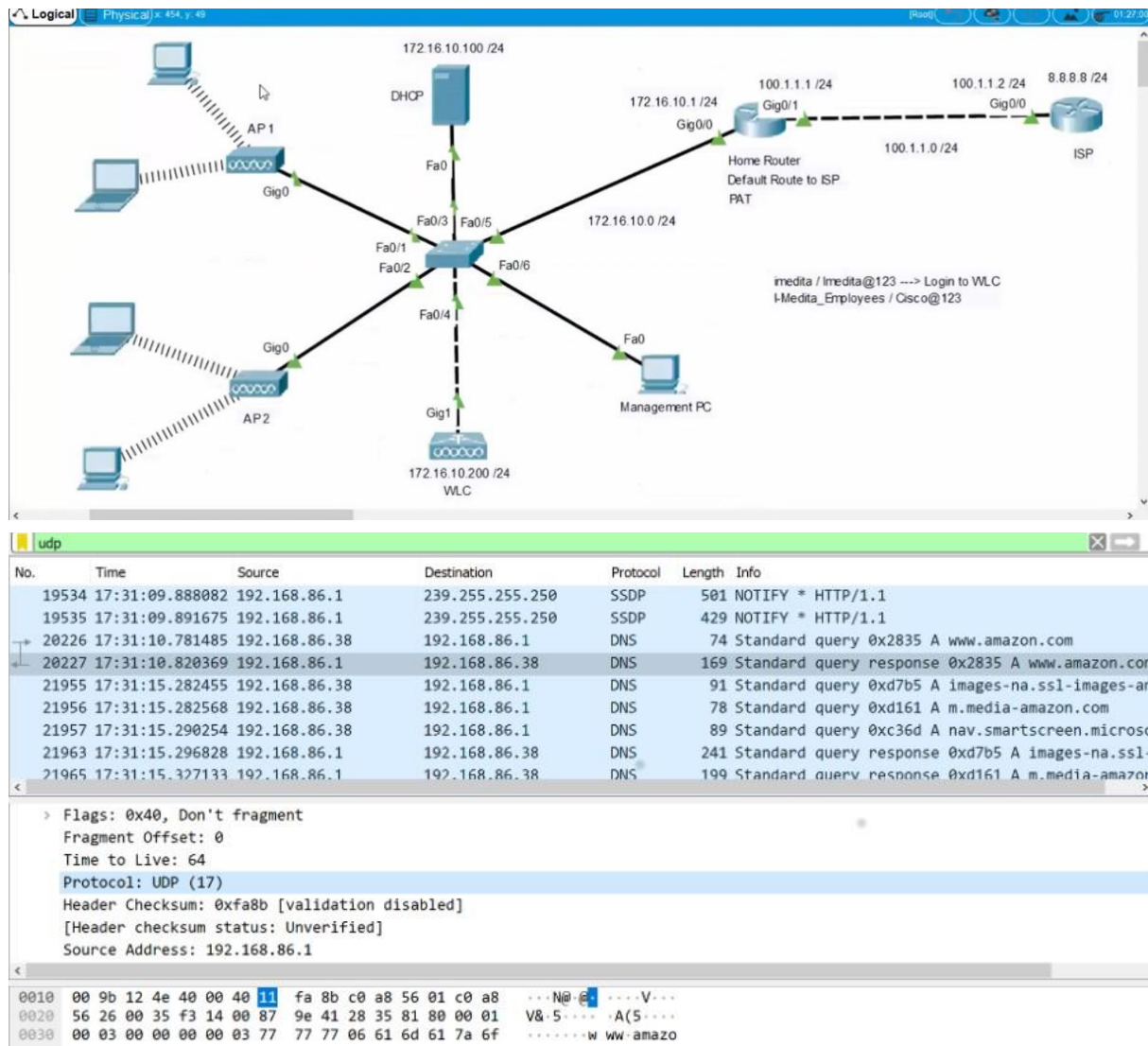


192225075



Cisco Packet Tracer

File Edit Options View Tools Extensions Help

Logical Physical x 1076 x 728

Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type
0.001	PC1	Switch0	ARP	
0.001	PC0	Switch0	ARP	
0.002	-	Switch0	ARP	
0.002	-	Switch0	ARP	
0.002	Switch0	Server0	ARP	
0.002	Switch0	PC0	ARP	
0.002	Switch0	PC2	ARP	
0.002	Switch0	PC3	ARP	
0.002	Switch0	PC1	ARP	
0.002	-	Switch0	ARP	
0.003	Switch0	Server0	ARP	
0.003	Switch0	PC2	ARP	
0.003	Switch0	PC3	ARP	
0.003	PC1	Switch0	ARP	
0.004	Switch0	PC0	ARP	
0.004	-	PC0	ICMP	

Reset Simulation ☒ Constant Delay Captured to: 0.004 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, 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, PAgg, PCP, 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: 00:12:03.811 PLAY CONTROLS

Scenario 0

New Delete

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

In Progress PC0 PC1 ICMP 0.000 N 0 (edit) (delete)

Cisco Packet Tracer - C:\Users\Nithin\Documents\Computer Networks\Subnetting.pkt

File Edit Options View Tools Extensions Help

Logical Physical x 912 x 513

Time: 00:00:01

Scenario 0

New Delete

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

Realtime Simulation

Cisco Packet Tracer

File Edit Options View Tools Extensions Help

Logical Physical x 1076 x 728

Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.000	-	PC0	ICMP
	0.001	PC0	Switch0	ICMP
	0.002	Switch0	PC1	ICMP
	0.003	PC1	Switch0	ICMP
	0.004	Switch0	PC0	ICMP

Reset Simulation ☒ Constant Delay Captured to: 0.004 s

Play Controls

Event List Filters - Visible Events

ADL Filter: ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DNS, DNS, DTLS, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Mcast, NTP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, PCP, PPP, PPPoE, PTP, RADIUS, RDP, RDPv6, RTP, SCCP, SMTP, SNMP, SSH, STP, Syslog, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Time: 00:22:05.719 PLAY CONTROLS

Scenario 0

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

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
Successful	PC0	PC1	ICMP			0.000	N	0	(edit)	(delete)

Player

Applications Places Wireshark

Sun 22:28

smtp-strange pcapng

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

smtp.response.code>399

No.	Time	DSCP	Transmission Control Protocol	Length	Calculated TCP Window Size	Source	Destination	Protocol	Info
23	6.826752	C50 Yes	77	65369	128.241.194.25	67.161.34.229	SMTP	S: 554 Validating Sender	
43	6.831053	C50 Yes	81	64772	128.241.194.25	67.161.34.229	SMTP	S: 553 Invalid recipient, DN	
56	12.292795	C50 Yes	81	64874	128.241.194.25	67.161.34.229	SMTP	S: 553 Invalid recipient, DN	
63	14.493386	C50 Yes	77	64772	128.241.194.25	67.161.34.229	SMTP	S: 553 Invalid recipient, DN	
79	16.694632	C50 Yes	81	64678	128.241.194.25	67.161.34.229	SMTP	S: 553 Invalid recipient, DN	
77	18.906092	C50 Yes	81	64539	128.241.194.25	67.161.34.229	SMTP	S: 553 Invalid recipient, DN	
84	21.098511	C50 Yes	81	64406	128.241.194.25	67.161.34.229	SMTP	S: 553 Invalid recipient, DN	
91	23.366783	C50 Yes	81	64289	128.241.194.25	67.161.34.229	SMTP	S: 553 Invalid recipient, DN	
98	25.516642	C50 Yes	81	64157	128.241.194.25	67.161.34.229	SMTP	S: 553 Invalid recipient, DN	
105	27.749357	C50 Yes	81	65535	128.241.194.25	67.161.34.229	SMTP	S: 553 Invalid recipient, DN	
113	29.985697	C50 Yes	77	65435	128.241.194.25	67.161.34.229	SMTP	S: 553 Invalid recipient, DN	
120	32.918228	C50 Yes	81	65187	128.241.194.25	67.161.34.229	SMTP	S: 553 Invalid recipient, DN	

Frame 42: 77 bytes on wire (616 bits), 77 bytes captured (616 bits) on interface 0

Ethernet II, Src: Cadant_22:a5:82 (08:01:8c:22:a5:82), Dst: SonyCorp_f4:3a:09 (08:00:46:f4:3a:09)

Internet Protocol Version 4, Src: 128.241.194.25, Dst: 67.161.34.229

Transmission Control Protocol, Src Port: 25, Dst Port: 1600, Seq: 482, Ack: 414, Len: 23

Source Port: 25

Destination Port: 1600

[Stream index: 0]

TCP Segment Len: 23

Sequence number: 482 (relative sequence number)

Next sequence number: 505 (relative sequence number)

Acknowledgment number: 414 (relative ack number)

Header Length: 20 bytes

Flags: 0x018 (PSH, ACK)

Window size value: 65122

[Calculated window size: 65122]

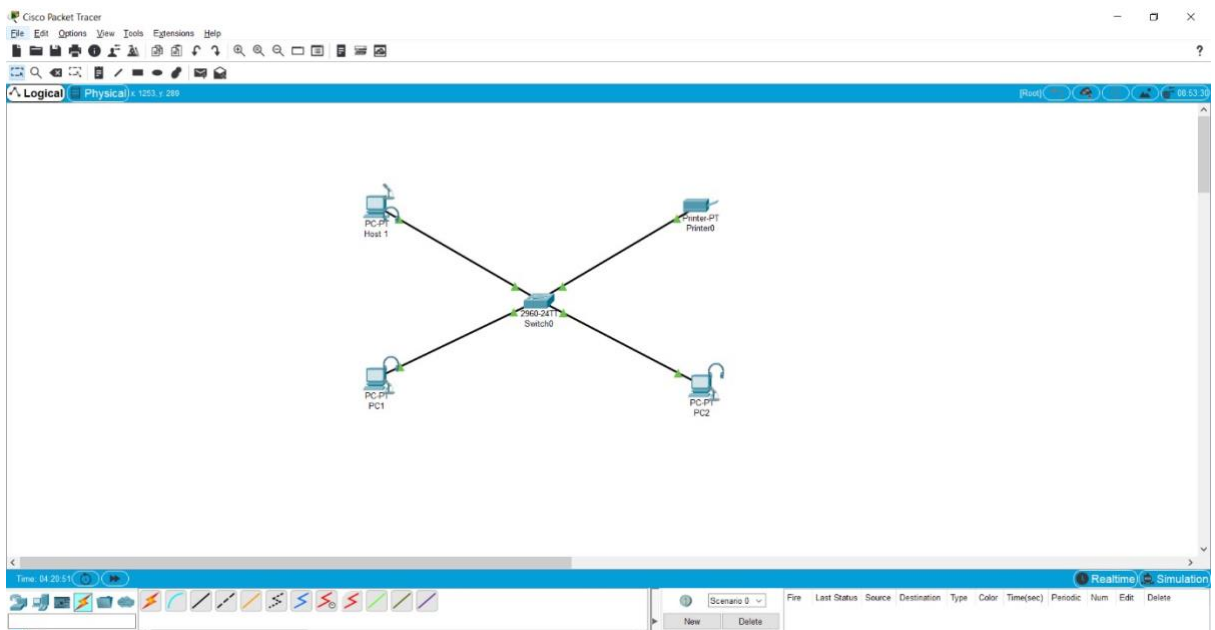
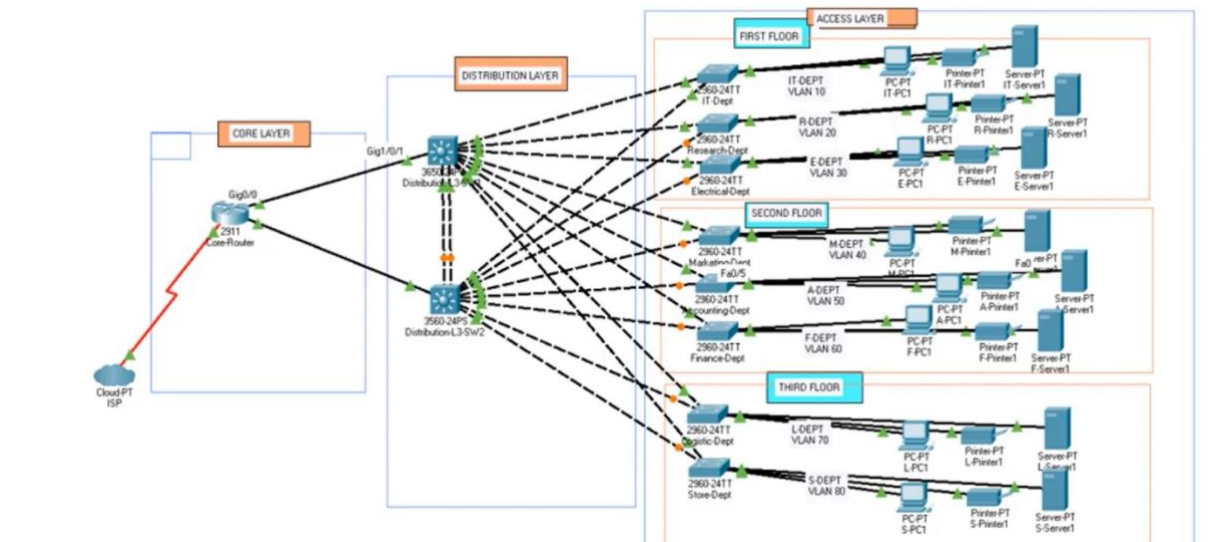
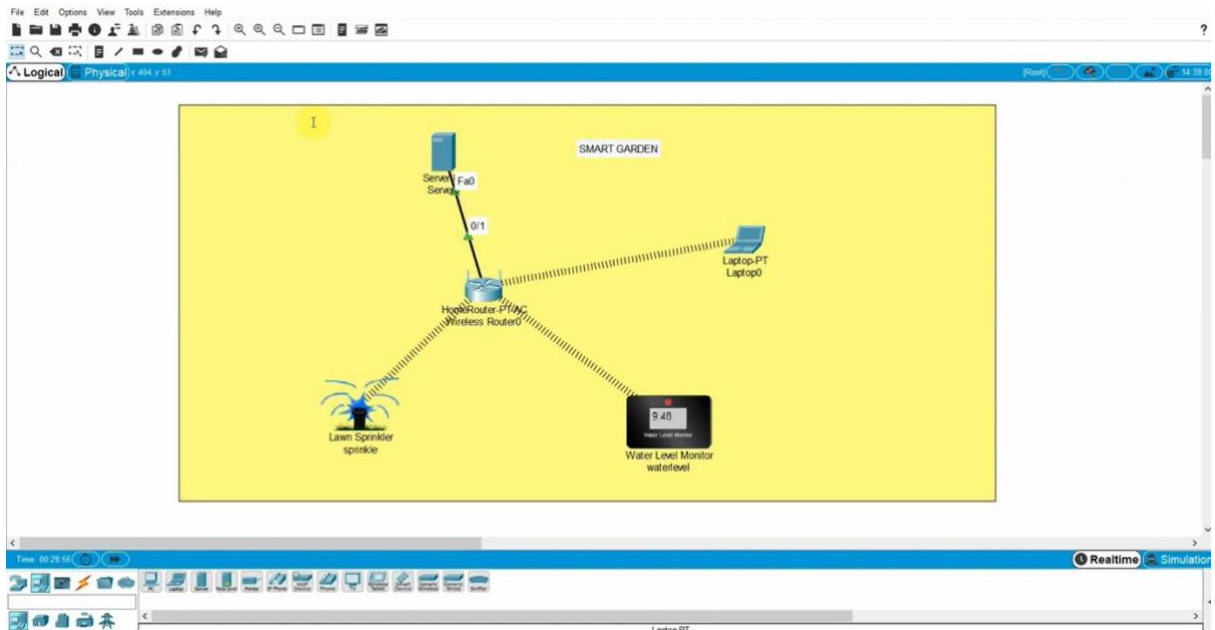
[Window size scaling factor: 1]

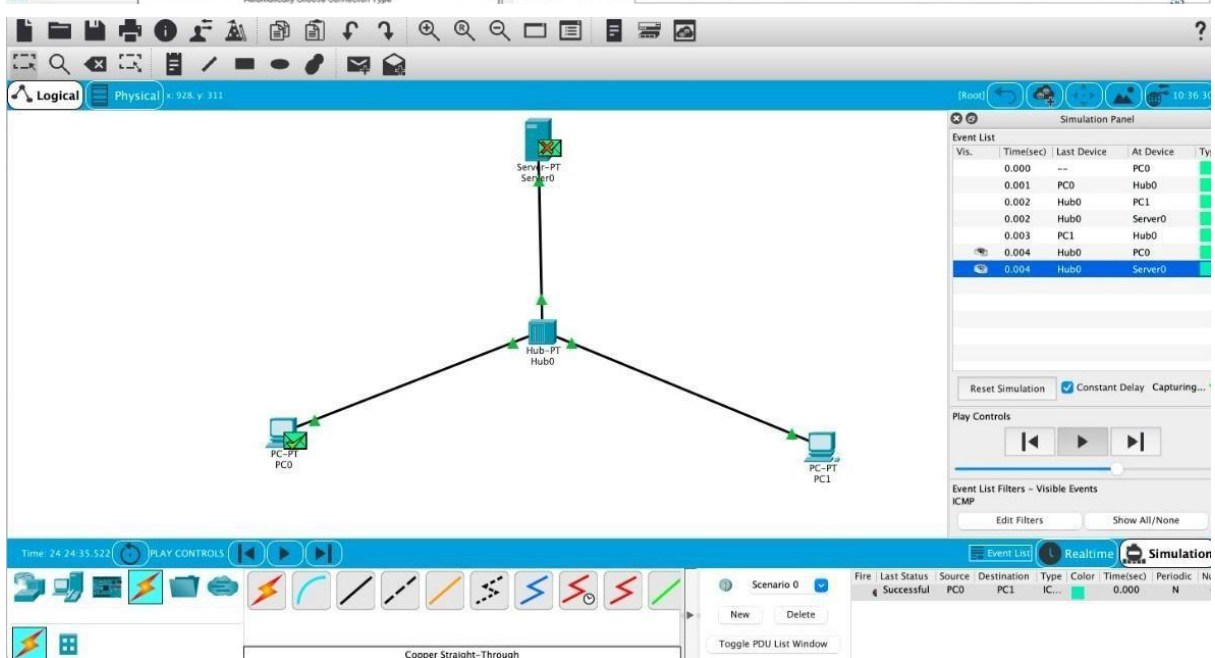
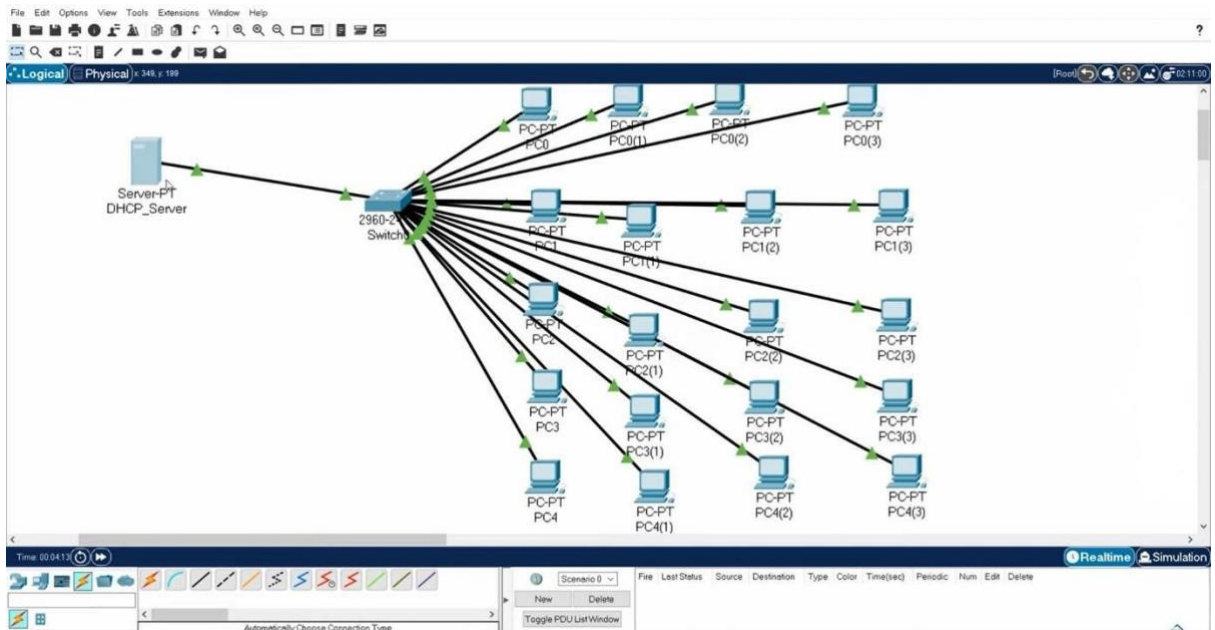
Checksum: 0x9863 [unverified]

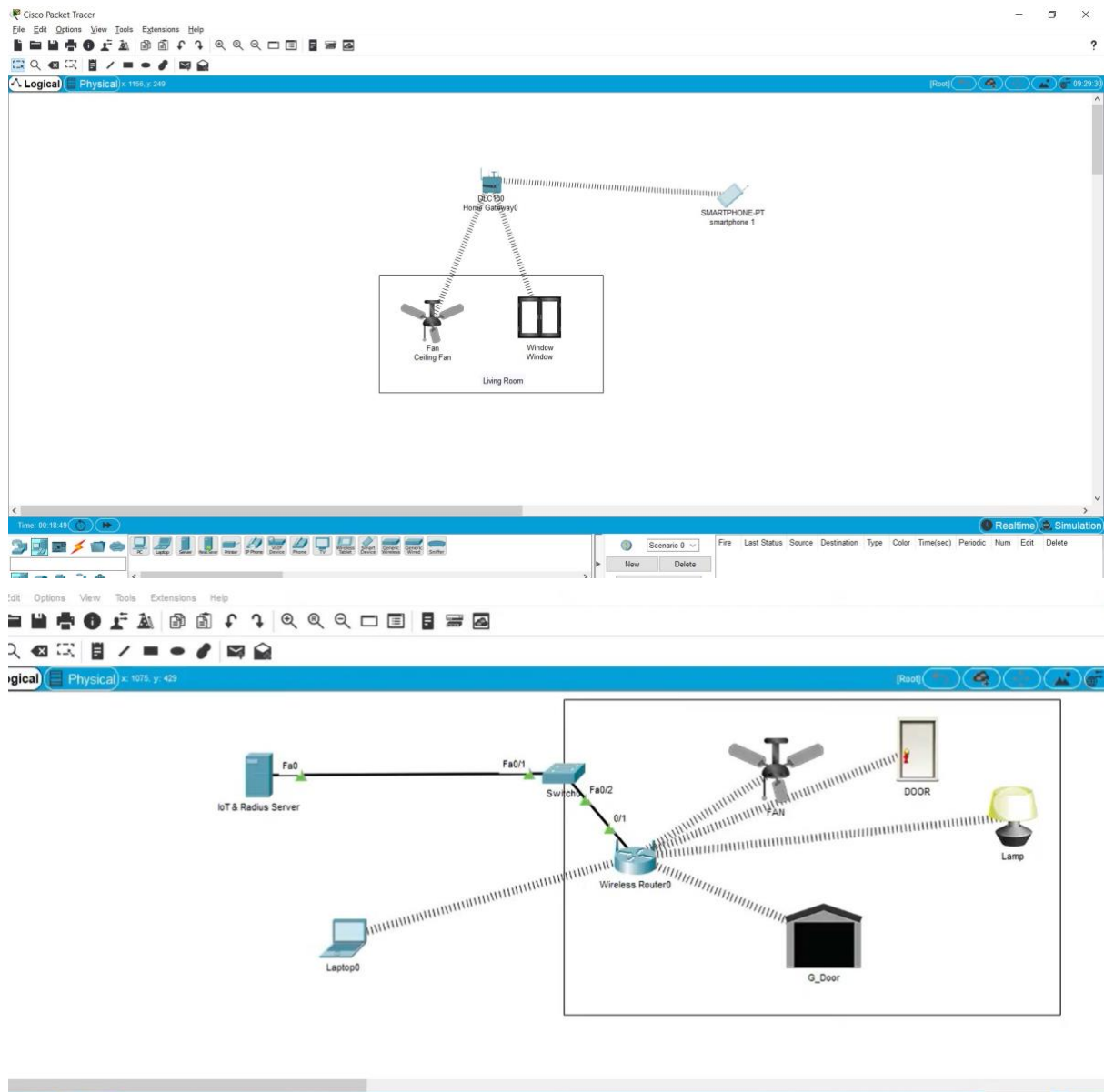
[Checksum Status: Unverified]

Urgent pointer: 0

[SEQ/ACK analysis]







File Edit View Go Capture Analyze Statistics Telephony Tools Internals Help						
Filter: icmp Expression... Clear Apply Save						
No.	Time	Source	Destination	Length	Info	
583	8.246307000	192.168.1.100	8.8.8.8	74	Echo (ping) request	id=0x0001, seq=5/1280, ttl=128 (reply in 584)
584	8.272879000	8.8.8.8	192.168.1.100	74	Echo (ping) reply	id=0x0001, seq=5/1280, ttl=44 (request in 583)
585	9.246995000	192.168.1.100	8.8.8.8	74	Echo (ping) request	id=0x0001, seq=6/1536, ttl=128 (reply in 586)
586	9.273258000	8.8.8.8	192.168.1.100	74	Echo (ping) reply	id=0x0001, seq=6/1536, ttl=44 (request in 585)
595	10.247960000	192.168.1.100	8.8.8.8	74	Echo (ping) request	id=0x0001, seq=7/1792, ttl=128 (reply in 596)
596	10.274468000	8.8.8.8	192.168.1.100	74	Echo (ping) reply	id=0x0001, seq=7/1792, ttl=44 (request in 595)
603	11.248925000	192.168.1.100	8.8.8.8	74	Echo (ping) request	id=0x0001, seq=8/2048, ttl=128 (reply in 604)
604	11.275518000	8.8.8.8	192.168.1.100	74	Echo (ping) reply	id=0x0001, seq=8/2048, ttl=44 (request in 603)

Frame 583: 74 bytes on wire (592 bits), 74 bytes captured (592 bits) on interface 0
 Ethernet II, Src: Asiarock_ec:ee:ab (00:19:66:ec:ee:ab), Dst: Cisco-Li_80:56:0d (00:22:6b:80:56:0d)
 Internet Protocol Version 4, Src: 192.168.1.100 (192.168.1.100), Dst: 8.8.8.8 (8.8.8.8)
 Internet Control Message Protocol

```

0000 00000000 00100010 01101011 10000000 01010110 00001101 00000000 00011001  ."k.v...
0008 01100110 11101100 11101110 10101011 00001000 00000000 01000101 00000000  f.....E.
0010 00000000 00111100 00010000 00101000 00000000 00000000 10000000 00000001  .<.(....
0018 01011000 01111101 11000000 10101000 00000001 01100100 00001000 00001000  X}...d..
0020 00001000 00001000 00001000 00000000 01001101 01010110 00000000 00000001  ...Mv..
0028 00000000 00000101 01100001 01100010 01100011 01100100 01100101 01100110  ..abcdef
0030 01100111 01101000 01101001 01101010 01101011 01101100 01101101 01101110  ghijklmn
0038 01101111 01110000 01110001 01110010 01110011 01110100 01110101 01110110  opqrstuv
0040 01110111 01100001 01100010 01100011 01100100 01100101 01100110 01100111  wabcdefg
0048 01101000 01101001                                     hi
  
```

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help						
Filter: icmp Expression... +						
No	Day Time	Source	Destination	Length	Protocol	Info
53	6.692	192.168.1.6	www.google.com	74	ICMP	Echo (ping) request id=0x0001, seq=6/1536, ttl=128 (reply in 54)
54	6.704	www.google.com	192.168.1.6	74	ICMP	Echo (ping) reply id=0x0001, seq=6/1536, ttl=55 (request in 53)
70	7.700	192.168.1.6	www.google.com	74	ICMP	Echo (ping) request id=0x0001, seq=7/1792, ttl=128 (reply in 71)
71	7.721	www.google.com	192.168.1.6	74	ICMP	Echo (ping) reply id=0x0001, seq=7/1792, ttl=55 (request in 70)
84	8.719	192.168.1.6	www.google.com	74	ICMP	Echo (ping) request id=0x0001, seq=8/2048, ttl=128 (reply in 85)
85	8.731	www.google.com	192.168.1.6	74	ICMP	Echo (ping) reply id=0x0001, seq=8/2048, ttl=55 (request in 84)
89	9.750	192.168.1.6	www.google.com	74	ICMP	Echo (ping) request id=0x0001, seq=9/2304, ttl=128 (reply in 90)
90	9.768	www.google.com	192.168.1.6	74	ICMP	Echo (ping) reply id=0x0001, seq=9/2304, ttl=55 (request in 89)

Frame 53: 74 bytes on wire (592 bits), 74 bytes captured (592 bits) on interface 0
 Ethernet II, Src: IntelCor_8c:ce:77 (Src: 08:00:0c:8c:ce:77), Dst: BestItwo_56:14:c0 (08:01:ea:56:14:c0)
 Internet Protocol Version 4, Src: 192.168.1.6 (192.168.1.6), Dst: www.google.com (172.217.167.132)
 Internet Control Message Protocol

```

0000 00 1e a6 56 14
0010 00 3c 1e e1 0e
0020 a7 84 08 00 4c
0030 67 68 69 6a 6t
0040 77 61 62 63 64
  
```


desktop-j16460h (zoom: 107.2%)

Wi-Fi

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

tcp.port == 56645

No.	Time	Source	Destination	Protocol	Length	Info
1586	13.688994	192.168.10.9	202.65.141.245	TCP	66	56645 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=256 SACK_PERM=1
1591	13.713123	202.65.141.245	192.168.10.9	TCP	68	80 → 56645 [SYN, ACK] Seq=0 Ack=1 Win=5840 Len=0 MSS=1460 SACK_PERM=1
1593	13.713241	192.168.10.9	202.65.141.245	TCP	54	56645 → 80 [ACK] Seq=1 Ack=1 Win=131328 Len=0
1595	13.713452	192.168.10.9	202.65.141.245	HTTP	486	GET / HTTP/1.1
1596	13.717667	202.65.141.245	192.168.10.9	TCP	56	80 → 56645 [ACK] Seq=1 Ack=433 Win=6912 Len=0
1597	13.719175	202.65.141.245	192.168.10.9	TCP	2974	80 → 56645 [ACK] Seq=1 Ack=433 Win=6912 Len=2920 [TCP segment of a stream ...]
1598	13.719175	202.65.141.245	192.168.10.9	TCP	1514	[TCP Previous segment not captured] 80 → 56645 [ACK] Seq=4381 Ack=433 Win=6912 Len=0
1599	13.719175	202.65.141.245	192.168.10.9	TCP	1514	[TCP Out-Of-Order] 80 → 56645 [ACK] Seq=2921 Ack=433 Win=6912 Len=0
1600	13.719175	202.65.141.245	192.168.10.9	TCP	1514	[TCP Previous segment not captured] 80 → 56645 [ACK] Seq=7301 Ack=433 Win=6912 Len=0
1601	13.719175	202.65.141.245	192.168.10.9	TCP	1514	[TCP Out-Of-Order] 80 → 56645 [ACK] Seq=5841 Ack=433 Win=6912 Len=0

< >

> Internet Protocol Version 4, Src: 192.168.10.9, Dst: 202.65.141.245

> Transmission Control Protocol, Src Port: 56645, Dst Port: 80, Seq: 1, Ack: 1, Len: 432

> Hypertext Transfer Protocol

> GET / HTTP/1.1\r\n

Host: www.mgit.ac.in\r\n

Connection: keep-alive\r\n

Upgrade-Insecure-Requests: 1\r\n

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/94.0.4606.81 Safari/537.36\r\n

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.9\r\n

Accept-Encoding: gzip, deflate\r\n

Accept-Language: en-US,en;q=0.9\r\n

\r\n

0040 2f 31 2e 31 0d 0a 18 6f 73 74 3a 20 77 77 77 2e /1.1.1 to st: www

0050 6d 67 69 74 2e 61 63 2e 69 6e 0d 0a 43 6f 6e 6e mgit.ac.in Conn

0060 65 63 74 69 6f 6e 3a 20 6b 65 65 70 2d 61 6c 69 ection: keep-all

0070 76 65 0d 0a 55 70 67 72 61 64 65 2d 49 6e 73 65 ve Upgr ade-Inse

0080 63 75 72 65 2d 52 65 71 75 65 73 74 73 3a 20 31 cure-Req uests: 1

0090 0d 0a 55 73 65 72 2d 41 67 65 6e 74 3a 20 4d 6f -User-A gent: Mo

HTTP Host (http.host), 22 bytes

Packets: 6443 · Displayed: 24 (0.4%) · Dropped: 0 (0.0%)

Profile: Default

desktop-j16460h (zoom: 107.2%)

Wi-Fi

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

tcp.port == 56645

No.	Time	Source	Destination	Protocol	Length	Info
1586	13.688994	192.168.10.9	202.65.141.245	TCP	66	56645 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=256 SACK_PERM=1
1591	13.713123	202.65.141.245	192.168.10.9	TCP	68	80 → 56645 [SYN, ACK] Seq=0 Ack=1 Win=5840 Len=0 MSS=1460 SACK_PERM=1
1593	13.713241	192.168.10.9	202.65.141.245	TCP	54	56645 → 80 [ACK] Seq=1 Ack=1 Win=131328 Len=0
1595	13.713452	192.168.10.9	202.65.141.245	HTTP	486	GET / HTTP/1.1
1596	13.717667	202.65.141.245	192.168.10.9	TCP	56	80 → 56645 [ACK] Seq=1 Ack=433 Win=6912 Len=0
1597	13.719175	202.65.141.245	192.168.10.9	TCP	2974	80 → 56645 [ACK] Seq=1 Ack=433 Win=6912 Len=2920 [TCP segment of a stream ...]
1598	13.719175	202.65.141.245	192.168.10.9	TCP	1514	[TCP Previous segment not captured] 80 → 56645 [ACK] Seq=4381 Ack=433 Win=6912 Len=0
1599	13.719175	202.65.141.245	192.168.10.9	TCP	1514	[TCP Out-Of-Order] 80 → 56645 [ACK] Seq=2921 Ack=433 Win=6912 Len=0
1600	13.719175	202.65.141.245	192.168.10.9	TCP	1514	[TCP Previous segment not captured] 80 → 56645 [ACK] Seq=7301 Ack=433 Win=6912 Len=0
1601	13.719175	202.65.141.245	192.168.10.9	TCP	1514	[TCP Out-Of-Order] 80 → 56645 [ACK] Seq=5841 Ack=433 Win=6912 Len=0

< >

> Internet Protocol Version 4, Src: 192.168.10.9, Dst: 202.65.141.245

> Transmission Control Protocol, Src Port: 56645, Dst Port: 80, Seq: 1, Ack: 1, Len: 432

> Hypertext Transfer Protocol

> GET / HTTP/1.1\r\n

Host: www.mgit.ac.in\r\n

Connection: keep-alive\r\n

Upgrade-Insecure-Requests: 1\r\n

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/94.0.4606.81 Safari/537.36\r\n

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.9\r\n

Accept-Encoding: gzip, deflate\r\n

Accept-Language: en-US,en;q=0.9\r\n

\r\n

0040 2f 31 2e 31 0d 0a 18 6f 73 74 3a 20 77 77 77 2e /1.1.1 to st: www

0050 6d 67 69 74 2e 61 63 2e 69 6e 0d 0a 43 6f 6e 6e mgit.ac.in Conn

0060 65 63 74 69 6f 6e 3a 20 6b 65 65 70 2d 61 6c 69 ection: keep-all

0070 76 65 0d 0a 55 70 67 72 61 64 65 2d 49 6e 73 65 ve Upgr ade-Inse

0080 63 75 72 65 2d 52 65 71 75 65 73 74 73 3a 20 31 cure-Req uests: 1

0090 0d 0a 55 73 65 72 2d 41 67 65 6e 74 3a 20 4d 6f -User-A gent: Mo

HTTP Host (http.host), 22 bytes

Packets: 6443 · Displayed: 24 (0.4%) · Dropped: 0 (0.0%)

Profile: Default

Cisco Packet Tracer

File Edit Options View Tools Extensions Help

Logical Physical x 156, v 720

Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type
	13.339	Switch1	Router1	STP
	13.339	Switch1	PC1	STP
	13.907	Switch1	Switch1	STP
	13.908	Switch1	PC1	STP
	14.188	Router2	Router2	OSPF
	14.189	Router2	Router0	OSPF
	15.324	Router0	Router0	OSPF
	15.325	Router0	Router1	OSPF
	15.336	Switch1	Router1	STP
	15.337	Switch1	PC1	STP
	15.339	Switch0	Switch0	STP
	15.340	Switch0	Router0	STP
	15.340	Switch0	PC0	STP
	15.707	Router1	Router1	OSPF
	15.708	Router1	Router0	OSPF

Reset Simulation ☒ Constant Delay Captured to: 15.708 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: 00:53:57.088 PLAY CONTROLS

Scenario 0

New Delete

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

Successful PC0 PC1 ICMP 0.000 N 0 (edit) (delete)

Logical Physical x 1214, v 832

Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.000	PC1	PC1	ICMP
	0.001	PC1	Switch0	ICMP
	0.002	Switch0	Switch3	ICMP
	0.003	Switch3	Switch2	ICMP
	0.004	Switch2	PC2	ICMP
	0.005	PC2	Switch2	ICMP
	0.006	Switch2	Switch3	ICMP
	0.007	Switch3	Switch0	ICMP
	0.008	Switch0	PC1	ICMP

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, 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: 00:01:33.747 PLAY CONTROLS

Scenario 0

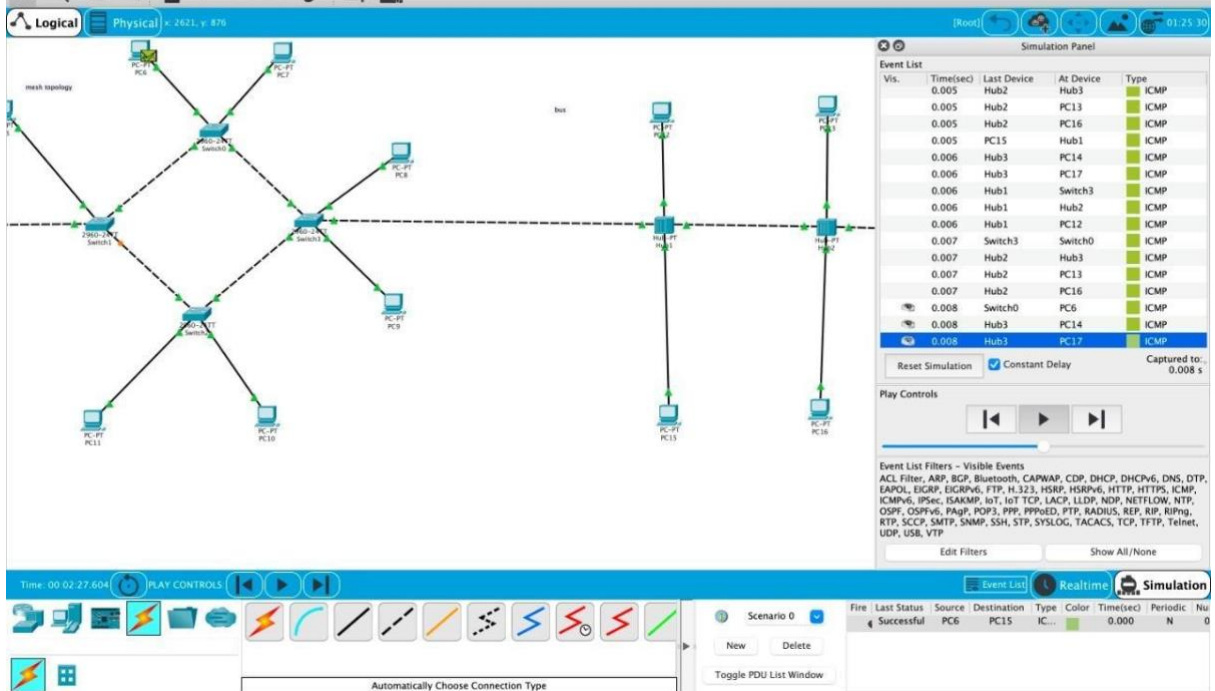
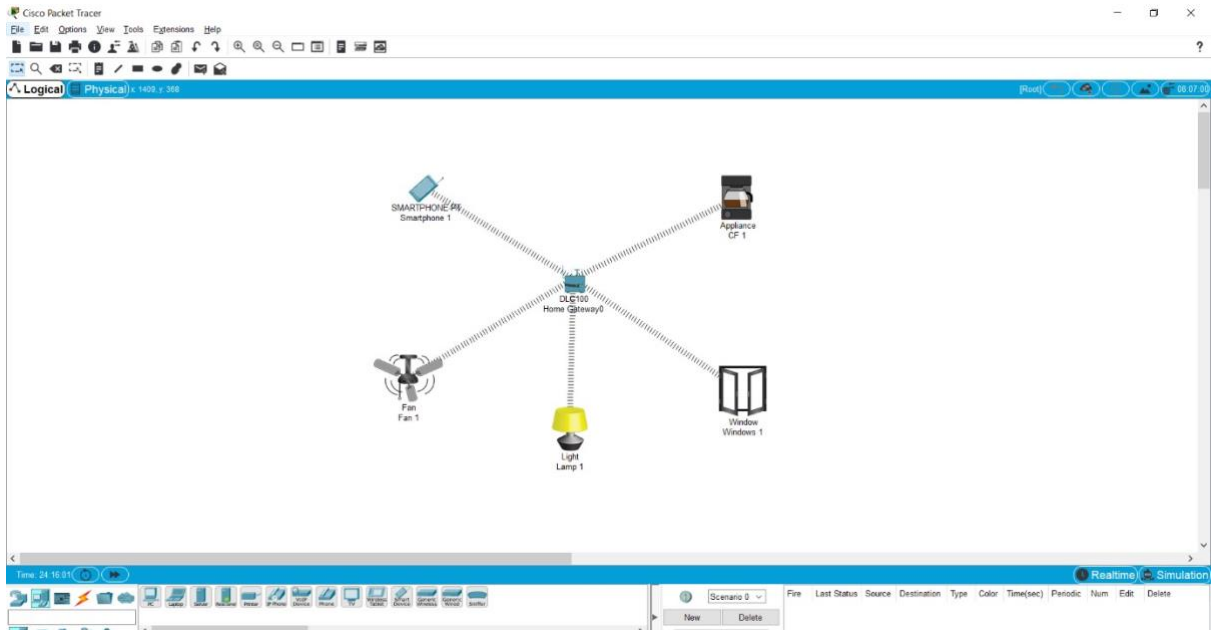
New Delete

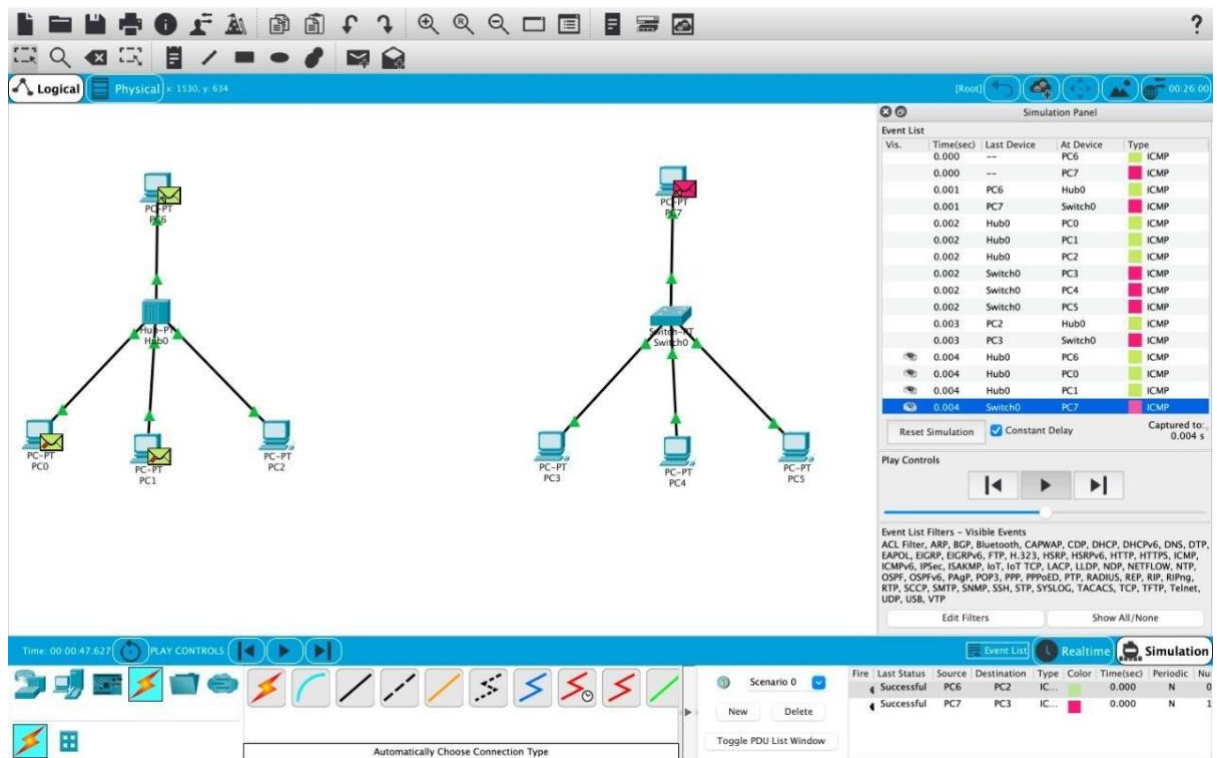
Toggle PDU List Window

Automatically Choose Connection Type

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

Successful PC1 PC2 ICMP 0.000 N 0





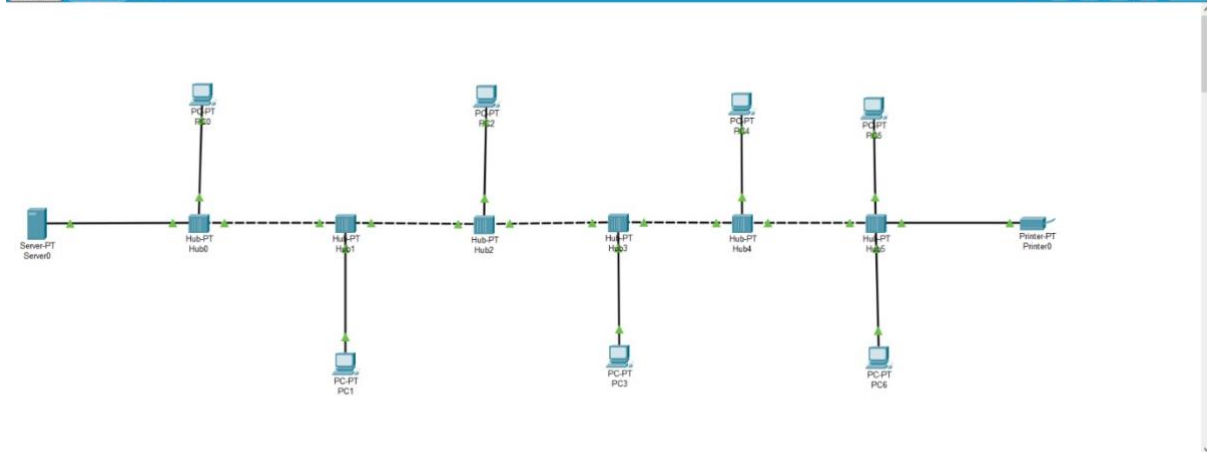
```
main.c
1 #include <stdio.h>
2 int main() {
3     char data[20], stuffedData[30];
4     int i, j, count;
5     printf("Enter the data: ");
6     scanf("%s", data);
7     i = 0;
8     j = 0;
9     count = 0;
10    while (data[i] != '\0') {
11        stuffedData[j] = data[i];
12        if (data[i] == '1') {
13            count++;
14        } else {
15            count = 0;
16        }
17        if (count == 5) {
18            stuffedData[++j] = '0';
19            count = 0;
20        }
21        i++;
22        j++;
23    }
24    stuffedData[j] = '\0';
25    printf("Original Data: %s\n", data);
26    printf("After Bit stuffing: %s\n", stuffedData);
27    return 0;
}
```

Output

```
/tmp/TSvhdIvgLr.o
Enter the data: 1011111100110
Original Data: 1011111100110
After Bit stuffing: 10111110100110
```

File Edit Options View Tools Extensions Help

Logical Physical 494 x 274 [Reset] 08:02:30



Time: 00:00:00 [Simulation] Realtime Simulation

Scenario 0

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
-	-	PC3	PC3	ICMP	Purple	0.000	N	0	(edit)	(delete)