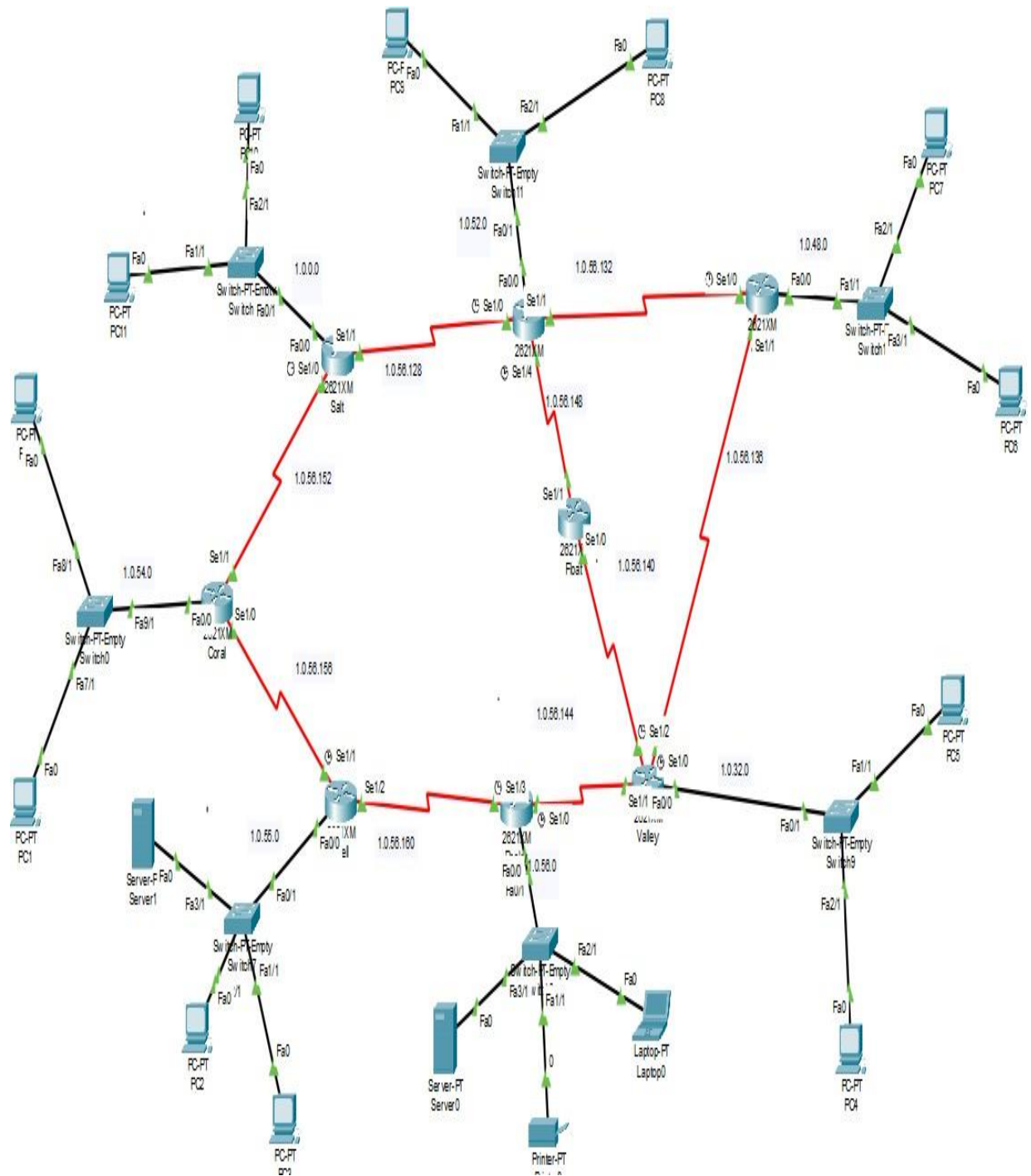


MARINE CONFIGURATIONS



Router Configuration:

Salt-----

```
Router(config-if)#exit
```

```
Router(config)#interface se1/0
```

```
Router(config-if)#interface fa0/0
```

```
Router(config-if)#no ip address 1.0.0.1 255.255.255.224
```

```
Router(config-if)#ip address 1.0.0.1 255.255.224.0
```

```
Router(config-if)#exit
```

```
Router(config)#interface se1/0
```

```
Router(config-if)#ip address 1.0.56.153 255.255.255.252
```

```
Router(config-if)#no shut
```

```
Router(config-if)#
```

```
Router(config-if)#exit
```

```
Router(config)#
```

```
Router(config)#interface se1/1
```

```
Router(config-if)#ip address 1.0.56.130 255.255.255.252
```

```
Router(config-if)#no shut
```

```
Router(config-if)#
```

```
Router(config-if)#exit
```

```
Router(config)#
```

```
Router(config)#ip route 1.0.54.0 255.255.255.0 1.0.56.154 13
```

```
Router(config)#ip route 1.0.55.0 255.255.255.0 1.0.56.154 3
```

```
Router(config)#ip route 1.0.56.0 255.255.255.128 1.0.56.154
```

```
Router(config)#ip route 1.0.32.0 255.255.240.0 1.0.56.154 15
```

```
Router(config)#ip route 1.0.32.0 255.255.240.0 1.0.56.129 15
```

```
Router(config)#ip route 1.0.52.0 255.255.254.0 1.0.56.129 12
```

```
Router(config)#ip route 1.0.48.0 255.255.252.0 1.0.56.129 10
```

```
Router(config)#exit
```

```
Router#
```

Valley-----

```
Router>en
```

```
Router#conf t
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
Router(config)#hostname Valley
```

```
Valley(config)#interface fa0/0
```

```
Valley(config-if)#ip address 1.0.32.1 255.255.240.0
```

```
Valley(config-if)#no shutdown
```

```
Valley(config)#interface se1/0
```

```
Valley(config-if)#ip address 1.0.56.138 255.255.255.252
```

Valley(config-if)#no shut

Valley(config-if)#

Valley(config-if)#exit

Valley(config)#

Valley(config)#interface se1/1

Valley(config-if)#ip address 1.0.56.145 255.255.255.252

Valley(config-if)#no shut

Valley(config-if)#exit

Valley(config)#interface se1/2

Valley(config-if)#ip address 1.0.56.141 255.255.255.252

Valley(config-if)#no shut

Valley(config-if)#exit

Valley(config)#ip route 1.0.48.0 255.255.252.0 1.0.56.137 11

Valley(config)#ip route 1.0.48.0 255.255.252.0 1.0.56.142 16

Valley(config)#ip route 1.0.52.0 255.255.254.0 1.0.56.137 9

Valley(config)#ip route 1.0.52.0 255.255.254.0 1.0.56.142 16

Valley(config)#ip route 1.0.0.0 255.255.224.0 1.0.56.137 15

Valley(config)#ip route 1.0.0.0 255.255.224.0 1.0.56.142 16

Valley(config)#ip route 1.0.54.0 255.255.255.0 1.0.56.137 6

Valley(config)#ip route 1.0.54.0 255.255.255.0 1.0.56.142 16

Valley(config)#ip route 1.0.56.0 255.255.255.128 1.0.56.146

```
Valley(config)#ip route 1.0.56.0 255.255.255.128 1.0.56.142 16
Valley(config)#ip route 1.0.55.0 255.255.255.0 1.0.56.146 8
Valley(config)#ip route 1.0.55.0 255.255.255.0 1.0.56.142 16
Valley(config)#exit
```

Algae-----

```
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname Algae
Algae(config)#interface fa0/0
Algae(config-if)#ip address 1.0.48.1 255.255.252.0
Algae(config-if)#no shutdown
Algae(config)#interface se1/0
Algae(config-if)#ip address 1.0.56.134 255.255.255.252
Algae(config-if)#no shutdown

Algae(config-if)#

Algae(config-if)#exit
Algae(config)#

Algae(config)#interface se1/1
```

```
Algae(config-if)#ip address 1.0.56.137 255.255.255.252
```

```
Algae(config-if)#no shutdown
```

```
Algae(config-if)#exit
```

```
Algae(config)#ip route 1.0.0.0 255.255.224.0 1.0.56.133
```

```
Algae(config)#ip route 1.0.52.0 255.255.254.0 1.0.56.133
```

```
Algae(config)#ip route 1.0.54.0 255.255.255.0 1.0.56.133
```

```
Algae(config)#ip route 1.0.55.0 255.255.255.0 1.0.56.133
```

```
Algae(config)#ip route 1.0.56.0 255.255.255.128 1.0.56.138
```

```
Algae(config)#ip route 1.0.32.0 255.255.240.0 1.0.56.138
```

```
Algae(config)#exit
```

```
Algae#
```

Coral----

```
Router>en
```

```
Router#conf t
```

```
Router(config)#hostname Coral
```

```
Coral(config)#interface fa0/0
```

```
Coral(config-if)#ip address 1.0.54.1 255.255.255.0
```

```
Coral(config-if)#no shut
```

```
Coral(config-if)#exit
```

```
Coral(config)#interface se1/0
```

```
Coral(config-if)#ip address 10.56.157 255.255.255.252
Coral(config-if)#exit
Coral(config)#interface se1/1
Coral(config-if)#ip address 10.56.154 255.255.255.252
Coral(config-if)#no shut
```

```
Coral(config-if)#exit
Coral(config)#router rip
Coral(config-router)# version 2
Coral(config-router)#no auto summary
Coral(config-router)#network 10.54.0
Coral(config-router)#network 10.56.152
Coral(config-router)#network 10.56.156
Coral(config-router)#redistribute static
Coral(config-router)#exit
Coral(config)#router rip
Coral(config-router)#no redistribute static
Coral(config-router)#network 10.0.0
Coral(config-router)#redistribute static
Coral(config-router)#exit
Coral(config)#ip route 10.0.0 255.255.224.0 10.56.153
Coral(config)#ip route 10.55.0 255.255.255.0 10.56.158
Coral(config)#ip route 10.56.0 255.255.255.128 10.56.158
```



```
Coral(config)#ip route 1.0.32.0 255.255.240.0 1.0.56.158
Coral(config)#ip route 1.0.52.0 255.255.254.0 1.0.56.153
Coral(config)#ip route 1.0.48.0 255.255.252.0 1.0.56.153
Coral(config)#exit
```

Reef-----

```
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname Reef
Reef(config)#interface fa 0/0
Reef(config-if)#ip address 1.0.52.1 255.255.254.0
Reef(config-if)#no shutdown
Reef(config-if)#exit
Reef(config)#interface se1/0
Reef(config-if)#ip address 1.0.56.129 255.255.255.252
Reef(config-if)#no shutdown
Reef(config-if)#exit
Reef(config)#interface se1/1
Reef(config-if)#ip address 1.0.56.133 255.255.255.252
Reef(config-if)#no shutdown

Reef(config-if)#exit
```

Reef(config)#interface se1/4

Reef(config-if)#ip address 1.0.56.149 255.255.255.252

Reef(config-if)#no shut

Reef(config-if)#exit

Reef(config)#ip route 1.0.0.0 255.255.224.0 1.0.56.130

Reef(config)#ip route 1.0.54.0 255.255.255.0 1.0.56.130

Reef(config)#ip route 1.0.55.0 255.255.255.0 1.0.56.130

Reef(config)#ip route 1.0.56.0 255.255.255.128 1.0.56.134

Reef(config)#ip route 1.0.56.0 255.255.255.128 1.0.56.150 16

Reef(config)#ip route 1.0.56.0 255.255.255.128 1.0.56.130 15

Reef(config)#ip route 1.0.48.0 255.255.252.0 1.0.56.134

Reef(config)#ip route 1.0.32.0 255.255.240.0 1.0.56.134 4

Reef(config)#ip route 1.0.32.0 255.255.240.0 1.0.56.150 16

Reef(config)#exit

Rocky-----

Router(config)#interface fa0/0

Router(config-if)#ip address 1.0.56.1 255.255.255.128

Router(config-if)#no shut

Router(config-if)#

Router(config-if)#exit

Router(config)#interface se1/0

Router(config-if)#ip address 1.0.56.146 255.255.255.252

Router(config-if)#no shut

Router(config-if)#

Router(config-if)#exit

Router(config)#

Router(config)#interface se1/3

Router(config-if)#ip address 1.0.56.161 255.255.255.252

Router(config-if)#no shut

Router(config-if)#exit

Router(config)#ip route 1.0.0.0 255.255.224.0 1.0.56.162

Router(config)#ip route 1.0.48.0 255.255.252.0 1.0.56.145

Router(config)#ip route 1.0.55.0 255.255.255.0 1.0.56.162

Router(config)#ip route 1.0.52.0 255.255.224.0 1.0.56.145

Router(config)#ip route 1.0.32.0 255.255.240.0 1.0.56.145

Router(config)#ip route 1.0.54.0 255.255.255.0 1.0.56.162

Router(config)#exit

Float-----

Router>en

Router#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface se1/1

Router(config-if)#ip address 1.0.56.150 255.255.255.252

Router(config-if)#no shut

Router(config-if)#

Router(config-if)#exit

Router(config)#interface se

Router#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface se1/0

Router(config-if)#ip address 1.0.56.142 255.255.255.252

Router(config-if)#no shut

Router(config-if)#

Router(config-if)#exit

Router(config)#ip route

```
Router(config)#ip route 1.0.0.0 255.255.224.0 1.0.56.149 16
Router(config)#ip route 1.0.52.0 255.255.254.0 1.0.56.149 17
Router(config)#ip route 1.0.54.0 255.255.255.0 1.0.56.149 18
Router(config)#ip route 1.0.55.0 255.255.255.0 1.0.56.149 19
Router(config)#ip route 1.0.56.0 255.255.255.128 1.0.56.141 20
Router(config)#ip route 1.0.56.0 255.255.255.128 1.0.56.141 20
Router(config)#ip route 1.0.32.0 255.255.240.0 1.0.56.141 20
Router(config)#ip route 1.0.48.0 255.255.252.0 1.0.56.141 22
Router(config)#no ip route 1.0.32.0 255.255.240.0 1.0.56.141 20
Router(config)#ip route 1.0.32.0 255.255.240.0 1.0.56.141 21
Router(config)#exit
```

Shell-----

```
Router>en
```

```
Router#conf t
```

Enter configuration commands, one per line. End with CNTL/Z.

```
Router(config)#interface fa0/0
```

```
Router(config-if)#ip address 1.0.55.1 255.255.255.0
```

```
Router(config-if)#no shut
```

```
Router(config-if)#
```

Router(config-if)#exit

Router(config)#interface se1/2

Router(config-if)#ip address 1.0.56.162 255.255.255.252

Router(config-if)#no shut

Router(config-if)#

Router(config-if)#exit

Router(config)#interface se1/1

Router(config-if)#ip address 1.0.56.158 255.255.255.252

Router(config-if)#no shut

Router(config-if)#

Router(config-if)#exit

Router(config)#

Router(config)#ipdhcp pool shell-pool

Router(dhcp-config)#network 1.0.55.0 255.255.255.0

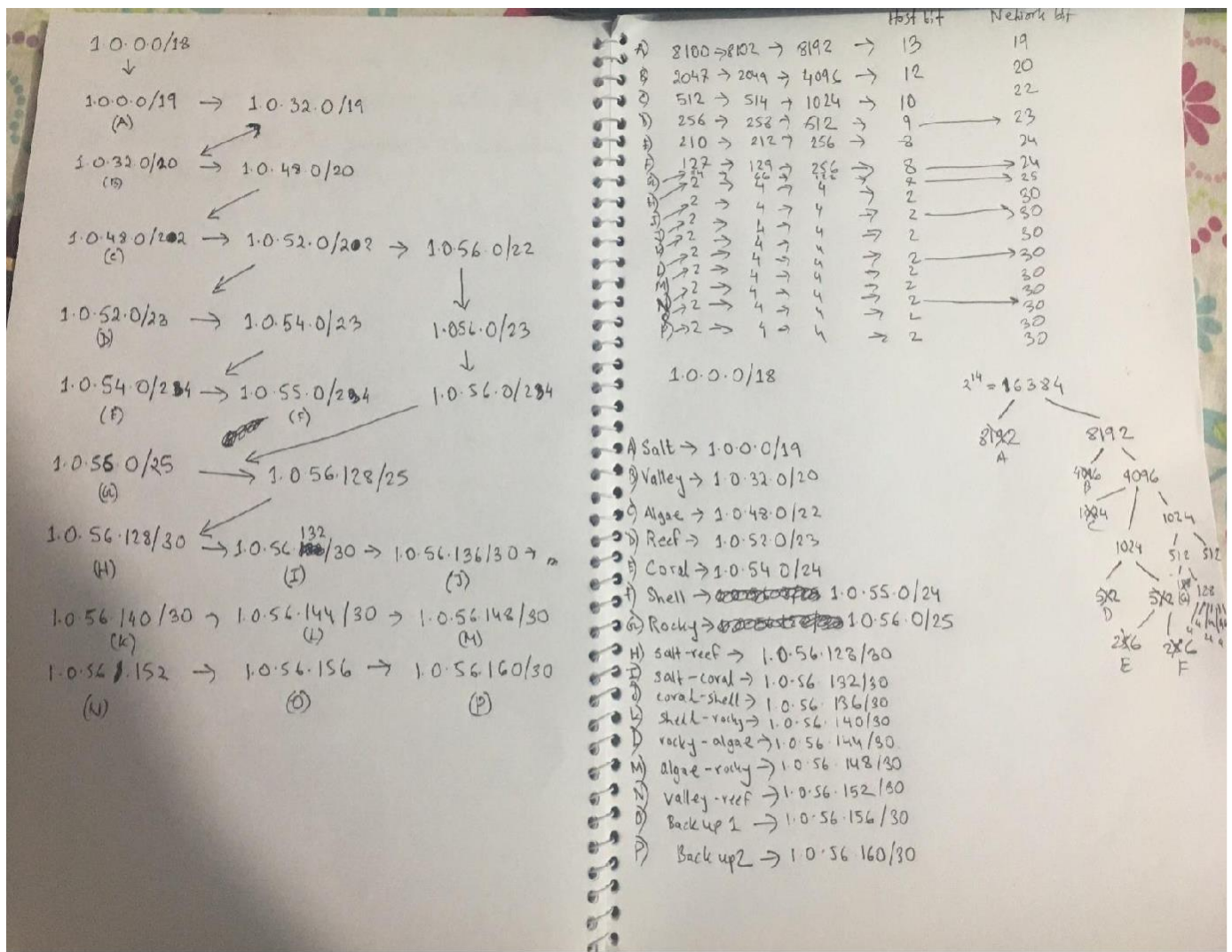
Router(dhcp-config)#default-router 1.0.55.1

Router(dhcp-config)#dns-server 1.0.55.254

Router(dhcp-config)#exit

Router#write memory

VLSM TREE



IP ADDRESS TABLE

Devices	Port	IP Address	Subnet Mask	Default Gateway
Salt	Fa0/0	1.0.0.1	255.255.224.0	N/A
	Se1/1	1.0.56.130	255.255.255.252	N/A
	Se1/0	1.0.56.153	255.255.255.252	N/A
Reef	Fa0/0	1.0.52.1	255.255.254.0	N/A
	Se1/0	1.0.56.129	255.255.255.252	N/A
	Se1/1	1.0.56.133	255.255.255.252	N/A
	Se1/4	1.0.56.149	255.255.255.252	N/A
Valley	Fa0/0	1.0.32.1	255.255.240.0	N/A
	Se1/0	1.0.56.138	255.255.255.252	N/A
	Se1/1	1.0.56.145	255.255.255.252	N/A
	Se1/2	1.0.56.141	255.255.255.252	N/A
Algae	Fa0/0	1.0.48.1	255.255.252.0	N/A
	Se1/0	1.0.56.134	255.255.255.252	N/A
	Se1/1	1.0.56.137	255.255.255.252	N/A
Rocky	Fa0/0	1.0.56.1	255.255.255.128	N/A
	Se1/0	1.0.56.146	255.255.255.252	N/A
	Se1/3	1.0.56.161	255.255.255.252	N/A
Shell	Fa0/0	1.0.55.1	255.255.255.0	N/A
	Se1/1	1.0.56.158	255.255.255.252	N/A
	Se1/2	1.0.56.162	255.255.255.252	N/A
Coral	Fa0/0	1.0.54.1	255.255.255.0	N/A
	Se1/0	1.0.56.157	255.255.255.252	N/A
	Se1/1	1.0.56.154	255.255.255.252	N/A
Float	Se1/0	1.0.56.142	255.255.255.252	N/A
	Se1/1	1.0.56.150	255.255.255.252	N/A
PC0	Fa0	1.0.54.5	255.255.255.0	1.0.54.1
PC1	Fa0	1.0.54.6	255.255.255.0	1.0.54.1
PC2	Fa0	1.0.55.2	255.255.255.0	1.0.55.1
PC3	Fa0	1.0.55.3	255.255.255.0	1.0.55.1

PC4	Fa0	1.0.32.6	255.255.240.0	1.0.32.1
PC5	Fa0	1.0.32.5	255.255.240.0	1.0.32.1
PC6	Fa0	1.0.48.6	255.255.252.0	1.0.48.1
PC7	Fa0	1.0.48.5	255.255.252.0	1.0.48.1
PC8	Fa0	1.0.52.6	255.255.254.0	1.0.52.1
PC9	Fa0	1.0.52.5	255.255.254.0	1.0.52.1
PC10	Fa0	1.0.0.6	255.255.224.0	1.0.0.1
PC11	Fa0	1.0.0.5	255.255.224.0	1.0.0.1
DHCP Server	Fa0	1.0.55.4	255.255.255.0	1.0.55.1
Web Server	Fa0	1.0.56.6	255.255.255.128	1.0.56.1
Laptop	Fa0	1.0.56.5	255.255.255.128	1.0.56.1
Printer	Fa0	1.0.56.8	255.255.255.128	1.0.56.1

NETWORK ADDRESS TABLE

Network	Network Address	Subnet Mask
Topology	1.0.0.0	255.255.192.0
Salt	1.0.0.0	255.255.224.0
Valley	1.0.32.0	255.255.240.0
Algae	1.0.48.0	255.255.252.0
Reef	1.0.52.0	255.255.254.0
Coral	1.0.54.0	255.255.255.0
Shell	1.0.55.0	255.255.255.0
Rocky	1.0.56.0	255.255.255.128
Salt--Reef	1.0.56.128	255.255.255.252
Algae--Reef	1.0.56.132	255.255.255.252
Valley--Algae	1.0.56.136	255.255.255.252
Float--Valley	1.0.56.140	255.255.255.252
Rocky--Valley	1.0.56.144	255.255.255.252
Float--Reef	1.0.56.148	255.255.255.252
Coral--Salt	1.0.56.152	255.255.255.252
Shell--Coral	1.0.56.156	255.255.255.252
Shell--Rocky	1.0.56.160	255.255.255.252

To extract the configuration of the command, we can use show interface, show startup config and show ip route.

Assumption:

1. We assumed that all the areas which are routers in the scenario are connected to each other in some way
2. The network address we used is an assumed address and for simplification reasons we choose this network 1.0.0.0/18.
3. There is one dynamic router, four floating routers which consist one backup router and three static routers.
4. We also assumed that all the routers are not individually connected to all routers like a mesh. So, we used ring topology.
5. We also assumed the AD distance to be kilometer distance of the area. Therefore, we scaled the numbers from lowest (40) to highest(1024) km to a scale of 1 to 15 AD distances.