

main.c



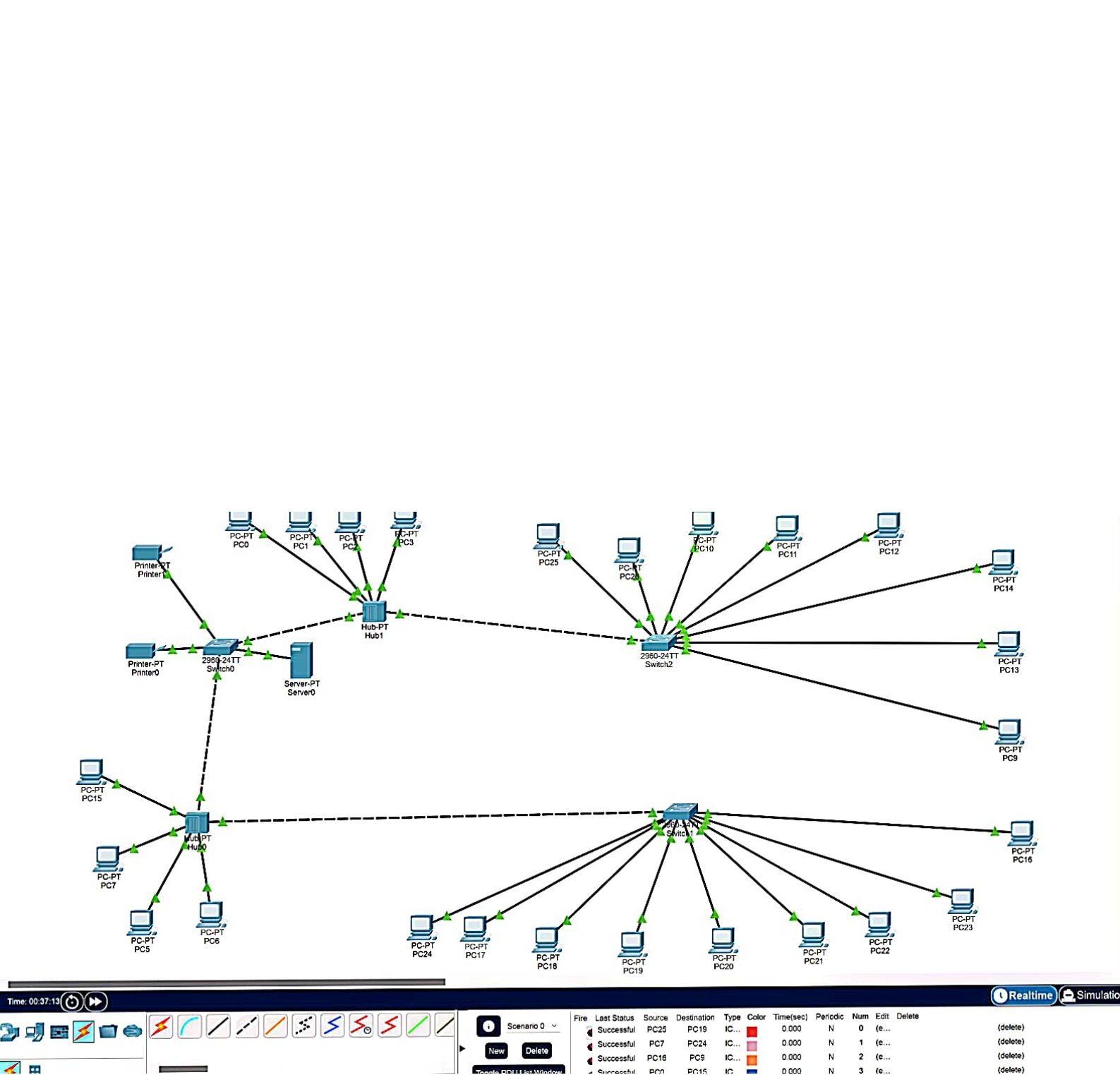
Save

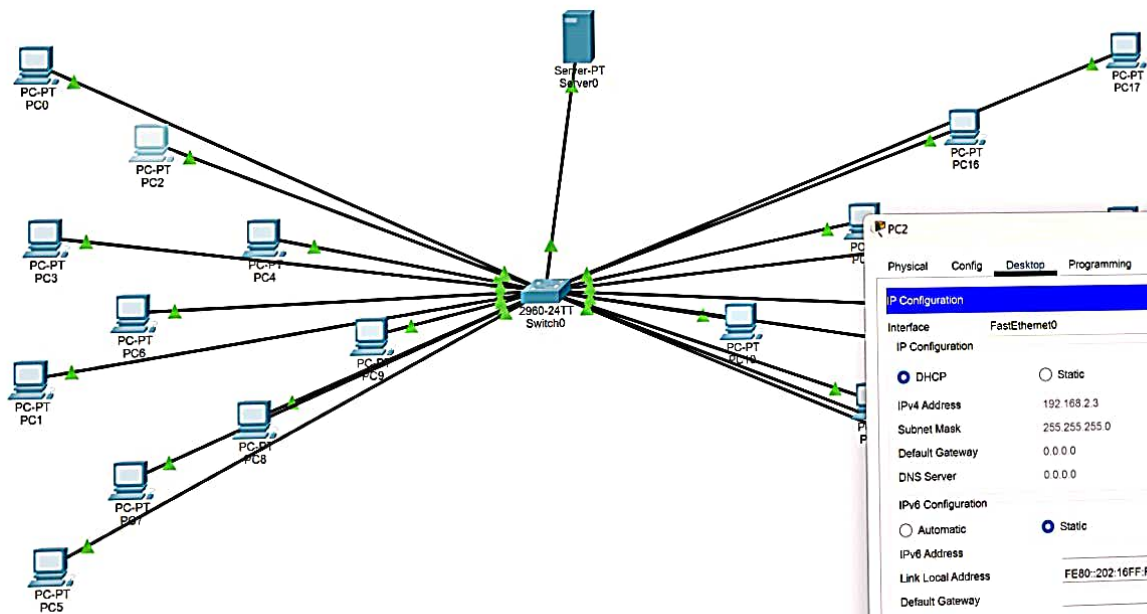
Run

Output

```
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     // Initialize variables
8     i = 0;
9     j = 0;
10    count = 0;
11    // Perform bit stuffing
12    while (data[i] != '\0') {
13        stuffedData[j] = data[i];
14        if (data[i] == '1') {
15            count++;
16        } else {
17            count = 0;
18        }
19        if (count == 5) {
20            stuffedData[++j] = '0';
21            count = 0;
22        }
23        i++;
24        j++;
25    }
26    stuffedData[j] = '\0';
27    printf("Original Data: %s\n", data);
28    printf("After Bit stuffing: %s\n", stuffedData);
29    return 0;
30 }
```

```
/tmp/zqlG91WOMn.o
Enter the data: 1011111100110
Original Data: 1011111100110
After Bit stuffing: 10111110100110
```





Physical Config **Desktop** Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☒ DHCP ☐ Static DHCP request successful.

IPv4 Address: 192.168.2.3

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address: _____

Link Local Address: FE80::202:16FF:FED5:A5C8

Default Gateway: _____

DNS Server: _____

802.1X

☐ Use 802.1X Security

Authentication: MD5

Time: 00:10:21

Scenario 0

New Delete

Toggle PDU List Window

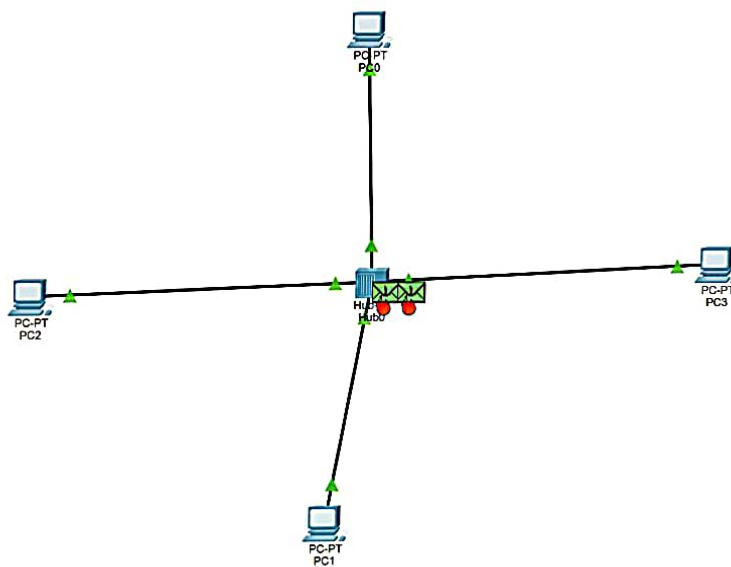
Fire	Last Status	Source	Destination	IC...	0.000	N	0	(e...	(delete)
	Successful	PC4	PC10	IC...	0.000	N	0	(e...	(delete)
	Successful	PC0	PC19	IC...	0.000	N	1	(e...	(delete)

ENG 14:12



Logical Physical x: 1281, y: 481

Root



Simulation Panel

Event List

Vis.	Time(sec)	Last Device
	0.000	--
	0.000	--
	0.000	--
	0.000	--
	0.001	PC0
	0.001	PC1

Reset Simulation ☒ Constant Delay Captured 0.00

Play Controls

Event List Filters - Visible Events
ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, 329, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, NDR, 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

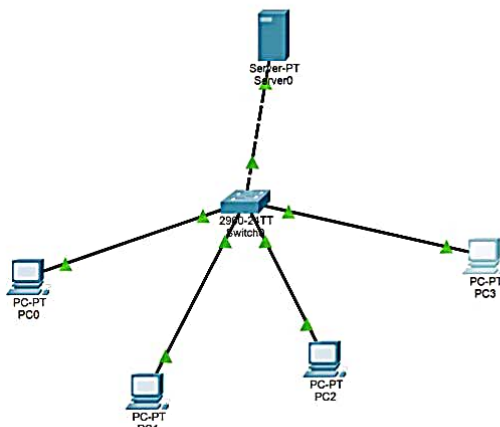
Edit Filters Show All/None

Time: 00:00:41.592 PLAY CONTROLS



Scenario 0
New Delete

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	In Progress	PC0	PC1	IC...		0.000	N	0	(e...)	(delete)
	In Progress	PC1	PC0	IC...		0.000	N	1	(e...)	(delete)



PC3

Physical Config Desktop Programming Attributes

IP Configuration

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address 192.122.2.5

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address

Link Local Address FE80::207:ECFF:FE0A:638E

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

Password

☐ Top

Time: 00:09:18

Realtime Simulation

Scenario 0

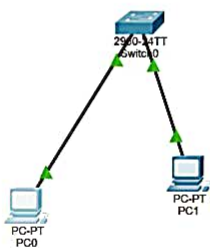
New Delete

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
Successful		PC0	PC3	IC...		0.000	N	0	(e...)	(delete)



Logical Physical 369, y: 302

Root 01:07:01



PC0

Physical Config Desktop Programming Attributes

Firewall X

Service ☒ On ☐ Off

Interface FastEthernet0

Inbound Rules

Action Protocol

Remote IP Remote Wildcard Mask

Remote Port Local Port

Save Remove Add

Action	Protocol	Remote IP	Remote Wild Card	Remote Port	Local Port
1 Deny	ICMP	0.0.0.0	255.255.25...	-	-

Time: 00:02:12

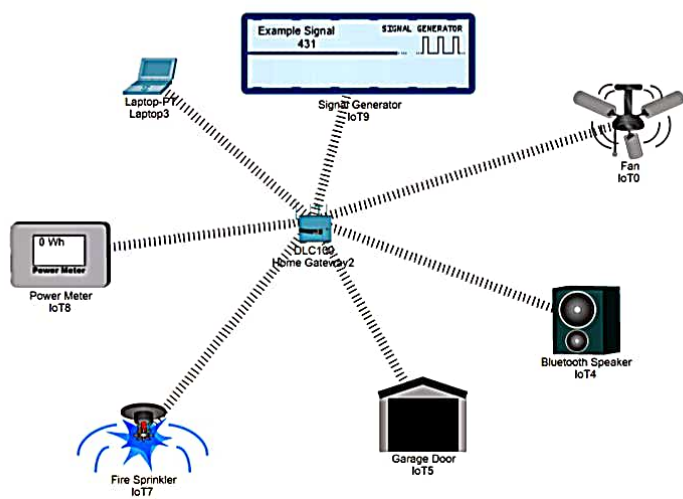


Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Failed	PC0	PC1	IC...	Green	0.000	N	0	(e...	(delete)
	Successful	PC0	PC1	IC...	Blue	0.000	N	1	(e...	(delete)
	Failed	PC0	PC1	IC...	Red	0.000	N	2	(e...	(delete)



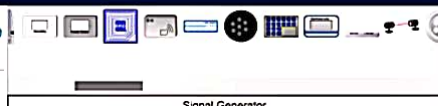
Logical Physical x: 852, y: 36

Root 15:40:3



Time: 00:27:26

Realtime Simulation



Scenario 0

New Delete

Toggle PDU List Window

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


```
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
tcpdserver.java tcpdateclient.java udpdnserver.java udpdnclient.java chatServer.java chatClient.java
1 import java.io.*; import java.net.*; class chatClient {
2 public static void main(String[] args) throws Exception
3 {
4 Socket sock=new Socket("127.0.0.1",1309);
5 BufferedReader keyRead=new BufferedReader(new InputStreamReader(System.in)); OutputStream ostream=sock.getOutputStream();
6 PrintWriter pwrite=new PrintWriter(ostream,true); InputStream istream=sock.getInputStream();
7 BufferedReader receiveRead =new BufferedReader(new InputStreamReader(istream)); System.out.println("Start the chitchat,type and press Enter");
8 String receiveMessage,sendMessage; while(true)
9 {
10 sendMessage=keyRead.readLine(); pwrite.println(sendMessage); pwrite.flush();
11 if((receiveMessage=receiveRead.readLine())!=null)
12 {
13 System.out.println(receiveMessage);
14 }
15 }
16 }
17 }
```

```
C:\Windows\System32\cmd.exe x + v -
Microsoft Windows [Version 10.0.22631.2506]
(c) Microsoft Corporation. All rights reserved.

D:\form>javac chatClient.java

D:\form>java chatClient
Start the chitchat,type and press Enter key
hi bye
hello
```

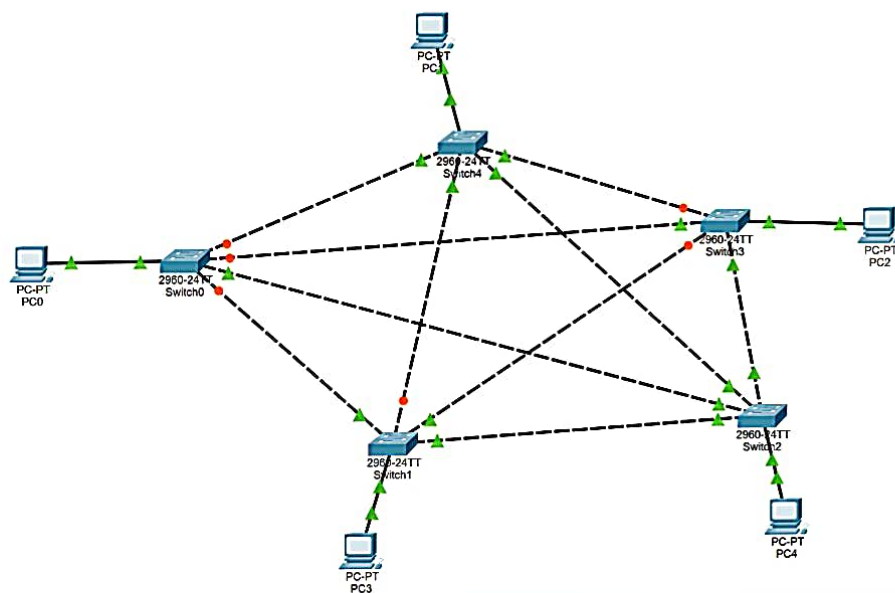
```
C:\Windows\System32\cmd.exe x + v -
Microsoft Windows [Version 10.0.22631.2506]
(c) Microsoft Corporation. All rights reserved.

D:\form>javac chatServer.java

D:\form>java chatServer
server ready for chatting
hi bye
hello
```



Logical Physical 741, y: 538 Root 03:01:0

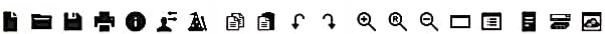


Time: 00:05:52 Realtime Simulation



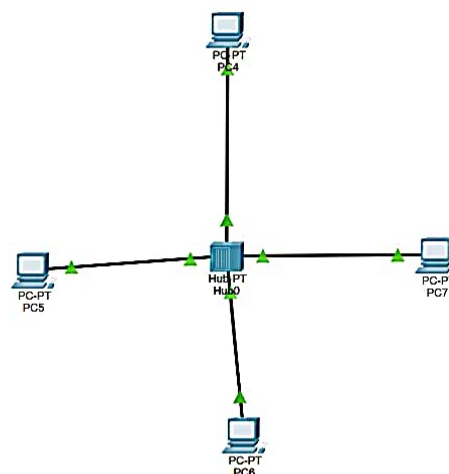
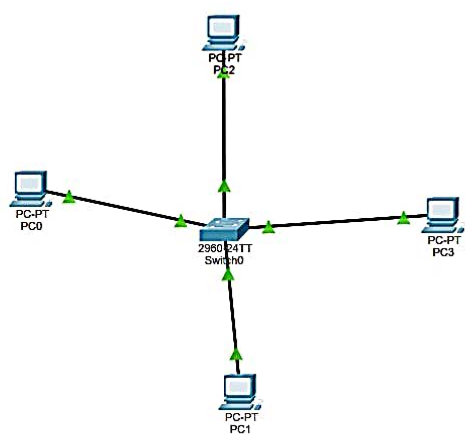
Scenario 0
New Delete
Tooltips PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC1	PC4	IC...		0.000	N	0	(e...	(delete)
	Successful	PC1	PC0	IC...		0.000	N	1	(e...	(delete)
	Successful	PC1	PC3	IC...		0.000	N	2	(e...	(delete)
	Successful	PC0	PC2	IC...		0.000	N	3	(e...	(delete)



Logical Physical c: 578, y: 507

Root 00:21



Time: 00:00:41



(Select a PDU to Drop and Drop to the Workbench)

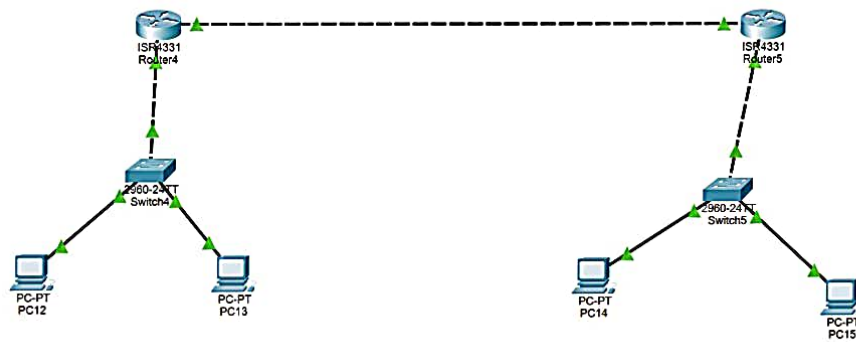
Scenano 0

New Delete

Toggle PDU List Window

Realtime Simulation

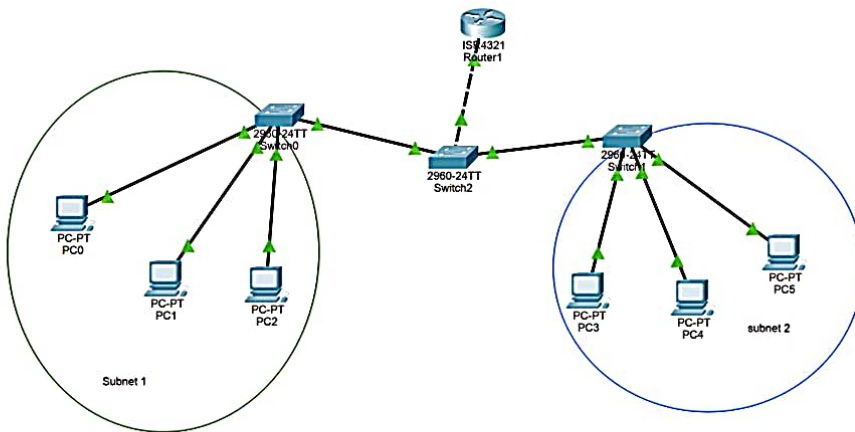
Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC4	PC6	IC...	Blue	0.000	N	0	(e...)	(delete)
	Successful	PC1	PC2	IC...	Green	0.000	N	1	(e...)	(delete)



Time: 00:13:00 ⏮ ⏪ ⏩ ⏭ Realtime Simulation

Scenario 0 New Delete

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
Successful		PC12	PC14	IC...	Black	0.000	N	0	(e...)	(delete)
Successful		PC13	PC15	IC...	Purple	0.000	N	1	(e...)	(delete)



Time: 00:33:58

Scenario 0

New Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
Successful	PC1	PC4	IC...	0.000	N	0	(e...)	(delete)		
Successful	PC1	PC3	IC...	0.000	N	1	(e...)	(delete)		
Successful	PC5	PC5	IC...	0.000	N	2	(e...)	(delete)		

```
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
tcpdateserver.java tcpdateclient.java
1 import java.net.*;
2 import java.io.*;
3 class tcpdateclient
4 { public static void main (String args[])
5 { Socket soc;
6   BufferedReader dis;
7   String sdate;
8   PrintStream ps;
9   try { InetAddress ia = InetAddress.getLocalHost();
10  if (args.length == 0)
11  soc = new Socket(InetAddress.getLocalHost(),4444);
12  else soc = new Socket(InetAddress.getByName(args[0]),4444);
13  dis = new BufferedReader(new InputStreamReader(soc.getInputStream()));
14  sdate=dis.readLine();
15  System.out.println("The date/time on server is : " +sdate);
16  ps = new PrintStream(soc.getOutputStream());
17  ps.println(ia); ps.close();
18  }
19  catch(IOException e)
20  {
21  System.out.println("THE EXCEPTION is : " + e);
22  }
23  }
24 }
25
```

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.22631.2506]
(c) Microsoft Corporation. All rights reserved.

D:\form>javac tcpdateclient.java
tcpdateclient.java:18: error: 'catch' without 'try'
    catch(IOException e)
    ^
tcpdateclient.java:9: error: 'try' without 'catch', 'finally' or resource declarations
    try { InetAddress ia = InetAddress.getLocalHost();
    ^
tcpdateclient.java:23: error: reached end of file while parsing
}
^
3 errors

D:\form>javac tcpdateclient.java

D:\form>java tcpdateclient
The date/time on server is : Tue Nov 14 10:39:08 IST 2023

D:\form>

Microsoft Windows [Version 10.0.22631.2506]
(c) Microsoft Corporation. All rights reserved.

D:\form>javac tcpdateserver.java

D:\form>java tcpdateserver
Press Ctrl+C to quit
Client System/IP address is :LAPTOP-JTTU7GNF/172.30.240.1
```

java source file length : 697 lines : 25 Ln : 24 C

- One Piece (Dub) - 509 1080p.mkv
- One Piece (Dub) - 508 1080p.mkv

4 items | 42 items | 1 item selected 0 bytes |

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

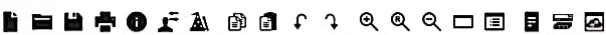


arp

No.	Time	Source	Destination	Protocol	Length	Info
881	9.025414	92:37:6d:17:9b:18	IntelCor_18:d3:96	ARP	42	Who has 192.168.255.82? Tell 192.168.255.190
882	9.025532	IntelCor_18:d3:96	92:37:6d:17:9b:18	ARP	42	192.168.255.82 is at ac:74:b1:18:d3:96
1155	28.593709	92:37:6d:17:9b:18	IntelCor_18:d3:96	ARP	42	Who has 192.168.255.82? Tell 192.168.255.190
1156	28.593738	IntelCor_18:d3:96	92:37:6d:17:9b:18	ARP	42	192.168.255.82 is at ac:74:b1:18:d3:96

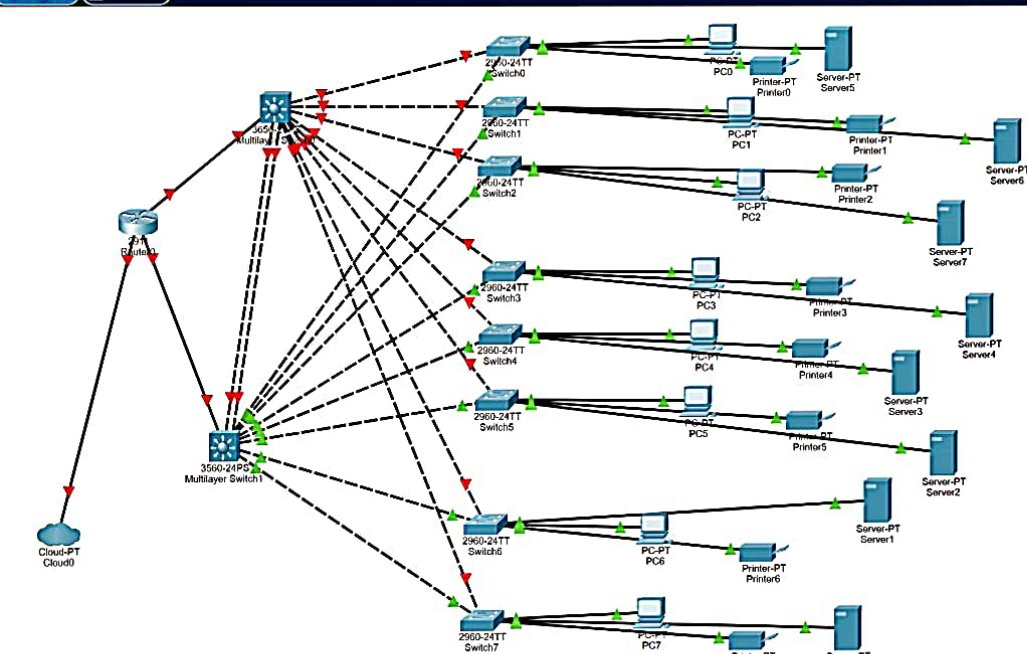
> Frame 882: 42 bytes on wire (336 bits), 42 bytes
> Ethernet II, Src: IntelCor_18:d3:96 (ac:74:b1:18:
v Address Resolution Protocol (reply)
Hardware type: Ethernet (1)
Protocol type: IPv4 (0x0800)
Hardware size: 6
Protocol size: 4
Opcode: reply (2)
Sender MAC address: IntelCor_18:d3:96 (ac:74:b1:18:d3:96)
Sender IP address: 192.168.255.82
Target MAC address: 92:37:6d:17:9b:18 (92:37:6d:17:9b:18)
Target IP address: 192.168.255.190

0000 92 37 6d 17 9b 18 ac 74 b1 18 d3 96 08 06 00 01 ..7m....t
0010 08 00 06 04 00 02 ac 74 b1 18 d3 96 c0 a8 ff 52tR
0020 92 37 6d 17 9b 18 c0 a8 ff be ..7m..... ..



Logical Physical x 145x, y: 341

Root 12:01:3



Time: 00:22:48



Scenario 0

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

Realtime Simulation

Time	Source	Destination	Protocol	Length	Info
65.457945	2600:1901:1:c36::	2401:4900:2306:1aed::	TCP	74	443 → 49740 [ACK] Seq=1 Ack=518 Win=66816 Len=0
65.460218	2600:1901:1:c36::	2401:4900:2306:1aed::	TLSv1.3	2514	Server Hello, Change Cipher Spec
65.460271	2401:4900:2306:1aed::	2600:1901:1:c36::	TCP	74	49740 → 443 [ACK] Seq=518 Ack=2441 Win=66048 Len=0
65.461346	2600:1901:1:c36::	2401:4900:2306:1aed::	TLSv1.3	1053	Application Data
65.461724	2401:4900:2306:1aed::	2600:1901:1:c36::	TLSv1.3	138	Change Cipher Spec, Application Data
65.495537	2600:1901:1:c36::	2401:4900:2306:1aed::	TLSv1.3	660	Application Data, Application Data
65.547888	2401:4900:2306:1aed::	2600:1901:1:c36::	TCP	74	49740 → 443 [ACK] Seq=582 Ack=4006 Win=66048 Len=0
65.607433	2600:1901:1:c36::	2401:4900:2306:1aed::	QUIC	232	Protected Payload (KP0)
65.607829	2401:4900:2306:1aed::	2600:1901:1:c36::	QUIC	97	Protected Payload (KP0), DCID=e6785cc05c5d8332
65.681198	2600:1901:1:c36::	2401:4900:2306:1aed::	QUIC	86	Protected Payload (KP0)
67.165740	192.168.255.82	192.168.255.255	UDP	86	57621 → 57621 Len=44

```

Frame 1: 150 bytes on wire (1200 bits), 150 bytes captured (1200 bits) on interface IntelCon_18:d3:96 (ac:74:b1:18:00:00)
Ethernet II, Src: IntelCon_18:d3:96 (ac:74:b1:18:00:00), Dst: 01:00:00:00:00:00, Protocol: 0x0800
Internet Protocol Version 6, Src: 2401:4900:2306:1aed::, Dst: 2600:1901:1:c36::
Transmission Control Protocol, Src Port: 49734, Dst Port: 443
Source Port: 49734
Destination Port: 443
Stream index: 0
Conversation completeness: Incomplete (8)
TCP Segment Len: 76
Sequence Number: 1 (relative sequence number)
Sequence Number (raw): 3370964096
Next Sequence Number: 77 (relative sequence number)
Acknowledgment Number: 1 (relative acknowledgment number)
Acknowledgment number (raw): 3721173777
101 .... = Header Length: 20 bytes (5)
Flags: 0x018 (PSH, ACK)
Window: 255
Calculated window size: 255
Window size scaling factor: -1 (unknown)
Checksum: 0x0985 [unverified]
Checksum Status: Unverified
Urgent Pointer: 0
Timestamps
SEQ/ACK analysis
TCP payload (76 bytes)
Transport Layer Security

```

```

0000  92 37 6d 17 9b 18 ac 74 b1 18 d3 96 86 dd 60 02  .7m...t .....
0010  96 bc 00 60 06 3f 24 01 49 00 23 06 1a ed f0 f0  ...".?$. I.#....
0020  e9 df 83 21 f9 5d 2a 01 01 11 f1 00 a0 04 00 00  ...|.]*. ....
0030  00 00 bf eb 8a d6 c2 46 01 bb c8 ec d4 80 dd cc  ....F .....
0040  9b 11 50 18 00 ff 09 85 00 00 17 03 03 00 47 00  ..P.....G.
0050  00 00 00 00 00 00 05 71 05 40 6b 01 0e a6 75 a5  ....q.gk...u.
0060  62 d4 8a 64 28 b9 f6 cd 9a d0 fb 87 ba bd 3c b7  b--d(.....<
0070  9c 66 58 61 99 38 fe bb 02 f4 d1 5b d5 be 0f ba  -fXa-8...[....
0080  f0 7b 71 2b 0c 4e e4 11 81 0e 35 f9 0c 9c 05 85  -(q+N...-S....
0090  bc df 00 d8 a8 e6  .....

```

```

1 import java.io.*;
2 import java.net.*;
3 public class udpdnsclient { public static void main(String args[]) throws IOException
4 { BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
5 DatagramSocket clientsocket = new DatagramSocket(); InetAddress ipaddress;
6 if (args.length == 0)
7 ipaddress = InetAddress.getLocalHost();
8 else ipaddress = InetAddress.getByName(args[0]);
9 byte[] senddata = new byte[1024]; byte[] receivedata = new byte[1024];
10 int portaddr = 1362; System.out.print("Enter the hostname : ");
11 String sentence = br.readLine();
12 senddata = sentence.getBytes();
13 DatagramPacket pack = new DatagramPacket(senddata,senddata.length, ipaddress,portaddr);
14 clientsocket.send(pack);
15 DatagramPacket recvpack = new DatagramPacket(receivedata,receivedata.length); clientsocket.receive(recvpack); String modified = new String
16 System.out.println("IP Address: " + modified);
17 clientsocket.close(); }
18

```

```

C:\Windows\System32\cmd.e
Microsoft Windows [Version 10.0.22631.2506]
(c) Microsoft Corporation. All rights reserved.

D:\form>javac udpdnsserver.java

D:\form>java udpdnsserver
Press Ctrl + C to Quit
Request for host yahoo.com

```

```

C:\Windows\System32\cmd.e
Microsoft Windows [Version 10.0.22631.2506]
(c) Microsoft Corporation. All rights reserved.

D:\form>javac udpdnsclient.java
error: file not found: udpdnsclient.java
Usage: javac <options> <source files>
use --help for a list of possible options

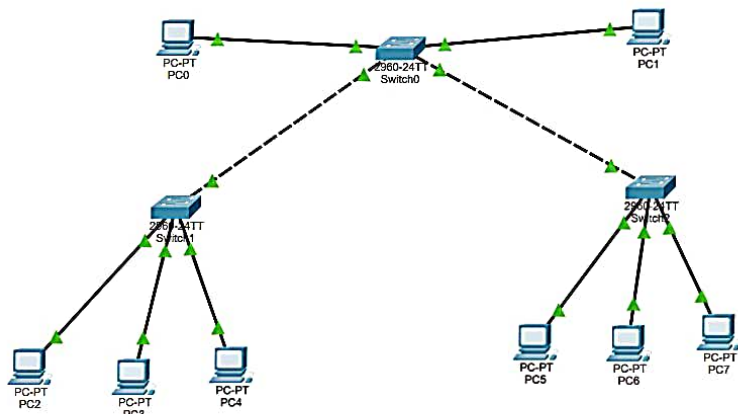
D:\form>javac udpdnsclient.java
udpdnsclient.java:12: error: cannot find symbol
    Senddata = sentence.getBytes();
    ^
  symbol:   variable Senddata
  location: class udpdnsclient
1 error

D:\form>javac udpdnsclient.java

D:\form>java udpdnsclient
Enter the hostname : yahoo.com
IP Address: 68.180.206.184

D:\form>

```



Time: 00:00:54

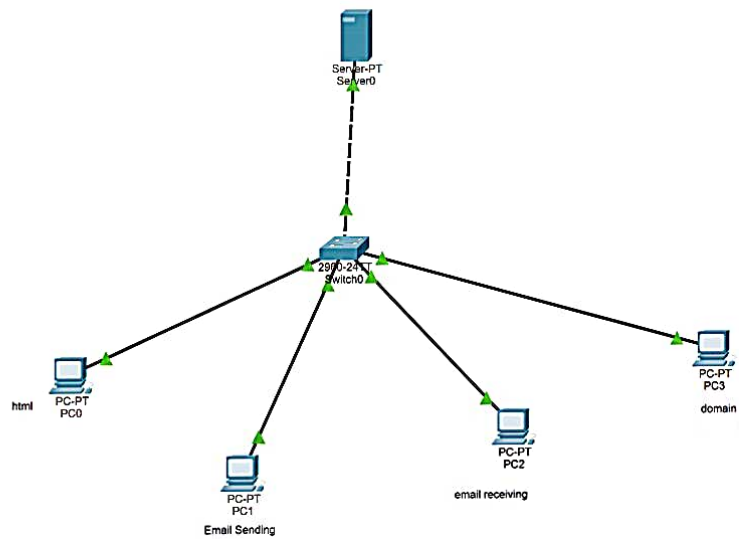
Scenario 0

New Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
Successful	PC0	PC6	IC...	0.000	N	0	(e...)	(delete)		
Successful	PC1	PC4	IC...	0.000	N	1	(e...)	(delete)		
Successful	PC1	PC7	IC...	0.000	N	2	(e...)	(delete)		

Realtime Simulation



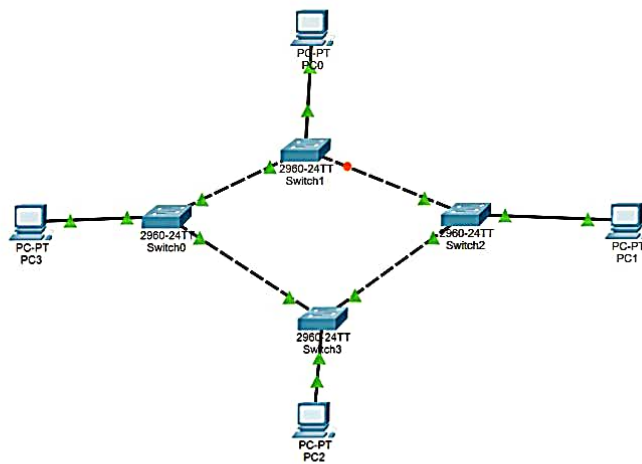
Time: 00:01:02 [Play] [Pause] [Stop]

Realtime Simulation

4331 4321 1941 2901 2911 8191OX 8191QW 829 1240 PTAct PTEmp

Scenario 0

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



Time: 00:02:25
⏮
⏪
⏩
⏭

4331

4321

1941

2901

2911

8191OX

819KOW

829

1240

PFRouter

PFEmu

Scenario 0

New

Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
Successful	PC0	PC2	IC...	0.000	N	0	(e...)	(delete)		
Successful	PC1	PC3	IC...	0.000	N	1	(e...)	(delete)		

Realtime
Simulation

File Edit View Tools Extensions Window Help

Icons for file operations (New, Open, Save, Print, etc.), editing (Undo, Redo, Cut, Copy, Paste), viewing (Zoom In, Zoom Out, Fit, etc.), and tools (Eraser, Lasso, etc.).

Logical Physical x: 83, y: 191

Root [Navigation icons] 05:20



Time: 00:10:51 [Play] [Pause]

Realtime Simulation

PC Laptop Server Net Server Network Controller Printer IP Phone VoIP Device Phone TV Tablet

Scenario 0

New Delete

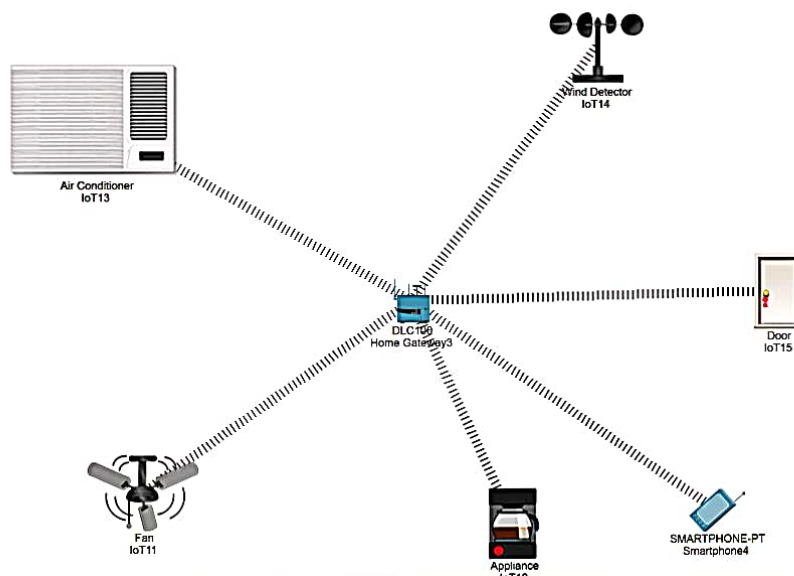
Toggle PDU List Window

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

PC-PT



Logical Physical x: 816, y: 41 Root 00:56:00



Time: 00:01:35 Realtime Simulation

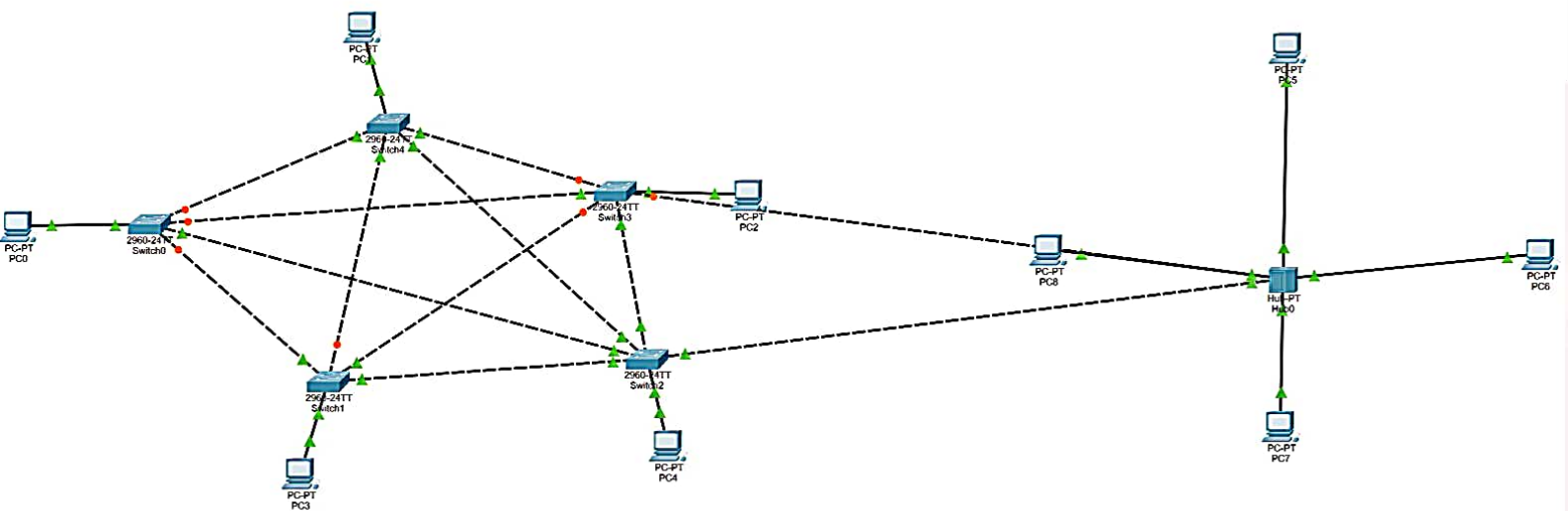
(Select a Device to Drag and Drop to the Workspace)

Scenario 0

New Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
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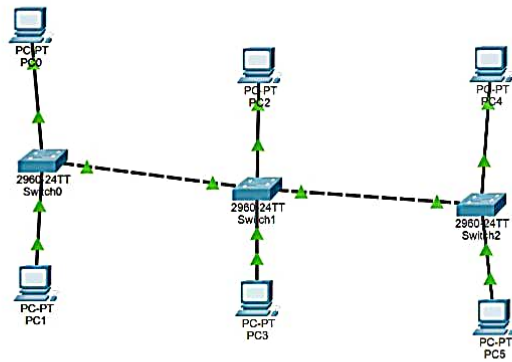
Time: 00:07:03

Scenario 0

New Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
Successful	PC1	PC2	IC...		0.000	N	0	(e...)		(delete)
Successful	PC2	PC7	IC...		0.000	N	1	(e...)		(delete)
Successful	PC4	PC8	IC...		0.000	N	2	(e...)		(delete)



Time: 00:01:35

Scenario 0

New Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC1	PC4	IC...	Blue	0.000	N	0	(e...)	(delete)
	Successful	PC0	PC2	IC...	Cyan	0.000	N	1	(e...)	(delete)
	Successful	PC5	PC3	IC...	Green	0.000	N	2	(e...)	(delete)