19ECE311: Computer Networks

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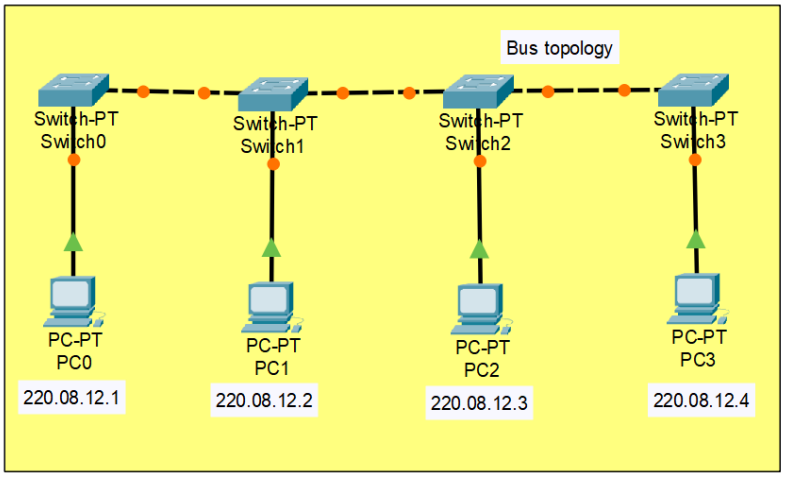
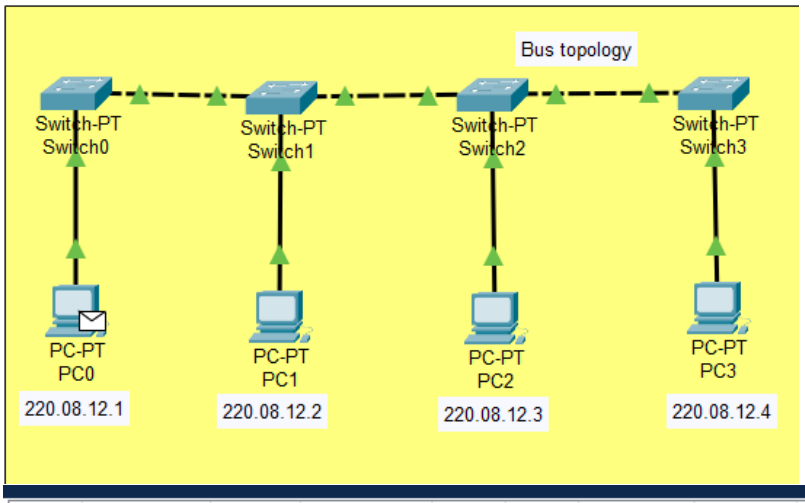
ASSIGNMENT

Q) Create all the topologies discussed in class in Cisco Packet Tracer (CPT).

Tree topology

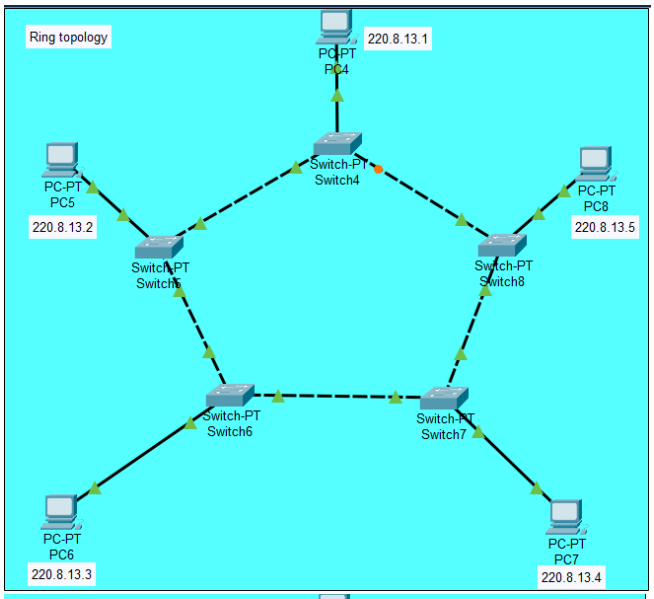


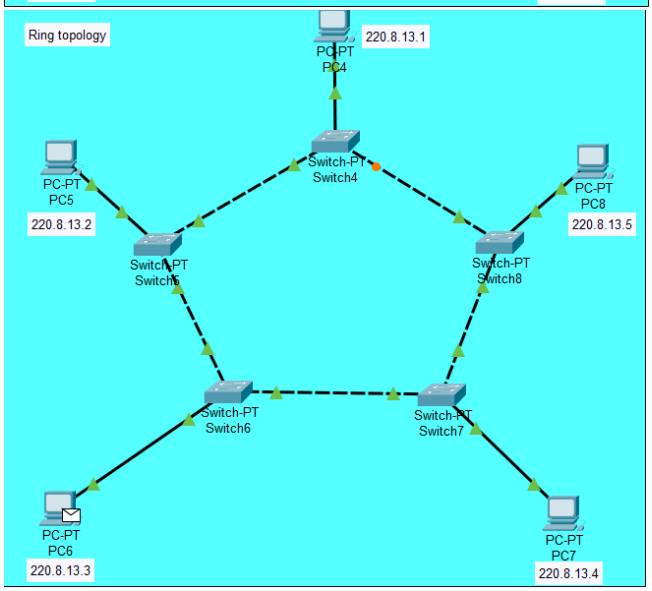


Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC1	PC2	ICMP		0.000	N	0	(edit)	(delete)
	Successful	PC0	PC1	ICMP		0.000	N	1	(edit)	(delete)


```
C:\>ping 220.08.12.1

Pinging 220.08.12.1 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 220.8.12.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>
```

Ring topology

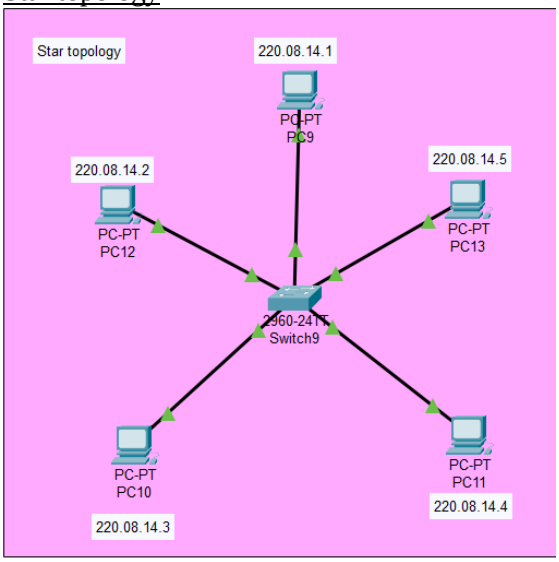


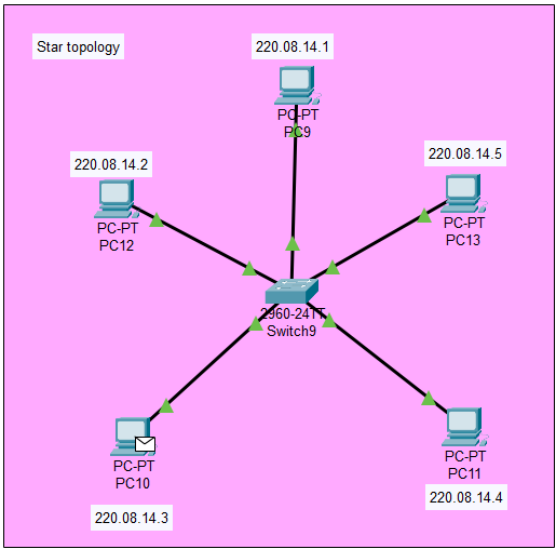


Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC6	PC7	ICMP		0.000	N	0	(edit)	(delete)


```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 220.08.13.2

Pinging 220.08.13.2 with 32 bytes of data:

Reply from 220.8.13.2: bytes=32 time<1ms TTL=128
Reply from 220.8.13.2: bytes=32 time<1ms TTL=128
Reply from 220.8.13.2: bytes=32 time=1ms TTL=128
Reply from 220.8.13.2: bytes=32 time=1ms TTL=128

Ping statistics for 220.8.13.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

Star topology



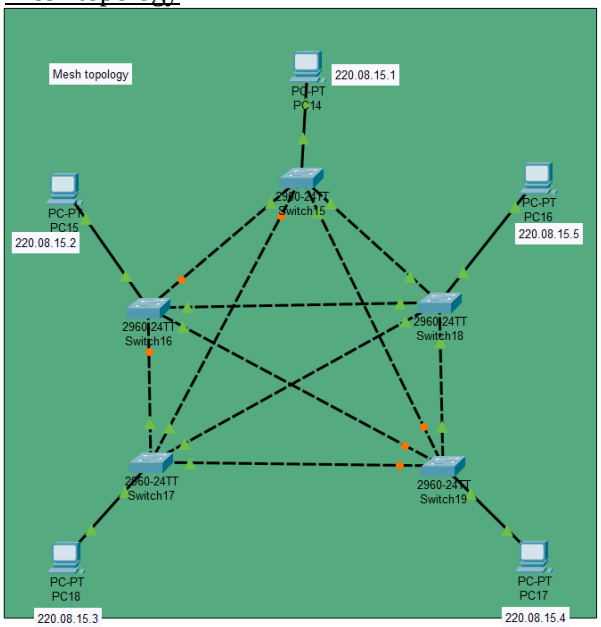


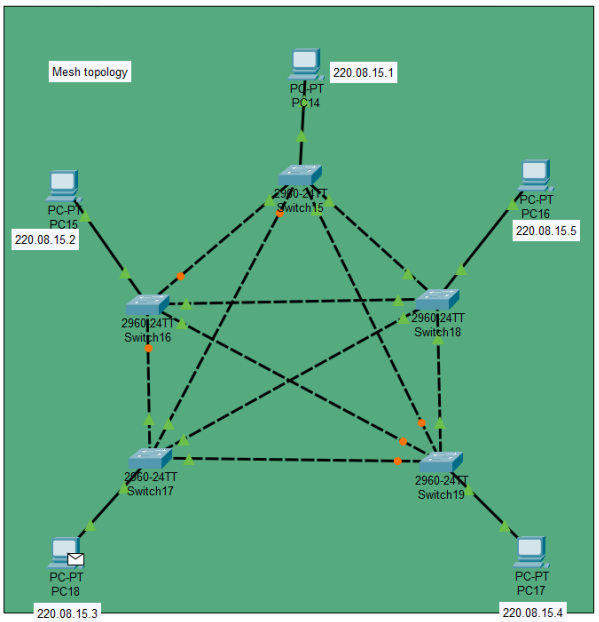
Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC10	PC11	ICMP		0.000	N	0	(edit)	(delete)

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 220.08.14.3

Pinging 220.08.14.3 with 32 bytes of data:

Reply from 220.8.14.3: bytes=32 time=7ms TTL=128
Reply from 220.8.14.3: bytes=32 time<1ms TTL=128
Reply from 220.8.14.3: bytes=32 time=5ms TTL=128
Reply from 220.8.14.3: bytes=32 time<1ms TTL=128

Ping statistics for 220.8.14.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 7ms, Average = 3ms

C:\>
```

Mesh topology



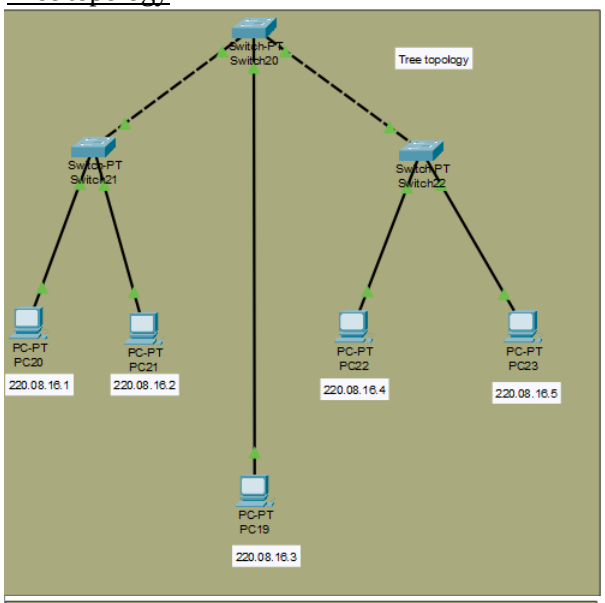


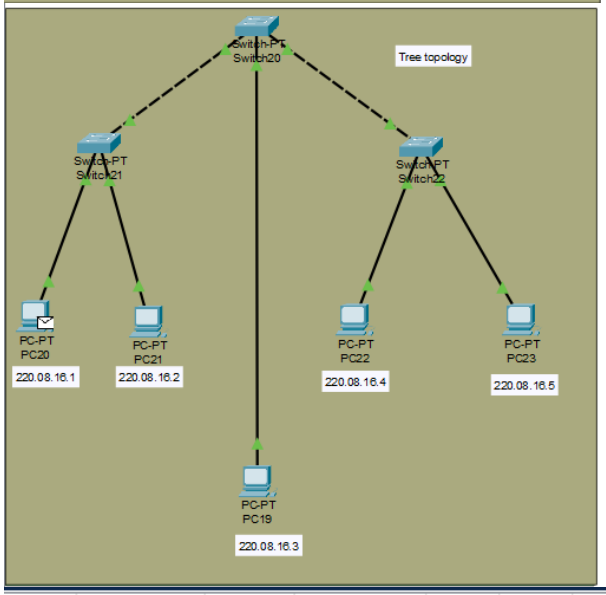
Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC18	PC17	ICMP		0.000	N	0	(edit)	(delete)

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 220.08.15.1

Pinging 220.08.15.1 with 32 bytes of data:

Reply from 220.8.15.1: bytes=32 time<1ms TTL=128
Reply from 220.8.15.1: bytes=32 time<1ms TTL=128
Reply from 220.8.15.1: bytes=32 time<1ms TTL=128
Reply from 220.8.15.1: bytes=32 time<1ms TTL=128

Ping statistics for 220.8.15.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Tree topology





Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC20	PC23	ICMP		0.000	N	0	(edit)	(delete)

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 220.08.16.3

Pinging 220.08.16.3 with 32 bytes of data:

Reply from 220.8.16.3: bytes=32 time<1ms TTL=128
Reply from 220.8.16.3: bytes=32 time<1ms TTL=128
Reply from 220.8.16.3: bytes=32 time<1ms TTL=128
Reply from 220.8.16.3: bytes=32 time<1ms TTL=128

Ping statistics for 220.8.16.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Name: ANAND MAHADEVAN

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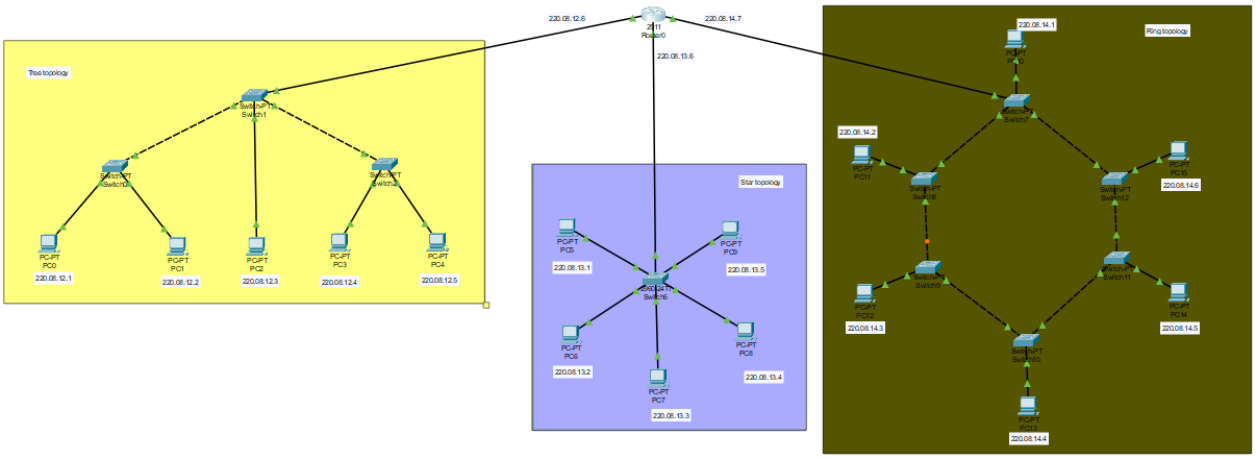
ASSIGNMENT

Q) Create 3 LAN networks connected via a single Router (CPT). Choose appropriate router, connection and configure it. Each LAN network is configured via Tree, Star and Ring topologies respectively.

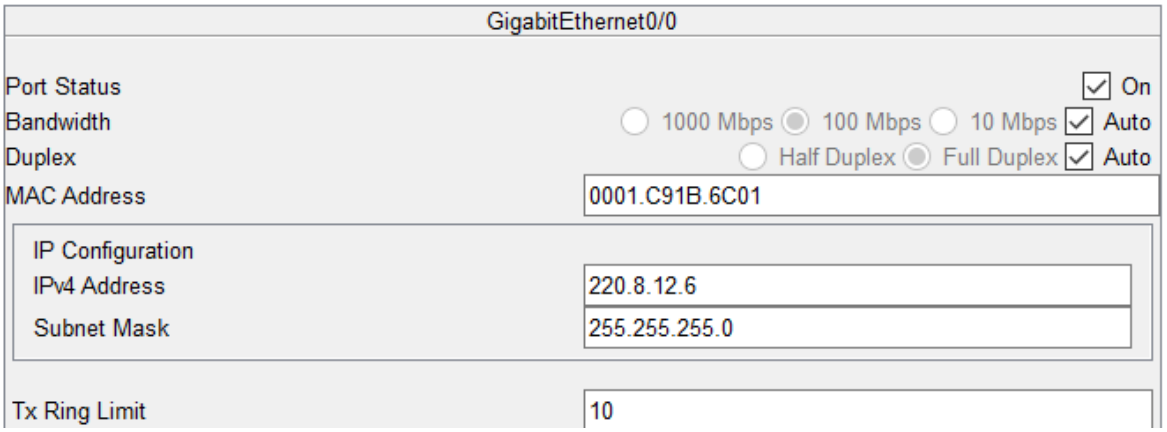


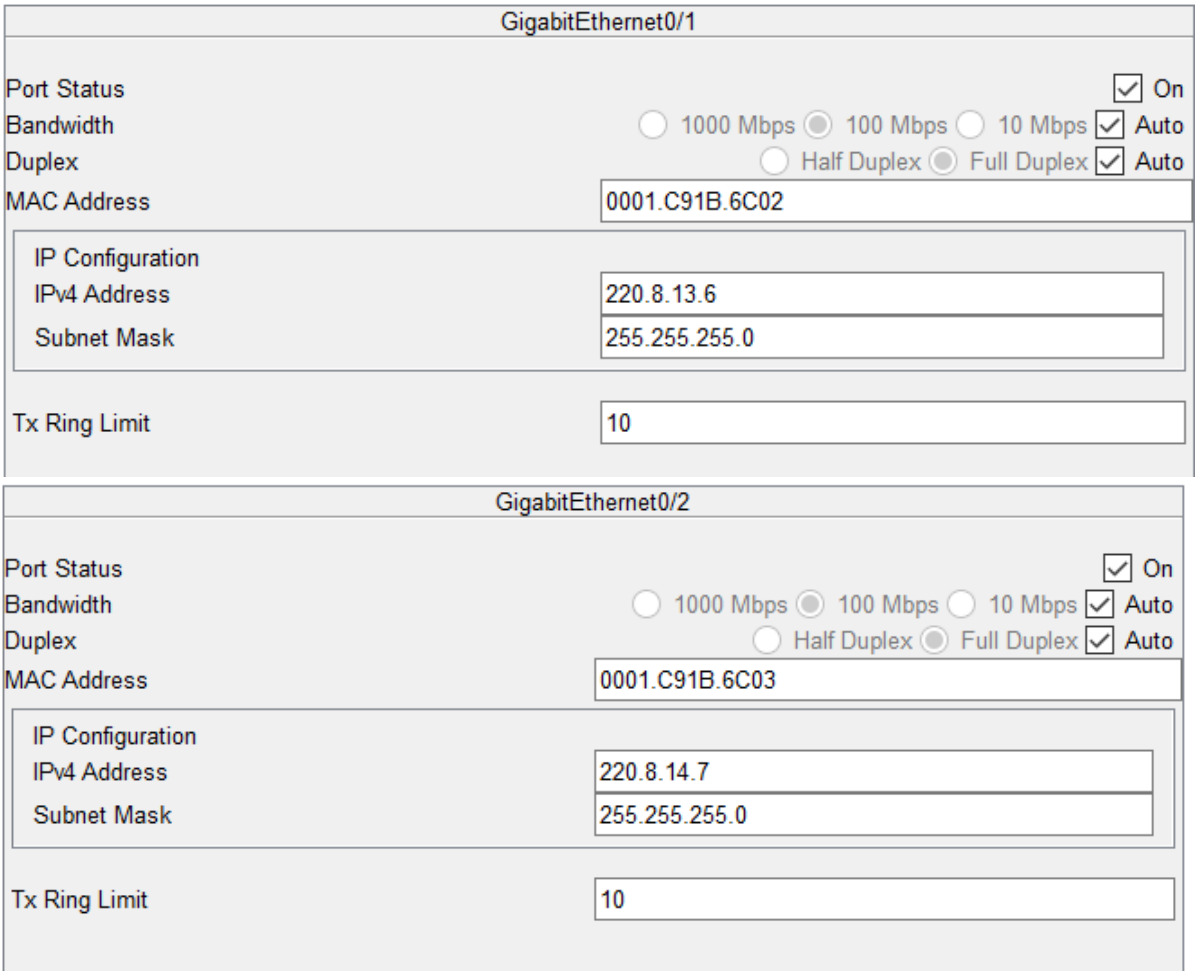
LAN1 (Tree topology) : IP Addresses – 220.08.12.1 - 220.08.12.5

LAN2 (Star topology) : IP Addresses – 220.08.13.1 - 220.08.13.5

LAN3 (Ring topology) : IP Addresses – 220.08.14.1 - 220.08.14.6

Router Configuration:





GigabitEthernet0/0 → Connected to LAN1 (Tree Topology)

GigabitEthernet0/1 → Connected to LAN2 (Star Topology)

GigabitEthernet0/2 → Connected to LAN3 (Ring Topology)

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC3	PC5	ICMP		0.000	N	0	(edit)	(delete)
	Successful	PC0	PC12	ICMP		0.000	N	1	(edit)	(delete)

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 220.08.14.2

Pinging 220.08.14.2 with 32 bytes of data:

Request timed out.
Reply from 220.8.14.2: bytes=32 time<1ms TTL=127
Reply from 220.8.14.2: bytes=32 time=1ms TTL=127
Reply from 220.8.14.2: bytes=32 time=1ms TTL=127

Ping statistics for 220.8.14.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 220.08.13.2

Pinging 220.08.13.2 with 32 bytes of data:

Reply from 220.8.13.2: bytes=32 time<1ms TTL=127
Reply from 220.8.13.2: bytes=32 time<1ms TTL=127
Reply from 220.8.13.2: bytes=32 time<1ms TTL=127
Reply from 220.8.13.2: bytes=32 time=1ms TTL=127

Ping statistics for 220.8.13.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```