

Task 2

Initial IP address: 192.168.1.0/24

Subnet C → No. of hosts = 60 || $2^n - 2 = 60$ | $n = 6$

Next Hop = 64

New subnet (binary) = 1111 1111.1111 1111.1111 1111.1100 0000

New subnet (decimal) = 255.255.255.192 or / 26

Network IP = 192.168.1.0

Host Range = 192.168.1.1 - 192.168.1.62

Broadcast IP = 192.168.1.63

Subnet B → No. of hosts = 30 || $2^n - 2 = 30$ | $n = 5$

Next Hop = 32

New subnet (binary) = 1111 1111.1111 1111.1111 1111.1110 0000

New subnet (decimal) = 255.255.255.224 or / 27

Network IP = 192.168.1.64

Host Range = 192.168.1.65 - 192.168.1.94

Broadcast IP = 192.168.1.95

Subnet A → No. of hosts = 14 || $2^n - 2 = 14$ | $n = 4$

Next Hop = 16

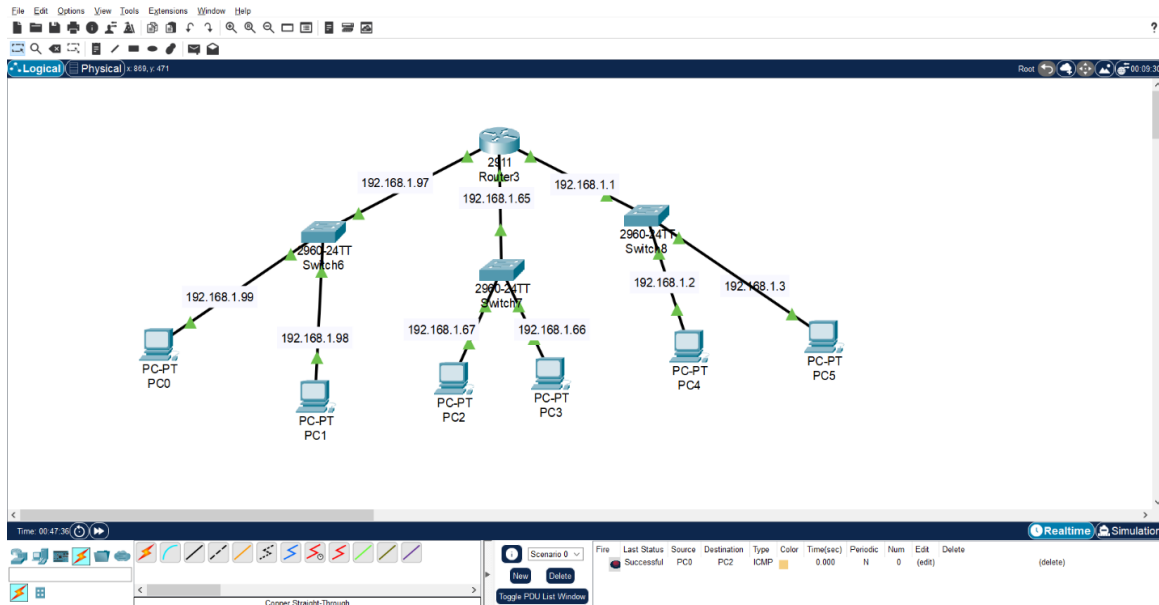
New subnet (binary) = 1111 1111.1111 1111.1111 1111.1111 0000

New subnet (decimal) = 255.255.255. 240 or / 28

Network IP = 192.168.1.96

Host Range = 192.168.1.97 - 192.168.1.110

Broadcast IP = 192.168.1.111



Interfaces Configurations

G0/0:

```
Router#
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int
Router(config)#interface g0/0
Router(config-if)#IP ad
Router(config-if)#IP address 192.168.1.97 255.255.255.240
Router(config-if)#no shutd
Router(config-if)#no shutdown
```

G0/1:

```
Router(config)#in
Router(config)#interface g0/1
Router(config-if)#IP ad
Router(config-if)#IP address 192.168.1.65 255.255.255.224
Router(config-if)#no sh
Router(config-if)#no shutdown
```

G0/2:

```
Router(config)#inter
Router(config)#interface g0/2
Router(config-if)#ip add
Router(config-if)#ip address 192.168.1.1 255.255.255.192
Router(config-if)#no shyt
Router(config-if)#no shut
Router(config-if)#no shutdown
```

Ping from PC0 to all other PCs

Physical Config Desktop Programming Attributes

Command Prompt

```
C:\>
C:\>
C:\>ping 192.168.1.98

Pinging 192.168.1.98 with 32 bytes of data:

Reply from 192.168.1.98: bytes=32 time<1ms TTL=128
Reply from 192.168.1.98: bytes=32 time<1ms TTL=128
Reply from 192.168.1.98: bytes=32 time<1ms TTL=128
Reply from 192.168.1.98: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.98:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.1.67

Pinging 192.168.1.67 with 32 bytes of data:

Reply from 192.168.1.67: bytes=32 time<1ms TTL=127
Reply from 192.168.1.67: bytes=32 time<1ms TTL=127
Reply from 192.168.1.67: bytes=32 time<1ms TTL=127
Reply from 192.168.1.67: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.1.67:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.1.66

Pinging 192.168.1.66 with 32 bytes of data:

Reply from 192.168.1.66: bytes=32 time<1ms TTL=127
Reply from 192.168.1.66: bytes=32 time<1ms TTL=127
Reply from 192.168.1.66: bytes=32 time<1ms TTL=127
Reply from 192.168.1.66: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.1.66:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time<1ms TTL=127
Reply from 192.168.1.2: bytes=32 time<1ms TTL=127
Reply from 192.168.1.2: bytes=32 time<1ms TTL=127
Reply from 192.168.1.2: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.1.2:
```

☐ Top

```
C:\>ping 192.168.1.3
```

```
Pinging 192.168.1.3 with 32 bytes of data:
```

```
Reply from 192.168.1.3: bytes=32 time<1ms TTL=127
Reply from 192.168.1.3: bytes=32 time<1ms TTL=127
Reply from 192.168.1.3: bytes=32 time<1ms TTL=127
Reply from 192.168.1.3: bytes=32 time<1ms TTL=127
```

```
Ping statistics for 192.168.1.3:
```

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

```
C:\>
```