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Lab-3

1) Configure IP address to routers in packet t. Explore ping responses, destination unreachable, request timed out.

=)

Step 1:) Connect two Generic PCs with a generic router. Add notes to each devices. Enter the IP address of PC1 → 10.0.0.1 and PC2 → 20.0.0.1. Also give the gateways 10.0.0.2 & 20.0.0.2 respectively.

Step 2:) Ensure all the devices are turned out. Go to the Router and CLI. Enter the following:

↳ no
↳ Router> enable
↳ # config t ↳ interface fa0/0 interface ?
↳ ip address 10.0.0.2 255.0.0.0
↳ No shut
↳ exit

Step 3: Do the same for the second PC. Which can turn the connections 'ON'.

Step 4: Take a simple PDU ~~to~~ from PC1 → PC2. If it comes successful. A simple router-PC transmission is built.

Step 5: Next create the same structure using two different PC's and a generic router.

Step 6: Do the same steps for the second transmission to

Step 7: Connecting ~~with~~ the two diff routers with a third router.

Step 8: Add a simple PDU for each of the routers with their IP address. Once the connection is made between the three routers. We can observe the connections are through serial port. Hence go to the Router1 and click on the server 2/0. Keep the IP address as 50.0.0.1 and for the Router2 as 60.0.0.1

Step 9: Once it is done click on router 3 and set 50.0.0.2 for router 1 & 60.0.0.2 for router 2

Step 10: Repeat the same process as Step 2. Hence making all the connections turn Green.

Step 11: Click on the simple PDV and send a message from PC1 to PC4. It should come failed. Also click on PC1, go to cmd and type ping 40.0.0.1. Record the output produced.

Step 12: Go to Router1 an check for the show ip route and check for the routes

Step 13: Hence we have to connect each PC address to each other PC's

Step 14: Now run the ping messages to check whether the messages were sent from one PC to another PC.

Outputs: Connecting two PCs to Routers.

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

Press RETURN to get started!

Router > enable

Router # config terminal

Router (config) # interface fastEthernet 0/0

Router (config-if) # ip address 10.0.0.2 255.0.0.0

Router (config-if) # no shutdown

Router (config-if) # exit.

Diagram.

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Output 2:

Router(config)# interface Serial 3/0
Router(config-if)#
%SYS-5-config-I: Configured from console by console.
%SYS-5-config-I: Configured from console by console exit.

Router(config)#ip route 30.0.0.0 255.0.0.0 50.0.0.2
Router(config)#ip route 40.0.0.0 255.0.0.0 50.0.0.2
Router(config)#ip route 60.0.0.0 255.0.0.0 50.0.0.2
Router(config)# exit
Router#
%SYS-5-CONFIG_I: Configured from Console by Console

Router# show ip route
Codes: C-connected, S-static, I-IGRP, R-RIP, M-mobile B-BG
D-EIGRP, EX-EIGRP external, O-OSPF, IA-OSPF inter area N1-OSPF NSSA external type 1, N2-OSPF NSSA extern 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 area default, U- per-user static route, O-ODR P-periodic downloaded static route.
Gateway of last resort is not set
C 10.0.0.0/8 is directly connected, FastEthernet 0/0
C 20.0.0.0/8 is directly connected, FastEthernet 1/0
S 30.0.0.0/8 [1/0] via 50.0.0.2
S 40.0.0.0/8 [1/0] via 50.0.0.2
C 50.0.0.0/8 is directly connected, Serial2/0
C 60.0.0.0/8 is directly connected, Serial 3/0

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Output 3:

Packet Tracer PC Command Line 1.0
PC> ping 10.0.0.1
Pinging 10.0.0.1 with 32 bytes of data:

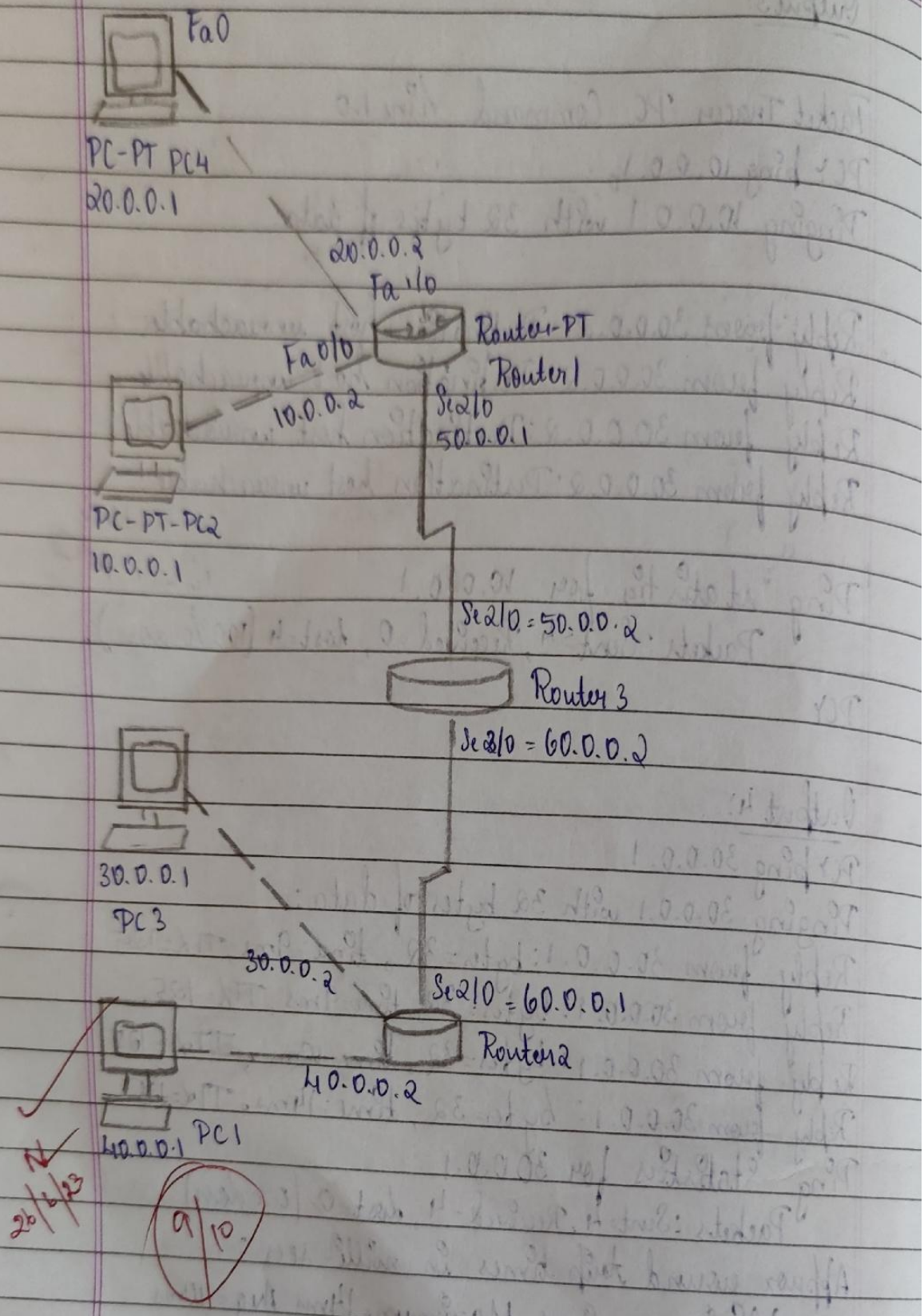
Reply from 30.0.0.2: Destination host unreachable.
Reply from 30.0.0.2: Destination host unreachable.
Reply from 30.0.0.2: Destination host unreachable.
Reply from 30.0.0.2: Destination host unreachable.

Ping statistics for 10.0.0.1
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

PC>

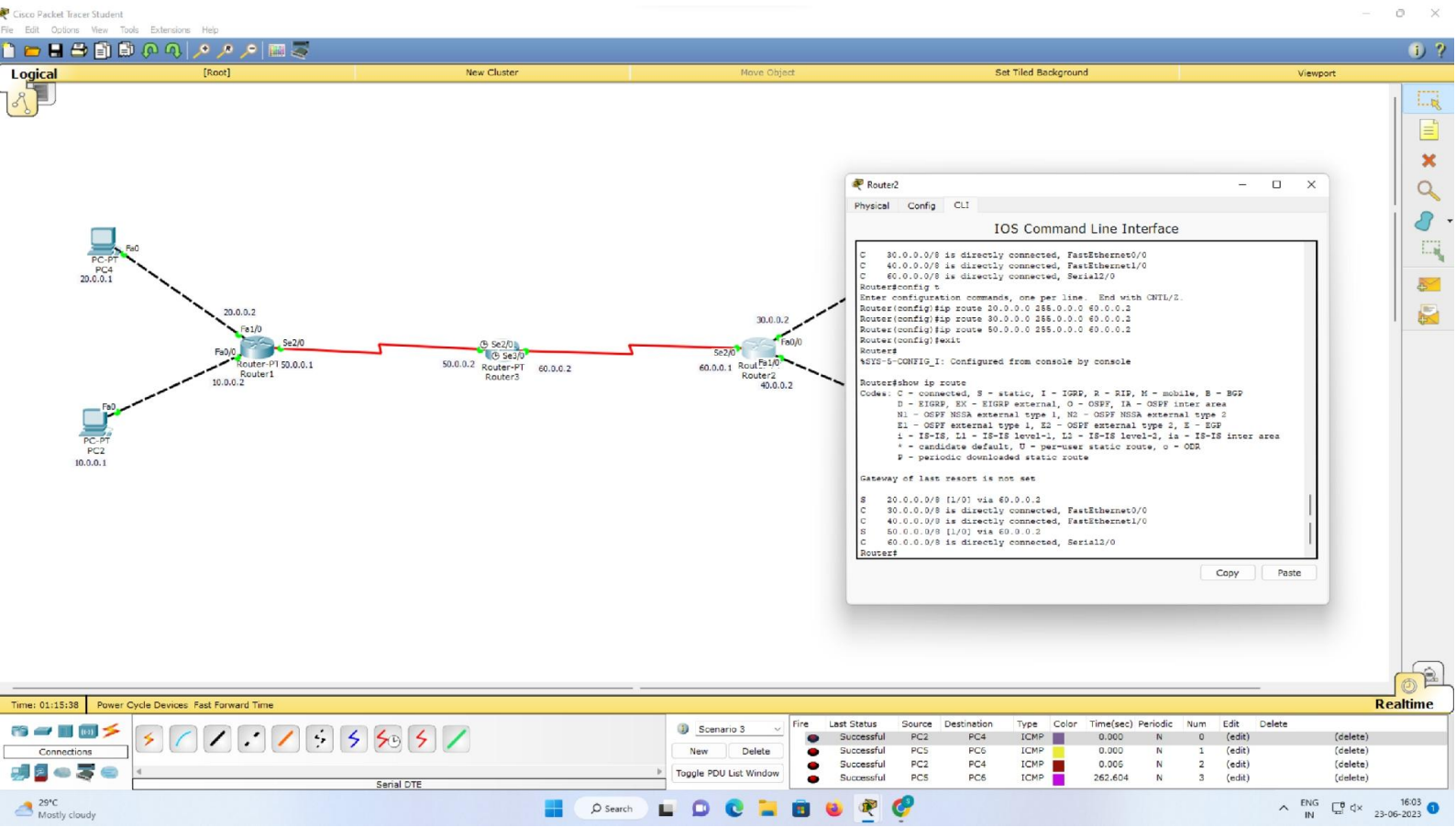
Output 4:

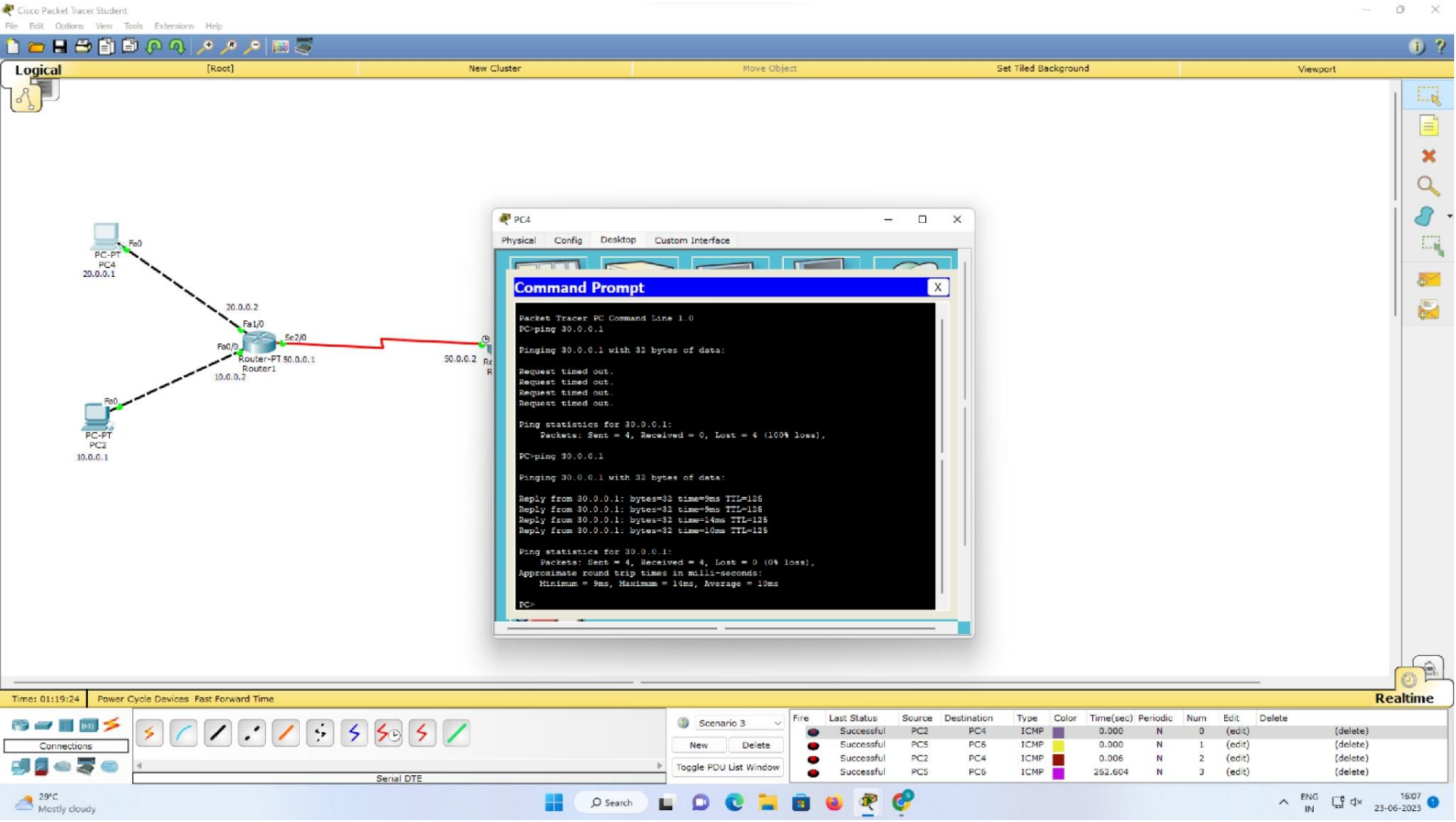
PC> ping 30.0.0.1
Pinging 30.0.0.1 with 32 bytes of data:
Reply from 30.0.0.1: bytes = 32, time = 9ms, TTL = 125
Reply from 30.0.0.1: bytes = 32, time = 9ms, TTL = 125
Reply from 30.0.0.1: bytes = 32, time = 10ms, TTL = 125
Reply from 30.0.0.1: bytes = 32, time = 14ms, TTL = 125
Ping Statistics for 30.0.0.1
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-secs:
Minimum = 9ms, Maximum = 14ms, Avg = 10ms


Fa0
PC-PT PC4
20.0.0.1
20.0.0.2
Fa1/0
Router-PT
Router1
Fa0/0
10.0.0.2
Se2/0
50.0.0.1
PC-PT-PC2
10.0.0.1
Se2/0 = 50.0.0.2
Router 3
Se2/0 = 60.0.0.2
30.0.0.1
PC3
30.0.0.2
Se2/0 = 60.0.0.1
Router2
40.0.0.2
40.0.0.1 PC1

26/6/23

9/10


Cisco Packet Tracer Student
File Edit Options View Tools Extensions Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
PC-PT
PC4
20.0.0.1
Fa0
20.0.0.2
Fa1/0
Fa0/0
Se2/0
Router-PT
Router1
50.0.0.1
10.0.0.2
Fa0
PC-PT
PC2
10.0.0.1
Se2/0
Se3/0
50.0.0.2
Router-PT
Router3
60.0.0.2
30.0.0.2
Fa0/0
Se2/0
60.0.0.1
Fa1/0
Router2
40.0.0.2
Router2
Physical
Config
CLI
IOS Command Line Interface
C 30.0.0.0/8 is directly connected, FastEthernet0/0
C 40.0.0.0/8 is directly connected, FastEthernet1/0
C 60.0.0.0/8 is directly connected, Serial2/0
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 20.0.0.0 255.0.0.0 60.0.0.2
Router(config)#ip route 30.0.0.0 255.0.0.0 60.0.0.2
Router(config)#ip route 50.0.0.0 255.0.0.0 60.0.0.2
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
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 not set
S 20.0.0.0/8 [1/0] via 60.0.0.2
C 30.0.0.0/8 is directly connected, FastEthernet0/0
C 40.0.0.0/8 is directly connected, FastEthernet1/0
S 50.0.0.0/8 [1/0] via 60.0.0.2
C 60.0.0.0/8 is directly connected, Serial2/0
Router#
Copy
Paste
Time: 01:15:38
Power Cycle Devices Fast Forward Time
Realtime
Connections
Serial DTE
Scenario 3
New
Delete
Toggle PDU List Window
Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete
Successful PC2 PC4 ICMP 0.000 N 0 (edit) (delete)
Successful PC5 PC6 ICMP 0.000 N 1 (edit) (delete)
Successful PC2 PC4 ICMP 0.006 N 2 (edit) (delete)
Successful PC5 PC6 ICMP 262.604 N 3 (edit) (delete)
29°C
Mostly cloudy
Search
ENG
IN
16:03
23-06-2023


Cisco Packet Tracer Student
File Edit Options View Tools Extensions Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
PC-PT
PC4
20.0.0.1
Fa0
20.0.0.2
Fa1/0
Fa0/0
Se2/0
Router-PT
Router1
50.0.0.1
10.0.0.2
50.0.0.2
PC-PT
PC2
10.0.0.1
PC4
Physical
Config
Desktop
Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 30.0.0.1
Pinging 30.0.0.1 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 30.0.0.1:
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:
Reply from 30.0.0.1: bytes=32 time=9ms TTL=125
Reply from 30.0.0.1: bytes=32 time=9ms TTL=125
Reply from 30.0.0.1: bytes=32 time=14ms TTL=125
Reply from 30.0.0.1: bytes=32 time=10ms TTL=125
Ping statistics for 30.0.0.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 9ms, Maximum = 14ms, Average = 10ms
PC>
Time: 01:19:24
Power Cycle Devices Fast Forward Time
Realtime
Connections
Serial DTE
Scenario 3
New
Delete
Toggle PDU List Window
Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete
Successful PC2 PC4 ICMP 0.000 N 0 (edit) (delete)
Successful PC5 PC6 ICMP 0.000 N 1 (edit) (delete)
Successful PC2 PC4 ICMP 0.006 N 2 (edit) (delete)
Successful PC5 PC6 ICMP 262.604 N 3 (edit) (delete)
29°C
Mostly cloudy
Search
ENG
IN
16:07
23-06-2023