VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"JnanaSangama", Belgaum -590014, Karnataka.

LAB REPORT
on

COMPUTER NETWORKS

Submitted by

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in partial fulfillment for the award of the degree of
BACHELOR OF ENGINEERING
in
COMPUTER SCIENCE AND ENGINEERING

B.M.S. COLLEGE OF ENGINEERING
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B. M. S. College of Engineering,
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Department of Computer Science and Engineering

CERTIFICATE

This is to certify that the Lab work entitled "LAB COURSE **COMPUTER NETWORKS**" carried out by **M GAGAN(1BM20CS222),** who is bonafide student of **B. M. S. College of Engineering.** It is in partial fulfillment for the award of **Bachelor of Engineering in Computer Science and Engineering** of the Visvesvaraya Technological University, Belgaum during the year 2022-2023. The Lab report has been approved as it satisfies the academic requirements in respect of a **Computer Networks - (20CS5PCCON)** work prescribed for the said degree.

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LAB-1

nslookup — used to get IP address

Outcome Lab 2

We learnt about IP address, mac address and terminologies like ethernet, Routers, ARP Table and many more

In this tutorial we explored Cisco ~~Packet~~ Packet tracer software it helped us to understand the concept of computer network in a better way Through simulations, we have also established connection between client and server, and also added the IP address and DNS server for making necessary communication

Akshaya
[illegible]

LAB-2

Aim: Implementation of hub and switches

Procedure: Open Cisco packet tracer, connect end devices with hubs and switches. then configure IP address for each IP device. Pass simple PDU across the end devices and note down result using simulation

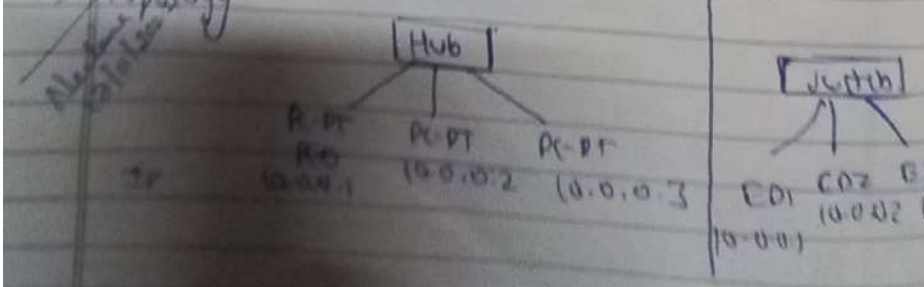
Topology: star topology

Result: successfull transfer of simple PDU from source to destination end devices

Outcome / observation:

Hubs are devices which doesn't have storage and mapping (processing) features hence they just broadcast (transmit) to all the end devices of the same network. while switches performs as hub during initial state, but later transfer from source to destination and mapping feature as using ARP table. transmission is said to be successful if PDU fails if receiver host isn't connect to internet work, message cannot be pinged and hence represent represent will be timed out.

⇒ Topology



LAB - 3

Aim: Configuring IP address to routers in packet tracer. explore ping response destination unreachable, reply, request timed out.

Procedure: Open Cisco packet tracer
→ Connect two PC's to routers using copper cross - overwire
→ Then configure 2 PC. and also configure router using CLI commands like enable, interface Fa0/0, IP address <IP - address>
→ if we ping from 1 PC to another PC then it will show timedout.
→ and ping to another device

Topology: Star topology

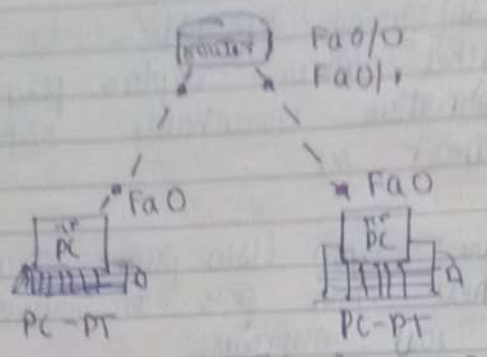
Result: Pinging 20.0.0.2 with 32 bytes of data:

Reply from 20.0.0.2 : bytes=32 time=0ms TTL=255
Reply from 20.0.0.2 : bytes=32 time=0ms TTL=255
Reply from 20.0.0.2 : bytes=32 time=0ms TTL=255
Reply from 20.0.0.2 : bytes=32 time=0ms TTL=255
Reply from 20.0.0.2 : bytes=32 time=0ms TTL=255

Ping statistics for 20.0.0.2:
Packets: Sent = 4, Received = 4, Lost = 0
(0% loss)

Approx round trip time in milli seconds:
Minimum = 0ms, Maximum = 0ms

Observation: Topology:



IP - 10.0.0.1 IP - 20.0.0.1

gateway 10.0.0.2 gateway - 20.0.0.2

Observation:

(1) Successfull: when we configure both the routers and PC (end devices) with appropriate ip addresses and by configuring subnet mask of interface of router as 255.0.0.0. and gateway of PC0 is set as 10.0.0.2 and gateway of PC1 is set as 20.0.0.2 which is of Fa0/0 interface followed by we could successfully ping devices.

Timeout: If IP address of end devices and or gateway is not configured properly then results in Timeout.

PC > ping 20.0.0.2

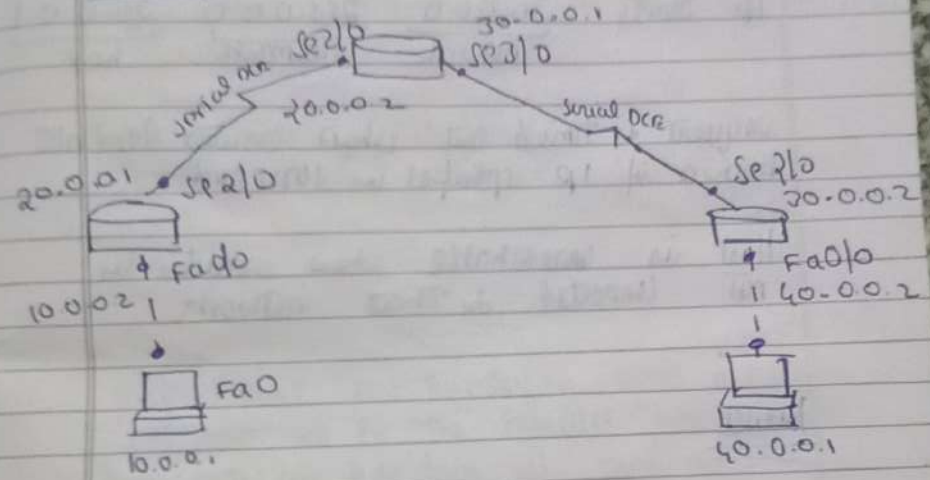
Request timed out
Request timed out
Request timed out

Ping statistics
Sent = 4 Received = 0
Lost = 4

LAB-4

Aim: Configuring static default route to router

Topology



Procedure:

Two routers are connected to end devices and router is used to connect other two router using serial DCE connection

Configure IP address for end devices and for interface of router

Set IP of PC2 to 40.0.0.1 and gateway to 40.0.0.2 Configure router of in CLI window using command

- enable
- config terminal
- interface Fa 0/0 or SE 2/0
- IP address
- no shutdown
- exit

follow the procedure for all 2 routers such that it matches topology drawn later
show ip route
for R1, 10.0.0.0 & 20.0.0.0

ip route $\underbrace{30.0.0.0}_{\text{network}}$ $\underbrace{255.0.0.0}_{\text{subnmask}}$ $\underbrace{20.0.0.1}_{\text{hop}}$

request is timed out when router does not known if IP specified is connected.

Host is unreachable when router is not connected to that network

Reset

R > ping 20.0.0.1
pinging 20.0.0.1 with 32 bytes of data
request timed out
request timed out
request timed out

Ping statistics for 20.0.0.1
packets sent = 4, received = 0, Lost = 4 (100% loss)

PC > ping 30.0.0.1

pinging 30.0.0.1 with 32 bytes of data
destination host not reachable error

PC > ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data

reply from 40.0.0.1 bytes = 32 time = 8ms TTL=125
reply from 40.0.0.1 bytes = 32 time = 8ms TTL=125

Ping statistics for 40.0.0.1
Packets : sent = 4, received = 4, Lost = (0% loss)

Observation

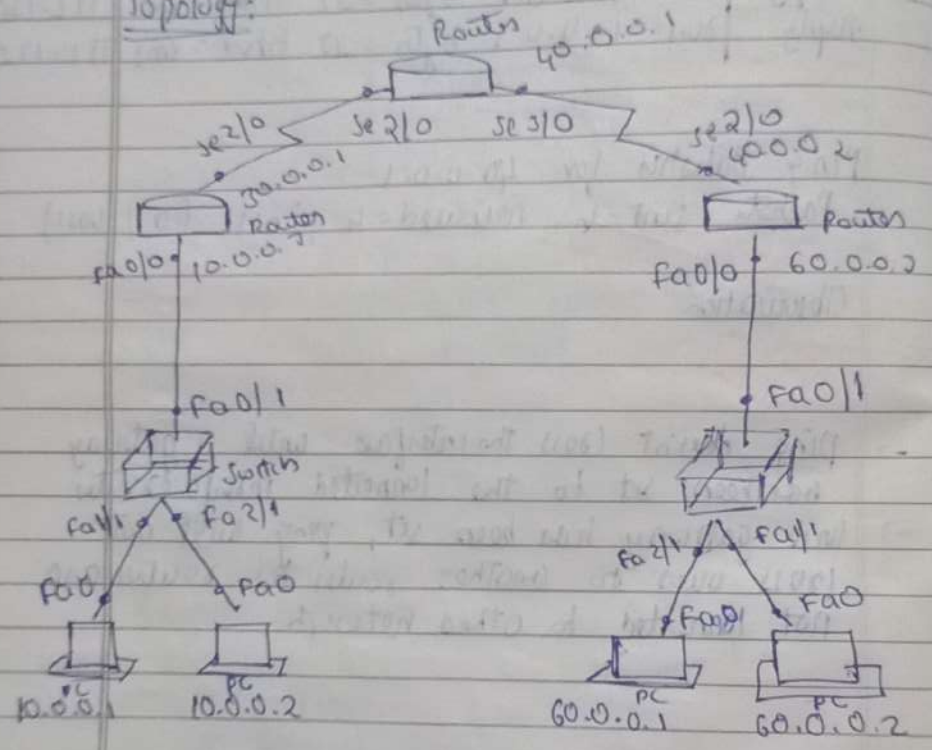
Abdulaziz
20/4/2022

→ ping doesn't (ross) the interface until a gateway has been set to the connected interface router
→ once gateway has been set, ping will not (ross) over to another router as router are not connected to other network.

LAB-5

Aim: Configuring default route to router

Topology:



Procedure:

- 3 routers are connected to 2 switches which are then connected to routers
- Configure and define and interface router
- Configure IP address between router on valid interface interface
- To configure IP address following commands are executed

enable
config terminal
interface se 2/0
i/p address 10.0.0.2 255.0.0.0
no shutdown
exit

→ Configure gateway address of end device with connected interface of router.
→ A ping In order to establish default route across routers, ip route is configured using command

ip route 0.0.0.0 0.0.0.0 20.0.0.2

Observation:

→ ping doesn't cross interface until gateway has been sent to connected interface router.
→ once gateway has been set, ping will not cross over to another routers as the routers are not connected to other network and they don't know which route network and they to take are where next hop of to take are where the next hop of to take signal is to be done
→ routers are configured with ip-route. when network default route is configured between routers and subnet mask is not specified only via interface of connected route

→ Data packet connection between all the routers and end devices

Result:

PC > ping 60.0.0.1

Pinging 60.0.0.1 with 32 bytes of data

Reply from 60.0.0.1 : bytes = 32 time = 3ms TTL =
Reply from 60.0.0.1 : bytes = 32 time 10ms TTL =

Ping Statistics for 60.0.0.1 :
Packets : sent = 4, Received = 4, LOST = 0

ping 40.0.0.1
Pinging timed out

Request timed out
Reply from 40.0.0.1 bytes = 32 time = 5ms TTL
Request timed out

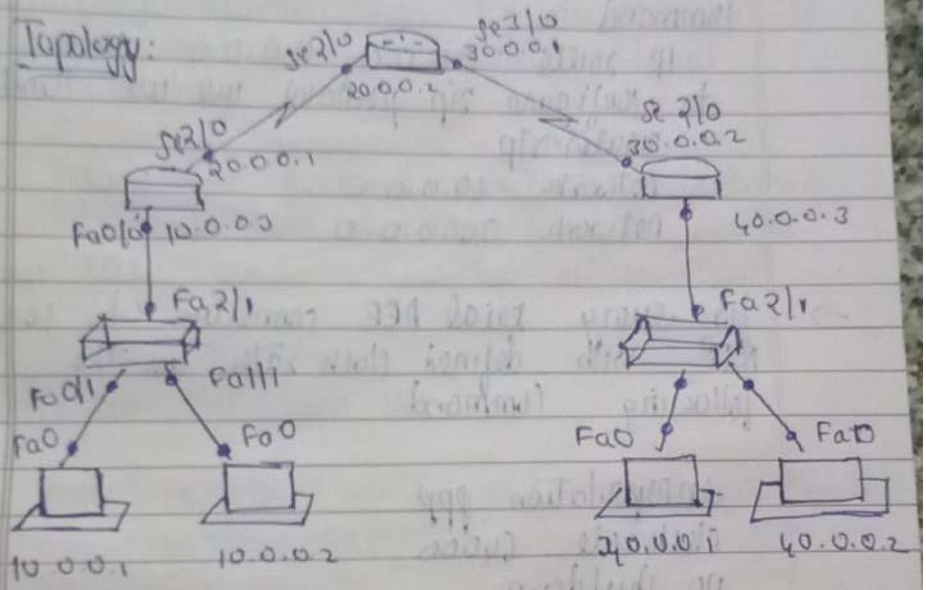
Ping Statistics for 40.0.0.1
Packets : sent = 4, Received = 2 LOST = 2

Machine Hulsen

LAB-6

Aim: Configuring RIP routing protocol in routers

Topology:



Procedure:

- 3 routers are connected to 2 switches which are than connected to ~~routers~~ end devices
- Configure end device and interface of routers
- configure IP address between routers on serial (DCE) interface
- to configure IP address following commands are routers

enable
config terminal
interface s2/0
ip address 10.0.0.2 255.0.0.0
no shutdown
exit

- configure gateway address of and division with connected interface of routes
- In order to establish default route over router ip route is configured using command

  ip route 0.0.0.0 0.0.0.0 20.0.0.2

  to configure rip protocol we use commands

  router rip
  network 20.0.0.0
  network 30.0.0.0

→ for every serial DCE connected to configure RIP with defined clock rate, use the following command

  encapsulation ppp
  clock rate 64000
  no shutdown
  exit

Observation

> ping 40.0.0.1

reply from 40.0.0.1 with 32 byte of data

Reply from 40.0.0.1 byte=32 time=2ms TTL=120
reply from 40.0.0.1 byte=32 time=2ms TTL=120
reply from 40.0.0.1 byte=32 time=2ms TTL=120
reply from 40.0.0.1 byte=32 time=2ms TTL=120

Ping statistic for 40.0.0.1

Packets: sent = 4, received = 4, Lost = 0

Approximate round trip in milliseconds
Minimum = 2ms, Maximum = 40ms,
Average = 16ms

Since RIP protocol has been established IP route does not have to be set for each router

Before RIP was set

ping 10.0.0.1 -> 40.0.0.1 : Destination host unreachable

Before RIP:
ping 10.x -> 20.x
Request Timed out

Only on correctly configuring gatways and protocol, its reply received properly.

Result:
(Routing information Protocol) RIP is established in network correctly.

NOTE:
Even on proper connection and configuration
The first packet of first inter network
ping is timed out as switches have
not learnt network yet.

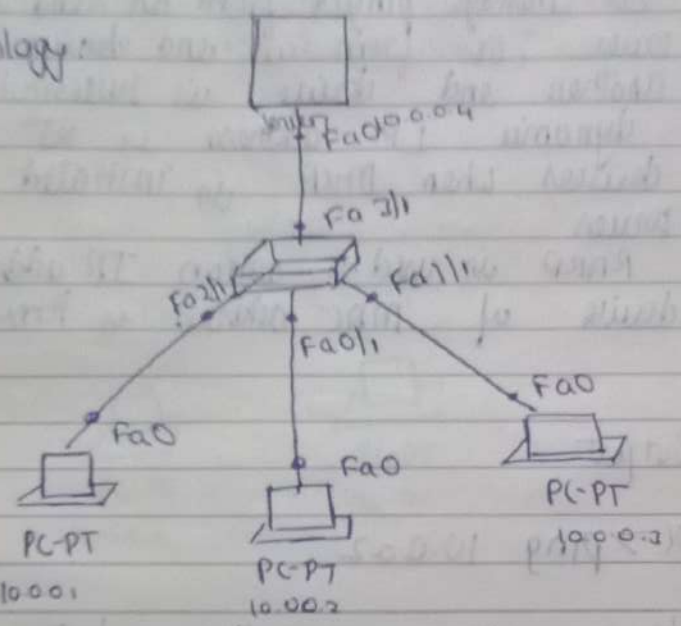
RIP - Routing Information Protocol -
is dynamic routing protocol that
uses hop count as a metric to find
best path between source and destination
network

Nantinga
8/12/2022

LAB-6

Aim: Configure DHCP server

Topology:



Procedure:

- 3 end devices are connected to a switch which is then connected to a server
- Configure IP address of server to 10.0.0.4
- Switch on the DHCP service
- Add and save the IP addresses of all the end devices or services to their appropriate IP and save them to connect the end devices automatically
- After saving the address of in server change the gateway/DNS in end devices to DHCP

→ Ping the IP address of all the end devices

Observation:

→ The message pinged from an end device to server, or from an end device to another end device, is successfully sent

→ dynamic IP address is set to end devices when DHCP is initiated in server

→ RARP is used to assign IP address of device of MAC address is known.

Output

PC > ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 10.0.0.2 byte = 32 time = 0ms TTL = 128
Reply from 10.0.0.2 byte = 32 time = 3ms TTL = 128
Reply from 10.0.0.2 byte = 32 time = 4ms TTL = 128

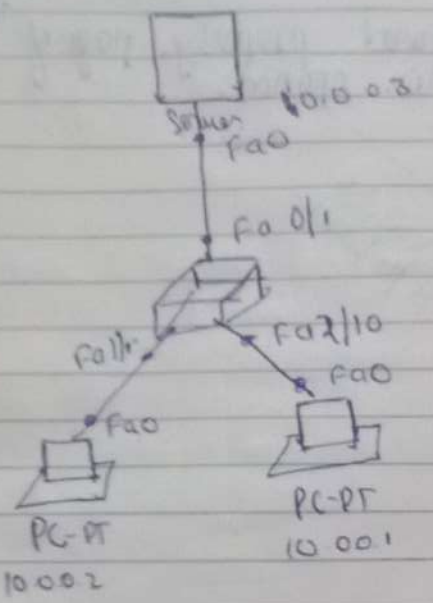
Ping statistics for 10.0.0.1:
Packets: Sent = 4, Received = 4, Lost = 0

approximate round trip in milli seconds:
min = 2ms, max = 5ms, Avg = 3ms

LAB-7

Aim: Configuring webserver and DNS server

Topology:



Procedure:

→ Construct following topology. where server is connected to end device through switch

→ Configure IP address of server and end devices

→ Set HTTP and DNS server to on state

→ Set server domain name & address of it as same as server. and save following.

→ From one of end devices check if webserver is reachable from end device by entering:

→ Observation:

Web browser module is opened in end device and set domain name (www.bms.com) in server

if system / servers hadn't been configured properly ie set DNS servers and default gateway, the Host Unresolved is shown

if configured properly, page of Cisco Packet Tracer is opened.

Neelima
15/12/2022

Write a program for error detection using CRC 16bit

```
#include <iostream>
using namespace std;

int main()
{
    int i=0, j=0, n;
    cout << "enter no of data entry";
    cin >> n;

    int a[n+16];
    int g[]={1,0,0,0,1,0,0,0,0,0,0,1,0,0,0,0,1};
    int rem[n];
    int m=n+16;


    for (i=0; i<m; i++){

        if (i >= n){
            a[i]=0;
        }
        else{
            cin >> a[i];
        }
        if (i<n){
            rem[i]= a[i];
        }
}
```

```
for(i=0; i<n; i++){
    if (a[i] == 1) {
        continue;
    }
    for(j=0; j<17; j++){
        a[i+j] = a[i+j] ^ g[j];
    }
}

for(i=0; i<n; i++){
    a[i] = num[i];
}

for(int i=0; i<m; i++){
    cout << a[i];
}
```

Output

3
1
1
1

1110110000011000011
0010000010000000

5/1/2023

Leaky - Bucket

```
#include <iostream>
using namespace std;

int main() {
    int cap, out, in, n, bucket = 0;


    cout << "Enter CAPACITY of BUCKET \n";
    cin >> cap
    cout << " enter output rate";
    cin >> out;


while (true) {
        cout << " ENTER 1 TO GIVE INPUT "
        cout << " ENTER 2 TO EXIT \n";
        cin >> n;

        switch(n) {

            case 1: cout << " ENTER INPUT RATE ";
                    cin >> in;

                    if (in > cap)
                        cout << " BUCKET OVERFLOW";
                    }

                else {
                    bucket += in;

                if (bucket + in > cap)
                    {
                    cout << " BUCKET OVERFLOW";
                    }
```

```
else {
    bucket += in;
    bucket = bucket - out;

    if(bucket < 0) {
        bucket = 0;
    }

    cout << "Capacity of bucket " << bucket << "
}
break;


case 2: cout << "Thank you \n";
        exit;
    }

}
return 0;
}
```

Output:

Enter capacity of Bucket
200

Enter output rate
100

[illegible]

[illegible]

[illegible]

Distance-Vector (Bellman Ford)

```
#include<bits/stdc++.h>
using namespace std;
#define max 10
int n;

class router{
char adj_now[MAX],
adj_old[MAX];

int table_now[max], table_old[max];

public:
{
    router(){
    for(int i=0; i<MAX; i++)
        table_old[i] = table_now[i] = 99;
    }

void copy(){
  for(int i=0; i<n; i++){
      adj_old[i] = adj_now[i];
      table_old[i] = table_now[i];
  }
}

void display()
{
    cout << " Destination";

  for(int i=0; i<n; i++)
      cout << setw(10) << 'A'+i << " ";
```

```
for int i=0; i<n; i++)
  cout<<adj_mat[i]<<" ";

}

}

void build (int i){
 for int i=0; i<n; i++)
 for (int k=0; (i!=j) && (k<n); k++)

  if ((table_mat[i]+table_mat[j][k])< table_mat[i]
      adj_mat[k]=((mat) [A'+i]
 }
}

int main() {
   cout<<" enter no of  vertex ";
   for int i=0; i<n; i++)
     v[i]. mat[i],
   }
   int<< get;
}

}

Output

enter
[[[[[
enter mat = [[ [[ [[
```

enter # of corresponding router in adjacent
A B C D

Router table entries for A

Destination Router: A B C D E
outgoing line: A B C D E
Hop count: 0 1 1 9999

Destination Router: A B C D E
Outgoing line: A B C D E
Hop count: 0 1 1 9999

Destination router: A B C D E
Outgoing line: A B C D E
Hop count: 1 99 0 1 1

Dijkstras

```
#include <stdio.h>
#include <limits.h>
#include <stdc++.h>

using namespace std;

#define V4

int mindistance (int dist[], bool sptset[])
{
    int min= INT_MAX, min_index;

    for(int v=0; v<V; v++)
        if(sptset[v] == false && dist[v]<=min)
            min = dist[v],  min_index=v;

    return min_index;
}


void printSolution (int dist[])
{
    print ("Vertex ");
    for(int i=0 ;i<V; i++)
        printf("%d \t \t %d\n", i, dist[i]);

}


void dijkstra(int graph[V][V], int src)
{
    int dist[V];
    bool sptset[V];
```

```
for(int i=0; i<V; i++)
        dist[i]= INT_MAX;
        sptset[i] = false;

dist[src]=0;

for(int count=0; count < V-1; count++)
{
    int u = mindistance(dist, sptset);
    sptset[u]= true;

    for(int v=0; v<V; v++)

        if( !sptset[v] && graph[u][v] &&
                dist[u]!= INT_MAX
            && dist[u] + graph[u][v]< dist[v]

            dist[v]= dist[v]+ graph[u][v];

}

int main()
{
    int graph[V][V];
    cout << "Enter graph" << endl;

    for(int i=0; i<V; i++)
    {
        for(int j=0; j<V; j++)
            cin>> graph[i][j];
    }
    dijkstra(graph,0);
    return 0;

}
```

Output

enter graph

0 9 2 5
9 0 6 8
2 6 0 0
5 8 0 0

Vertex	Distance from source
0	0
1	8
2	2
3	5

TCP-IP

```
from socket import *

serverName = '127.0.0.1'
serverport = 12000

2
clientSocket = socket(AF_INET, SOCK_STREAM)
clientSocket.connect((serverName, serverPort))
sentence = input(" enter file name")
clientSocket.send(sentence.encode())
fileContent = clientSocket.recv(1024).decode()

print("from server")
print(fileContents)
clientSocket.close()


from socket import *

serverName = "127.0.0.1"
serverport = 12000
serverSocket = socket(AF_INET, SOCK_STREAM)
serverSocket.bind((serverName, serverPort))
serverSocket.listen(1)

while 1:
    print("server is ready to receive")
    connectionSocket, addr = serverSocket.acc
    sentence = connectionSocket.recv(1024).d
    file = open(sentence,'r')
    D = file.read(1024)
```

```
connectionSocket.send(l.encode())
print(sentence)
file.close()
connectionSocket.close()
```

Output

server is ready to receive
sent content of server.py

UDP

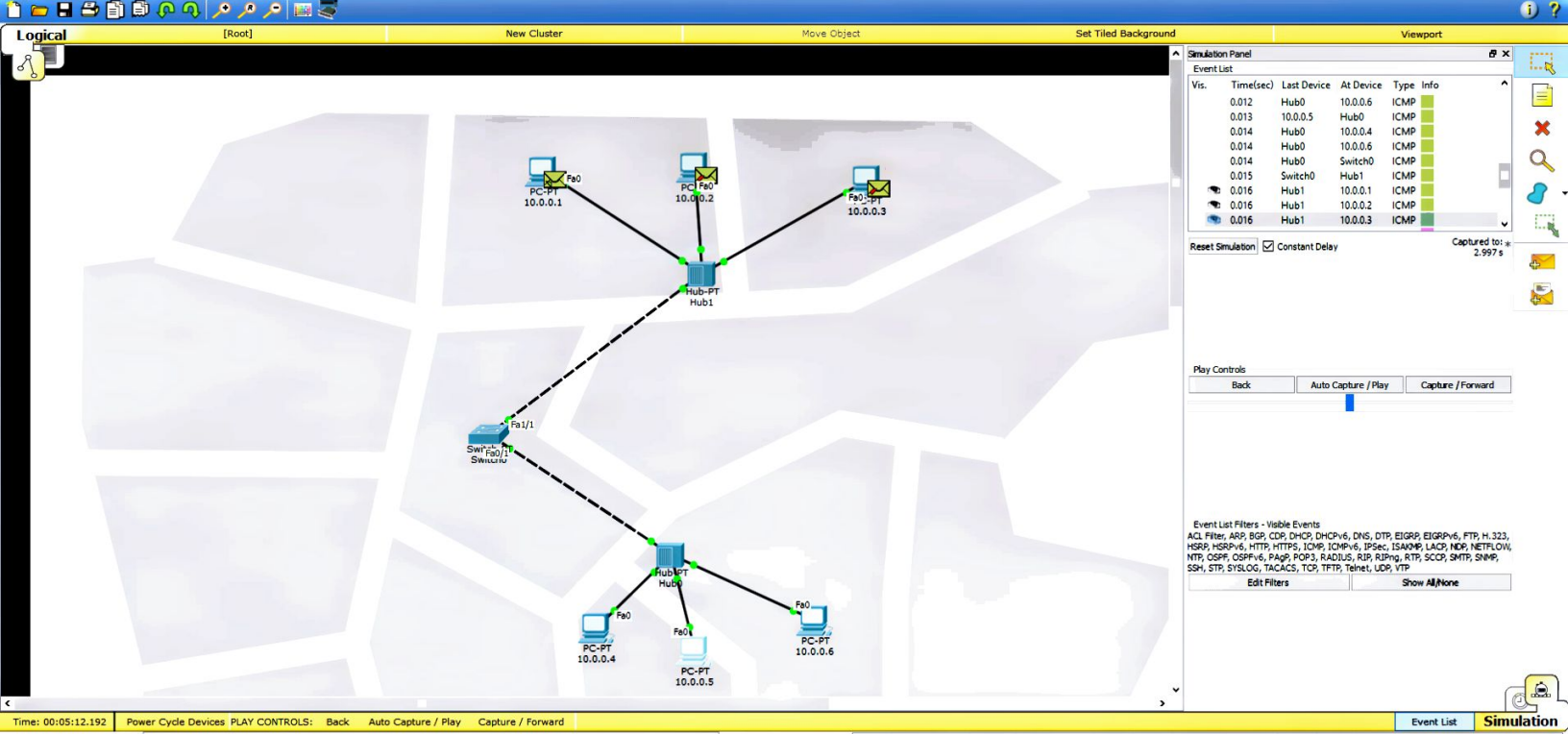
```
from socket import *
serverName = "127.0.0.1"
serverPort = 12000
clientSocket = socket(AF_INET, SOCK_DGRAM)
sentence = input("enter file name")
clientSocket.sendto(bytes(sentence, "utf-8"),
    (serverName, serverPort))
fileContents, serverAddress = clientSocket.recvfrom(2048)

print(from server)
print(fileContents.decode("utf-8"))

clientSocket.close()


from socket import *
serverPort = 12000
serverSocket = socket(AF_INET, SOCK_DGRAM)
serverSocket.bind(("127.0.0.1", serverPort))
while 1:
serverSocket.
    sentence, clientAddress = serverSocket.recvfrom
                                (2048)

    sentence = sentence.decode("utf-8")
    file = open(sentence, "r")
    l = file.read(2048)
    serverSocket.sendto(bytes(l, "utf-8"),
                clientAddress)

    print("Sent contents of", end = ' ')
    print(sentence)
    file.close()
```

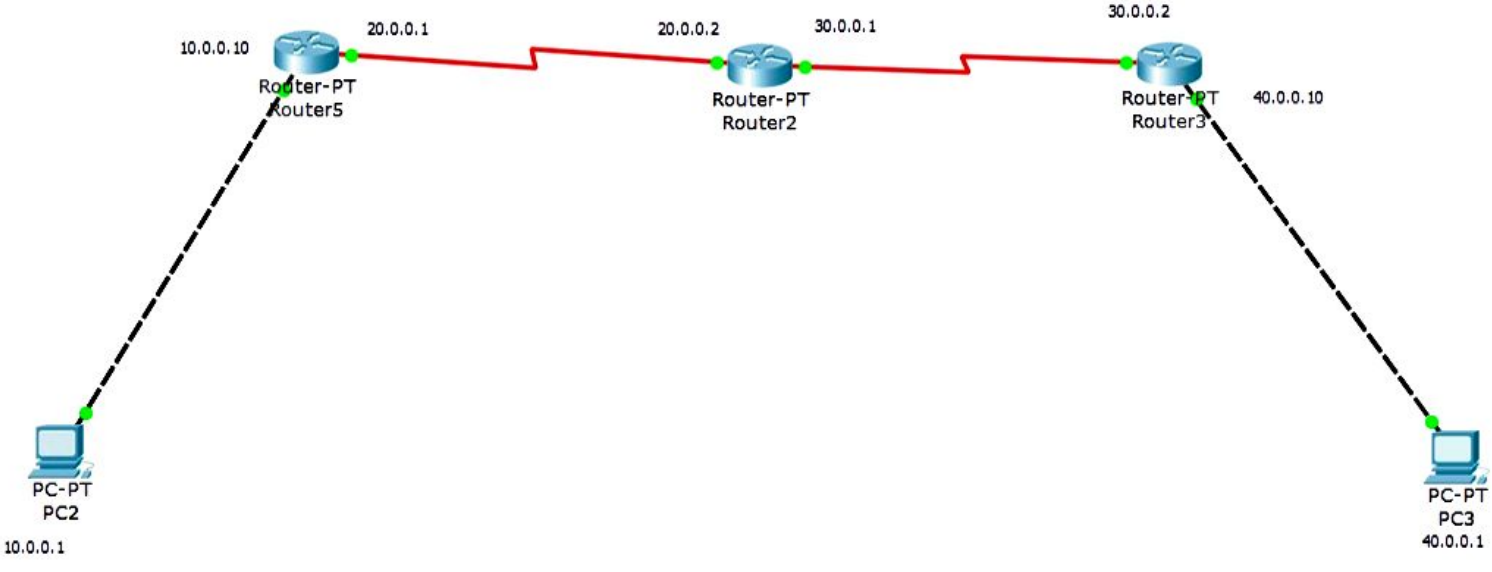
Output

Sent content of serverUDP.py

reply from server:

```
from socket import *
serverPort = 12000
serverSocket = socket(AF_INET, SOCK_DGRAM)

for i in sentenc:
    print(str(i), end = " ")
        file.flox()
```

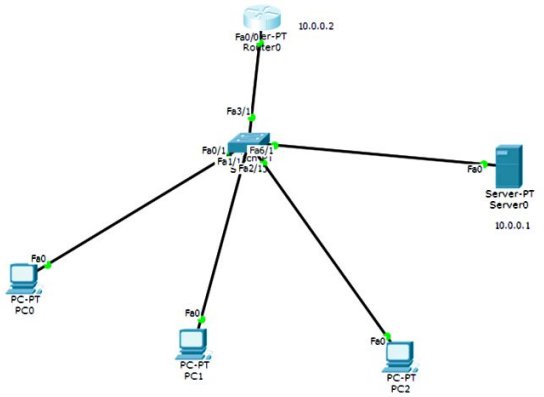

Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
PC-PT
10.0.0.1
Fa0
PC-PT
10.0.0.2
Fa0
PC-PT
10.0.0.3
Fa0
Hub-PT
Hub1
Fa1/1
Switch-PT
Switch0
Fa0/1
Hub-PT
Hub0
Fa0
PC-PT
10.0.0.4
Fa0
PC-PT
10.0.0.5
Fa0
PC-PT
10.0.0.6
Simulation Panel
Event List
Vis. Time(sec) Last Device At Device Type Info
0.012 Hub0 10.0.0.6 ICMP
0.013 10.0.0.5 Hub0 ICMP
0.014 Hub0 10.0.0.4 ICMP
0.014 Hub0 10.0.0.6 ICMP
0.014 Hub0 Switch0 ICMP
0.015 Switch0 Hub1 ICMP
0.016 Hub1 10.0.0.1 ICMP
0.016 Hub1 10.0.0.2 ICMP
0.016 Hub1 10.0.0.3 ICMP
Reset Simulation
Constant Delay
Captured to: 2.997 s
Play Controls
Back
Auto Capture / Play
Capture / Forward
Event List Filters - Visible Events
ACL Filter, ARP, BGP, CDP, DHCP, DHCPv6, DNS, DTP, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, LACP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, RADIUS, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, VTP
Edit Filters
Show All/None
Time: 00:05:12.192
Power Cycle Devices
PLAY CONTROLS:
Back
Auto Capture / Play
Capture / Forward
Event List
Simulation
Connections
Automatically Choose Connection Type
Scenario 0
New
Delete
Toggle PDU List Window
Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete
Successful 10.0.0.1 10.0.0.5 ICMP 0.000 N 0 (edit) (delete)


10.0.0.10
20.0.0.1
20.0.0.2
30.0.0.1
30.0.0.2
Router-PT
Router5
Router-PT
Router2
Router-PT
Router3
40.0.0.10
PC-PT
PC2
10.0.0.1
PC-PT
PC3
40.0.0.1

Cisco Packet Tracer Student

File Edit Options View Tools Extensions Help

Logical | [Root] | New Cluster | Move Object | Set Tiled Background | Viewport



Router0

Physical | Config | CLI

IOS Command Line Interface

```
2 Low-speed serial(sync/async) network interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)


         --- System Configuration Dialog ---


Continue with configuration dialog? [yes/no]: n


Press RETURN to get started!



Router>enable
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface fastethernet3/1
%Invalid interface type and number
Router(config)#interface fastethernet0/0
Router(config-if)#ip address 10.0.0.2 255.0.0.0
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to
up

Router(config-if)#
```

Copy | Paste

Time: 00:08:42 | Power Cycle Devices | Fast Forward Time | Realtime

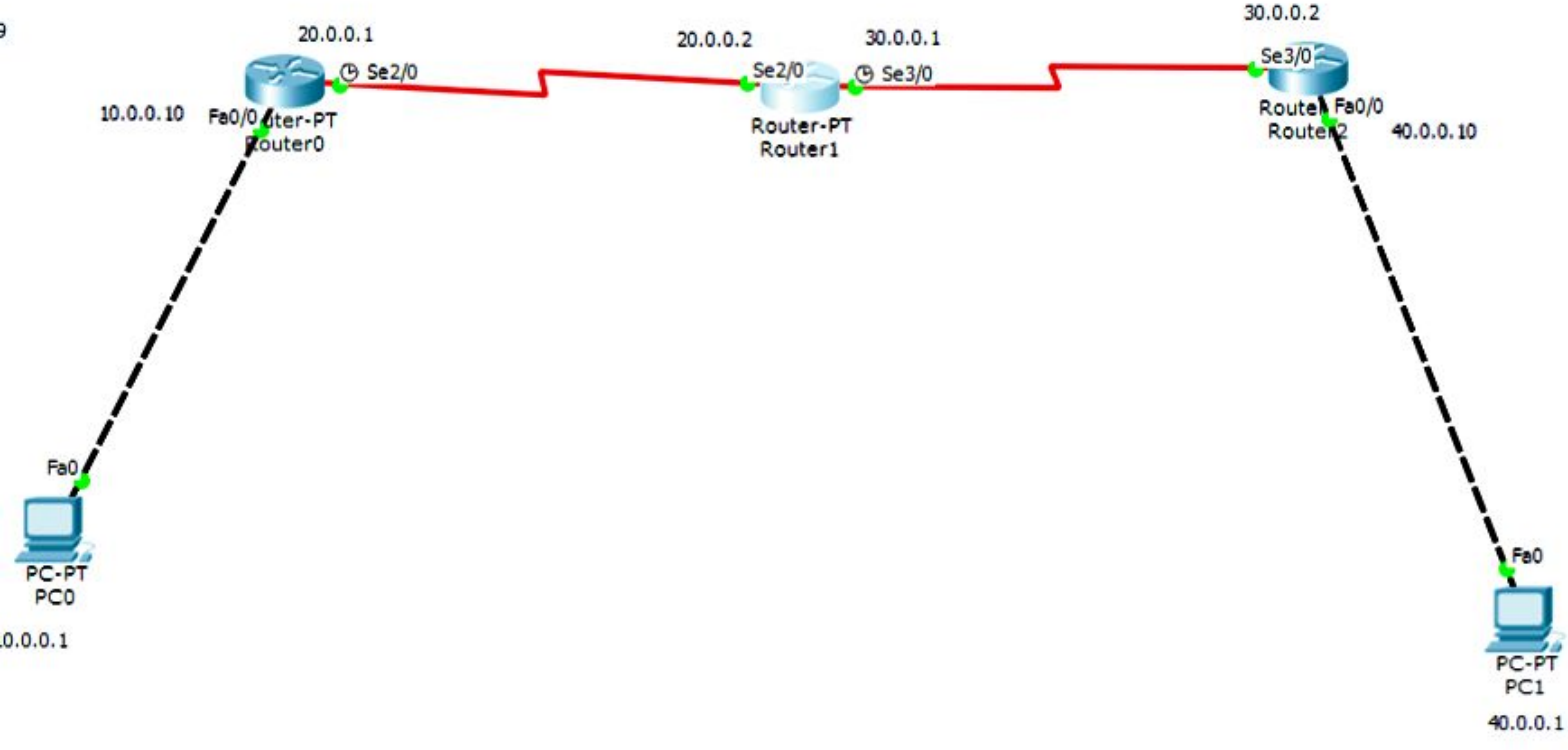
Connections

Automatically Choose Connection Type

Scenario 0 | New | Delete | Toggle PDU List Window

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

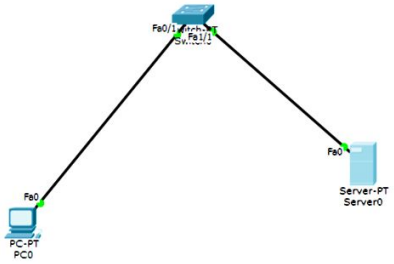
Type here to search | 23°C Partly sunny | ENG | 11:55:03 01-12-2022

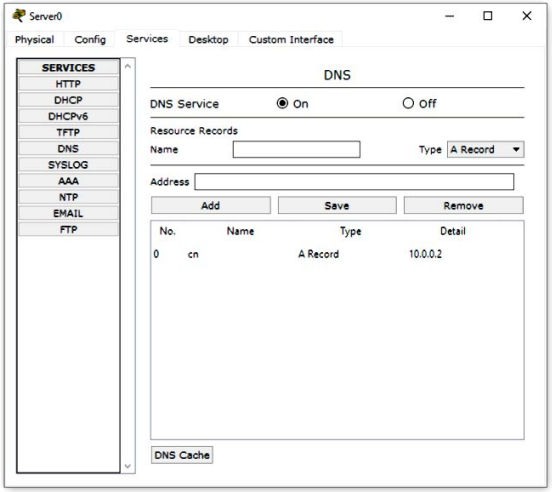

20.0.0.1
Se2/0
20.0.0.2
Se2/0
30.0.0.1
Se3/0
30.0.0.2
Se3/0
10.0.0.10
Fa0/0
Router-PT
Router0
Router-PT
Router1
Fa0/0
40.0.0.10
Fa0
PC-PT
PC0
Fa0
PC-PT
PC1
40.0.0.1

Cisco Packet Tracer Student

File Edit Options View Tools Extensions Help

Logical | [Root] | New Cluster | Move Object | Set Tiled Background | Viewport





Time: 00:08:18 | Power Cycle Devices | Fast Forward Time | Realtime

Connections

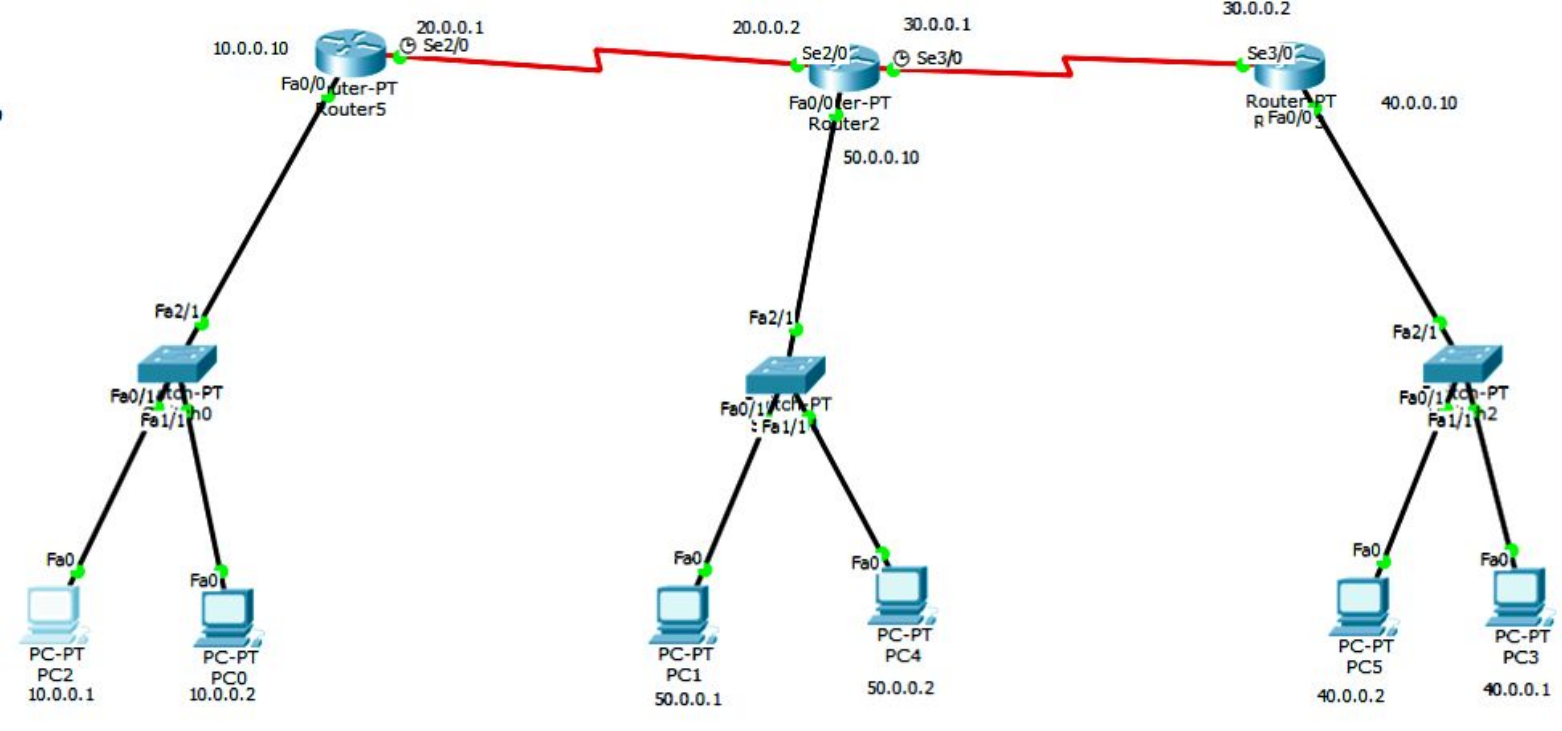
Automatically Choose Connection Type

Scenario 0 | New | Delete | Toggle PDU List Window

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

Type here to search

21°C Cloudy ENG 11:49:26 15-12-2022


10.0.0.10
20.0.0.1
Se2/0
Fa0/0
Router-PT
Router5
20.0.0.2
Se2/0
Se3/0
30.0.0.1
Fa0/0
Router-PT
Router2
30.0.0.2
Se3/0
Router-PT
Fa0/0
40.0.0.10
50.0.0.10
Fa2/1
Fa0/1
Fa1/1
Fa2/1
Fa0/1
Fa1/1
Fa2/1
Fa0/1
Fa1/1
Fa0
PC-PT
PC2
10.0.0.1
Fa0
PC-PT
PC0
10.0.0.2
Fa0
PC-PT
PC1
50.0.0.1
Fa0
PC-PT
PC4
50.0.0.2
Fa0
PC-PT
PC5
40.0.0.2
Fa0
PC-PT
PC3
40.0.0.1

```
Enter the data:1000010000010001
Enter the key:10101
CRC=1101
Dataword=10000100000100011101
Process returned 0 (0x0)   execution time : 37.143 s
Press any key to continue.
```

```
Enter the bucket capacity: 50
Enter the outflow rate: 10
1.Insert
2.Exit
Enter choice: 1

Enter the packet size: 40
40
After outflow: 30
1.Insert
2.Exit
Enter choice: 1

Enter the packet size: 5
35
After outflow: 25
1.Insert
2.Exit
Enter choice: 1

Enter the packet size: 30

Bucket overflow1.Insert
2.Exit
Enter choice: 2
No more inputs. Program exited
```

```
Enter the number of vertices: 4
Enter the source vertex of the graph: 1

Enter no. of edges: 5

For edge 1=>
Enter source vertex :1
Enter destination vertex :2
Enter weight :4

For edge 2=>
Enter source vertex :1
Enter destination vertex :3
Enter weight :5

For edge 3=>
Enter source vertex :3
Enter destination vertex :2
Enter weight :7

For edge 4=>
Enter source vertex :2
Enter destination vertex :4
Enter weight :7

For edge 5=>
Enter source vertex :4
Enter destination vertex :3
Enter weight :-15


NEGATIVE CYCLE PRESENT..!!
```

```
Enter the no. of vertices: 5

Enter the adjacency matrix:
0 3 1 0 0
3 0 7 5 1
1 7 0 2 0
0 5 2 0 7
0 1 0 7 0

Enter the starting node: 0

Distance of 1 = 3
Path = 1 <-0
Distance of 2 = 1
Path = 2 <-0
Distance of 3 = 3
Path = 3 <-2 <-0
Distance of 4 = 4
Path = 4 <-1 <-0
```

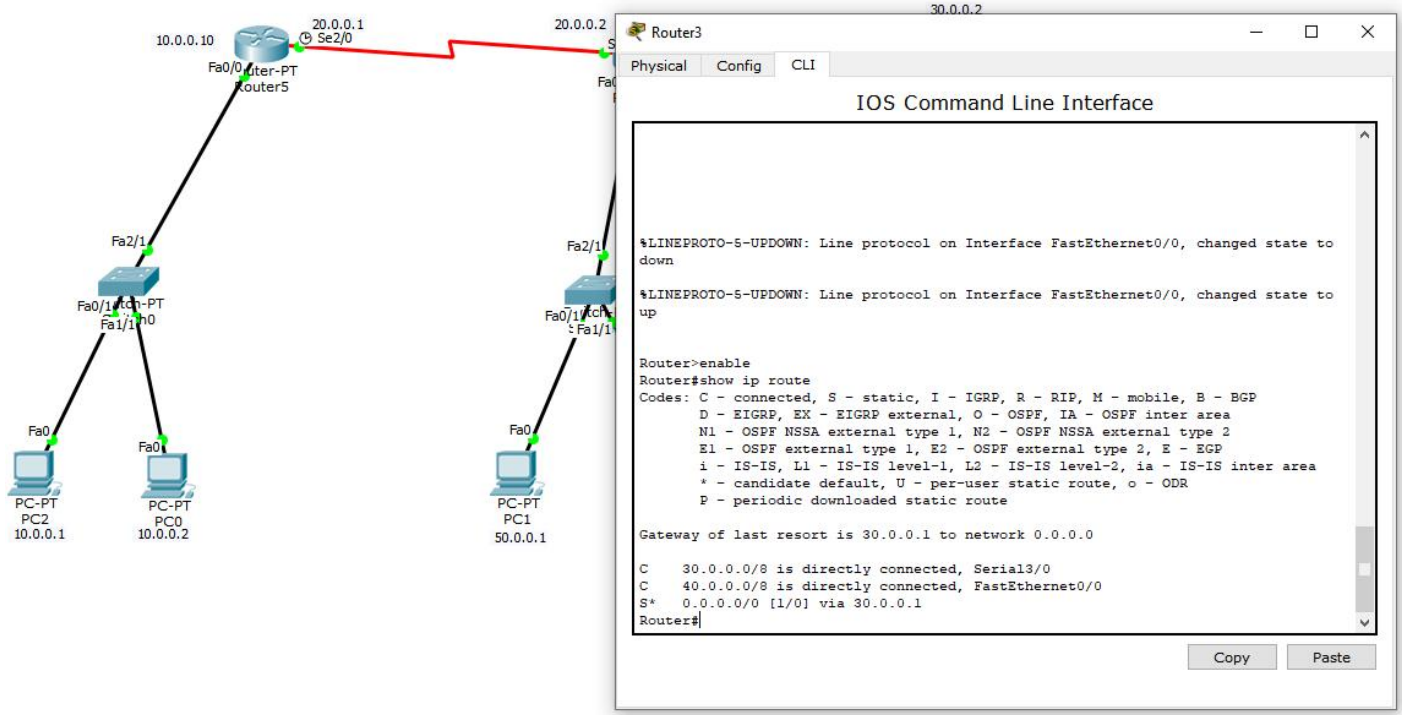
```
C:\Users\Srikanth\PycharmProjects\pythonProject1\Scripts\python.exe C:\U

Enter file name: ServerTCP.py

From Server:

from socket import *
serverName="127.0.0.1"
serverPort = 12000
serverSocket = socket(AF_INET,SOCK_STREAM)
serverSocket.bind((serverName,serverPort))
serverSocket.listen(1)
while 1:
    print ("The server is ready to receive")
    connectionSocket, addr = serverSocket.accept()
    sentence = connectionSocket.recv(1024).decode()
    file=open(sentence,"r")
    l=file.read(1024)
    connectionSocket.send(l.encode())
    print ('\nSent contents of ' + sentence)
    file.close()
    connectionSocket.close()

Process finished with exit code 0
```

```
C:\Users\Srikanth\PycharmProjects\pythonProject1\Scripts\python.exe

Enter file name: serverudp.py

Reply from Server:

from socket import *
serverPort = 12000
serverSocket = socket(AF_INET, SOCK_DGRAM)
serverSocket.bind(("127.0.0.1", serverPort))
print ("The server is ready to receive")
while 1:
    sentence, clientAddress = serverSocket.recvfrom(2048)
    sentence = sentence.decode("utf-8")
    file=open(sentence,"r")
    l=file.read(2048)
    serverSocket.sendto(bytes(l,"utf-8"),clientAddress)
    print ('\nSent contents of ', end = ' ')
    print (sentence)
# for i in sentence:
# print (str(i), end = '')
    file.close()

Process finished with exit code 0
```

ent - C:\suraj\lab-3\3 routers default.pkt

Tools Extensions Help

[Root] | New Cluster | Move Object | Set Tiled Background | Viewport



Router3

Physical | Config | CLI

IOS Command Line Interface

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to
down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to
up


Router>enable
Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is 30.0.0.1 to network 0.0.0.0

C    30.0.0.0/8 is directly connected, Serial3/0
C    40.0.0.0/8 is directly connected, FastEthernet0/0
S*   0.0.0.0/0 [1/0] via 30.0.0.1
Router#
```

Copy | Paste

er Cycle Devices Fast Forward Time

Realtime

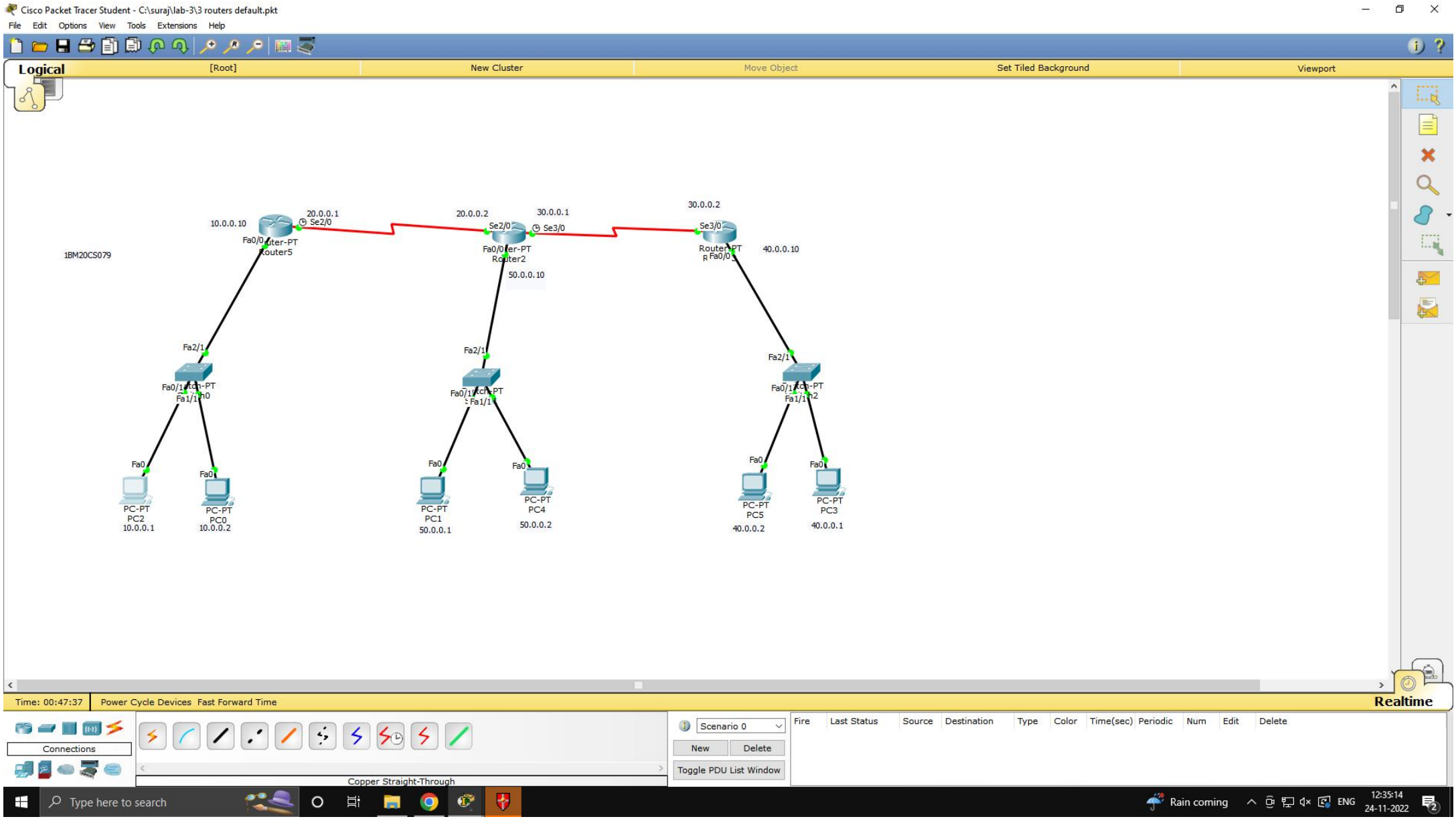
Copper Straight-Through

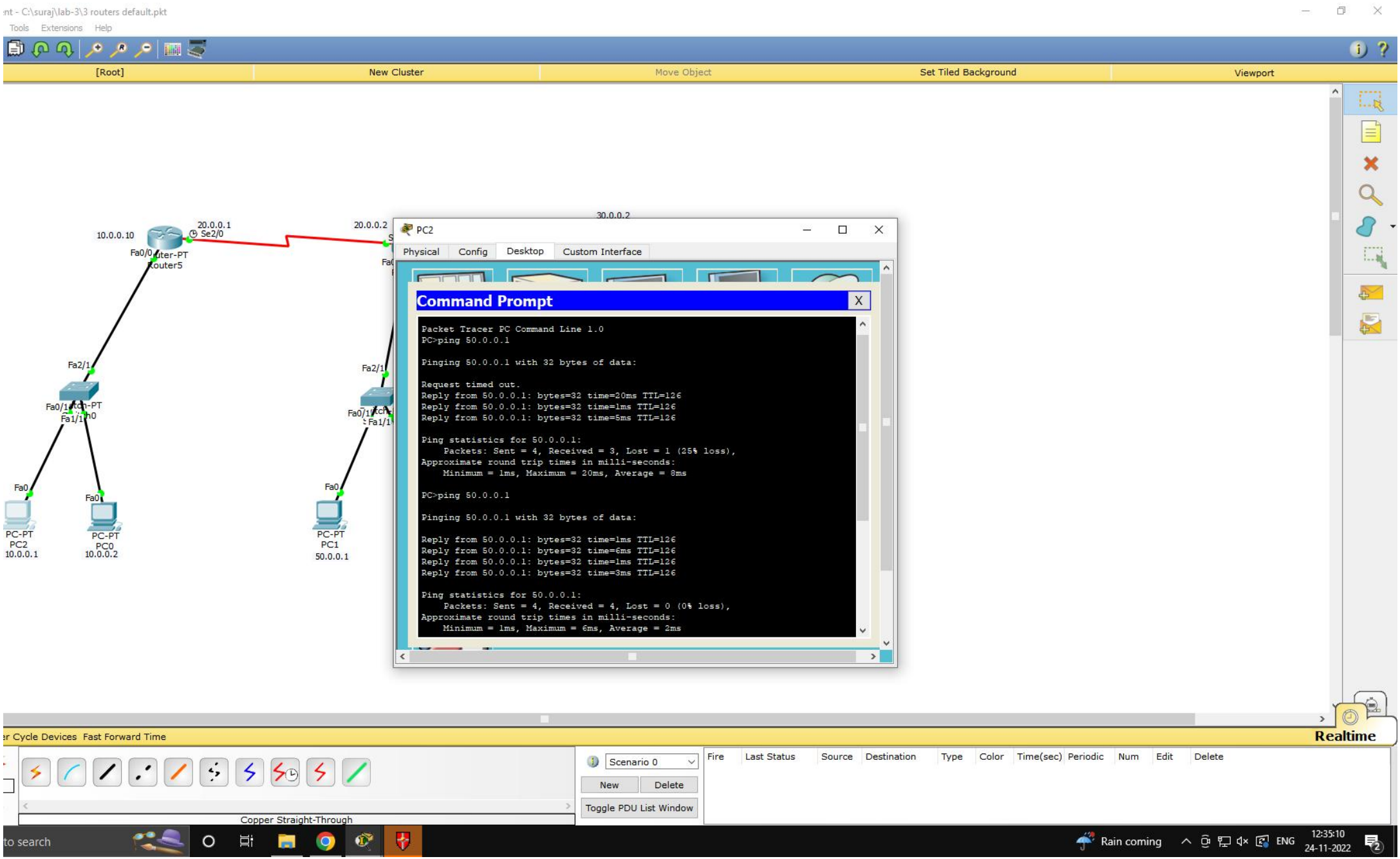
Scenario 0 | New | Delete | Toggle PDU List Window

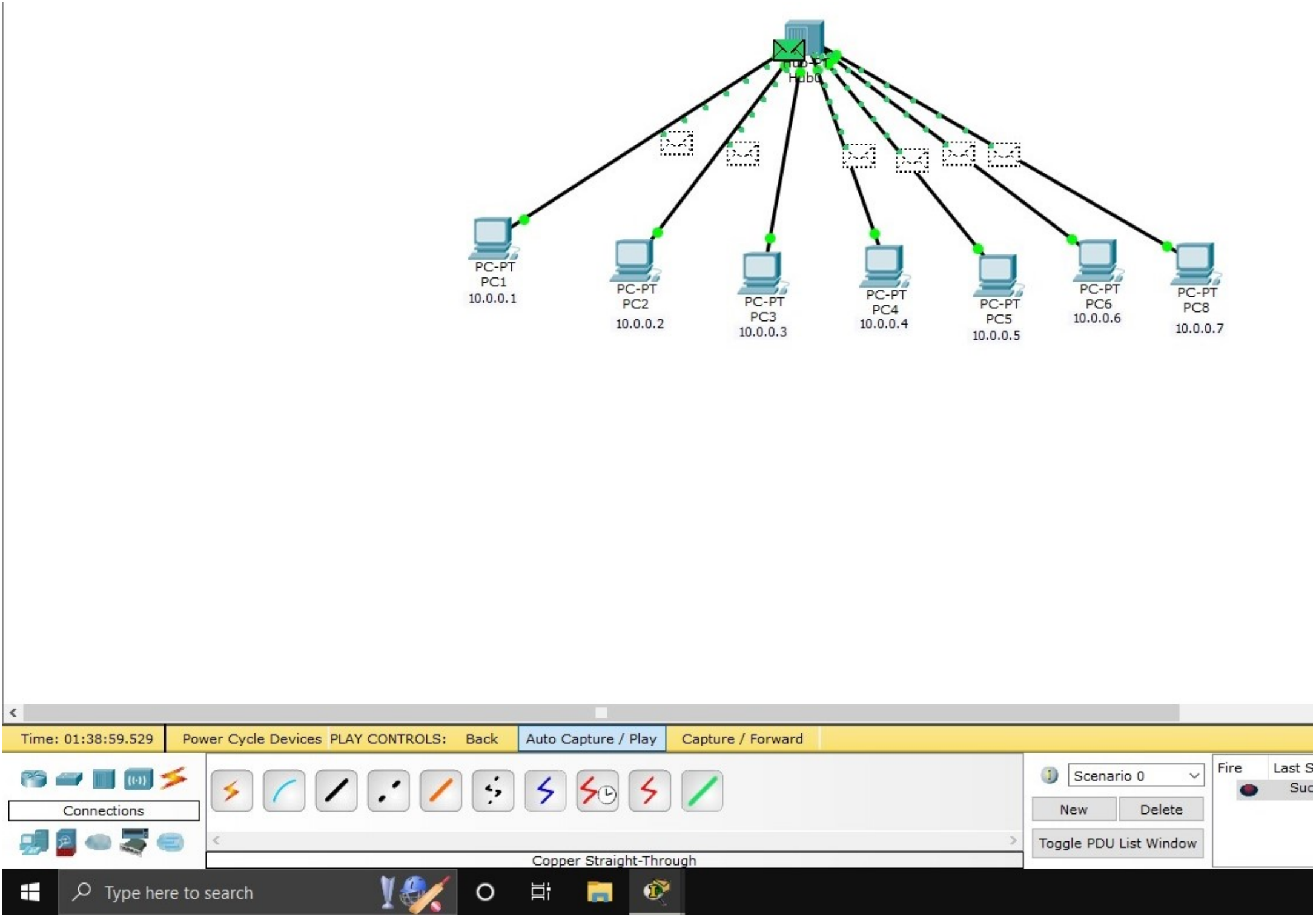
Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete

to search

Rain coming ENG 12:34:49 24-11-2022


Cisco Packet Tracer Student - C:\suraj\lab-3\3 routers default.pkt
File Edit Options View Tools Extensions Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
1BM20CS079
10.0.0.10
20.0.0.1
Se2/0
20.0.0.2
Se2/0
30.0.0.1
Se3/0
30.0.0.2
Se3/0
40.0.0.10
50.0.0.10
Fa2/1
Fa2/1
Fa2/1
Fa0
Fa0
Fa0
Fa0
Fa0
Fa0
PC-PT
PC2
10.0.0.1
PC-PT
PC0
10.0.0.2
PC-PT
PC1
50.0.0.1
PC-PT
PC4
50.0.0.2
PC-PT
PC5
40.0.0.2
PC-PT
PC3
40.0.0.1
Time: 00:47:37
Power Cycle Devices Fast Forward Time
Realtime
Connections
Copper Straight-Through
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Type here to search
Rain coming
ENG
12:35:14
24-11-2022


nt - C:\suraj\lab-3\3 routers default.pkt
Tools Extensions Help
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
10.0.0.10
20.0.0.1
Se2/0
20.0.0.2
30.0.0.2
Fa0/0
Router5
Fa2/1
Fa0/1
Fa1/1
Fa0
PC-PT
PC2
10.0.0.1
PC-PT
PC0
10.0.0.2
PC-PT
PC1
50.0.0.1
PC2
Physical
Config
Desktop
Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 50.0.0.1
Pinging 50.0.0.1 with 32 bytes of data:
Request timed out.
Reply from 50.0.0.1: bytes=32 time=20ms TTL=126
Reply from 50.0.0.1: bytes=32 time=1ms TTL=126
Reply from 50.0.0.1: bytes=32 time=5ms TTL=126
Ping statistics for 50.0.0.1:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 1ms, Maximum = 20ms, Average = 8ms
PC>ping 50.0.0.1
Pinging 50.0.0.1 with 32 bytes of data:
Reply from 50.0.0.1: bytes=32 time=1ms TTL=126
Reply from 50.0.0.1: bytes=32 time=6ms TTL=126
Reply from 50.0.0.1: bytes=32 time=1ms TTL=126
Reply from 50.0.0.1: bytes=32 time=3ms TTL=126
Ping statistics for 50.0.0.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 1ms, Maximum = 6ms, Average = 2ms
Cycle Devices Fast Forward Time
Realtime
Copper Straight-Through
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
to search
Rain coming
ENG
12:35:10
24-11-2022


Hub-PT
Hub0
PC-PT
PC1
10.0.0.1
PC-PT
PC2
10.0.0.2
PC-PT
PC3
10.0.0.3
PC-PT
PC4
10.0.0.4
PC-PT
PC5
10.0.0.5
PC-PT
PC6
10.0.0.6
PC-PT
PC8
10.0.0.7
Time: 01:38:59.529
Power Cycle Devices
PLAY CONTROLS:
Back
Auto Capture / Play
Capture / Forward
Connections
Copper Straight-Through
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last S
Type here to search

PC1

Physical | Config | Desktop | Custom Interface

Command Prompt

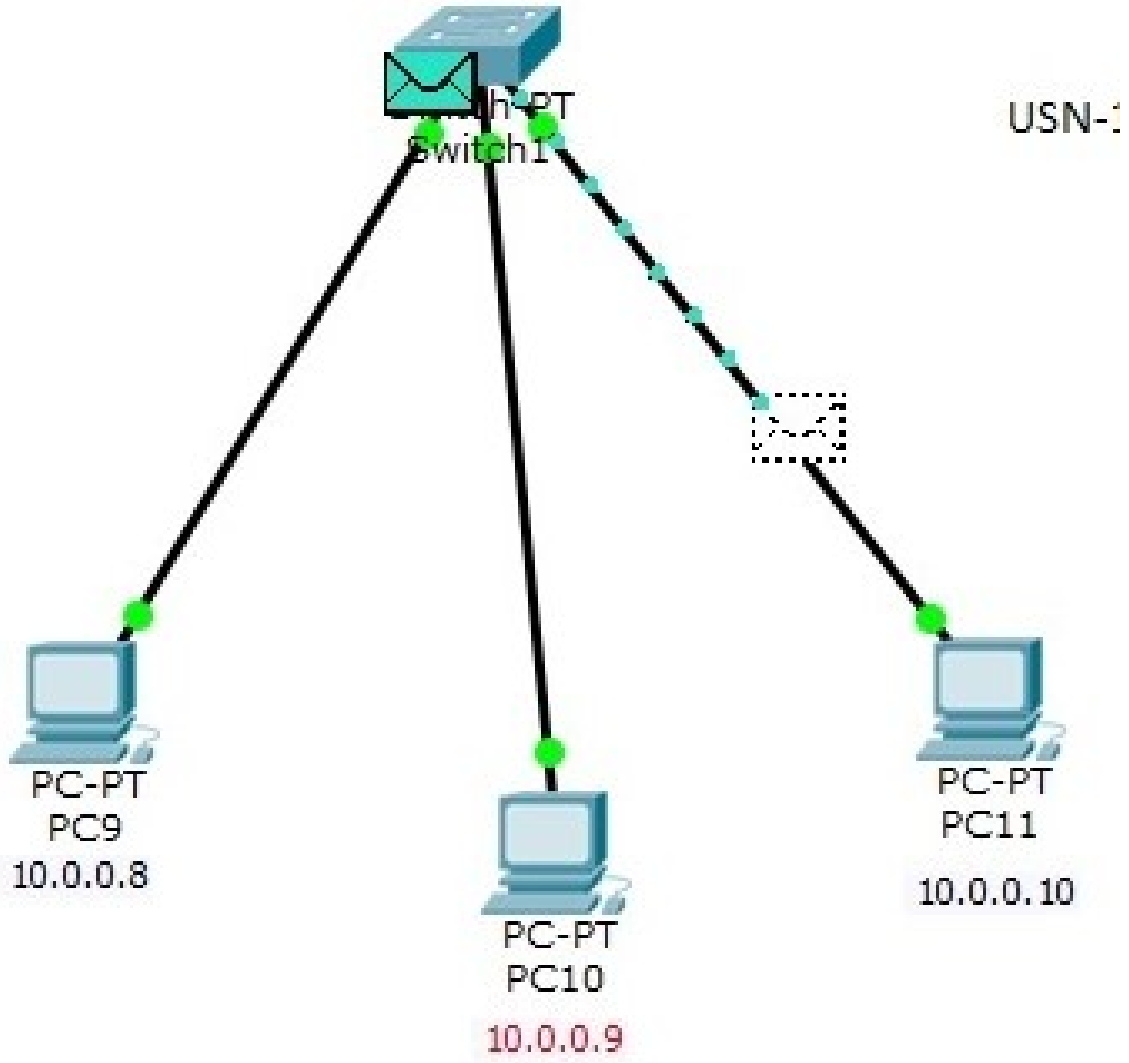
```
Packet Tracer PC Command Line 1.0
PC>PING 10.0.0.4

Pinging 10.0.0.4 with 32 bytes of data:

Reply from 10.0.0.4: bytes=32 time=0ms TTL=128
Reply from 10.0.0.4: bytes=32 time=0ms TTL=128
Reply from 10.0.0.4: bytes=32 time=0ms TTL=128
Reply from 10.0.0.4: bytes=32 time=0ms TTL=128

Ping statistics for 10.0.0.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>
```

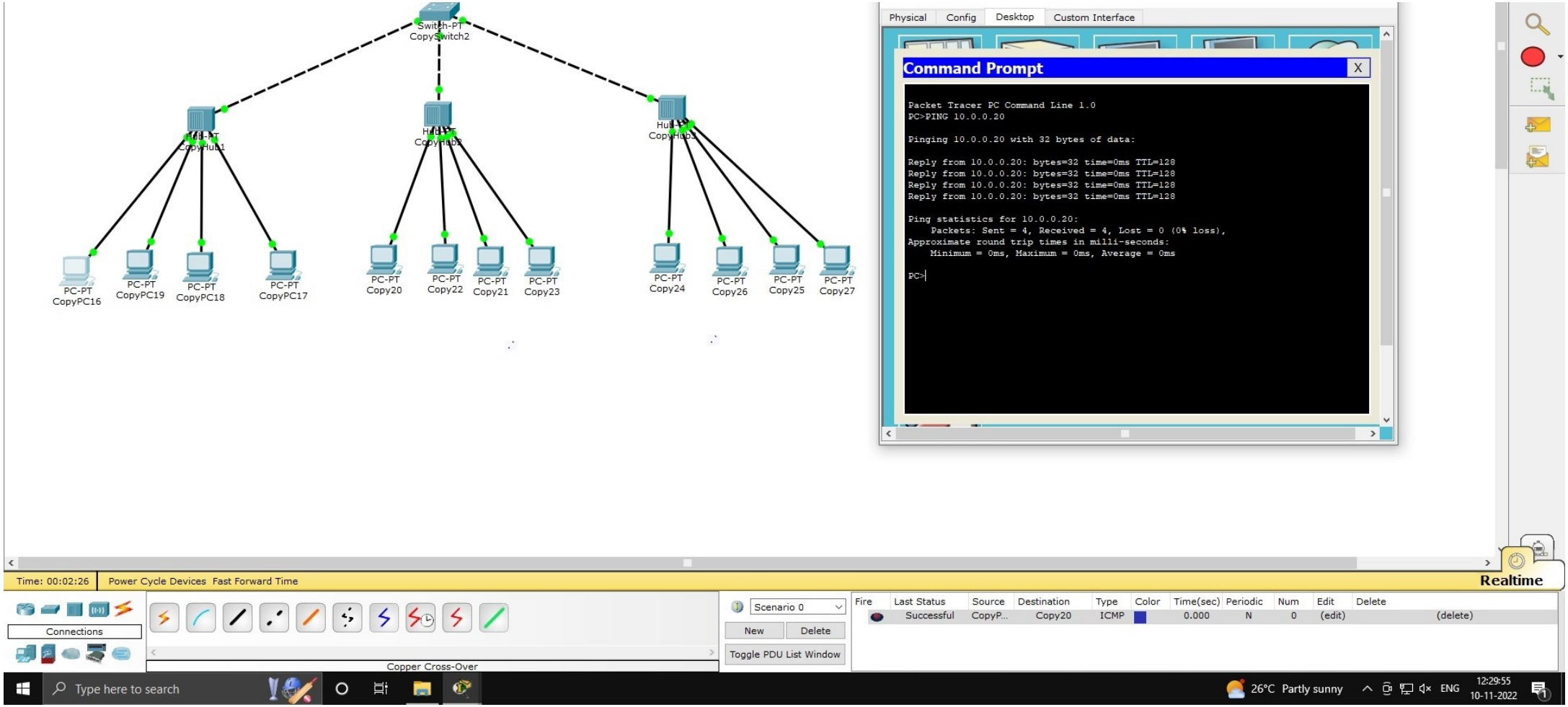
PC9

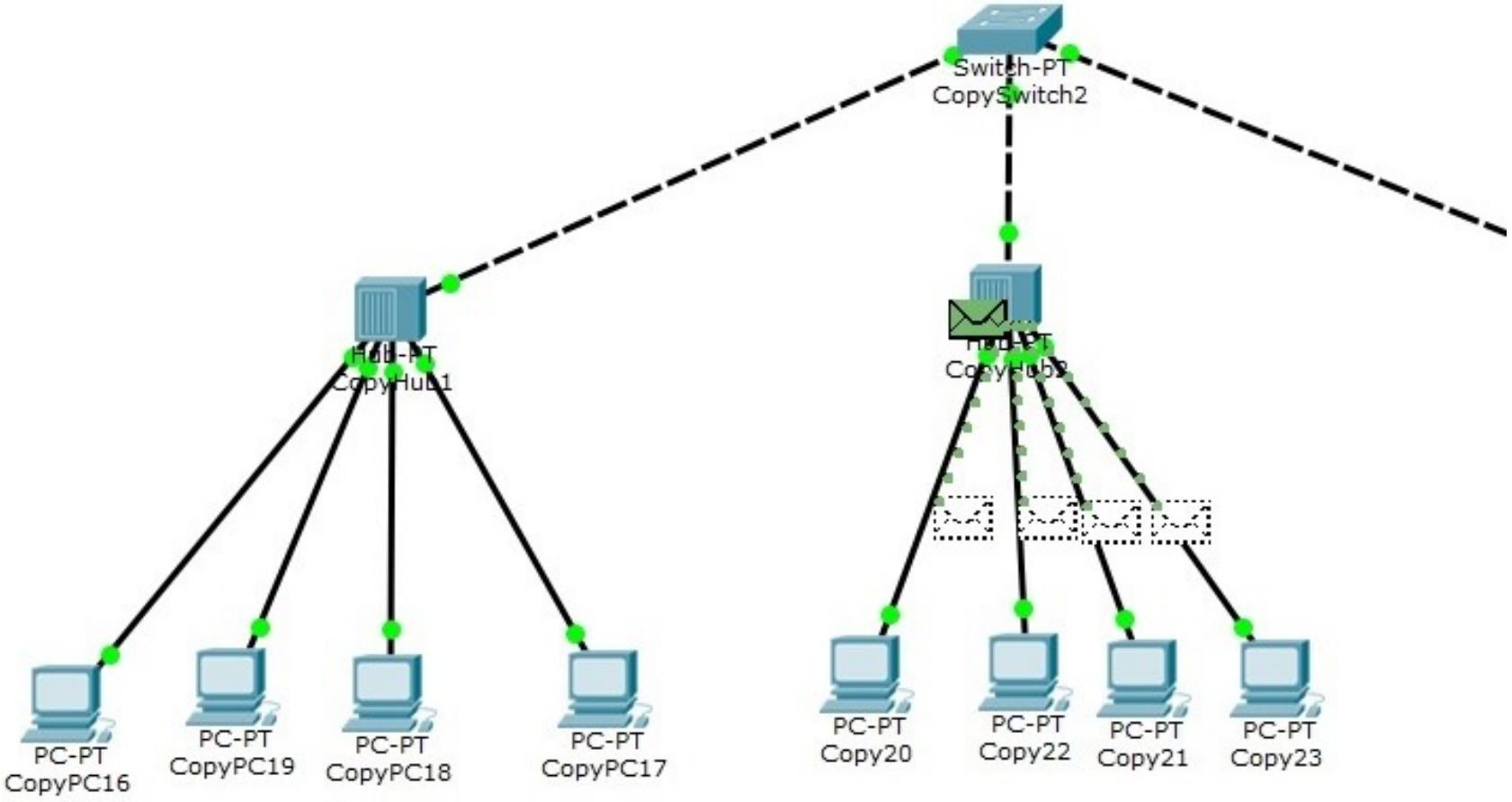
Physical | Config | Desktop | Custom Interface

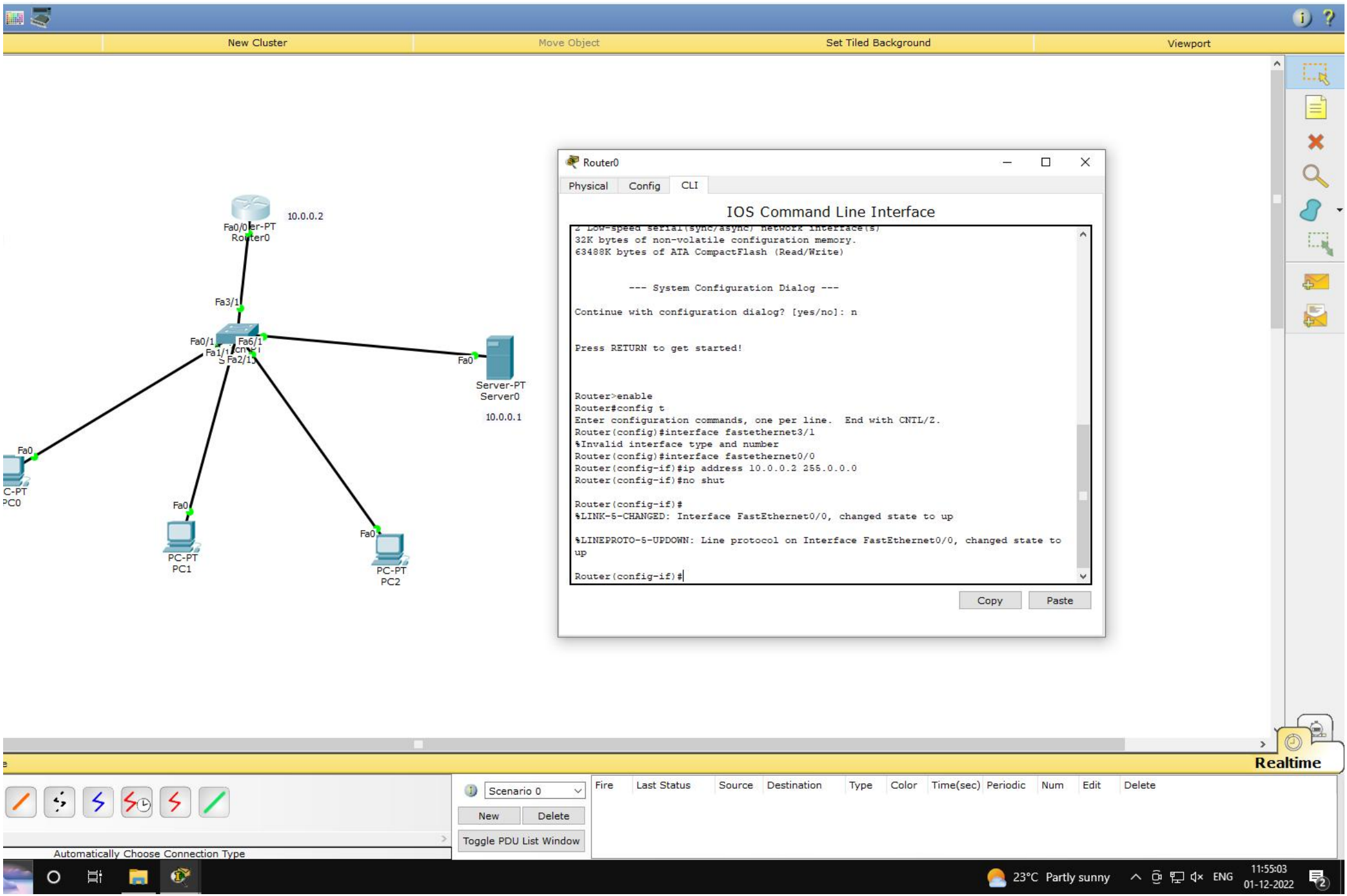
Command Prompt

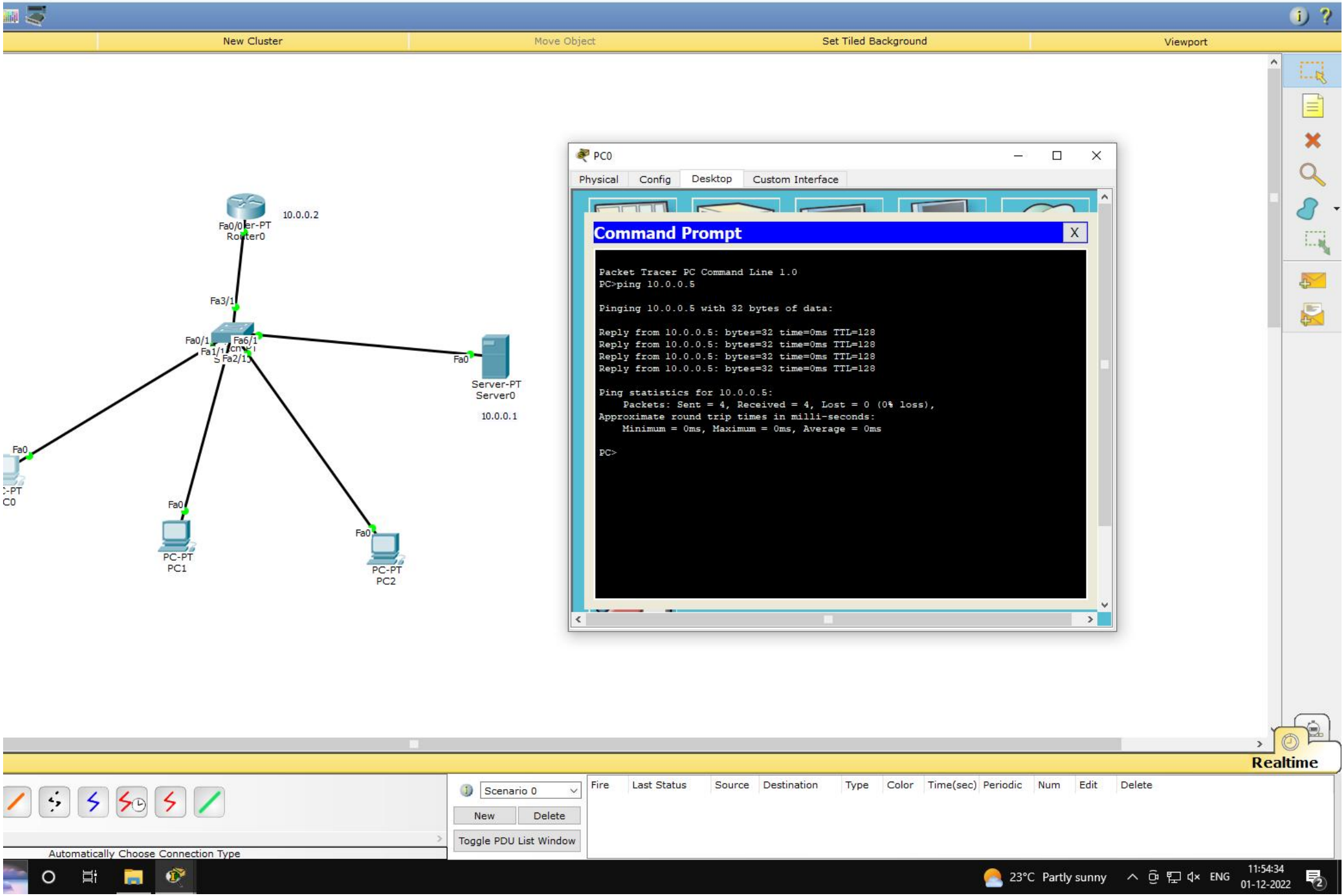
```
Packet Tracer PC Command Line 1.0
PC>PING 10.0.0.10

Pinging 10.0.0.10 with 32 bytes of data:

Reply from 10.0.0.10: bytes=32 time=0ms TTL=128
Reply from 10.0.0.10: bytes=32 time=0ms TTL=128
Reply from 10.0.0.10: bytes=32 time=0ms TTL=128
Reply from 10.0.0.10: bytes=32 time=4ms TTL=128

Ping statistics for 10.0.0.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 4ms, Average = 1ms

PC>
```

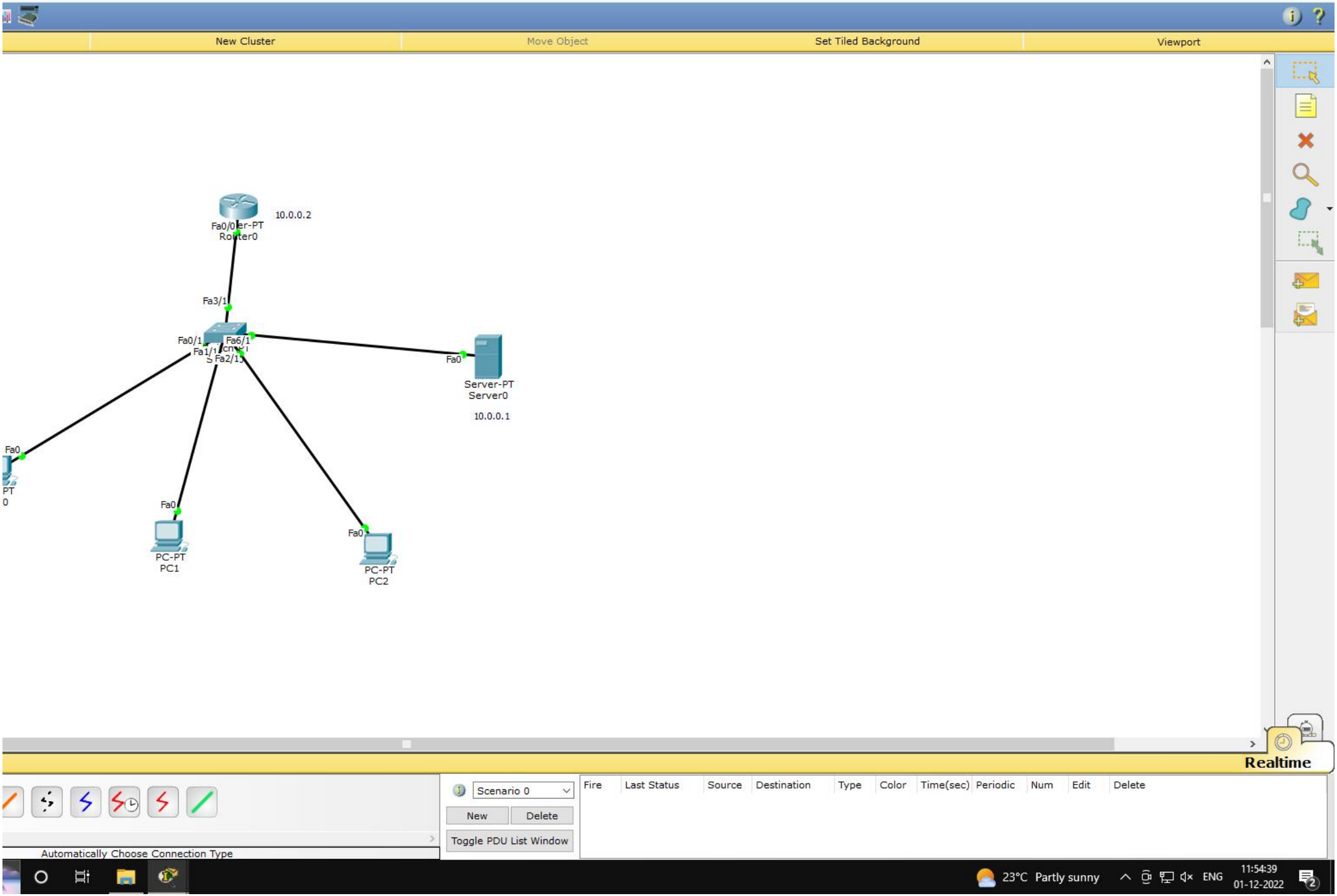

h-PT
Switch1
USN-
PC-PT
PC9
10.0.0.8
PC-PT
PC10
10.0.0.9
PC-PT
PC11
10.0.0.10

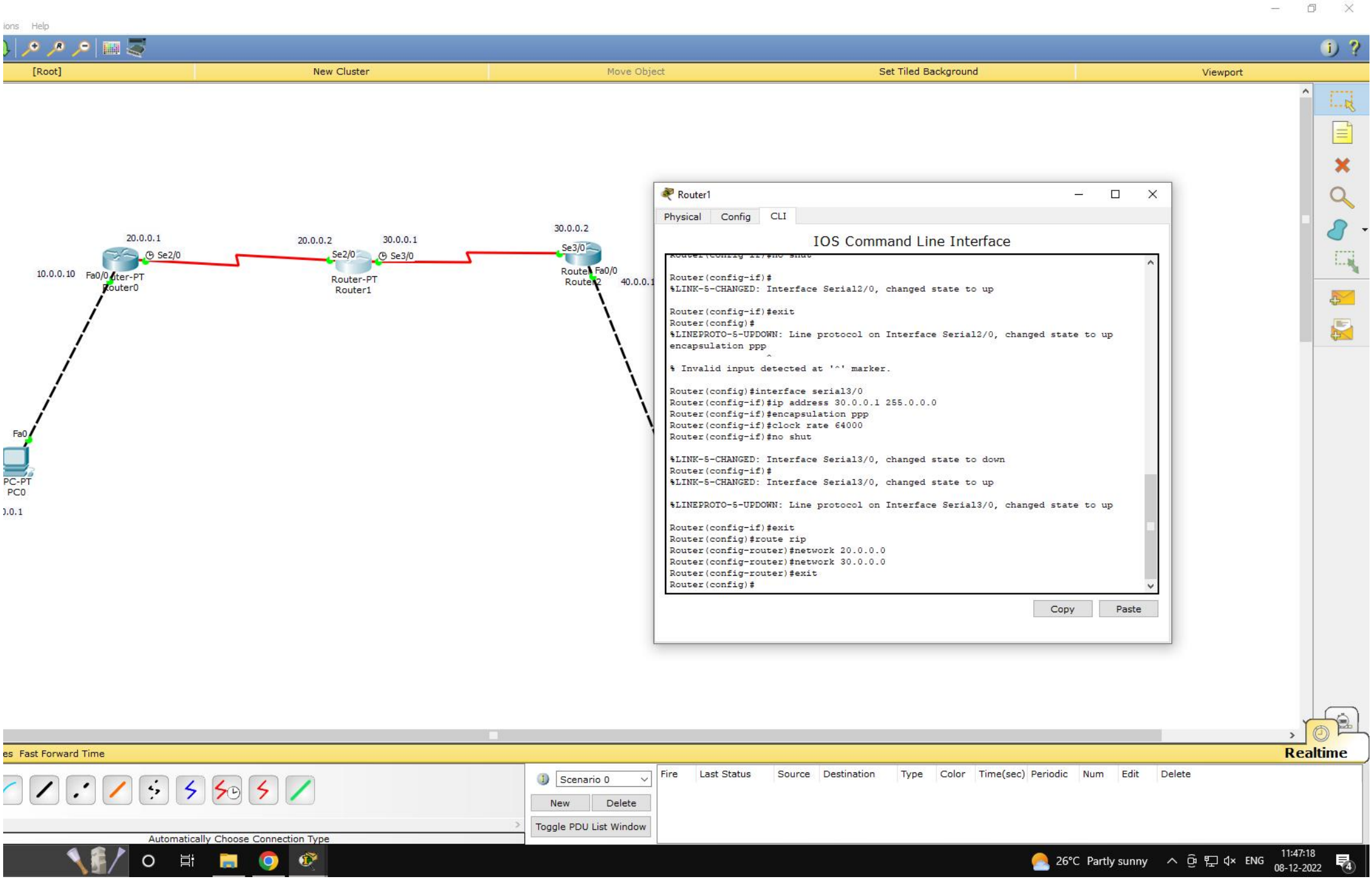

Switch-PT
CopySwitch2
Hub-PT
CopyHub1
Hub-PT
CopyHub2
Hub-PT
CopyHub3
PC-PT
CopyPC16
PC-PT
CopyPC19
PC-PT
CopyPC18
PC-PT
CopyPC17
PC-PT
Copy20
PC-PT
Copy22
PC-PT
Copy21
PC-PT
Copy23
PC-PT
Copy24
PC-PT
Copy26
PC-PT
Copy25
PC-PT
Copy27
Physical
Config
Desktop
Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
PC>PING 10.0.0.20
Pinging 10.0.0.20 with 32 bytes of data:
Reply from 10.0.0.20: bytes=32 time=0ms TTL=128
Reply from 10.0.0.20: bytes=32 time=0ms TTL=128
Reply from 10.0.0.20: bytes=32 time=0ms TTL=128
Reply from 10.0.0.20: bytes=32 time=0ms TTL=128
Ping statistics for 10.0.0.20:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PC>
Time: 00:02:26
Power Cycle Devices Fast Forward Time
Realtime
Connections
Copper Cross-Over
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Successful
CopyP...
Copy20
ICMP
0.000
N
0
(edit)
(delete)
Type here to search
26°C Partly sunny
ENG
12:29:55
10-11-2022

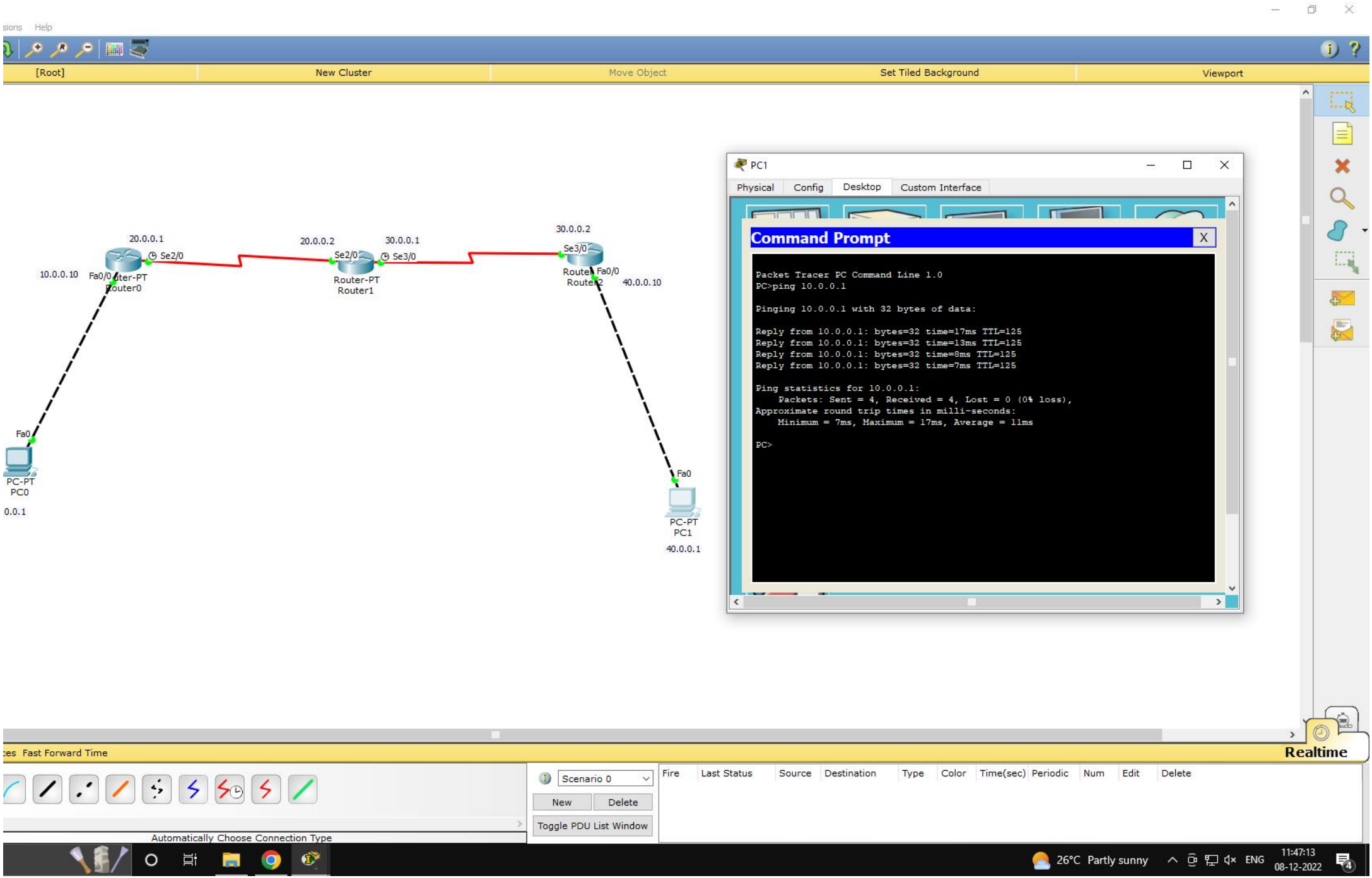

Switch-PT
CopySwitch2
Hub-PT
CopyHub1
PC-PT
CopyPC16
PC-PT
CopyPC19
PC-PT
CopyPC18
PC-PT
CopyPC17
PC-PT
Copy20
PC-PT
Copy22
PC-PT
Copy21
PC-PT
Copy23

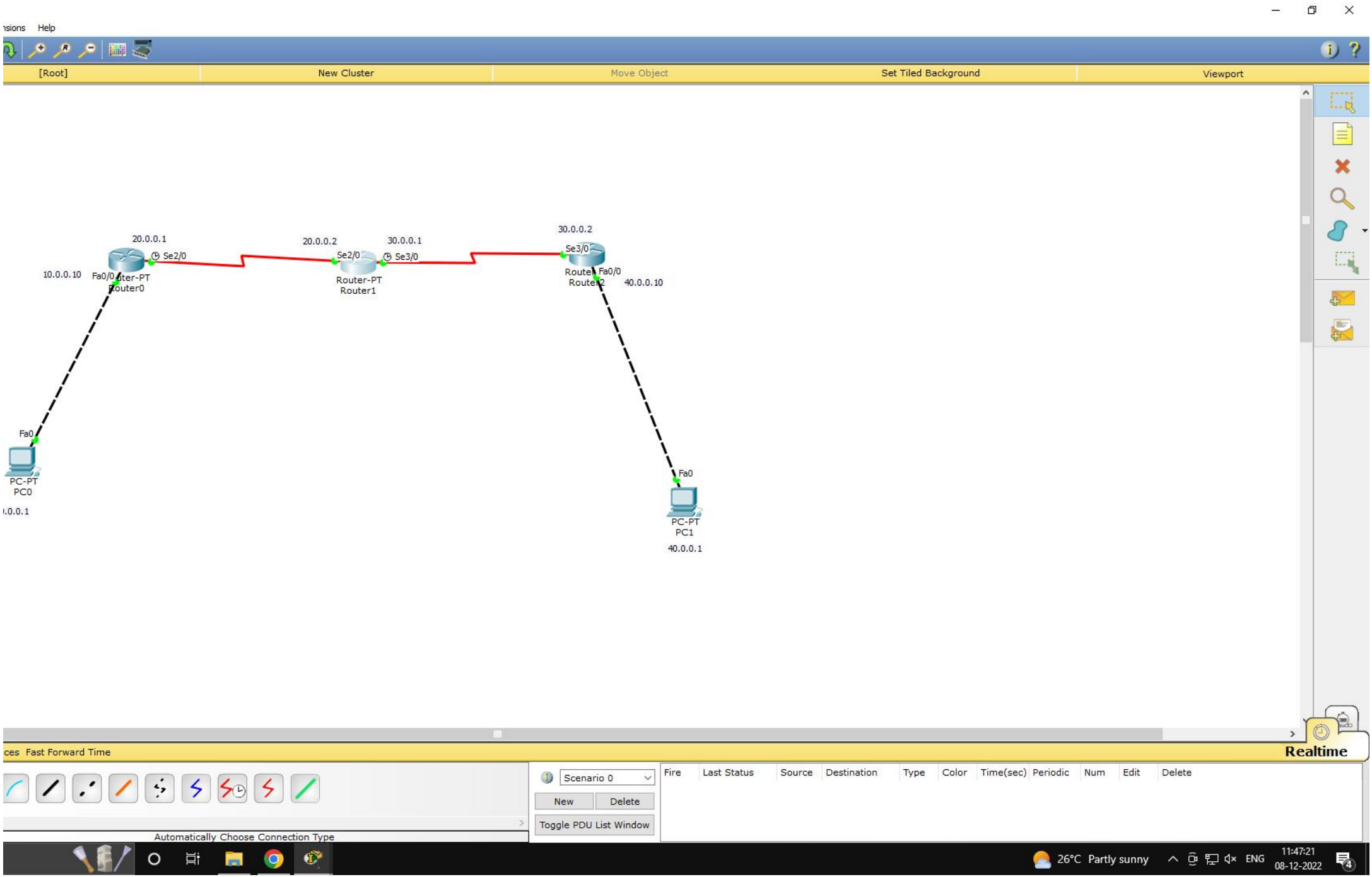

New Cluster
Move Object
Set Tiled Background
Viewport
10.0.0.2
Fa0/0
Router0
Fa3/1
Fa0/1
Fa6/1
Fa1/1
Fa2/1
Fa0
Server-PT
Server0
10.0.0.1
Fa0
PC-PT
PC0
Fa0
PC-PT
PC1
Fa0
PC-PT
PC2
Router0
Physical
Config
CLI
IOS Command Line Interface
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)
--- System Configuration Dialog ---
Continue with configuration dialog? [yes/no]: n
Press RETURN to get started!
Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface fastethernet3/1
%Invalid interface type and number
Router(config)#interface fastethernet0/0
Router(config-if)#ip address 10.0.0.2 255.0.0.0
Router(config-if)#no shut
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
Router(config-if)#
Copy
Paste
Realtime
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Automatically Choose Connection Type
23°C Partly sunny
ENG
11:55:03
01-12-2022


New Cluster
Move Object
Set Tiled Background
Viewport
10.0.0.2
Fa0/0
Router0
Fa3/1
Fa0/1
Fa6/1
Fa1/1
Fa2/1
Fa0
Server-PT
Server0
10.0.0.1
Fa0
Fa0
PC-PT
PC1
Fa0
PC-PT
PC2
PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.5
Pinging 10.0.0.5 with 32 bytes of data:
Reply from 10.0.0.5: bytes=32 time=0ms TTL=128
Reply from 10.0.0.5: bytes=32 time=0ms TTL=128
Reply from 10.0.0.5: bytes=32 time=0ms TTL=128
Reply from 10.0.0.5: bytes=32 time=0ms TTL=128
Ping statistics for 10.0.0.5:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PC>
Realtime
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Automatically Choose Connection Type
23°C Partly sunny
ENG
11:54:34
01-12-2022


New Cluster
Move Object
Set Tiled Background
Viewport
10.0.0.2
Fa0/0er-PT
Ro ter0
Fa3/1
Fa0/1
Fa6/1
Fa1/1
S Fa2/1
Fa0
Server-PT
Server0
10.0.0.1
Fa0
PT
0
Fa0
PC-PT
PC1
Fa0
PC-PT
PC2
Realtime
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Automatically Choose Connection Type
23°C Partly sunny
ENG
11:54:39
01-12-2022


[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
20.0.0.1
Se2/0
20.0.0.2
Se2/0
30.0.0.1
Se3/0
30.0.0.2
Se3/0
Fa0/0
10.0.0.10
Router-PT
Router0
Router-PT
Router1
Fa0
PC-PT
PC0
Router1
Physical
Config
CLI
IOS Command Line Interface
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
Router(config-if)#exit
Router(config)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
encapsulation ppp
% Invalid input detected at '^' marker.
Router(config)#interface serial3/0
Router(config-if)#ip address 30.0.0.1 255.0.0.0
Router(config-if)#encapsulation ppp
Router(config-if)#clock rate 64000
Router(config-if)#no shut
%LINK-5-CHANGED: Interface Serial3/0, changed state to down
Router(config-if)#
%LINK-5-CHANGED: Interface Serial3/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up
Router(config-if)#exit
Router(config)#route rip
Router(config-router)#network 20.0.0.0
Router(config-router)#network 30.0.0.0
Router(config-router)#exit
Router(config)#
Copy
Paste
Fast Forward Time
Realtime
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Automatically Choose Connection Type
26°C Partly sunny
ENG
11:47:18
08-12-2022


[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
20.0.0.1
Se2/0
10.0.0.10
Fa0/0
Router-PT
Router0
20.0.0.2
Se2/0
30.0.0.1
Se3/0
Router-PT
Router1
30.0.0.2
Se3/0
Fa0/0
40.0.0.10
Fa0
PC-PT
PC0
Fa0
PC-PT
PC1
40.0.0.1
PC1
Physical
Config
Desktop
Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.1
Pinging 10.0.0.1 with 32 bytes of data:
Reply from 10.0.0.1: bytes=32 time=17ms TTL=125
Reply from 10.0.0.1: bytes=32 time=13ms TTL=125
Reply from 10.0.0.1: bytes=32 time=8ms TTL=125
Reply from 10.0.0.1: bytes=32 time=7ms TTL=125
Ping statistics for 10.0.0.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 7ms, Maximum = 17ms, Average = 11ms
PC>
Fast Forward Time
Realtime
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Automatically Choose Connection Type
26°C Partly sunny
ENG
11:47:13
08-12-2022


Help
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
20.0.0.1
Se2/0
20.0.0.2
Se2/0
30.0.0.1
Se3/0
30.0.0.2
Se3/0
10.0.0.10
Fa0/0
Router-PT
Router0
Router-PT
Router1
Fa0/0
40.0.0.10
Fa0
PC-PT
PC0
Fa0
PC-PT
PC1
40.0.0.1
Fast Forward Time
Realtime
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Automatically Choose Connection Type
26°C Partly sunny
ENG
11:47:21
08-12-2022

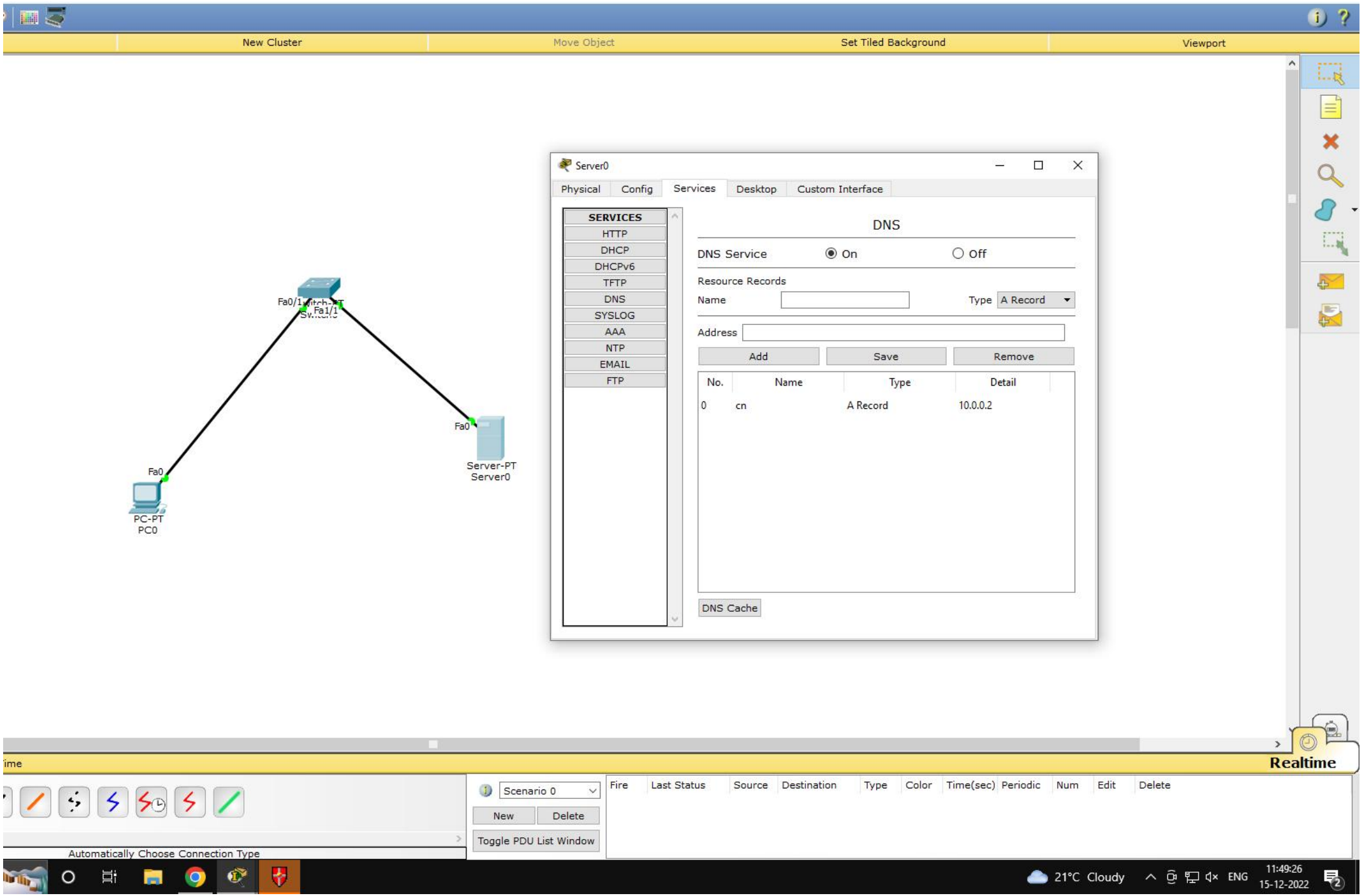
C:\Program Files\WindowsAp

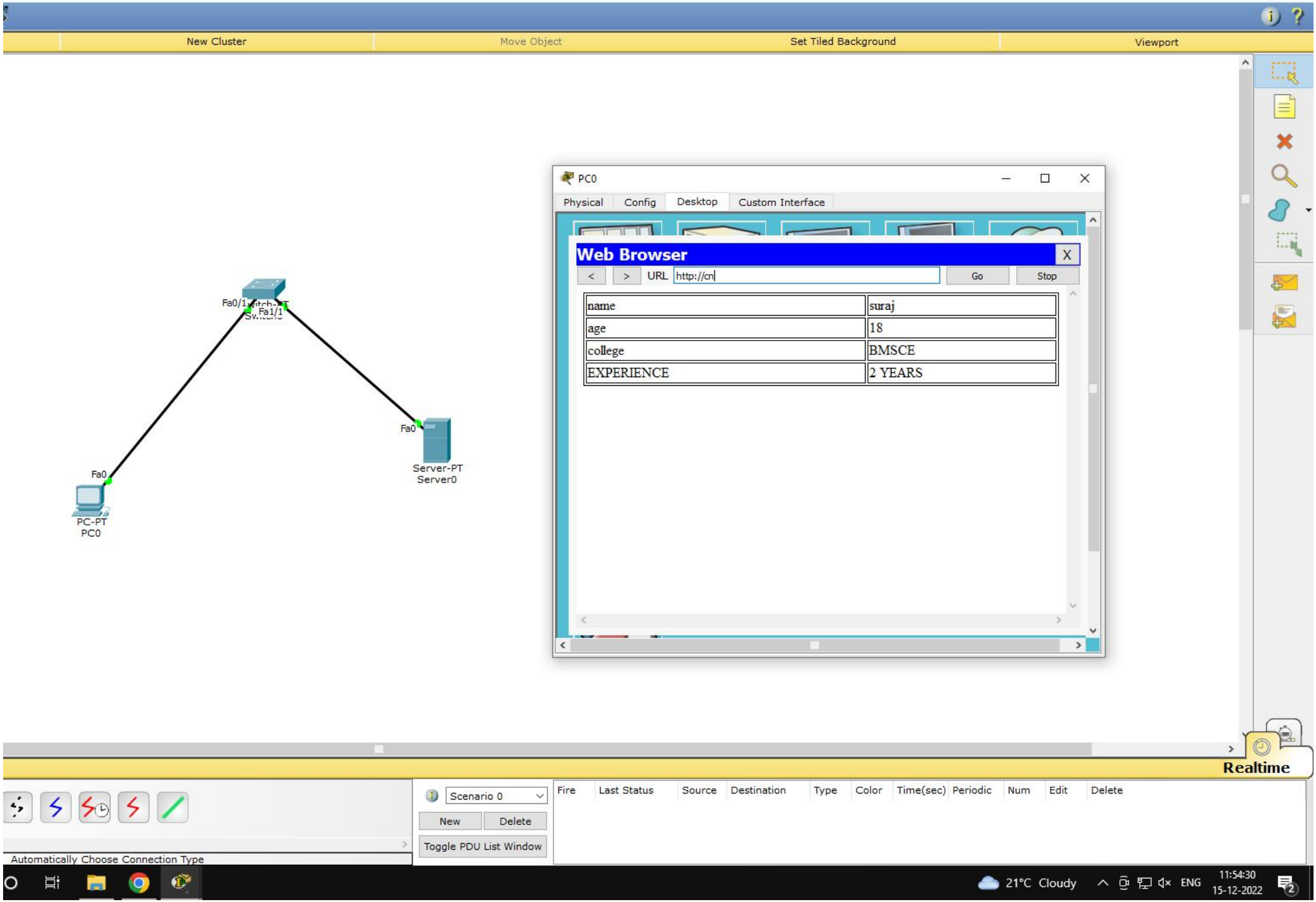
```
enter bucket capacity = 500
enter output rate = 5
enter packet size = 250
current bucket content = 245
enter packet size = 260
bucket is already full
240
enter packet size = 220
current bucket content = 455
enter packet size = 45
current bucket content = 495
enter packet size =
```

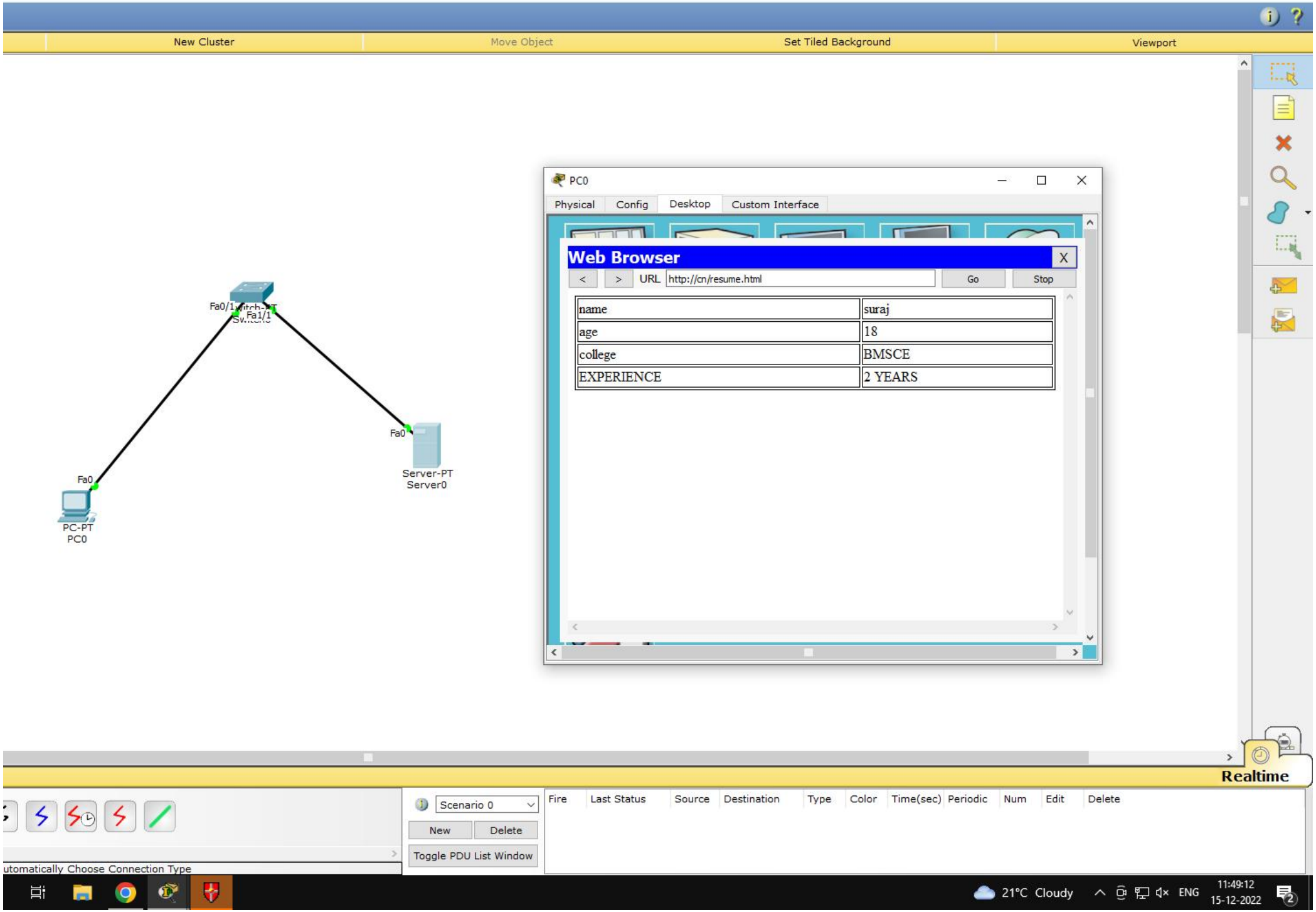
C:\Program Files\WindowsAp

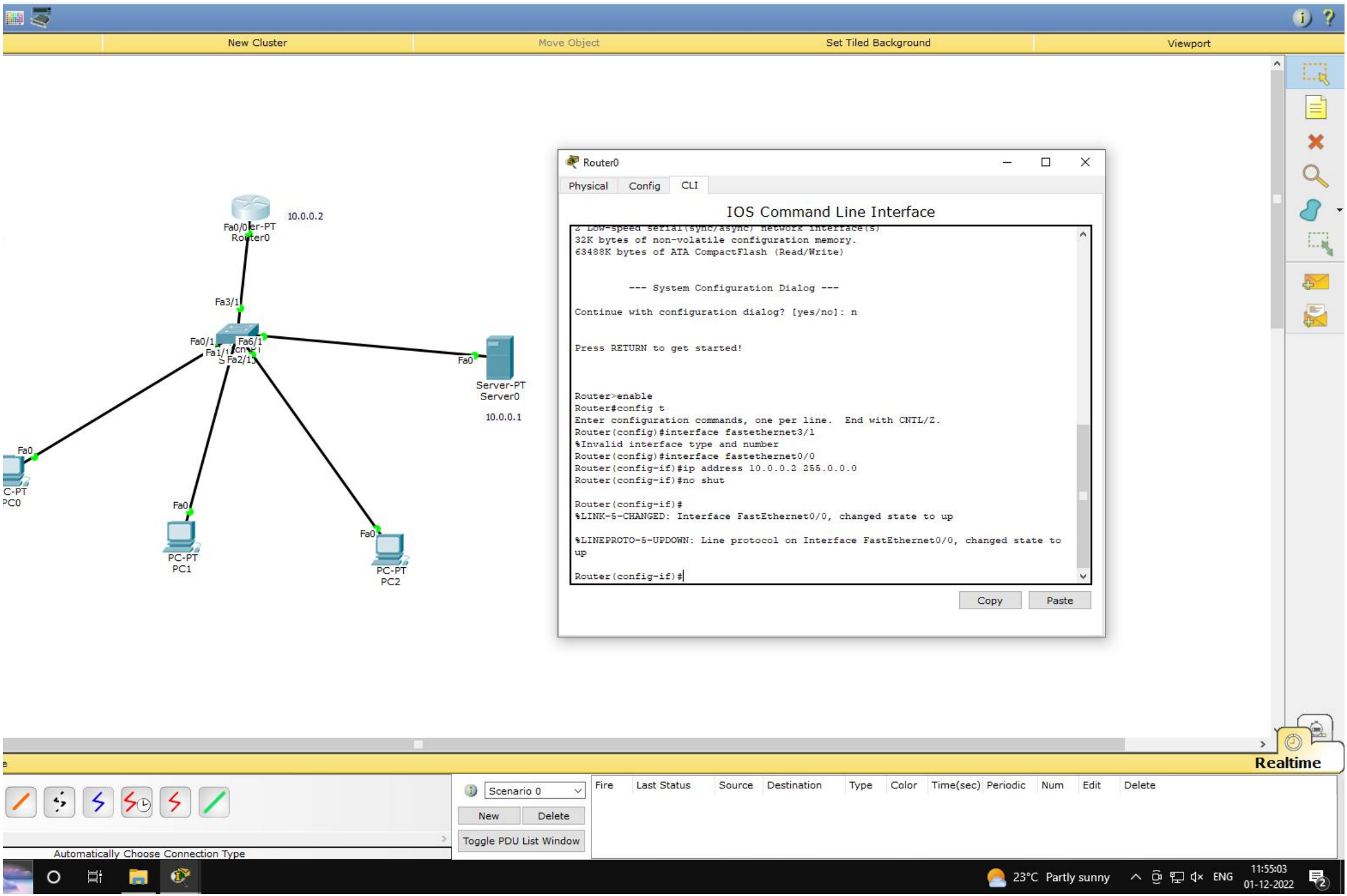
```
enter bucket capacity = 500
enter output rate = 5
enter packet size = 600
packet size exceeded
current bucket content =  0
enter packet size =
```

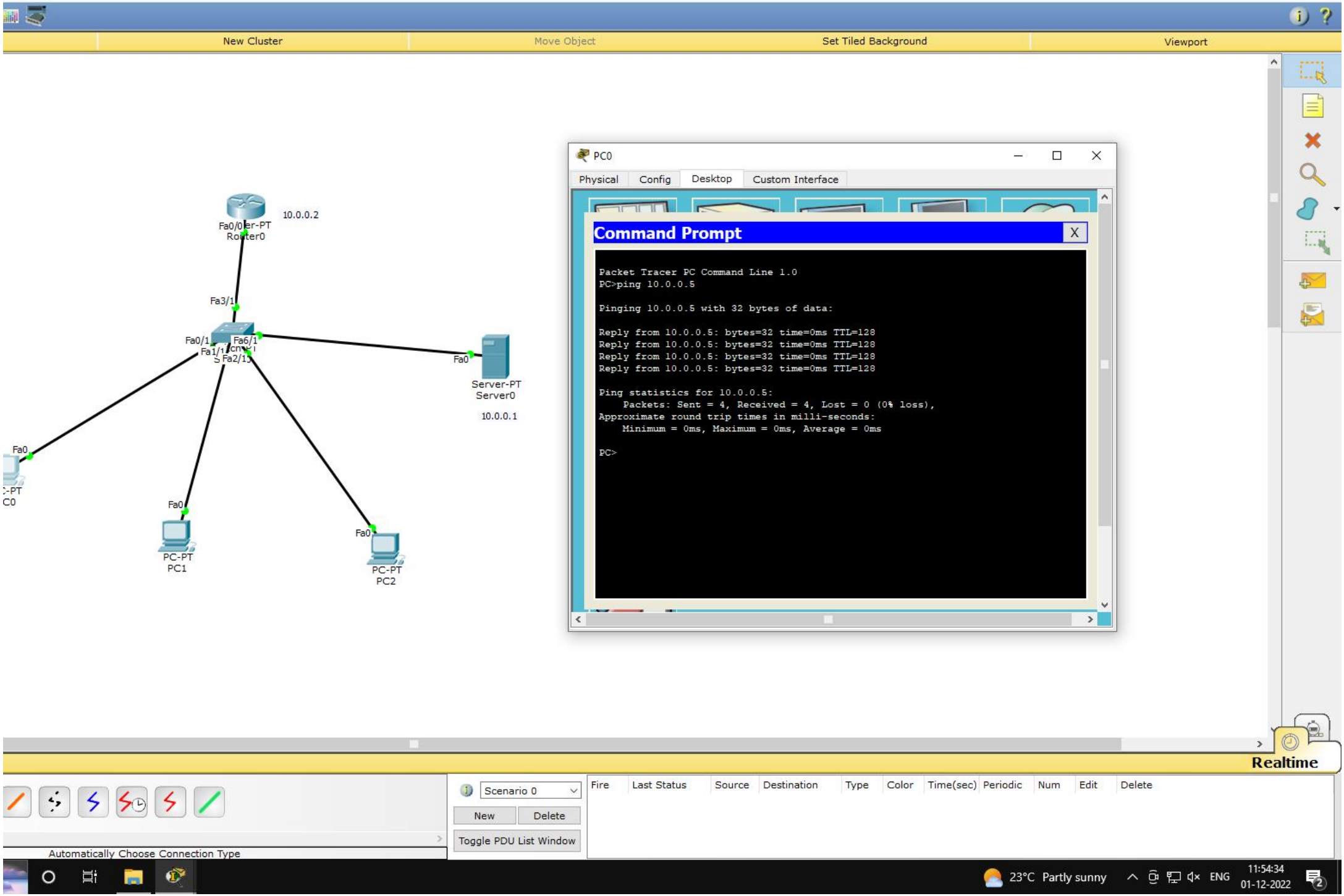
```
Enter the number the routers(<10): 5
Enter 1 if the corresponding router is adjacent to routerA else enter 99:
 B C D E
Enter matrix:1 1 99 99

Enter 1 if the corresponding router is adjacent to routerB else enter 99:
 A C D E
 A B C E
Enter matrix:99 99 1 99

Enter 1 if the corresponding router is adjacent to routerE else enter 99:
 A B C D
Enter matrix:99 99 1 99

Router Table entries for router A:-
Destination Router: A B C D E
Outgoing Line: A B C D E
Hop Count: 0 1 1 99 99

Router Table entries for router B:-
Destination Router: A B C D E
Outgoing Line: A B C D E
Hop Count: 1 0 99 99 99

Router Table entries for router C:-
Destination Router: A B C D E
Outgoing Line: A B C D E
Hop Count: 1 99 0 1 1

Router Table entries for router D:-
Destination Router: A B C D E
Outgoing Line: A B C D E
Hop Count: 99 99 1 0 99

Router Table entries for router E:-
Destination Router: A B C D E
Outgoing Line: A B C D E
Hop Count: 99 99 1 99 0
```

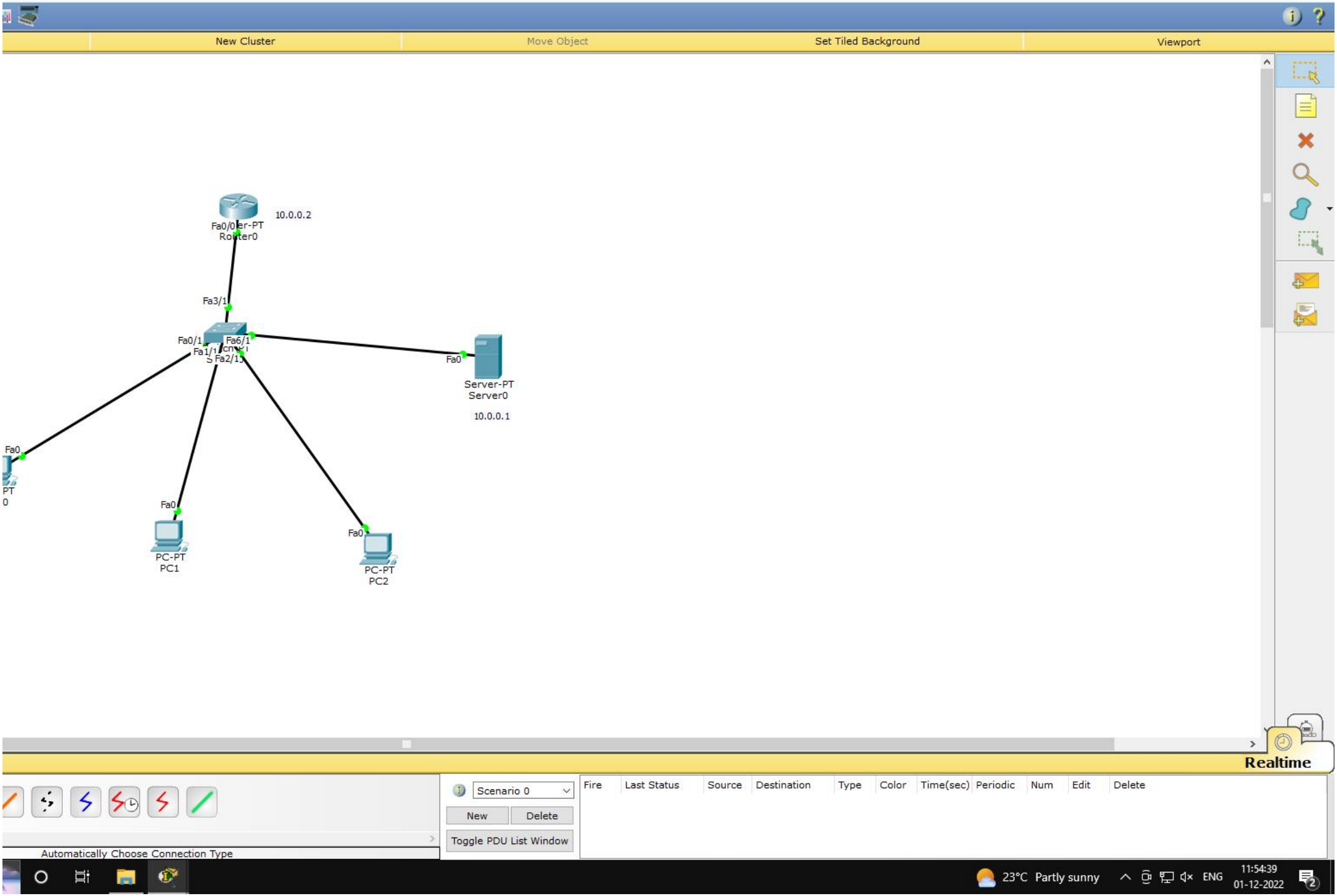

New Cluster
Move Object
Set Tiled Background
Viewport
Fa0/1
Fa1/1
Fa0
Server-PT
Server0
Fa0
PC-PT
PC0
Server0
Physical
Config
Services
Desktop
Custom Interface
SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
SYSLOG
AAA
NTP
EMAIL
FTP
DNS
DNS Service
On
Off
Resource Records
Name
Type
A Record
Address
Add
Save
Remove
No.
Name
Type
Detail
0
cn
A Record
10.0.0.2
DNS Cache
Realtime
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Automatically Choose Connection Type
21°C Cloudy
ENG
11:49:26
15-12-2022


New Cluster
Move Object
Set Tiled Background
Viewport
Fa0/1
Fa1/1
Fa0
Server-PT
Server0
Fa0
PC-PT
PC0
PC0
Physical
Config
Desktop
Custom Interface
Web Browser
X
URL
http://cn
Go
Stop
name
suraj
age
18
college
BMSCE
EXPERIENCE
2 YEARS
Realtime
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Automatically Choose Connection Type
21°C Cloudy
ENG
11:54:30
15-12-2022


New Cluster
Move Object
Set Tiled Background
Viewport
Fa0/1
Fa1/1
Fa0
Server-PT
Server0
Fa0
PC-PT
PC0
PC0
Physical
Config
Desktop
Custom Interface
Web Browser
URL
http://cn/resume.html
Go
Stop
name
suraj
age
18
college
BMSCE
EXPERIENCE
2 YEARS
Realtime
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
utomatically Choose Connection Type
21°C Cloudy
ENG
11:49:12
15-12-2022


New Cluster
Move Object
Set Tiled Background
Viewport
10.0.0.2
Fa0/0
Router0
Fa3/1
Fa0/1
Fa6/1
Fa1/1
Fa2/1
Fa0
Server-PT
Server0
10.0.0.1
Fa0
PC-PT
PC0
Fa0
PC-PT
PC1
Fa0
PC-PT
PC2
Router0
Physical
Config
CLI
IOS Command Line Interface
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)
--- System Configuration Dialog ---
Continue with configuration dialog? [yes/no]: n
Press RETURN to get started!
Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface fastethernet3/1
%Invalid interface type and number
Router(config)#interface fastethernet0/0
Router(config-if)#ip address 10.0.0.2 255.0.0.0
Router(config-if)#no shut
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
Router(config-if)#
Copy
Paste
Realtime
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Automatically Choose Connection Type
23°C Partly sunny
ENG
11:55:03
01-12-2022


New Cluster
Move Object
Set Tiled Background
Viewport
10.0.0.2
Fa0/0
Router0
Fa3/1
Fa0/1
Fa6/1
Fa1/1
Fa2/1
Fa0
Server-PT
Server0
10.0.0.1
Fa0
Fa0
PC-PT
PC1
Fa0
PC-PT
PC2
PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.5
Pinging 10.0.0.5 with 32 bytes of data:
Reply from 10.0.0.5: bytes=32 time=0ms TTL=128
Reply from 10.0.0.5: bytes=32 time=0ms TTL=128
Reply from 10.0.0.5: bytes=32 time=0ms TTL=128
Reply from 10.0.0.5: bytes=32 time=0ms TTL=128
Ping statistics for 10.0.0.5:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PC>
Realtime
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Automatically Choose Connection Type
23°C Partly sunny
ENG
11:54:34
01-12-2022


New Cluster
Move Object
Set Tiled Background
Viewport
10.0.0.2
Fa0/0er-PT
Ro ter0
Fa3/1
Fa0/1
Fa6/1
Fa1/1
S Fa2/1
Fa0
Server-PT
Server0
10.0.0.1
Fa0
PT
0
Fa0
PC-PT
PC1
Fa0
PC-PT
PC2
Realtime
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Automatically Choose Connection Type
23°C Partly sunny
ENG
11:54:39
01-12-2022