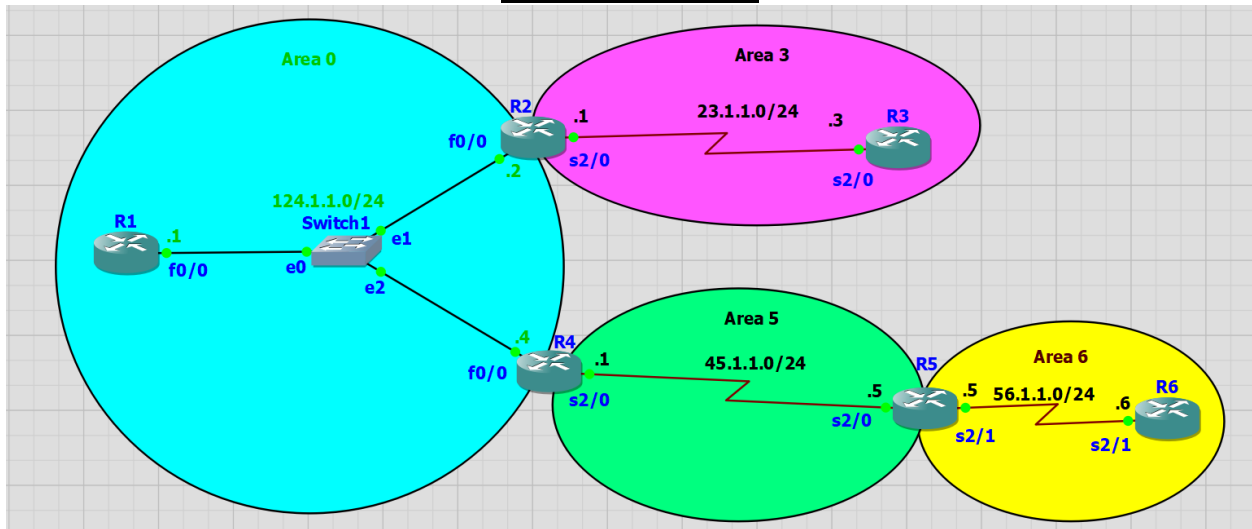


OSPF Lab



```
R1(config)#interface fastEthernet 0/0
R1(config-if)#no shutdown
R1(config-if)#ip address 124.1.1.1 255.255.255.0
```

```
R1(config)#router ospf 1
R1(config-router)#router-id 1.1.1.1
R1(config-router)#network 0.0.0.0 255.255.255.255 area 0
```

```
R1#show ip ospf neighbor
R1#show ip route
```

```
R1#show ip ospf database
```

```
R1(config)#ip route 10.1.1.0 255.255.255.0 null 0
R1(config)#ip route 10.1.2.0 255.255.255.0 null 0
R1(config)#ip route 10.1.3.0 255.255.255.0 null 0
```

```
R1(config-router)#redistribute static subnets
```

```
R1(config-router)#default-information originate always
```

```
R2(config)#interface fastEthernet 0/0
R2(config-if)#no shutdown
R2(config-if)#ip address 124.1.1.2 255.255.255.0
```

```
R2(config)#interface serial 2/0
R2(config-if)#no shutdown
R2(config-if)#ip address 23.1.1.1 255.255.255.0
```

```
R2(config)#interface fastEthernet 0/0
R2(config-if)#ip ospf priority 0
```

```
R2(config)#router ospf 1
R2(config-router)#router-id 2.2.2.2
R2(config-router)#network 124.1.1.0 0.0.0.255 area 0
R2(config-router)#network 23.1.1.0 0.0.0.255 area 3
```

```
R2#show ip ospf neighbor
```

```
R2(config)#access-list 10 permit 10.30.2.0 0.0.0.255
R2(config)#access-list 10 permit 10.30.3.0 0.0.0.255
```

```
R2(config)#router ospf 1
```

```
R2(config-router)#distribute-list 10 out
```

```
R2 (config)#interface serial 2/0
R2 (config-if)#ip ospf hello-interval 1
```

```
R2 (config-if)#ip ospf authentication message-digest
R2 (config-if)# ip ospf message-digest-key 1 md5 1234
```

```
R2(config-router)#area 3 stub no-summary
```

```
R3(config)#interface serial 2/0
R3(config-if)#no shutdown
R3(config-if)#ip address 23.1.1.3 255.255.255.0

R3(config)#interface loopback 1
R3(config-if)#ip address 30.30.30.30 255.255.255.0

R3(config)#router ospf 1
R3(config-router)#router-id 3.3.3.3
R3(config-router)#network 0.0.0.0 255.255.255.255 area 3
```

```
R3(config)#interface loopback 3
R3(config-if)#ip address 10.30.3.1 255.255.255.0
R3(config-if)#ex
R3(config)#interface loopback 2
R3(config-if)#ip address 10.30.2.1 255.255.255.0
R3(config-if)#ex
```

```
R3(config)#interface loopback 4
R3(config-if)#ip address 10.30.4.1 255.255.255.0
```

```
R3(config)#interface serial 2/0
R3(config-if)#ip ospf hello-interval 1
```

```
R3(config-if)#ip ospf authentication message-digest
R3(config-if)# ip ospf message-digest-key 1 md5 1234
R3(config-if)#
```

```
R3(config)#router ospf 1
R3(config-router)#area 3 stub
R3(config-router)#area 3 stub
```

```
R3(config-router)#do show ip route
```

```
After "R2(config-router)#area 3 stub no-summary"
R3(config-router)#do show ip route
```

```
R4(config)#interface fastEthernet 0/0
R4(config-if)#no shutdown
R4(config-if)#ip address 124.1.1.4 255.255.255.0
```

```
R4(config)#interface serial 2/0
R4(config-if)#no shutdown
R4(config-if)#ip address 45.1.1.1 255.255.255.0
```

```
R4(config)#interface fastEthernet 0/0
R4(config-if)#ip ospf priority 0
```

```
R4(config)#router ospf 1
R4(config-router)#router-id 4.4.4.4
R4(config-router)#network 124.1.1.0 0.0.0.255 area 0
R4(config-router)#network 45.1.1.0 0.0.0.255 area 5
```

```
R4(config)#router ospf 1
R4(config-router)#area 5 virtual-link 5.5.5.5
```

```
R5(config)#interface serial 2/0
R5(config-if)#no shutdown
R5(config-if)#ip address 45.1.1.5 255.255.255.0
```

```
R5(config-if)#interface serial 2/1
R5(config-if)#no shutdown
R5(config-if)#ip address 56.1.1.5 255.255.255.0
```

```
R5(config-if)#interface loopback 1
R5(config-if)#no shutdown
R5(config-if)#ip address 50.50.50.50 255.255.255.0
```

```
R5(config)#router ospf 1
R5(config-router)#router-id 5.5.5.5
R5(config-router)#network 45.1.1.0 0.0.0.255 area 5
R5(config-router)#network 56.1.1.0 0.0.0.255 area 6
```

```
R5(config-router)#network 50.50.50.0 0.0.0.255 area 5
```

```
R5(config)#router ospf 1
R5(config-router)#area 5 virtual-link 4.4.4.4
```

```
R6(config)#interface serial 2/1
R6(config-if)#no shutdown
R6(config-if)#ip address 56.1.1.6 255.255.255.0

R6(config)#interface loopback 1
R6(config-if)#ip address 60.60.60.60 255.255.255.0

R6(config)#router ospf 1
R6(config-router)#router-id 6.6.6.6
R6(config-router)#network 0.0.0.0 255.255.255.255 area 6
```