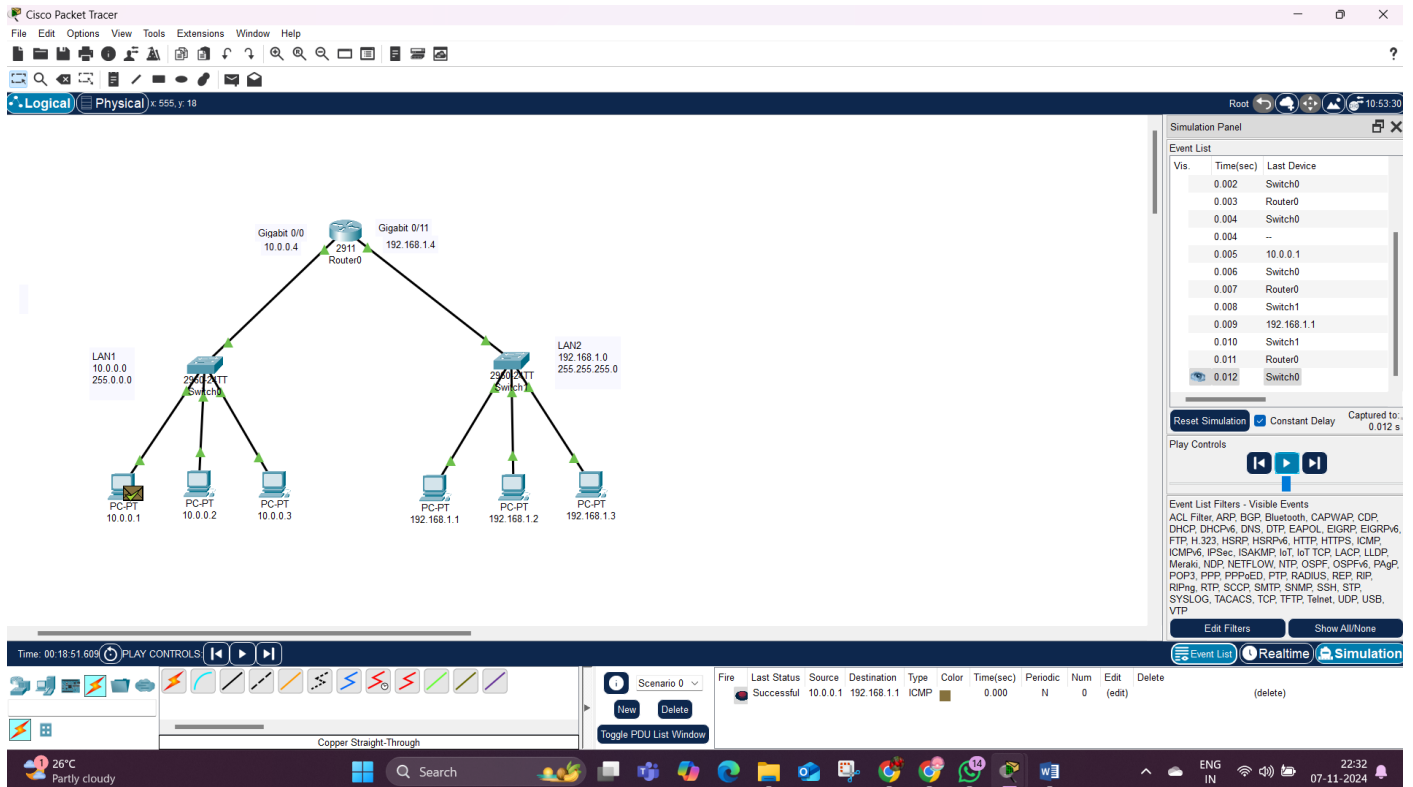
Toggle PDU List Window

Copper Straight-Through

26°C Partly cloudy

Search

ENG IN 22:32 07-11-2024



Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	10.0.0.1	192.168.1.1	ICMP		0.000	N	0	(edit)	(delete)

## RESULT: -

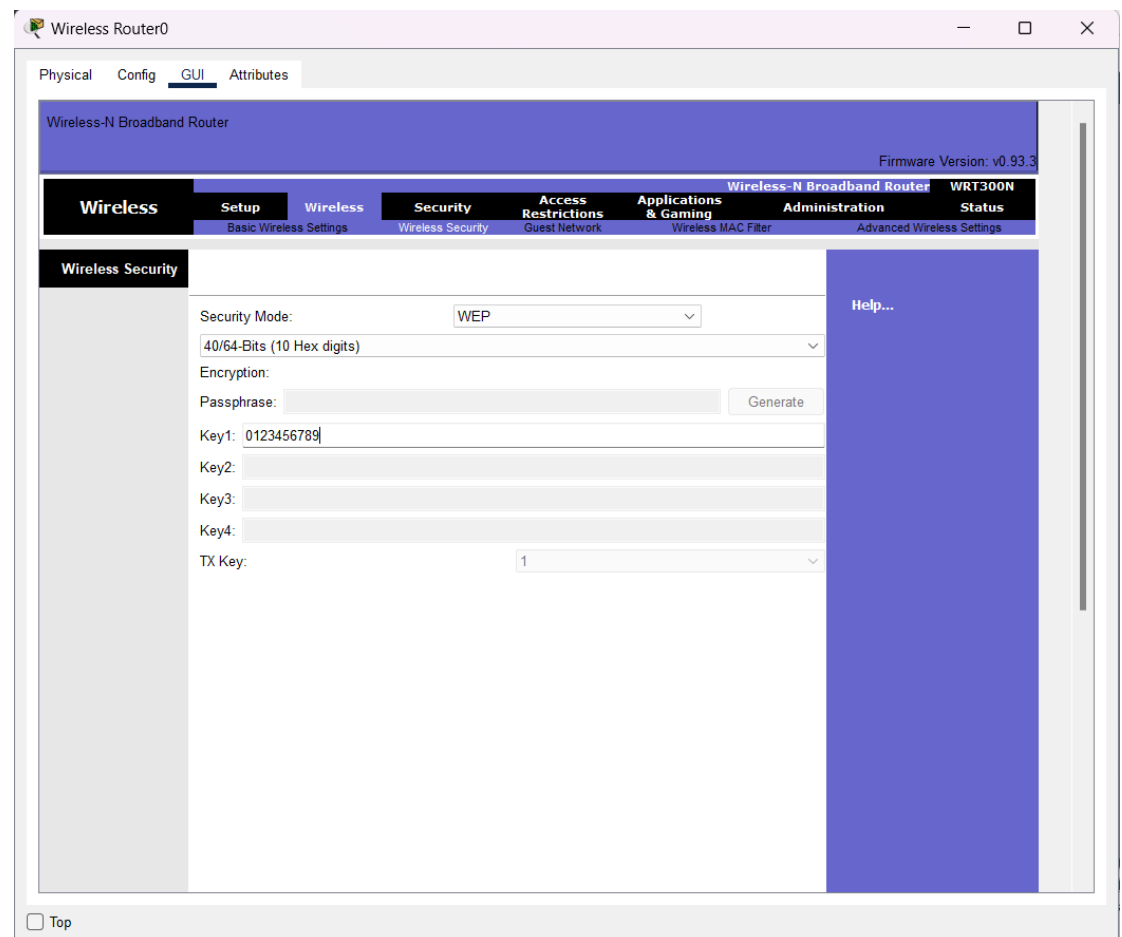
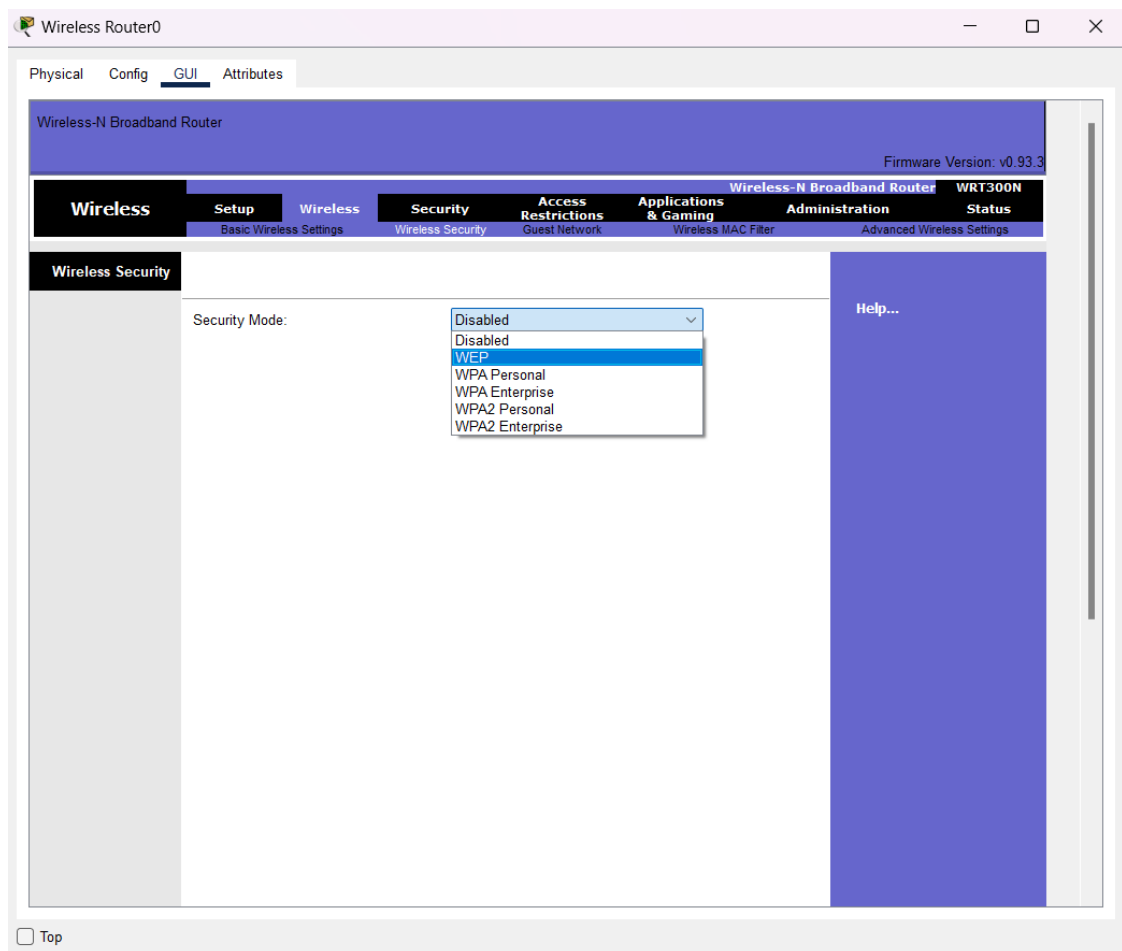
Router have been successfully done in CISCO PACKET TRACER.

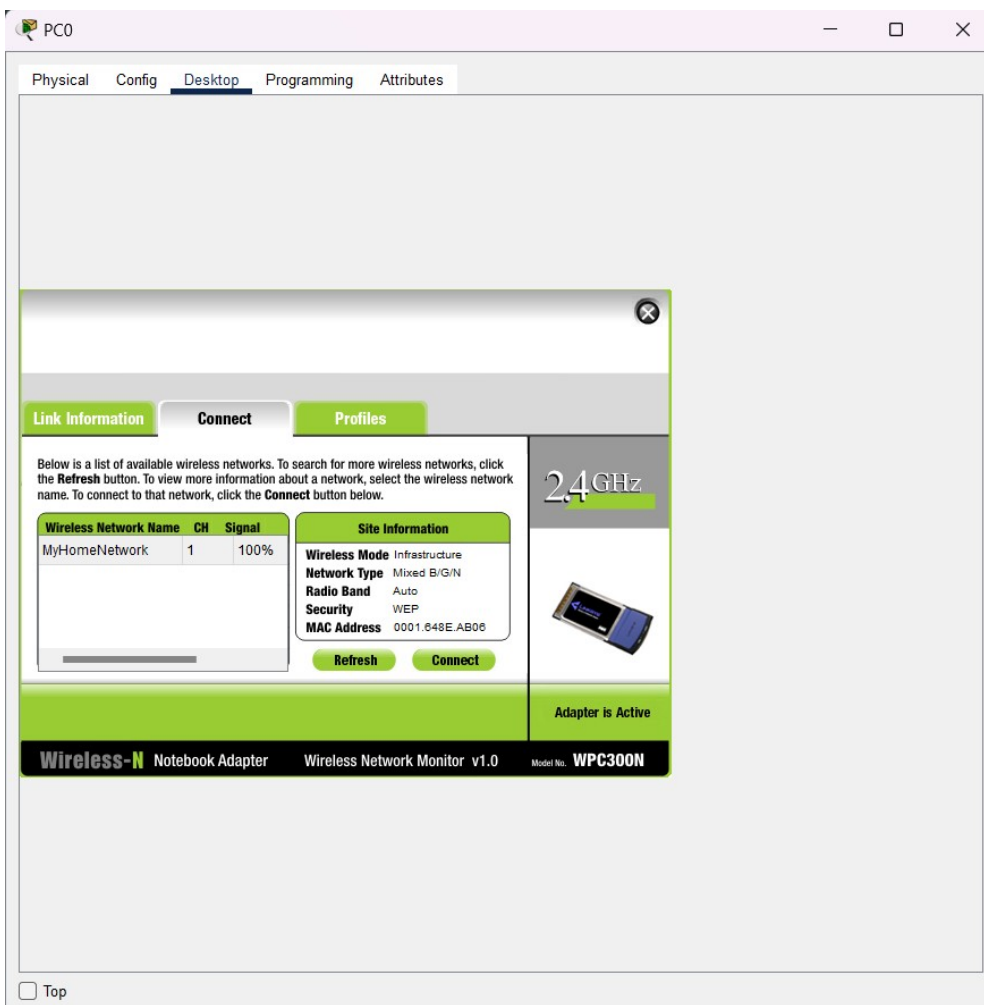
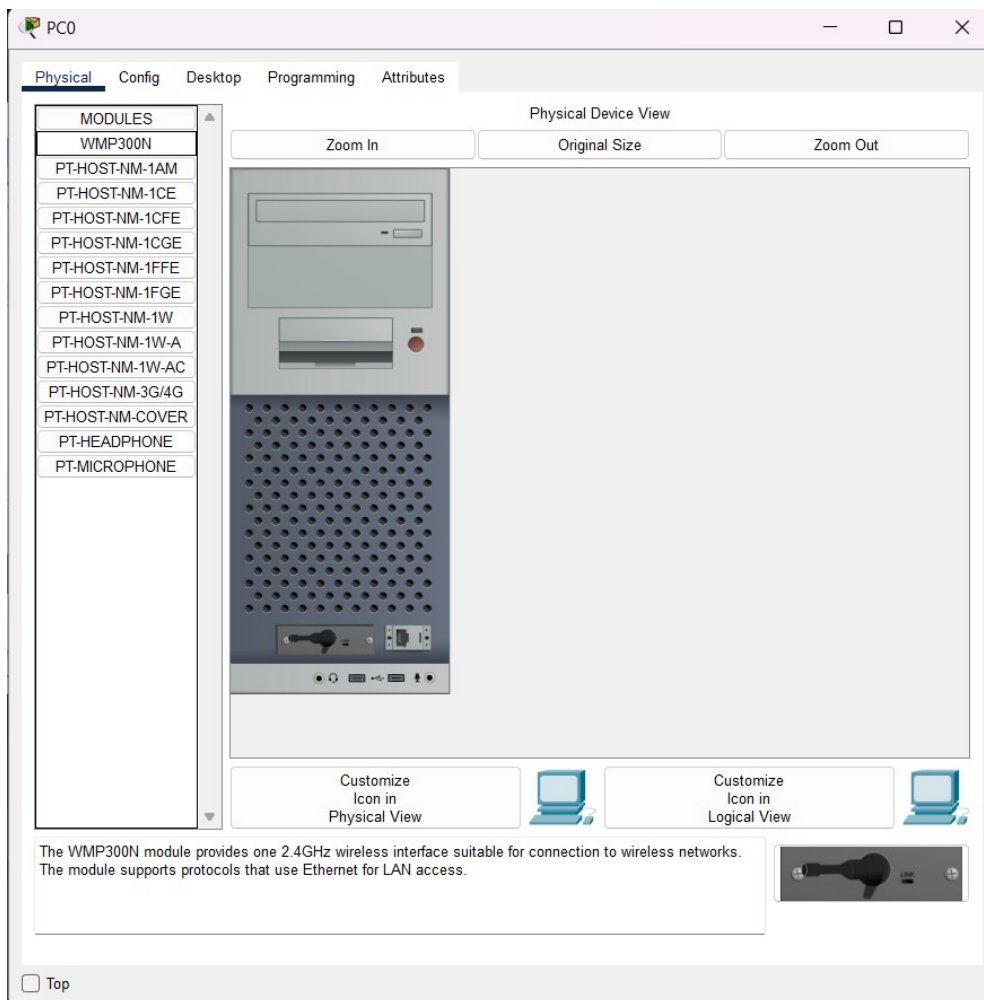
**AIM:** - b) Design and configure an internetwork using wireless router, DHCP server and internet cloud.

**OUTPUT:** -

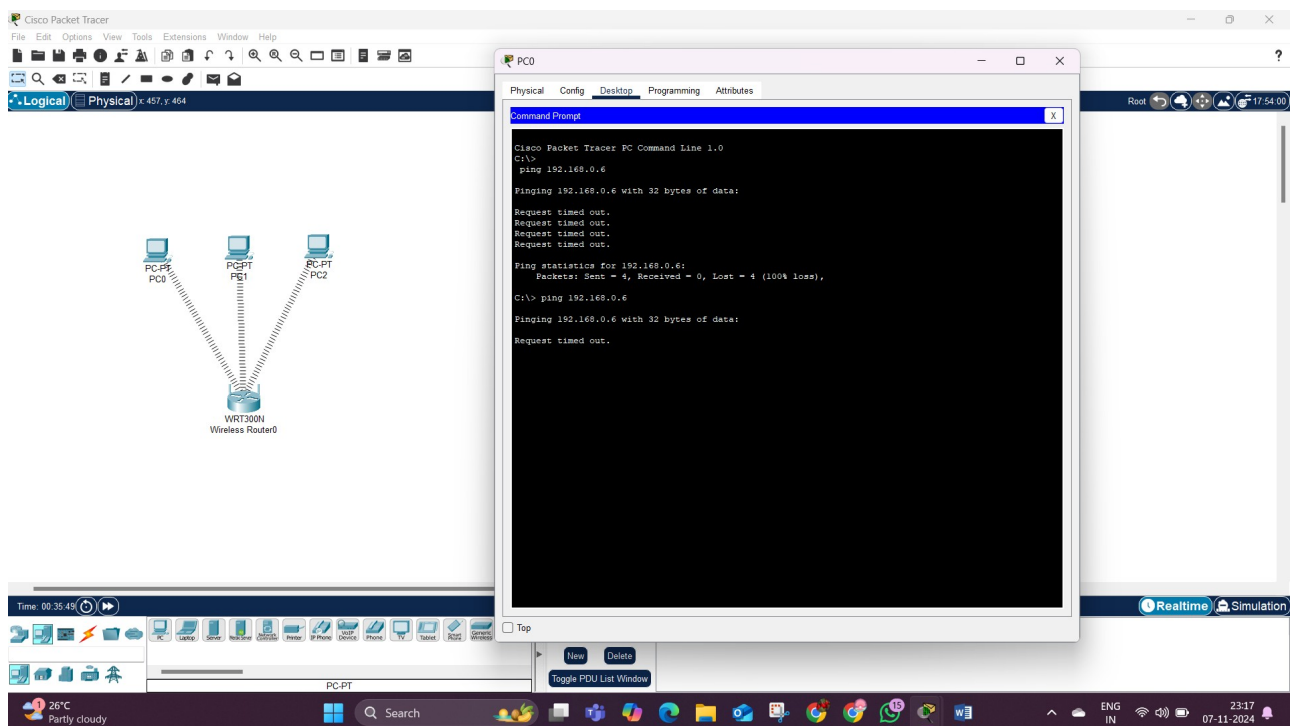
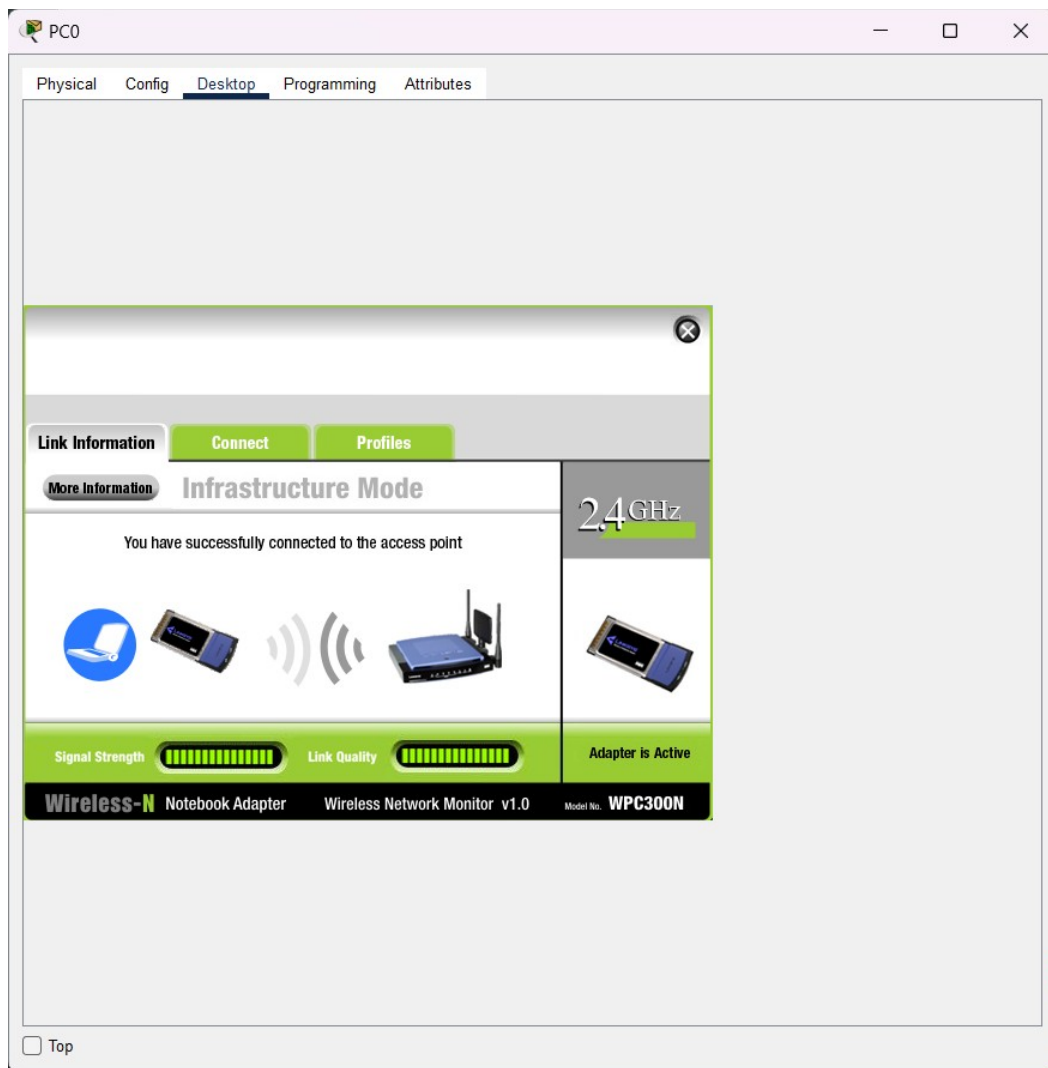
The screenshot shows the 'Internet Setup' page of the Wireless Router0 GUI. The page is titled 'Wireless-N Broadband Router' with 'Firmware Version: v0.93.3' and 'WRT300N' displayed. The 'Setup' tab is selected, with sub-tabs for 'Basic Setup', 'Wireless', 'Security', 'Access Restrictions', 'Applications & Gaming', 'Administration', and 'Status'. The 'Internet Setup' section is active, showing 'Automatic Configuration - DHCP' as the Internet Connection type. Below this, there are fields for 'Host Name', 'Domain Name', and 'MTU' (set to 1500). The 'Network Setup' section is also visible, showing 'Router IP' (192.168.0.1) and 'Subnet Mask' (255.255.255.0). The 'DHCP Server Settings' section shows the 'DHCP Server' is disabled, with 'Start IP Address' (192.168.0.100), 'Maximum number of Users' (50), 'IP Address Range' (192.168.0.100 - 149), and 'Client Lease Time' (0 minutes). There are also fields for 'Static DNS 1', 'Static DNS 2', and 'Static DNS 3', all set to 0.0.0.0. A 'Help...' button is located on the right side of the page.

The screenshot shows the 'Wireless Setup' page of the Wireless Router0 GUI. The page is titled 'Wireless-N Broadband Router' with 'Firmware Version: v0.93.3' and 'WRT300N' displayed. The 'Wireless' tab is selected, with sub-tabs for 'Basic Wireless Settings', 'Wireless Security', 'Access Restrictions', 'Applications & Gaming', 'Administration', and 'Status'. The 'Basic Wireless Settings' section is active, showing 'Network Mode' (Mixed), 'Network Name (SSID)' (MyHomeNetwork), 'Radio Band' (Auto), 'Wide Channel' (Auto), 'Standard Channel' (1 - 2.412GHz), and 'SSID Broadcast' (Enabled). A 'Help...' button is located on the right side of the page.









## **RESULT:-**

Wireless Router have been successfully done in CISCO PACKET TRACER.