

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:\>
```

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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

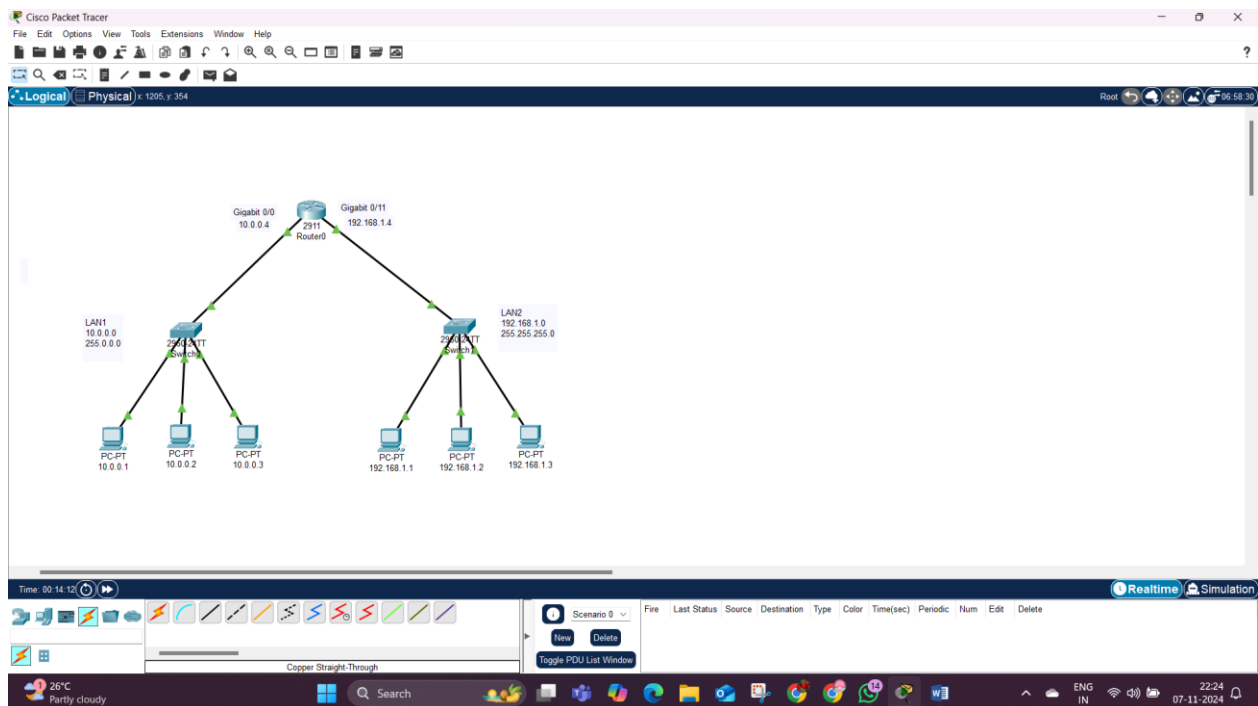
C:\>ping 192.168.1.2

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: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

Time: 00:18:51.600 PLAY CONTROLS

Scenario 0

New Delete

Toggle PDU List Window

Copper Straight-Through

26°C Partly cloudy

Search

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

Time: 00:18:51.600 PLAY CONTROLS

Scenario 0

New Delete

Toggle PDU List Window

Copper Straight-Through

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Search

ENG IN 22:30 07-11-2024

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

26°C Partly cloudy

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

26°C Partly cloudy

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x: 1152, y: 9

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

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Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x: 478, y: 90

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

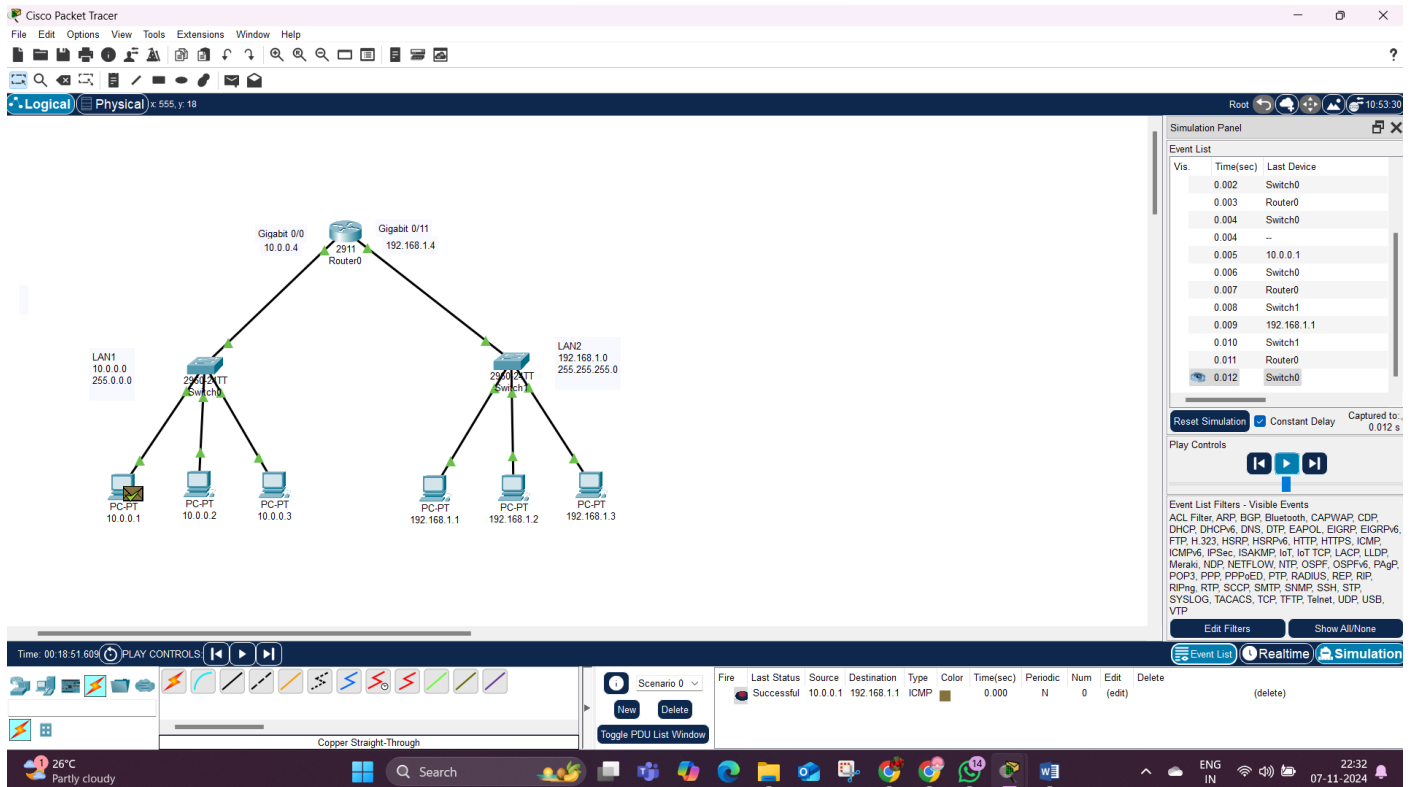
Toggle PDU List Window



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 displays the 'Internet Setup' page of a 'Wireless-N Broadband Router' (WRT300N) with firmware version v0.93.3. The 'Setup' tab is active, showing the 'Automatic Configuration - DHCP' option selected for the Internet Connection type. The Router IP is set to 192.168.0.1 with a Subnet Mask of 255.255.255.0. The DHCP Server is disabled, with a Start IP Address of 192.168.0.100, a Maximum number of Users of 50, and an IP Address Range of 192.168.0.100 - 149. The Client Lease Time is set to 0 minutes. Static DNS settings are all set to 0.0.0.0.

Wireless Router0

Physical Config **GUI** Attributes

Wireless-N Broadband Router Firmware Version: v0.93.3

Setup Setup **Wireless** Security Access Restrictions Applications & Gaming Administration Status

Basic Setup DHCP MAC Address Clone Advanced Routing

Internet Setup

Internet Connection type: Automatic Configuration - DHCP

Optional Settings (required by some internet service providers):

Host Name:

Domain Name:

MTU: Size: 1500

Network Setup

Router IP: IP Address: 192 . 168 . 0 . 1 Subnet Mask: 255.255.255.0

DHCP Server Settings: DHCP Server: ☐ Enabled ☒ Disabled DHCP Reservation

Start IP Address: 192.168.0.100

Maximum number of Users: 50

IP Address Range: 192.168.0.100 - 149

Client Lease Time: 0 minutes (0 means one day)

Static DNS 1: 0 . 0 . 0 . 0

Static DNS 2: 0 . 0 . 0 . 0

Static DNS 3: 0 . 0 . 0 . 0

WINS: 0 . 0 . 0 . 0

☐ Top

The screenshot displays the 'Wireless' page of the 'Wireless-N Broadband Router' (WRT300N) with firmware version v0.93.3. The 'Wireless' tab is active, showing the 'Basic Wireless Settings' section. The Network Mode is set to 'Mixed', the Network Name (SSID) is 'MyHomeNetwork', the Radio Band is 'Auto', the Wide Channel is 'Auto', and the Standard Channel is '1 - 2.412GHz'. The SSID Broadcast is enabled.

Wireless Router0

Physical Config **GUI** Attributes

Wireless-N Broadband Router Firmware Version: v0.93.3

Wireless Setup Wireless Security Access Restrictions Applications & Gaming Administration Status

Basic Wireless Settings Wireless Security Guest Network Wireless MAC Filter Advanced Wireless Settings

Basic Wireless Settings

Network Mode: Mixed

Network Name (SSID): MyHomeNetwork

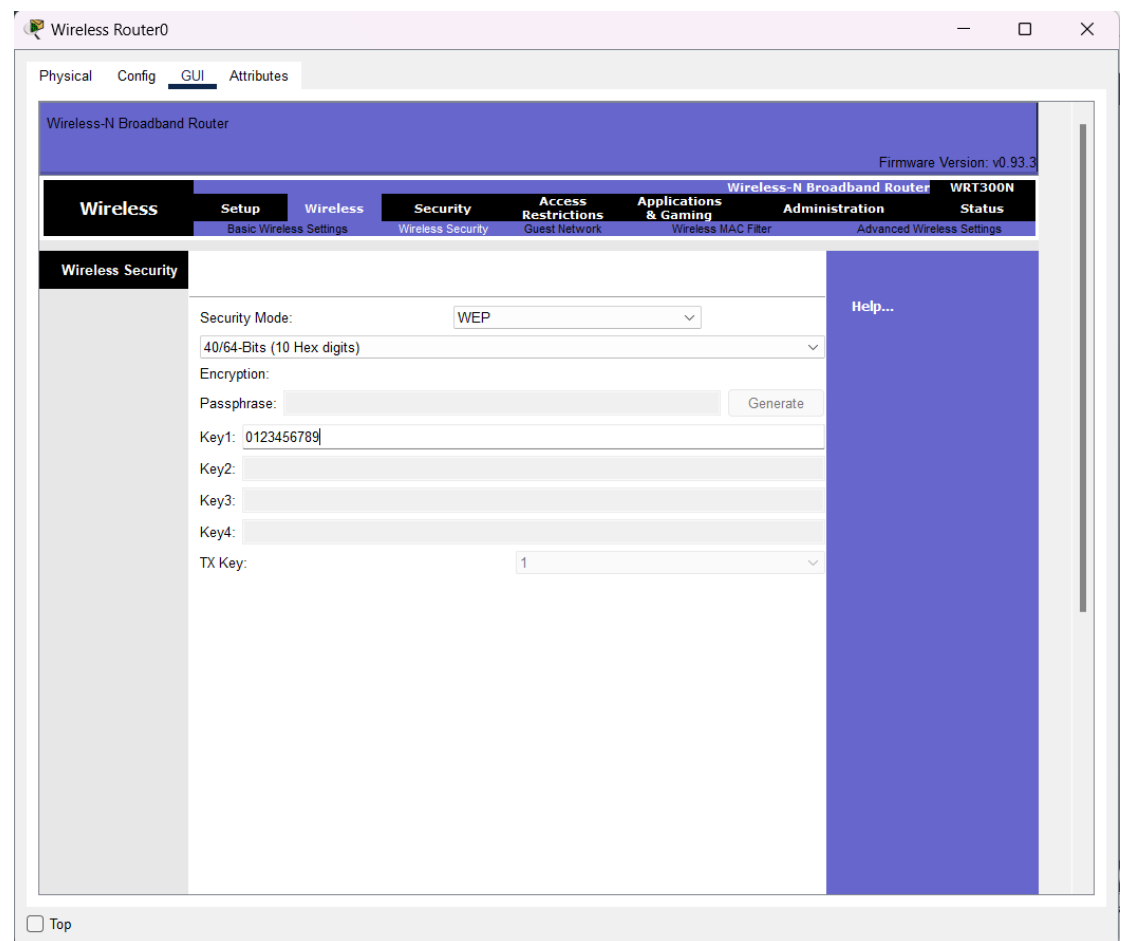
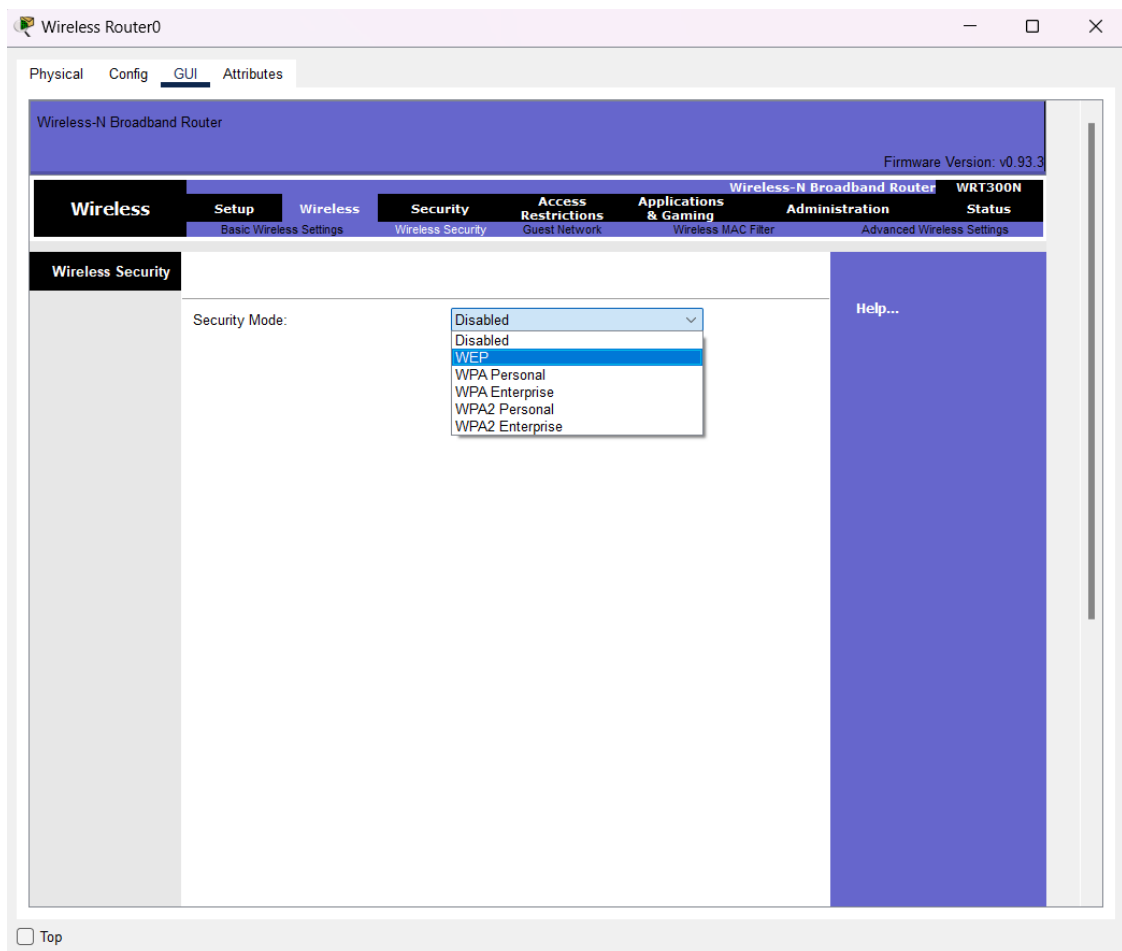
Radio Band: Auto

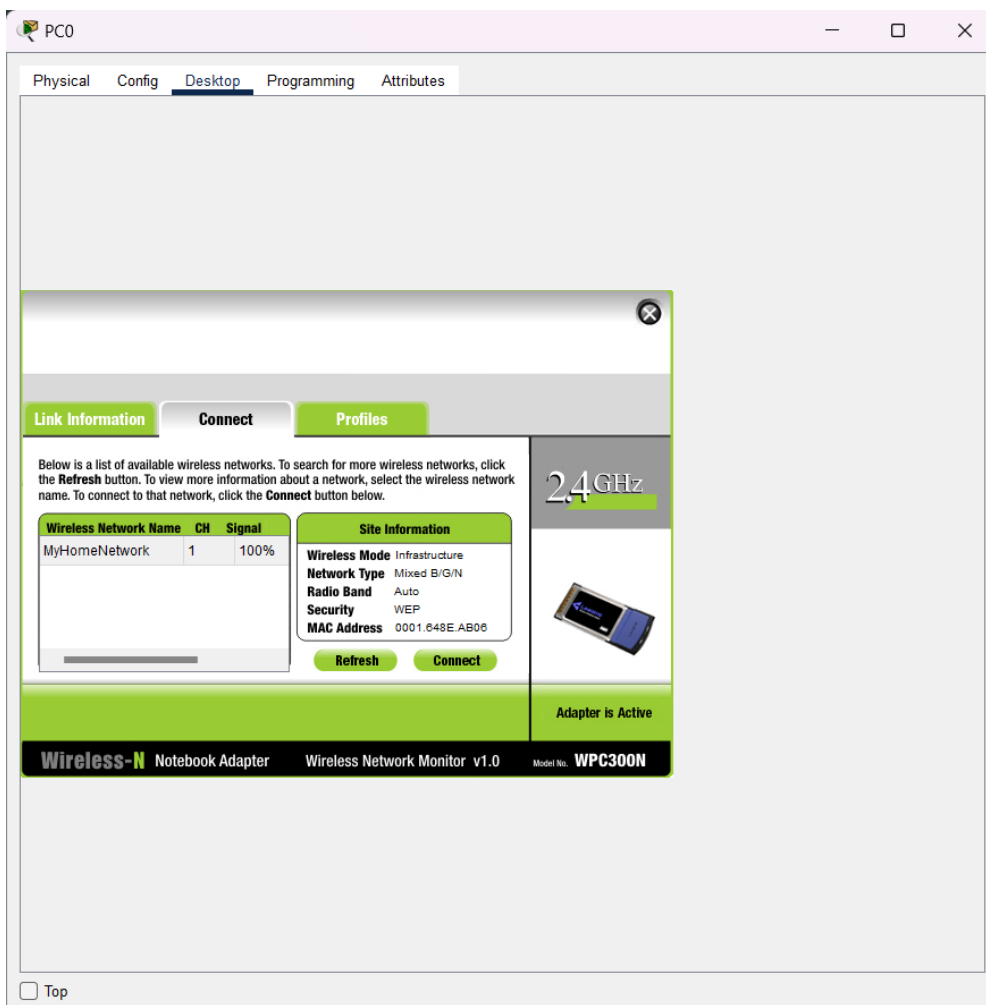
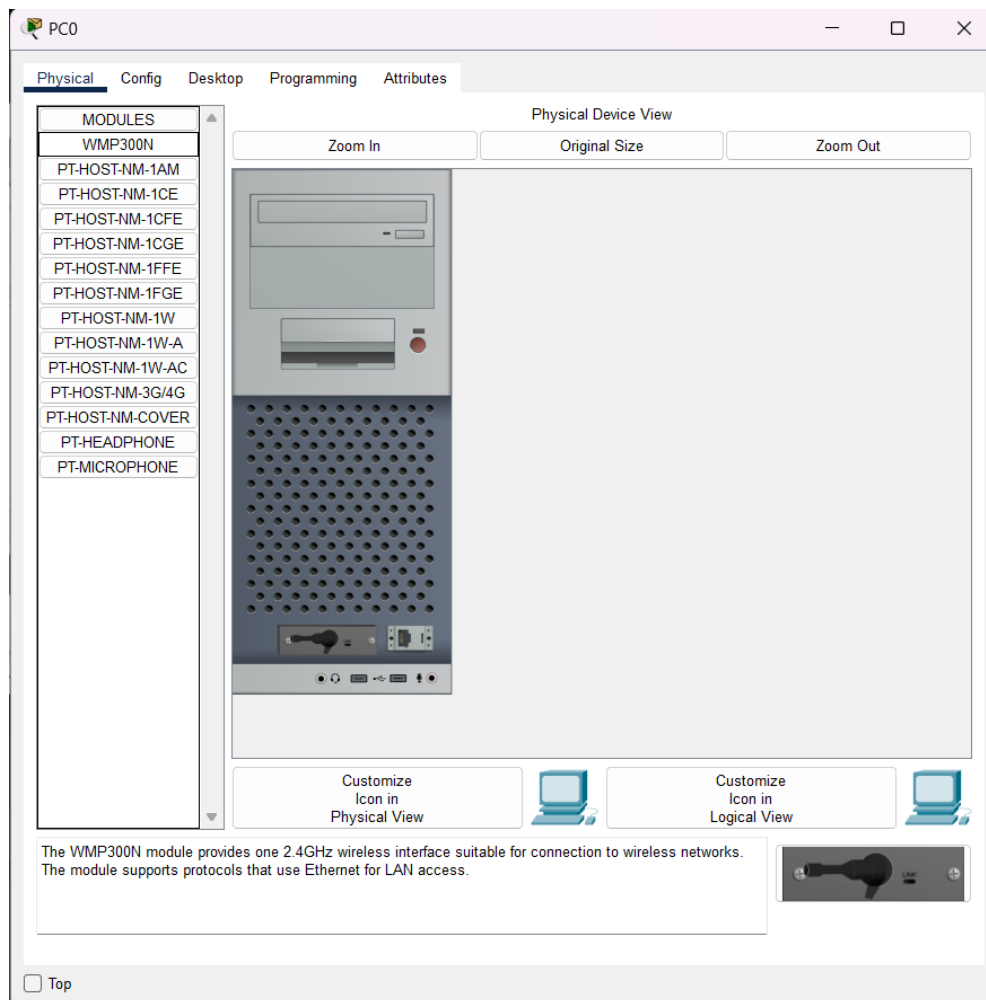
Wide Channel: Auto

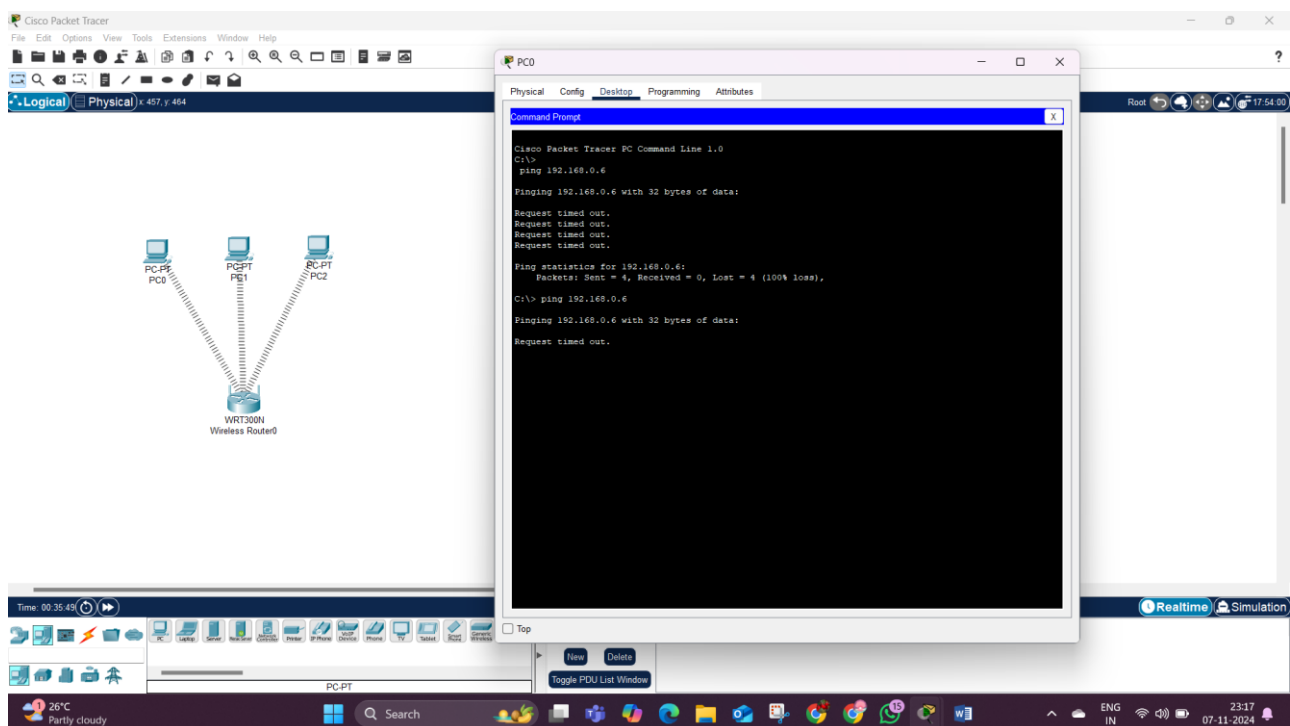
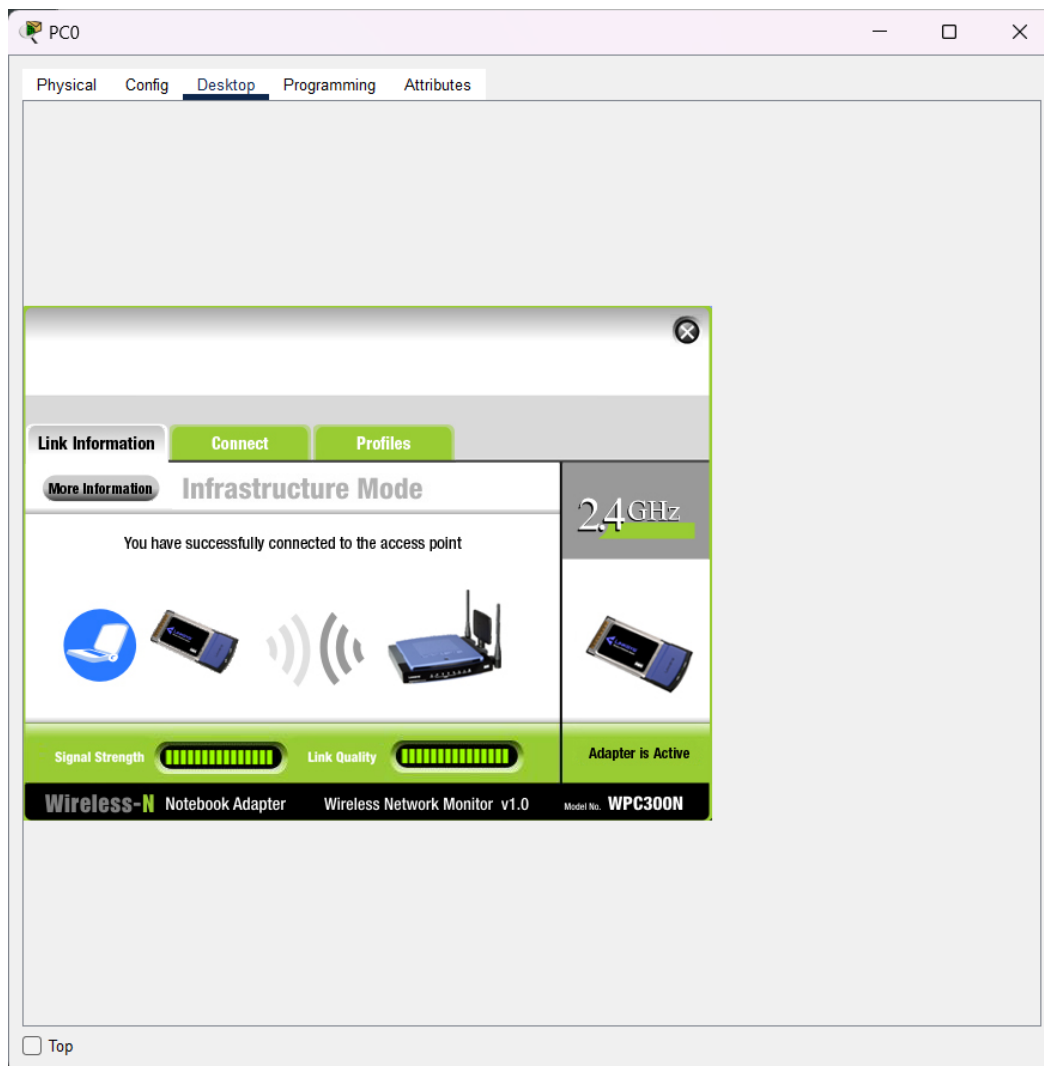
Standard Channel: 1 - 2.412GHz

SSID Broadcast: ☒ Enabled ☐ Disabled

☐ Top







RESULT: -

Wireless Router have been successfully done in CISCO PACKET TRACER.