

# Subnet design

There is more than one correct solution - any solution that satisfies the requirements above is acceptable! Once you have made your design decisions, complete the following table:

LAN	Subnet Mask	Network Address	Smallest Address	Highest Address	Broadcast Address
LAN A ≥ 21	255.255.255.224 100%	10.1.49.64 100%	10.1.49.65 100%	10.1.49.94 100%	10.1.49.95 100%
LAN B ≥ 9	255.255.255.240 100%	10.1.49.96 100%	10.1.49.97 100%	10.1.49.110 100%	10.1.49.111 100%
LAN C ≥ 56	255.255.255.192 100%	10.1.49.0 100%	10.1.49.1 100%	10.1.49.62 100%	10.1.49.63 100%

## Configure LAN interface on each router

On **router-a**:

```
sudo ifconfig ethx 10.1.49.65 100% netmask 255.255.255.224 100%
```

On **router-b**:

```
sudo ifconfig ethx 10.1.49.97 100% netmask 255.255.255.240 100%
```

On **router-c**:

```
sudo ifconfig ethx 10.1.49.1 100% netmask 255.255.255.192 100%
```

## Configure LAN interface on each host

On **romeo**:

```
sudo ifconfig eth1 10.1.49.94 100% netmask 255.255.255.224 100%
```

On **juliet**:

```
sudo ifconfig eth1 10.1.49.93 100% netmask 255.255.255.224 100%
```

On **hamlet**:

```
sudo ifconfig eth1 10.1.49.110 100% netmask 255.255.255.240 100%
```

On **ophelia**:

```
sudo ifconfig eth1 10.1.49.109 100% netmask 255.255.255.240 100%
```

On **othello**:

```
sudo ifconfig eth1 10.1.49.62 100% netmask 255.255.255.192 100%
```

On **desdemona**:

```
sudo ifconfig eth1 10.1.49.61 100% netmask 255.255.255.192 100%
```

# Configure routes on each router

On **router-a**, add a route to LAN B:

```
sudo ip route add 10.1.49.96 100%/28 100% via 10.1.10.2 100%
```

On **router-a**, add a route to LAN C:

```
sudo ip route add 10.1.49.0 100%/26 100% via 10.1.10.3 100%
```

On **router-b**, add a route to LAN A:

```
sudo ip route add 10.1.49.64 100%/27 100% via 10.1.10.1 100%
```

On **router-b**, add a route to LAN C:

```
sudo ip route add 10.1.49.0 100%/26 100% via 10.1.10.3 100%
```

On **router-c**, add a route to LAN A:

```
sudo ip route add 10.1.49.64 100%/27 100% via 10.1.10.1 100%
```

On **router-c**, add a route to LAN B:

```
sudo ip route add 10.1.49.96 100%/28 100% via 10.1.10.2 100%
```

# Configure routes on each host

On **romeo**:

```
sudo ip route add 10.1.49.0 100%/25 100% via 10.1.49.65 100%
```

On **juliet**:

```
sudo ip route add 10.1.49.0 100%/25 100% via 10.1.49.65 100%
```

On **hamlet**:

```
sudo ip route add 10.1.49.0 100%/25 100% via 10.1.49.97 100%
```

On **ophelia**:

```
sudo ip route add 10.1.49.0 100%/25 100% via 10.1.49.97 100%
```

On **othello**:

```
sudo ip route add 10.1.49.0 100%/25 100% via 10.1.49.1 100%
```

On **desdemona**:

```
sudo ip route add 10.1.49.0 100%/25 100% via 10.1.49.1 100%
```

Submitted answer 65

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97%



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94%



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