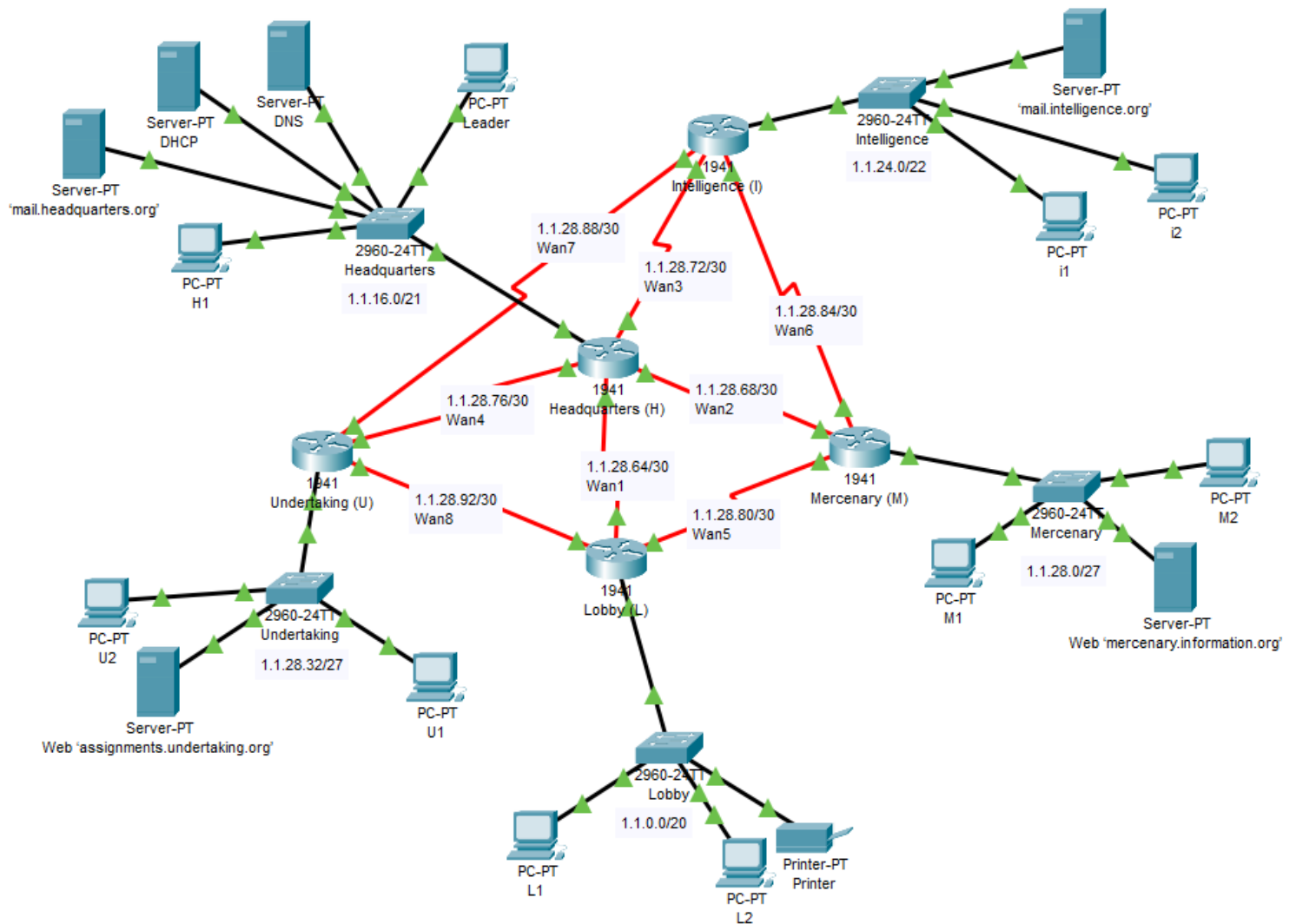
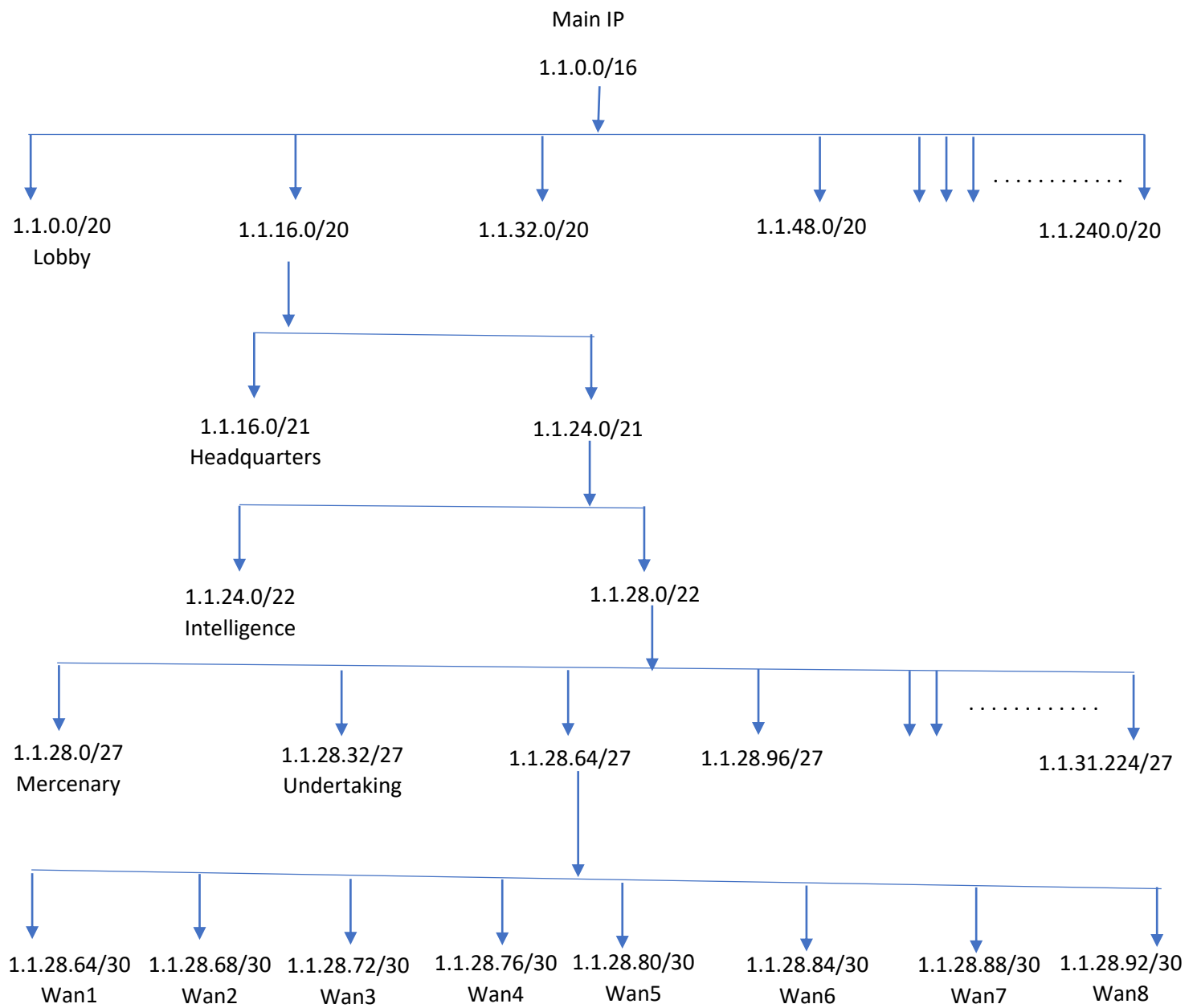


Network topology diagram:



VLSM tree:



Router configuration commands:

Headquarters (H) :

```
enable
configure terminal
hostname H
enable secret head
service password-encryption
access-list 1 permit host 1.1.16.5 0.0.0.0
access-list 1 deny any
line vty 0 4
access-class 1 in
password leader
login
transport input telnet
exit
interface GigabitEthernet0/1
ip address 1.1.16.1 255.255.248.0
no shutdown
exit
interface Serial0/0/0
ip address 1.1.28.65 255.255.255.252
no shutdown
exit
interface Serial0/0/1
ip address 1.1.28.69 255.255.255.252
no shutdown
exit
interface Serial0/1/0
ip address 1.1.28.73 255.255.255.252
no shutdown
exit
interface Serial0/1/1
ip address 1.1.28.77 255.255.255.252
no shutdown
exit
router rip
version 2
network 1.1.28.64
network 1.1.28.68
network 1.1.28.72
network 1.1.28.76
passive-interface GigabitEthernet0/1
no auto-summary
exit
ip route 1.1.0.0 255.255.240.0 Serial0/0/0
ip route 1.1.24.0 255.255.252.0 Serial0/1/0
ip route 1.1.28.0 255.255.255.224 Serial0/0/1
ip route 1.1.28.32 255.255.255.224 Serial0/1/1
end
copy run start
```

Lobby (L):

```
enable
configure terminal
hostname L
interface GigabitEthernet0/1
ip address 1.1.0.1 255.255.240.0
ip helper-address 1.1.16.2
no shutdown
exit
interface Serial0/0/0
ip address 1.1.28.66 255.255.255.252
no shutdown
exit
interface Serial0/0/1
ip address 1.1.28.94 255.255.255.252
no shutdown
exit
interface Serial0/1/0
ip address 1.1.28.81 255.255.255.252
no shutdown
exit
ip route 1.1.28.32 255.255.255.224 Serial0/0/1 12
ip route 1.1.28.0 255.255.255.224 Serial0/1/0 12
ip route 1.1.24.0 255.255.252.0 Serial0/1/0 12
ip route 1.1.28.32 255.255.255.224 Serial0/0/0
ip route 1.1.28.0 255.255.255.224 Serial0/0/0
ip route 1.1.24.0 255.255.252.0 Serial0/0/0
ip route 1.1.16.0 255.255.248.0 Serial0/0/0
router rip
version 2
network 1.1.28.64
network 1.1.28.80
network 1.1.28.92
passive-interface GigabitEthernet0/1
no auto-summary
exit
end
copy run start
```

Mercenary (M):

```
enable
configure terminal
hostname M
interface GigabitEthernet0/1
ip address 1.1.28.1 255.255.255.224
ip helper-address 1.1.16.2
no shutdown
exit
interface Serial0/0/1
ip address 1.1.28.70 255.255.255.252
no shutdown
exit
interface Serial0/1/0
ip address 1.1.28.82 255.255.255.252
no shutdown
exit
interface Serial0/1/1
ip address 1.1.28.85 255.255.255.252
no shutdown
exit
router rip
version 2
network 1.1.28.68
network 1.1.28.80
network 1.1.28.84
passive-interface GigabitEthernet0/1
no auto-summary
exit
ip route 1.1.24.0 255.255.252.0 Serial0/1/1 12
ip route 1.1.0.0 255.255.240.0 Serial0/1/0 12
ip route 1.1.28.32 255.255.255.224 Serial0/1/0 12
ip route 1.1.24.0 255.255.252.0 Serial0/0/1
ip route 1.1.0.0 255.255.240.0 Serial0/0/1
ip route 1.1.28.32 255.255.255.224 Serial0/0/1
ip route 1.1.16.0 255.255.248.0 Serial0/0/1
end
copy run start
```

Intelligence (I):

```
enable
configure terminal
hostname I
interface GigabitEthernet0/1
ip address 1.1.24.1 255.255.252.0
ip helper-address 1.1.16.2
no shutdown
exit
interface Serial0/1/0
ip address 1.1.28.74 255.255.255.252
no shutdown
exit
interface Serial0/1/1
ip address 1.1.28.86 255.255.255.252
no shutdown
exit
ip route 1.1.28.0 255.255.255.224 Serial0/1/1 12
ip route 1.1.28.32 255.255.255.224 Serial0/0/0 12
ip route 1.1.0.0 255.255.240.0 Serial0/1/1 12
ip route 1.1.28.0 255.255.255.224 Serial0/1/0
ip route 1.1.28.32 255.255.255.224 Serial0/1/0
ip route 1.1.0.0 255.255.240.0 Serial0/1/0
ip route 1.1.16.0 255.255.248.0 Serial0/1/0
router rip
version 2
passive-interface GigabitEthernet0/1
no auto-summary
network 1.1.28.72
network 1.1.28.84
network 1.1.28.78
end
copy run start
```

Undertaking (U):

```
enable
configure terminal
hostname U
interface GigabitEthernet0/1
ip address 1.1.28.33 255.255.255.224
ip helper-address 1.1.16.2
no shutdown
exit
interface Serial0/0/1
ip address 1.1.28.93 255.255.255.252
no shutdown
exit
interface Serial0/1/1
ip address 1.1.28.78 255.255.255.252
no shutdown
exit
interface Serial0/0/0
ip address 1.1.28.90 255.255.255.252
no shutdown

exit
ip route 1.1.0.0 255.255.240.0 Serial0/0/1 12
ip route 1.1.24.0 255.255.252.0 Serial0/0/0 12
ip route 1.1.28.0 255.255.255.224 Serial0/0/1 12
ip route 1.1.0.0 255.255.240.0 Serial0/1/1
ip route 1.1.24.0 255.255.252.0 Serial0/1/1
ip route 1.1.28.0 255.255.255.224 Serial0/1/1
ip route 1.1.16.0 255.255.248.0 Serial0/1/1
router rip
version 2
passive-interface GigabitEthernet0/1
no auto-summary
network 1.1.28.76
network 1.1.28.88
network 1.1.28.92
end
copy run start
```

IP address table:

Device	Interface	IP Address	Subnet Mask	Default Gateway
Router Headquarters (H)	S0/0/0	1.1.28.65	255.255.255.252	N/A
	S0/0/1	1.1.28.69	255.255.255.252	
	S0/1/0	1.1.28.73	255.255.255.252	
	S0/1/1	1.1.28.77	255.255.255.252	
	G0/1	1.1.16.1	255.255.248.0	
Router Lobby (L)	S0/0/0	1.1.28.66	255.255.255.252	N/A
	S0/0/1	1.1.28.94	255.255.255.252	
	S0/1/0	1.1.28.81	255.255.255.252	
	G0/1	1.1.0.1	255.255.240.0	
Router Mercenary (M)	s0/1/0	1.1.28.82	255.255.255.252	N/A
	S0/1/1	1.1.28.85	255.255.255.252	
	S0/0/1	1.1.28.70	255.255.255.252	
	G0/1	1.1.28.1	255.255.255.224	
Router Intelligence (I)	S0/0/0	1.1.28.89	255.255.255.252	N/A
	S0/1/0	1.1.28.74	255.255.255.252	
	S0/1/1	1.1.28.86	255.255.255.252	
	G0/1	1.1.24.1	255.255.252.0	
Router Undertaking (U)	S0/0/0	1.1.28.90	255.255.255.252	N/A
	S0/0/1	1.1.28.93	255.255.255.252	
	S0/1/1	1.1.28.78	255.255.255.252	
	G0/1	1.1.28.33	255.255.255.224	
Server DHCP	Fa0	1.1.16.2	255.255.248.0	1.1.16.1
Server DNS	Fa0	1.1.16.3	255.255.248.0	1.1.16.1
Server mail.headquarters.org	Fa0	1.1.16.4	255.255.248.0	1.1.16.1
PC Leader	Fa0	1.1.16.5	255.255.248.0	1.1.16.1
PC H1	Fa0	DHCP	255.255.248.0	1.1.16.1
Printer	Fa0	1.1.0.2	255.255.240.0	1.1.0.1
PC L1	Fa0	DHCP	255.255.240.0	1.1.0.1
PC L2	Fa0	DHCP	255.255.240.0	1.1.0.1
Server Web mercenary.information.org	Fa0	1.1.28.2	255.255.255.224	1.1.28.1
PC M1	Fa0	DHCP	255.255.255.224	1.1.28.1
PC M2	Fa0	DHCP	255.255.255.224	1.1.28.1
Server mail.intelligence.org	Fa0	1.1.24.2	255.255.252.0	1.1.24.1
PC i1	Fa0	DHCP	255.255.252.0	1.1.24.1
PC i2	Fa0	DHCP	255.255.252.0	1.1.24.1
Server assignments.undertaking.org	Fa0	1.1.28.34	255.255.255.224	1.1.28.33
PC U1	Fa0	DHCP	255.255.255.224	1.1.28.33
PC U2	Fa0	DHCP	255.255.255.224	1.1.28.33