

Part 1:

Config:

r11

```
ifconfig eth0 203.50.60.129 netmask 255.255.255.224
ifconfig eth1 203.50.60.65 netmask 255.255.255.224
ifconfig eth2 195.85.10.50
route add -net 203.50.60.128
route add -net 203.50.60.64
route add -net 195.85.10.0
route add -net 189.89.0.0 netmask 255.255.0.0 gw 203.50.60.66
route add default gw 195.85.10.51
```

r12

```
ifconfig eth0 203.50.60.66 netmask 255.255.255.224
route add -net 203.50.60.64
route add default gw 203.50.60.65
```

r12

```
ifconfig eth1 189.89.0.1 netmask 255.255.255.248
route add -net 189.89.0.0
route add -net 189.89.0.8 netmask 255.255.255.248 gw 189.89.0.3
route add -net 189.89.0.16 netmask 255.255.255.248 gw 189.89.0.3
route add -net 189.89.0.24 netmask 255.255.255.248 gw 189.89.0.2
route add -net 189.89.0.32 netmask 255.255.255.248 gw 189.89.0.2
```

r13

```
ifconfig eth0 189.89.0.3 netmask 255.255.255.248
ifconfig eth1 189.89.0.9 netmask 255.255.255.248
ifconfig eth2 189.89.0.17 netmask 255.255.255.248
route add -net 189.89.0.0
route add -net 189.89.0.8
route add -net 189.89.0.16
route add -net 189.89.0.24 netmask 255.255.255.248 gw 189.89.0.2
route add -net 189.89.0.32 netmask 255.255.255.248 gw 189.89.0.2
route add default gw 189.89.0.1
```

r14

```
ifconfig eth0 189.89.0.2 netmask 255.255.255.248
ifconfig eth1 189.89.0.25 netmask 255.255.255.248
ifconfig eth2 189.89.0.33 netmask 255.255.255.248
route add -net 189.89.0.0
route add -net 189.89.0.24
route add -net 189.89.0.32
```

```
route add -net 189.89.0.8 netmask 255.255.255.248 gw 189.89.0.3  
route add -net 189.89.0.16 netmask 255.255.255.248 gw 189.89.0.3  
route add default gw 189.89.0.1
```

```
internet  
ifconfig eth0 195.85.10.51  
route add -net 195.85.10.0  
route add -net 203.50.60.128 netmask 255.255.255.224 gw 195.85.10.50  
route add -net 203.50.60.64 netmask 255.255.255.224 gw 195.85.10.50  
route add -net 189.89.0.0 netmask 255.255.0.0 gw 195.85.10.50
```

Part 2:

Config:

n0

```
ifconfig eth0 203.50.60.130 netmask 255.255.255.224  
route add -net 203.50.60.128  
route add default gw 203.50.60.129
```

n1

```
ifconfig eth0 203.50.60.131 netmask 255.255.255.224  
route add -net 203.50.60.128  
route add default gw 203.50.60.129
```

n2

```
ifconfig eth0 203.50.60.70 netmask 255.255.255.224  
route add -net 203.50.60.64  
route add default gw 203.50.60.65
```

n3

```
ifconfig eth0 189.89.0.34 netmask 255.255.255.248  
route add -net 189.89.0.32  
route add default gw 189.89.0.33
```

n4

```
ifconfig eth0 189.89.0.35 netmask 255.255.255.248  
route add -net 189.89.0.32  
route add default gw 189.89.0.33
```

n5

```
ifconfig eth0 189.89.0.26 netmask 255.255.255.248  
route add -net 189.89.0.24
```

```
route add default gw 189.89.0.25
```

n6

```
ifconfig eth0 189.89.0.27 netmask 255.255.255.248
```

```
route add -net 189.89.0.24
```

```
route add default gw 189.89.0.25
```

n7

```
ifconfig eth0 189.89.0.10 netmask 255.255.255.248
```

```
route add -net 189.89.0.8
```

```
route add default gw 189.89.0.9
```

n8

```
ifconfig eth0 189.89.0.11 netmask 255.255.255.248
```

```
route add -net 189.89.0.8
```

```
route add default gw 189.89.0.9
```

n9

```
ifconfig eth0 189.89.0.18 netmask 255.255.255.248
```

```
route add -net 189.89.0.16
```

```
route add default gw 189.89.0.17
```

n10

```
ifconfig eth0 189.89.0.19 netmask 255.255.255.248
```

```
route add -net 189.89.0.16
```

```
route add default gw 189.89.0.17
```

r15

```
ifconfig eth0 189.89.0.36 netmask 255.255.255.224
```

```
ifconfig eth1 189.89.0.65 netmask 255.255.255.224
```

```
route add -net 189.89.0.32
```

```
route add -net 189.89.0.64
```

```
route add default gw 189.89.0.33
```

n11

```
ifconfig eth0 189.89.0.66 netmask 255.255.255.224
```

```
route add -net 189.89.0.64
```

```
route add default gw 189.89.0.65
```

n12

```
ifconfig eth0 189.89.0.67 netmask 255.255.255.224
```

```
route add -net 189.89.0.64
```

```
route add default gw 189.89.0.65
```

r11
ifconfig eth0 203.50.60.129 netmask 255.255.255.224
ifconfig eth1 203.50.60.65 netmask 255.255.255.224
ifconfig eth2 195.85.10.50
route add -net 203.50.60.128
route add -net 203.50.60.64
route add -net 195.85.10.0
route add -net 189.89.0.0 netmask 255.255.0.0 gw 203.50.60.66
route add default gw 195.85.10.51

r12
ifconfig eth0 203.50.60.66 netmask 255.255.255.224
ifconfig eth1 189.89.0.1 netmask 255.255.255.248
route add -net 189.89.0.0
route add -net 189.89.0.8 netmask 255.255.255.248 gw 189.89.0.3
route add -net 189.89.0.16 netmask 255.255.255.248 gw 189.89.0.3
route add -net 189.89.0.24 netmask 255.255.255.248 gw 189.89.0.2
route add -net 189.89.0.32 netmask 255.255.255.248 gw 189.89.0.2
route add -net 203.50.60.64
route add default gw 203.50.60.65

r13
ifconfig eth0 189.89.0.3 netmask 255.255.255.248
ifconfig eth1 189.89.0.9 netmask 255.255.255.248
ifconfig eth2 189.89.0.17 netmask 255.255.255.248
route add -net 189.89.0.0
route add -net 189.89.0.8
route add -net 189.89.0.16
route add -net 189.89.0.24 netmask 255.255.255.248 gw 189.89.0.2
route add -net 189.89.0.32 netmask 255.255.255.248 gw 189.89.0.2
route add default gw 189.89.0.1

r14
ifconfig eth0 189.89.0.2 netmask 255.255.255.248
ifconfig eth1 189.89.0.25 netmask 255.255.255.248
ifconfig eth2 189.89.0.33 netmask 255.255.255.224
route add -net 189.89.0.0
route add -net 189.89.0.24
route add -net 189.89.0.32
route add -net 189.89.0.8 netmask 255.255.255.248 gw 189.89.0.3
route add -net 189.89.0.16 netmask 255.255.255.248 gw 189.89.0.3
route add -net 189.89.0.32 netmask 255.255.255.224 gw 189.89.0.36
route add -net 189.89.0.64 netmask 255.255.255.224

```
route add default gw 189.89.0.1
```

```
internet
ifconfig eth0 195.85.10.51
route add -net 195.85.10.0
route add -net 203.50.60.128 netmask 255.255.255.224 gw 195.85.10.50
route add -net 203.50.60.64 netmask 255.255.255.224 gw 195.85.10.50
route add -net 189.89.0.0 netmask 255.255.0.0 gw 195.85.10.50
```

Topology:

```
install n0 bus0 eth0
install n1 bus0 eth0
install n2 bus1 eth0
install n3 bus7 eth0
install n4 bus7 eth0
install n5 bus8 eth0
install n6 bus8 eth0
install n7 bus5 eth0
install n8 bus5 eth0
install n9 bus6 eth0
install n10 bus6 eth0
install n11 bus9 eth0
install n12 bus9 eth0
install r11 bus0 eth0
install r11 bus1 eth1
install r11 bus3 eth2
install r12 bus1 eth0
install r12 bus4 eth1
install r13 bus4 eth0
install r13 bus5 eth1
install r13 bus6 eth2
install r14 bus4 eth0
install r14 bus7 eth1
install r14 bus8 eth2
install r15 bus8 eth0
install r15 bus9 eth1
install internet bus3 eth0
```