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Lab Assignment-1

1. Sending Ping requests between nodes:

Observations :

Here we used a router and used a router and 2 PC and connected and requests are being forwarded to the gateway

Configurations:

Configuration Of Router 0:

```
R1(config)#line console0
```

```
R1(config-line)#login
```

```
R1(config-line)#end
```

Step6: Configure interfaces and static routing on router R1

a Configure the FastEthernet 0/0 interface with the IP address 192.168.1.1/24.

b Configure the Fast Ethernet 0/1 interface with ip address 192.168.2.1/24

```
R0(config)#interface fastethernet0/0
```

```
R0(config-if)#ip adr192.168.1.1 255.255.255.0
```

```
R0(config-if)#no shutdown
```

Device Name	Interface	IP address GE 0/0	Subnet	IP Address GE 0/1	Subnet	Gateway
Router	Router0	192.168.1.1	255.255.255.0	192.168.2.1	255.255.255.0	-
Computer 1	PC0	192.168.1.2	255.255.255.0	-	-	192.168.1.1
Computer 2	PC1	-	-	192.168.2.2	255.255.255.0	192.168.2.1

Activities

PacketTracer7

Jul 24 23:07

+0B/s +0B/s

53%

Cisco Packet Tracer

File

Edit

Options

View

Tools

Extensions

Help

LogicalPhysical

753, 61

[Root]

09:26:30

1943

Router

PC-PT

PC0

PC-PT

PC1

Port	Link	VLAN	IP Address	IPv6 Address	MAC Address
GigabitEthernet0/0	Up	--	192.168.1.1/24	<not set>	0000.47AE.BA01
GigabitEthernet0/1	Up	--	192.168.2.1/24	<not set>	0000.47AE.BA02
Vlan1	Down	1	<not set>	<not set>	0000.70E1.913A

Hostname: Router

Physical Location: Intercity, Home City, Corporate Office, Main Wiring Closet

Time: 00:18:04

Realtime

Simulation

Copper Straight-Through

New

Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Period
	Successful	PC0	PC1	ICMP		0.000	N
	Successful	PC0	Router0	ICMP		0.000	N
	Successful	Router0	PC1	ICMP		0.000	N

2. Building a network with 2 switches

Observations:

Here we used 1 router 2 switches and 11 PC connected to the switches accordingly switches are the advanced model of hubs and switches won't assign save the IP address they will remember the PC using its MAC id and forward the requests accordingly switches are like providing more ethernet hubs to connect more nodes easily!

Steps:

Configuration Of Router 0:

```
R1(config)#line console0
```

```
R1(config-line)#login
```

```
R1(config-line)#end
```

Step6: Configure interfaces and static routing on router R1

- c Configure the Fast Ethernet 0/0 interface with the IP address 192.168.1.1/24.

- d Configure the Fast Ethernet 0/1 interface with ip address 192.168.2.1/24

```
R0(config)#interface fastethernet0/0
```

```
R0(config-if)#ip address 192.168.1.1 255 .255 .255.0
```

```
R0(config-if)#no shutdown
```

Connect PC1 to the switch

Connect PC1 to Fast Ethernet switch port Fa0/1. Configure PC1 to use the IP address, mask, and gateway as shown in the topology diagram.

Establish a terminal emulation session to the switch from PC1.

Perform an initial configuration on the switch

Configure the hostname of the switch as Switch0.

```
Switch>enable
```

```
Switch#conf t
```

```
Switch(config)#hostname Switch0
```

Configure the switch management interface on VLAN1

Enter the interface configuration mode for VLAN 1.

```
Switch0(config)#interface vlan1
```

Set the IP address, subnet mask, and default gateway for the management interface. Switch1(config-if)#ip address 192.168.1.2 255 .255 .255 .0

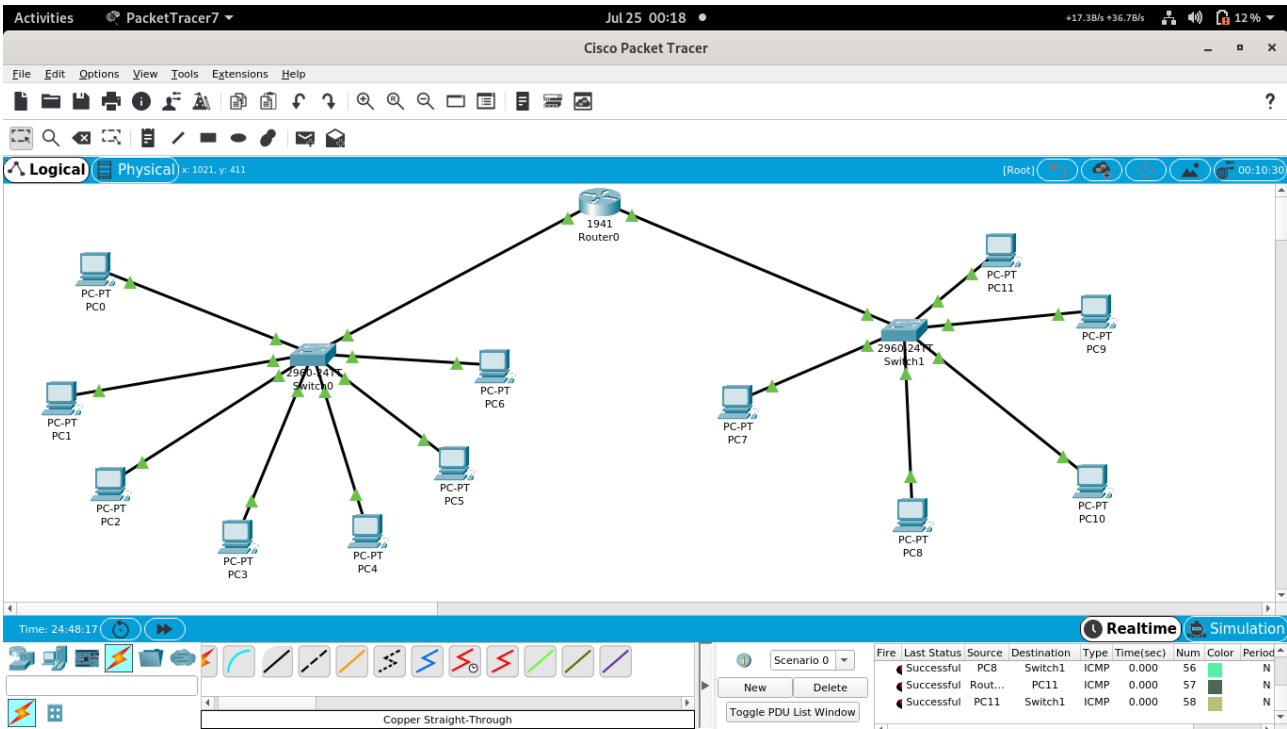
```
Switch0(config-if)#no shutdown
```

```
Switch0(config)#ip default-gateway 192.168.1.1
```

We can check the configuration of the switch by typing in: **show running-config**

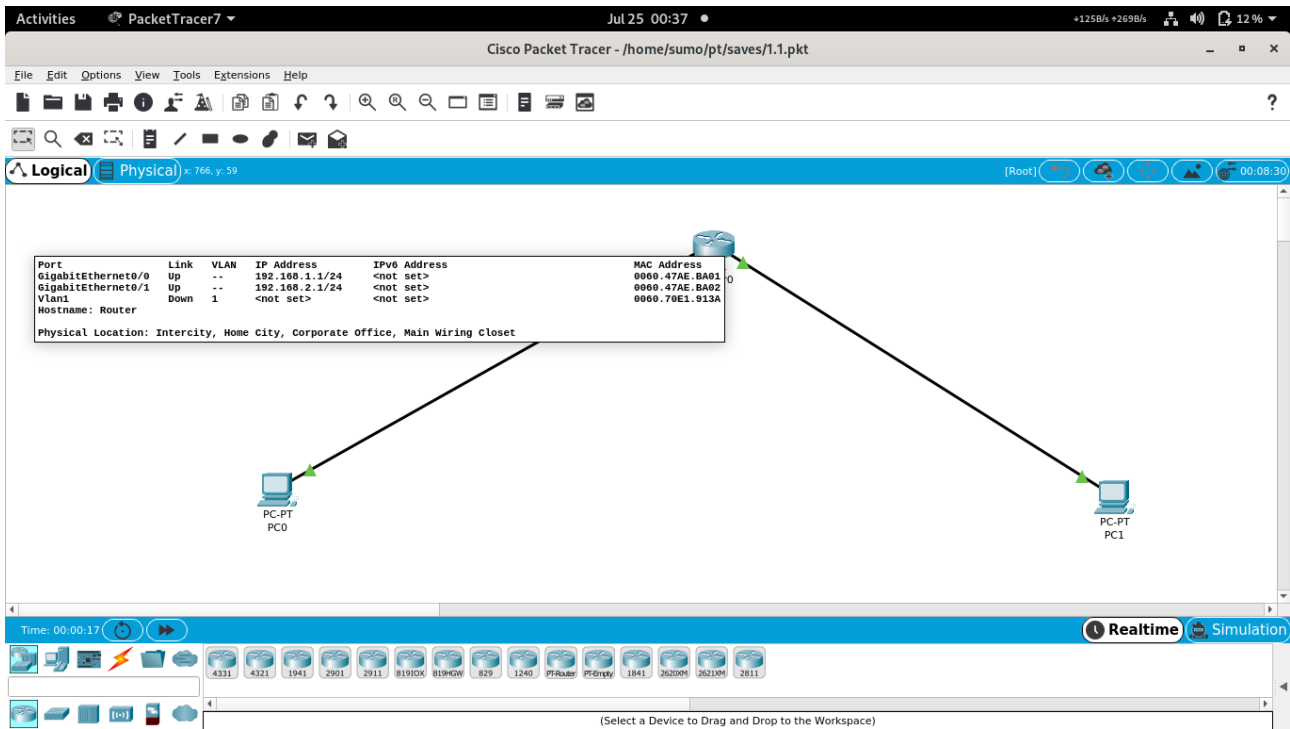
***as the same goes for switch1 with VLAN address as 192.168.2.2 and default-gateway as 192.168.2.1**

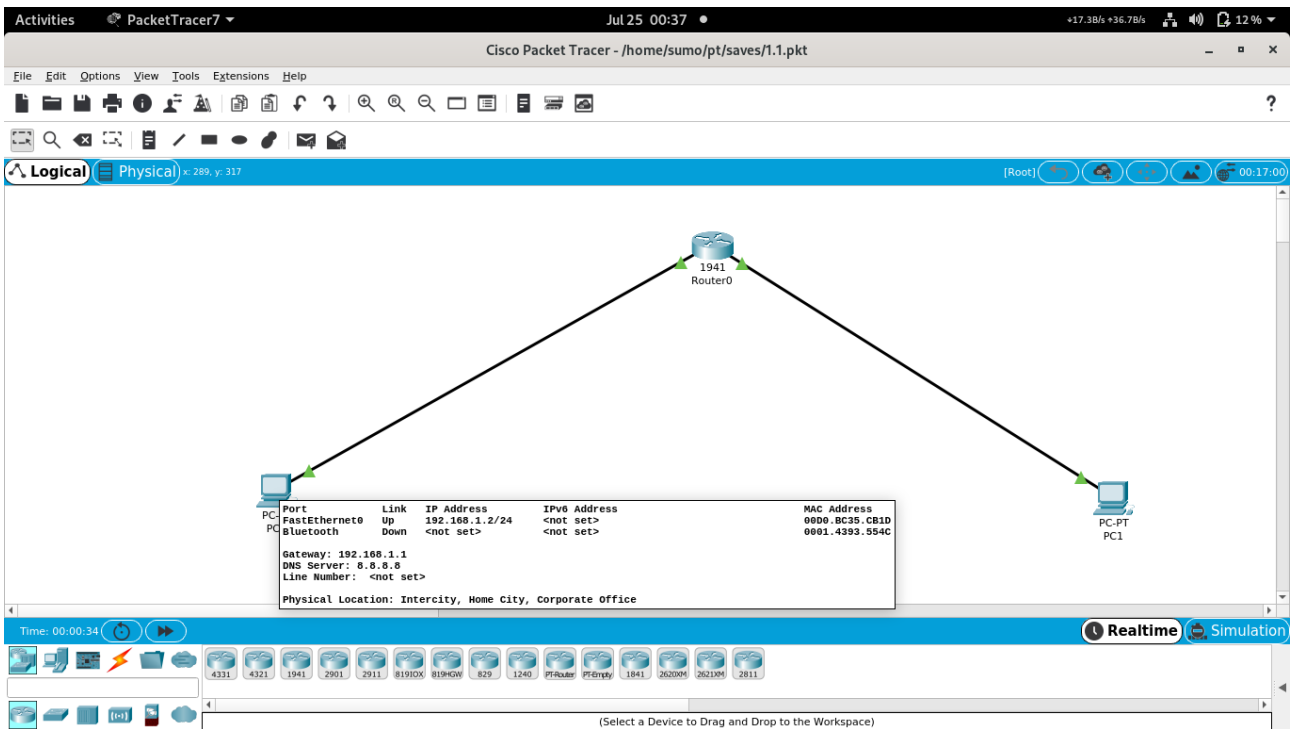
Device Name	Interface	IP address GE 0/0	Subnet	Connected Switch	IP AddressGE 0/1	Subnet	Gateway
Router	Router 0	192.168.1.1	255.255.255.0	-	192.168.2.1	255.255.255.0	-
Switch0	Vlan1	192.168.1.2	255.255.255.0	-			192.168.1.1
Switch1	Vlan1	192.168.2.2	255.255.255.0				192.168.2.1



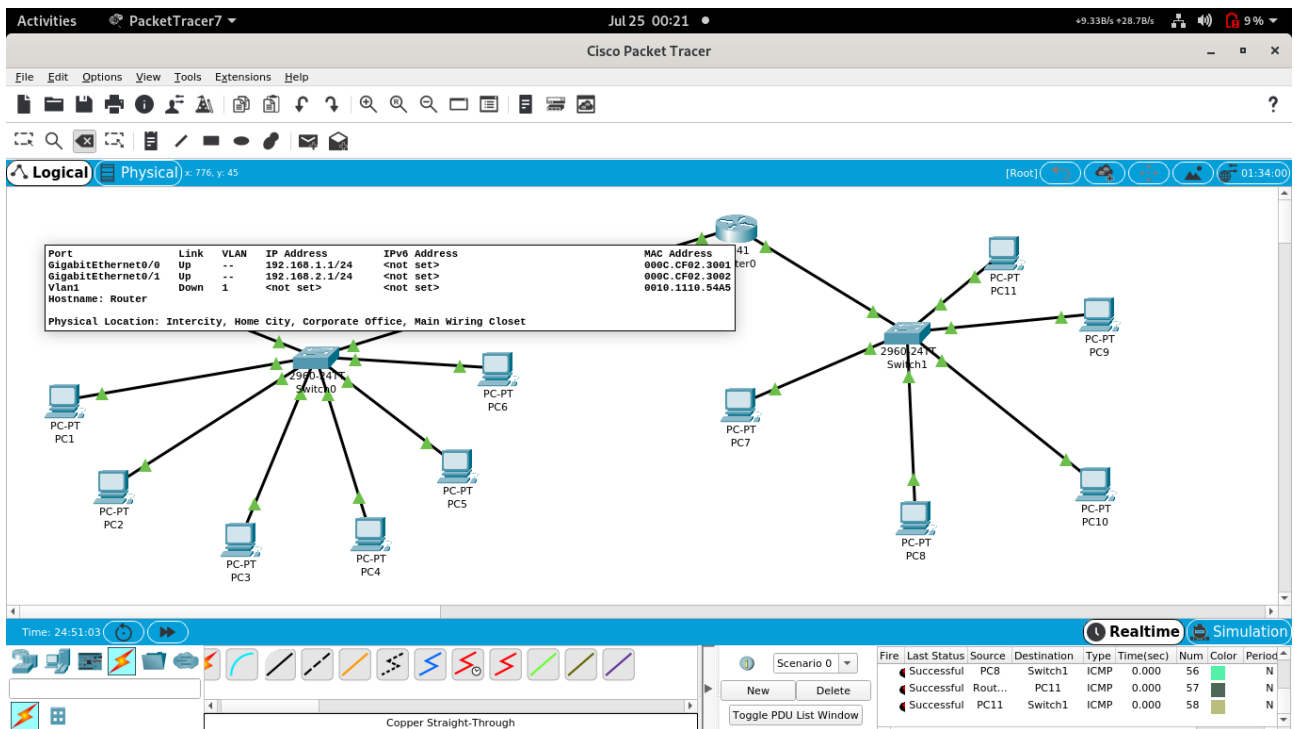
Configurations

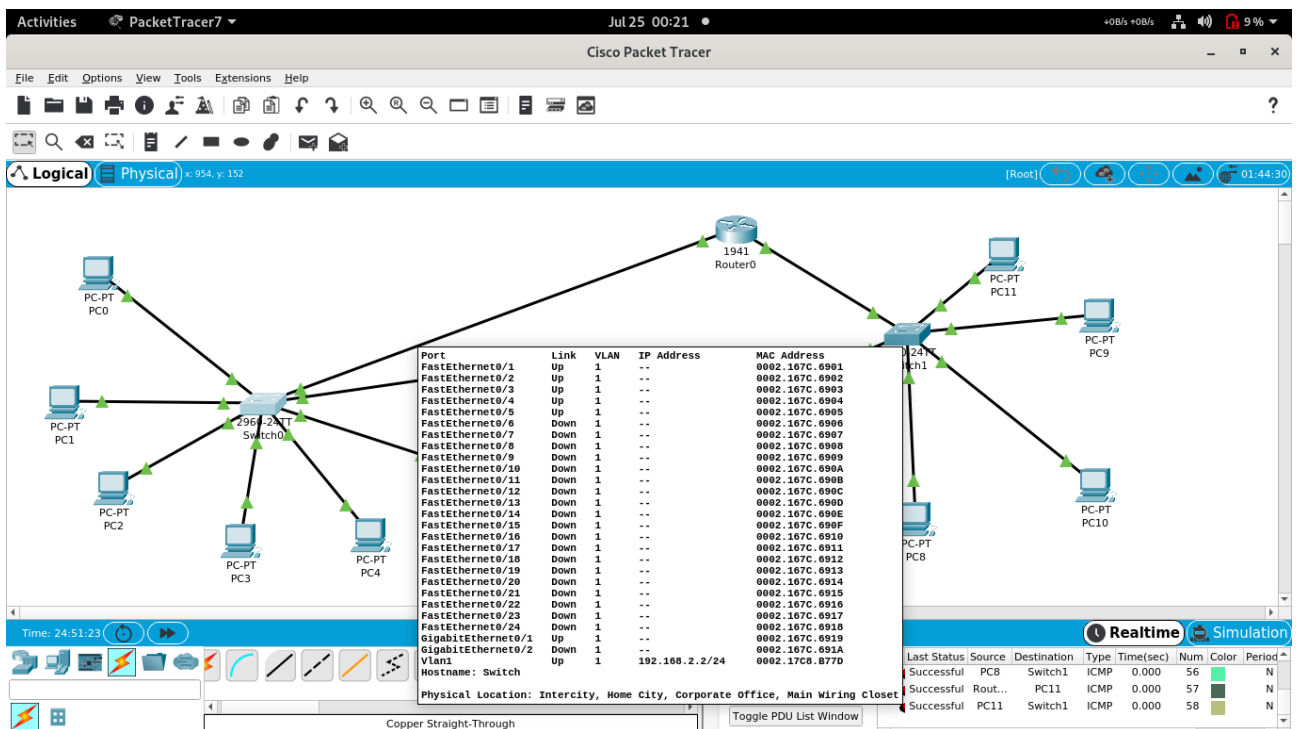
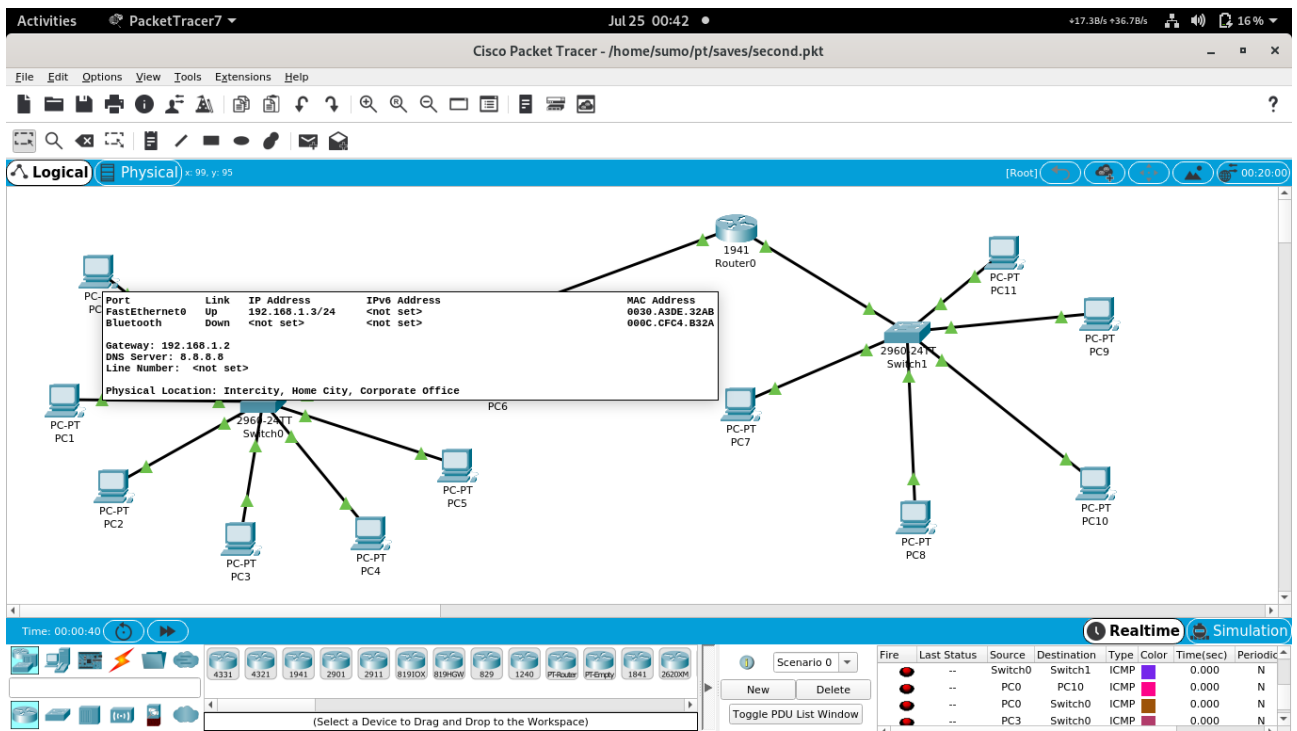
1.





2.





Activities PacketTracer7 Jul 25 00:21 +17.3B/s +36.7B/s 9%

File Edit Options View Tools Extension

Logical Physical 274, y: 234

Port Link VLAN IP Address MAC Address

FastEthernet0/1	Up	1	--	000C.859D.2701
FastEthernet0/2	Up	1	--	000C.859D.2702
FastEthernet0/3	Up	1	--	000C.859D.2703
FastEthernet0/4	Up	1	--	000C.859D.2704
FastEthernet0/5	Up	1	--	000C.859D.2705
FastEthernet0/6	Up	1	--	000C.859D.2706
FastEthernet0/7	Up	1	--	000C.859D.2707
FastEthernet0/8	Down	1	--	000C.859D.2708
FastEthernet0/9	Down	1	--	000C.859D.2709
FastEthernet0/10	Down	1	--	000C.859D.270A
FastEthernet0/11	Down	1	--	000C.859D.270B
FastEthernet0/12	Down	1	--	000C.859D.270C
FastEthernet0/13	Down	1	--	000C.859D.270D
FastEthernet0/14	Down	1	--	000C.859D.270E
FastEthernet0/15	Down	1	--	000C.859D.270F
FastEthernet0/16	Down	1	--	000C.859D.2710
FastEthernet0/17	Down	1	--	000C.859D.2711
FastEthernet0/18	Down	1	--	000C.859D.2712
FastEthernet0/19	Down	1	--	000C.859D.2713
FastEthernet0/20	Down	1	--	000C.859D.2714
FastEthernet0/21	Down	1	--	000C.859D.2715
FastEthernet0/22	Down	1	--	000C.859D.2716
FastEthernet0/23	Down	1	--	000C.859D.2717
FastEthernet0/24	Down	1	--	000C.859D.2718
GigabitEthernet0/1	Up	1	--	000C.859D.2719
GigabitEthernet0/2	Down	1	--	000C.859D.271A
Vlan1	Up	1	192.168.1.2/24	0001.43BE.07C1

Hostname: Switch

Physical Location: Intercity, Home City, Corporate Office, Main Wiring Closet

PC0 PC1 PC2 PC3 PC4 PC5 PC6 PC7 PC8 PC9 PC10 PC11

Switch0 Switch1

Time: 24:51:17

Realtime Simulation

Scenario 0

New Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Time(sec)	Num	Color	Period
Successful	PC8	Switch1	ICMP	0.000	56		N	
Successful	Rout...	PC11	ICMP	0.000	57		N	
Successful	PC11	Switch1	ICMP	0.000	58		N	

Copper Straight-Through