

EXPERIMENT – 10

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

OUTPUT: -

PC0

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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

```
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

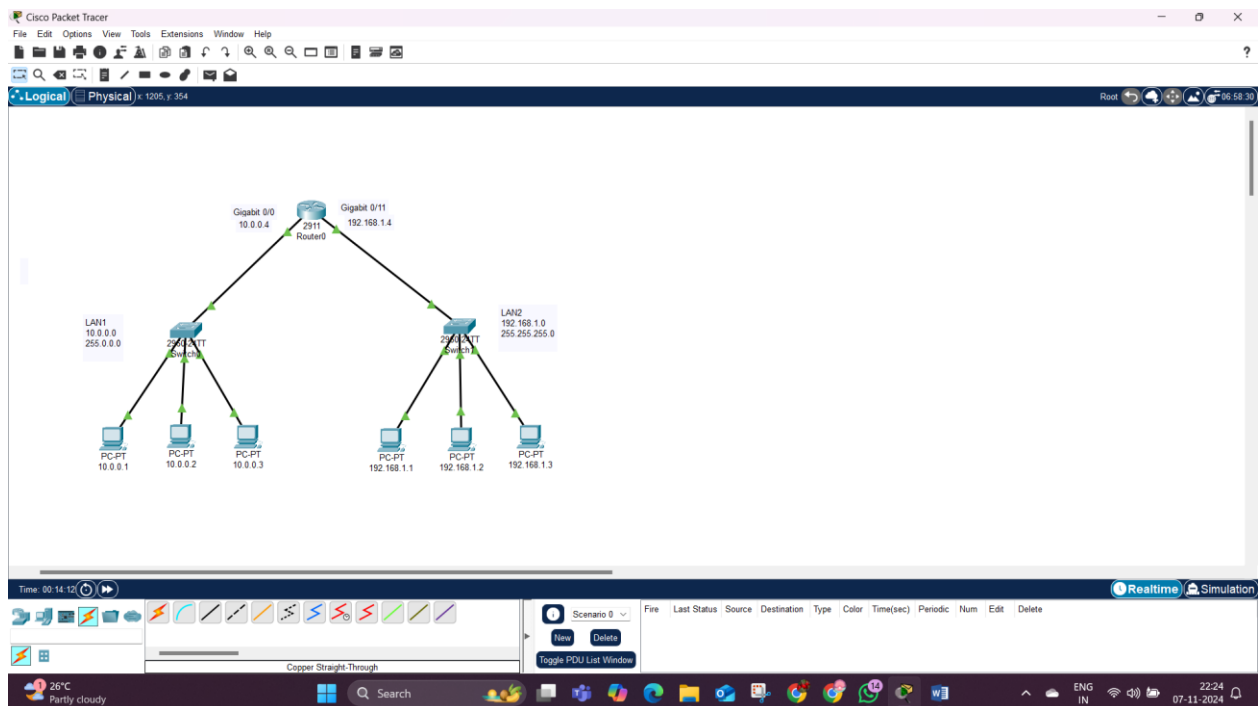
C:\>ping 192.168.1.2

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:1612, 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 TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PaGP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPv2, RIPv3, SCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Scenario 0

New Delete

Toggle PDU List Window

Time: 00:18:51.600 PLAY CONTROLS

26°C Partly cloudy

ENG IN 22:30 07-11-2024

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 TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PaGP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPv2, RIPv3, SCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Scenario 0

New Delete

Toggle PDU List Window

Time: 00:18:51.600 PLAY CONTROLS

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Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x 835, 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, RIPv2, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

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

Copper Straight-Through

26°C Partly cloudy

ENG IN 22:31 07-11-2024

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x 861, 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	-
0.002	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, RIPv2, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

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

Copper Straight-Through

26°C Partly cloudy

ENG IN 22:31 07-11-2024

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: 00:18:51.600 PLAY CONTROLS

Scenario 0

New Delete

Toggle PDU List Window

Copper Straight-Through

26°C Partly cloudy

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

ENG IN 22:32 07-11-2024

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x 500, y 18

Simulation Panel

Event List

Vis.	Time(sec)	Last Device
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	
0.011	Router0	
0.012	Switch0	

Reset Simulation Constant Delay Captured to: 0.012 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

Time: 00:18:51.609 PLAY CONTROLS

Scenario 0

New Delete

Toggle PDU List Window

Copper Straight-Through

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)

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: -

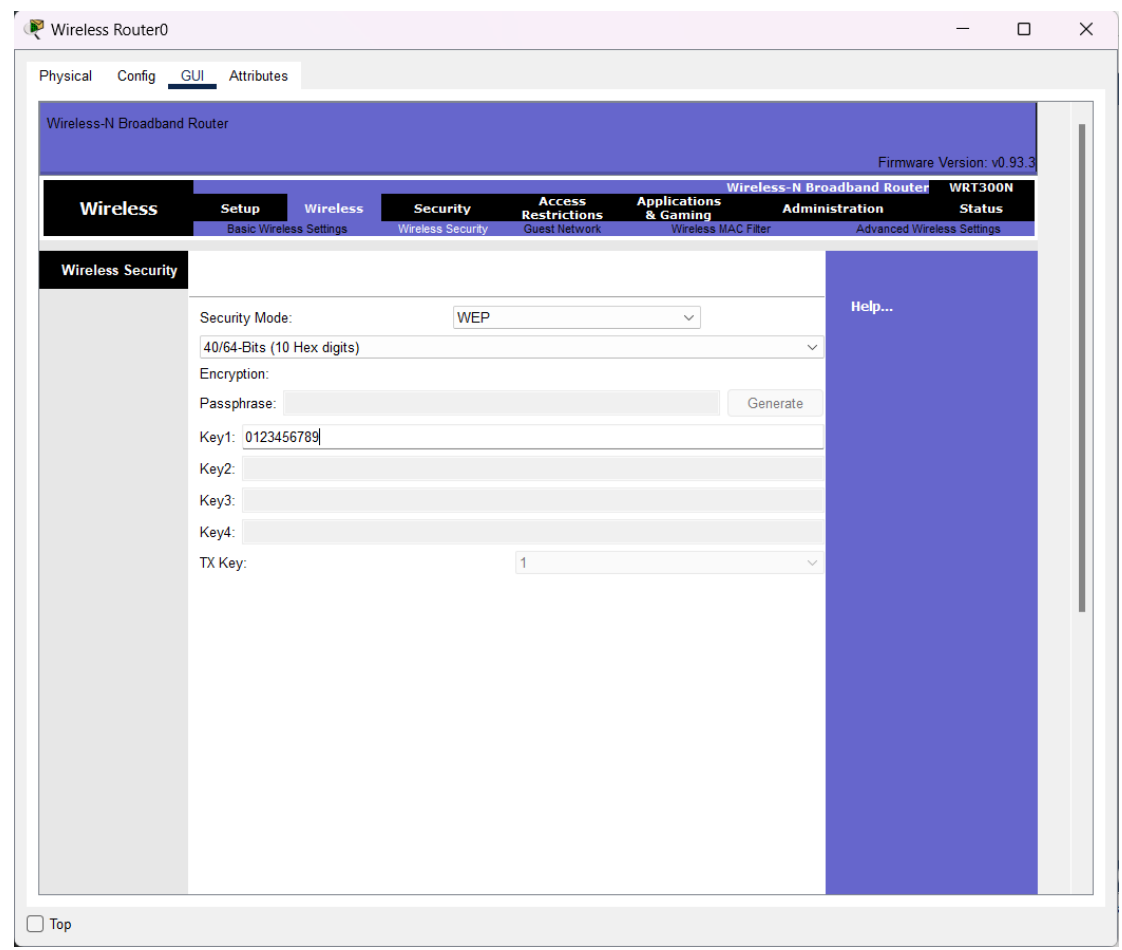
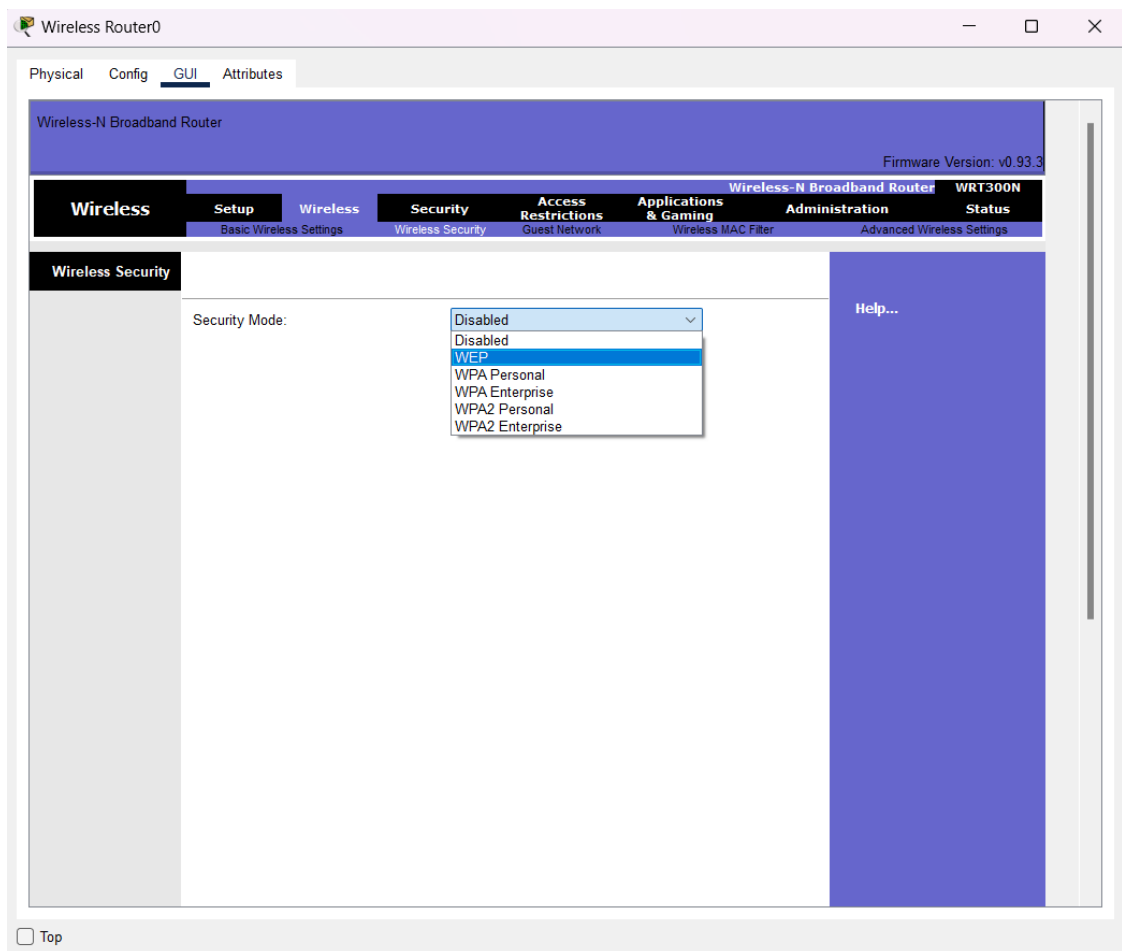
Router have been successfully done in CISCO PACKET TRACER.

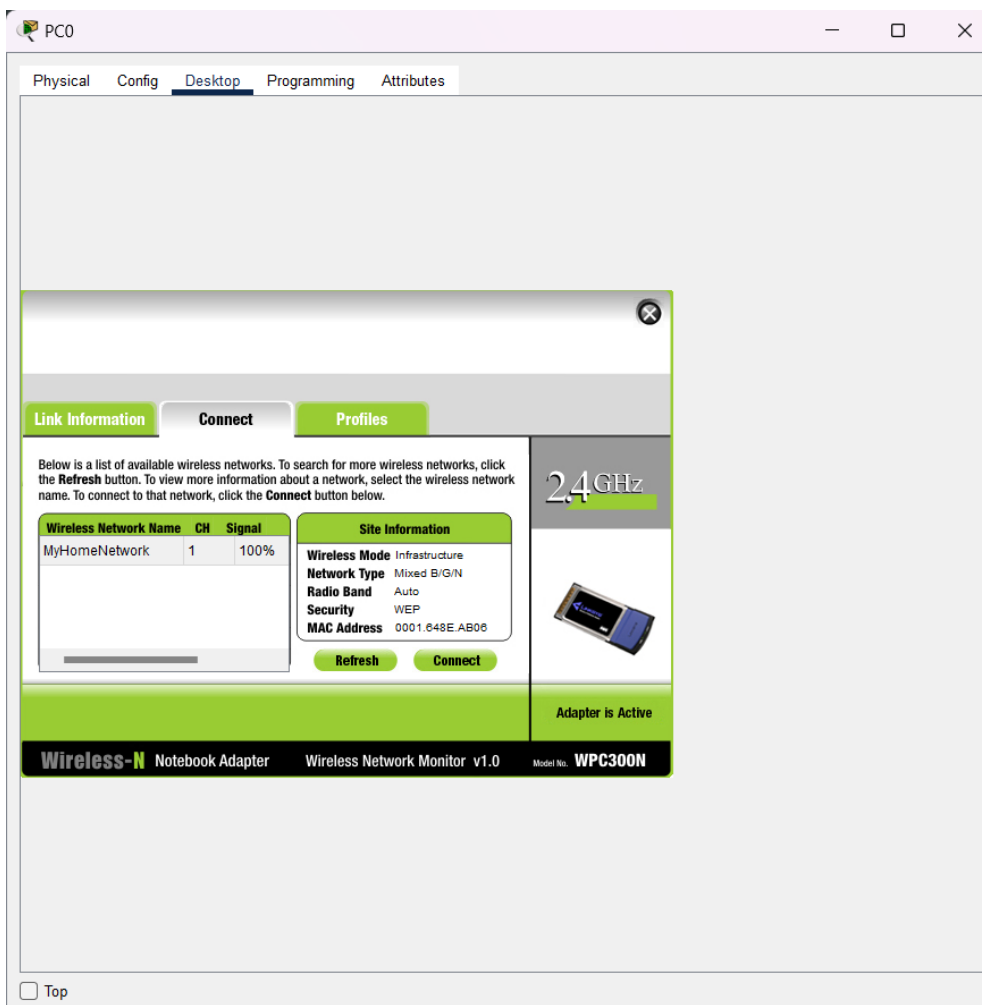
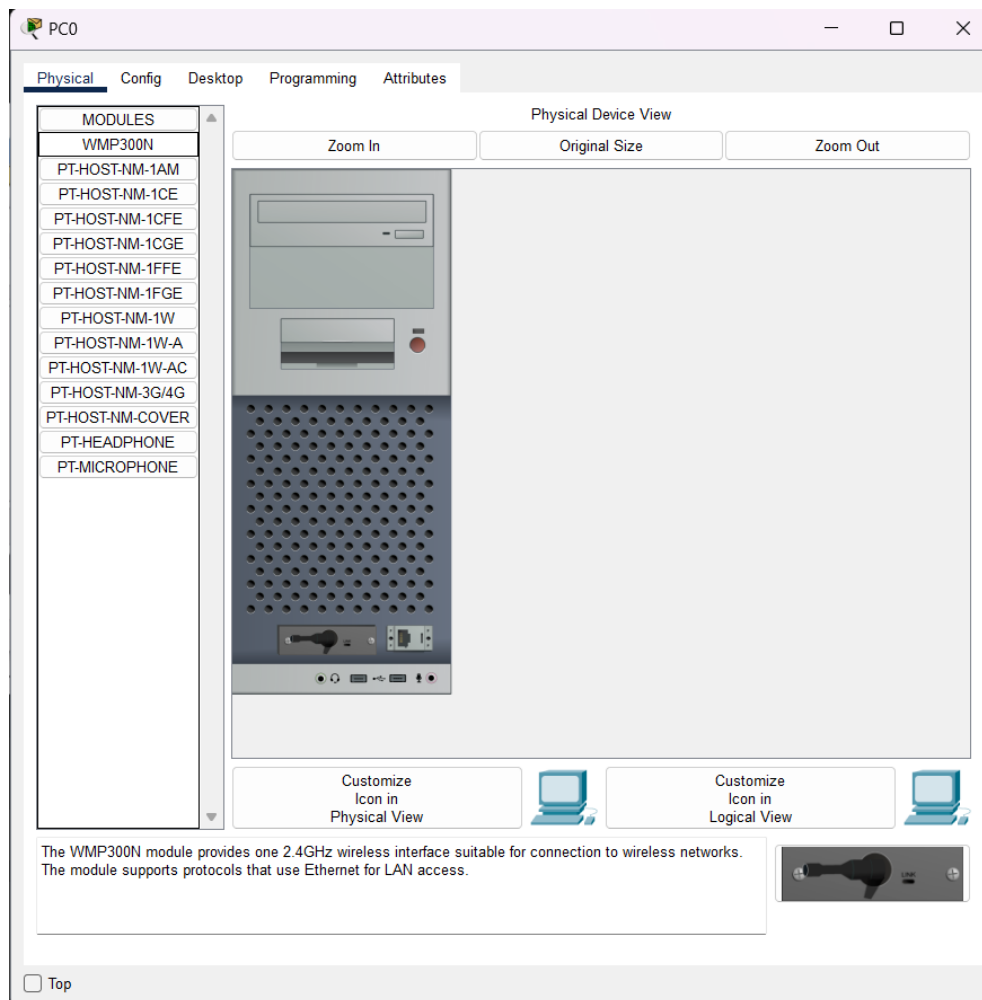
AIM: - b) Design and configure an internetwork using wireless router, DHCP server and internet cloud.

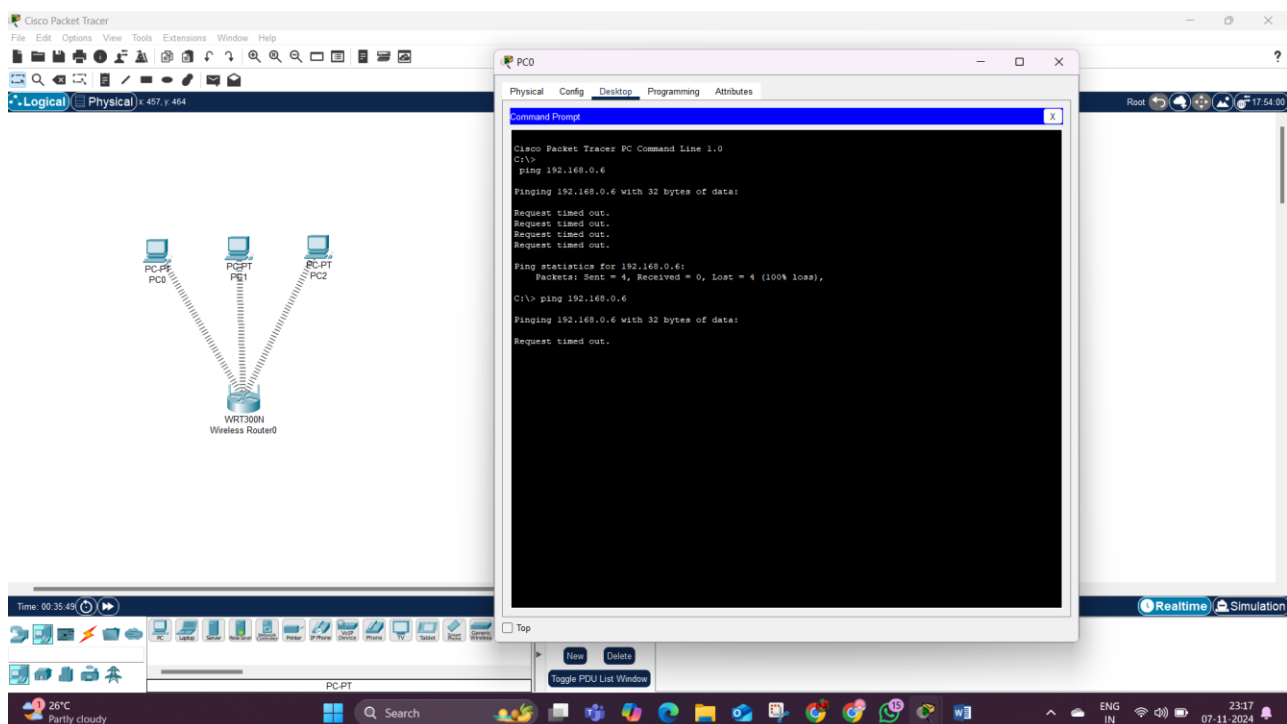
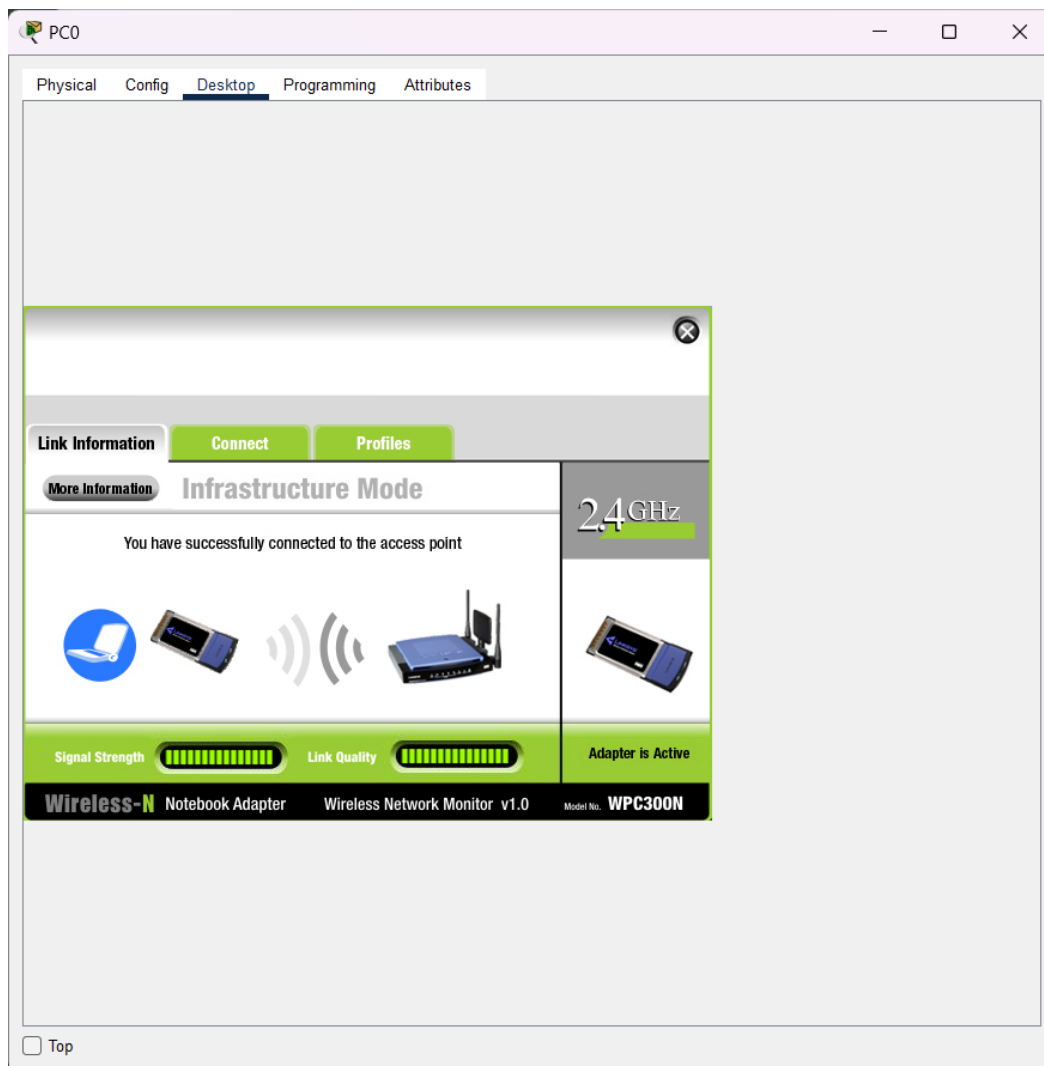
OUTPUT: -

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 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 the 'Router IP' as 192.168.0.1 with a subnet mask of 255.255.255.0. The 'DHCP Server Settings' are configured with 'DHCP Server' set to 'Disabled', 'Start IP Address' as 192.168.0.100, 'Maximum number of Users' as 50, and 'IP Address Range' as 192.168.0.100 - 149. The 'Client Lease Time' is set to 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' configuration 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', 'Guest Network', 'Wireless MAC Filter', and 'Advanced Wireless Settings'. The 'Basic Wireless Settings' section is active, showing 'Network Mode' set to 'Mixed', 'Network Name (SSID)' as 'MyHomeNetwork', 'Radio Band' set to 'Auto', 'Wide Channel' set to 'Auto', 'Standard Channel' set to '1 - 2.412GHz', and 'SSID Broadcast' set to 'Enabled'. A 'Help...' button is located on the right side of the page.







RESULT: -

Wireless Router have been successfully done in CISCO PACKET TRACER.