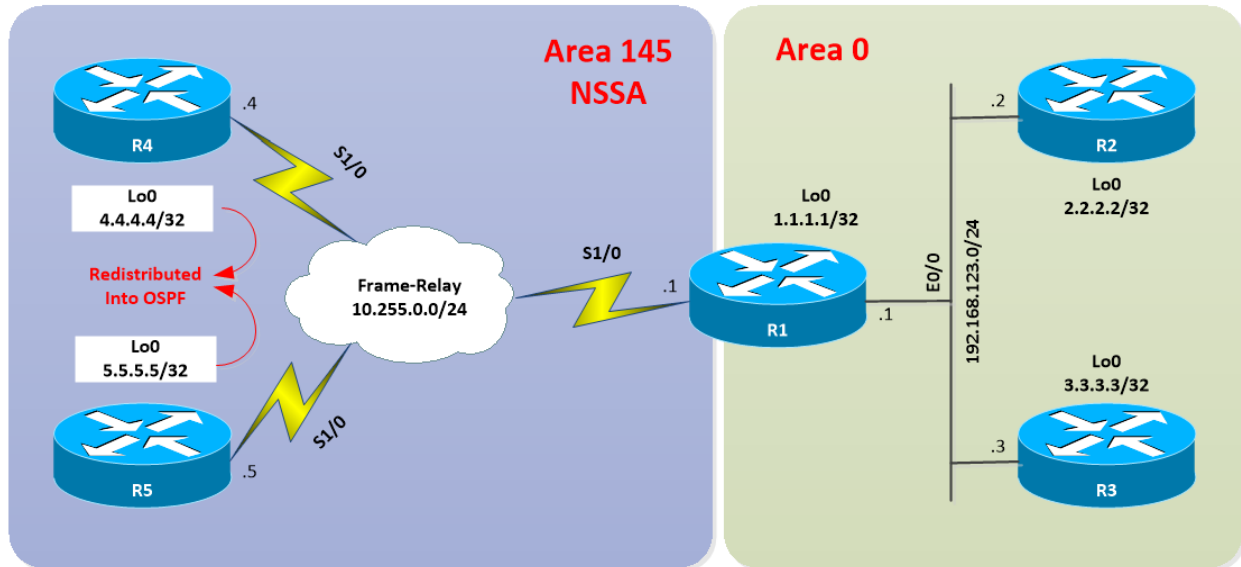


OSPF LSA Database Filtering and Flood Reduction



Initial Configurations:

R1:

```

!
hostname R1
!
no aaa new-model
no ip icmp rate-limit unreachable
no ip domain lookup
ip cef
no cdp log mismatch duplex
ip tcp synwait-time 5
!
interface Loopback0
ip address 1.1.1.1 255.255.255.255
ip ospf 1 area 0
!
interface Ethernet0/0
ip address 192.168.123.1 255.255.255.0
ip ospf 1 area 0
!
interface Serial1/0
ip address 10.255.0.1 255.255.255.0
encapsulation frame-relay
ip ospf network point-to-multipoint

```

```

ip ospf 1 area 145
serial restart-delay 0
cdp enable
frame-relay lmi-type ansi
!
router ospf 1
router-id 0.0.0.1
area 145 nssa default-information-originate
!
no ip http server
no ip http secure-server
!
line vty 0 4
exec-timeout 0 0
privilege level 15
logging synchronous
width 180
!
end

```

R2:

```

!
hostname R2
!
no aaa new-model

```

```

no ip icmp rate-limit unreachable
no ip domain lookup
ip cef
no ipv6 cef
no cdp log mismatch duplex
ip tcp synwait-time 5
!
interface Loopback0
ip address 2.2.2.2 255.255.255.255
ip ospf 1 area 0
!
interface Ethernet0/0
ip address 192.168.123.2 255.255.255.0
ip ospf 1 area 0
!
router ospf 1
router-id 0.0.0.2
!
no ip http server
no ip http secure-server
!
line vty 0 4
exec-timeout 0 0
privilege level 15
logging synchronous
width 180
!
end

```

R3:

```

!
hostname R3
!
no aaa new-model
no ip icmp rate-limit unreachable
no ip domain lookup
ip cef
no ipv6 cef
no cdp log mismatch duplex
ip tcp synwait-time 5
!
interface Loopback0
ip address 3.3.3.3 255.255.255.255
ip ospf 1 area 0
!
interface Ethernet0/0
ip address 192.168.123.3 255.255.255.0
ip ospf 1 area 0
!
router ospf 1
router-id 0.0.0.3
!
no ip http server
no ip http secure-server
!
line vty 0 4

```

```

exec-timeout 0 0
privilege level 15
logging synchronous
width 180
!
end

```

R4:

```

!
hostname R4
!
no aaa new-model
no ip icmp rate-limit unreachable
no ip domain lookup
ip cef
no ipv6 cef
no cdp log mismatch duplex
ip tcp synwait-time 5
!
interface Loopback0
ip address 4.4.4.4 255.255.255.255
!
interface Ethernet0/0
no ip address
shutdown
!
interface Serial1/0
ip address 10.255.0.4 255.255.255.0
encapsulation frame-relay
ip ospf network point-to-multipoint
ip ospf 1 area 145
serial restart-delay 0
cdp enable
frame-relay lmi-type ansi
!
router ospf 1
router-id 0.0.0.4
area 145 nssa
redistribute connected subnets route-map CONN->OSPF
!
route-map CONN->OSPF permit 10
match interface Loopback0
!
no ip http server
no ip http secure-server
!
line vty 0 4
exec-timeout 0 0
privilege level 15
logging synchronous
width 180
!
end

```

R5:

```
!  
hostname R5  
!  
no aaa new-model  
no ip icmp rate-limit unreachable  
no ip domain lookup  
ip cef  
no ipv6 cef  
no cdp log mismatch duplex  
ip tcp synwait-time 5  
!  
interface Loopback0  
ip address 5.5.5.5 255.255.255.255  
!  
interface Ethernet0/0  
no ip address  
shutdown  
!  
interface Serial1/0  
ip address 10.255.0.5 255.255.255.0  
encapsulation frame-relay  
ip ospf network point-to-multipoint  
ip ospf 1 area 145  
serial restart-delay 0  
cdp enable  
frame-relay lmi-type ansi  
!  
router ospf 1  
router-id 0.0.0.5  
area 145 nssa  
redistribute connected subnets route-map CONN->OSPF  
!  
route-map CONN->OSPF permit 10  
match interface Loopback0  
!  
no ip http server  
no ip http secure-server  
!  
line vty 0 4  
exec-timeout 0 0  
privilege level 15  
logging synchronous  
width 180  
!  
end
```

Frame-Relay Switch:

```
!  
hostname FrSw  
!  
no aaa new-model  
no ip icmp rate-limit unreachable  
no ip domain lookup
```

```
ip cef  
no ipv6 cef  
no cdp log mismatch duplex  
ip tcp synwait-time 5  
!  
frame-relay switching  
!  
interface Serial0/0  
description TO->R1 HUB  
no ip address  
encapsulation frame-relay  
serial restart-delay 0  
no frame-relay inverse-arp  
frame-relay lmi-type ansi  
frame-relay intf-type dce  
frame-relay route 124 interface Serial0/1 421  
frame-relay route 125 interface Serial0/2 521  
!  
interface Serial0/1  
description TO->R4  
no ip address  
encapsulation frame-relay  
serial restart-delay 0  
no frame-relay inverse-arp  
frame-relay lmi-type ansi  
frame-relay intf-type dce  
frame-relay route 421 interface Serial0/0 124  
!  
interface Serial0/2  
description TO->R5  
no ip address  
encapsulation frame-relay  
serial restart-delay 0  
no frame-relay inverse-arp  
frame-relay lmi-type ansi  
frame-relay intf-type dce  
frame-relay route 521 interface Serial0/0 125  
!  
interface Serial0/3  
no ip address  
shutdown  
serial restart-delay 0  
!  
no ip http server  
no ip http secure-server  
!  
line vty 0 4  
exec-timeout 0 0  
privilege level 15  
logging synchronous  
width 180  
!  
end
```