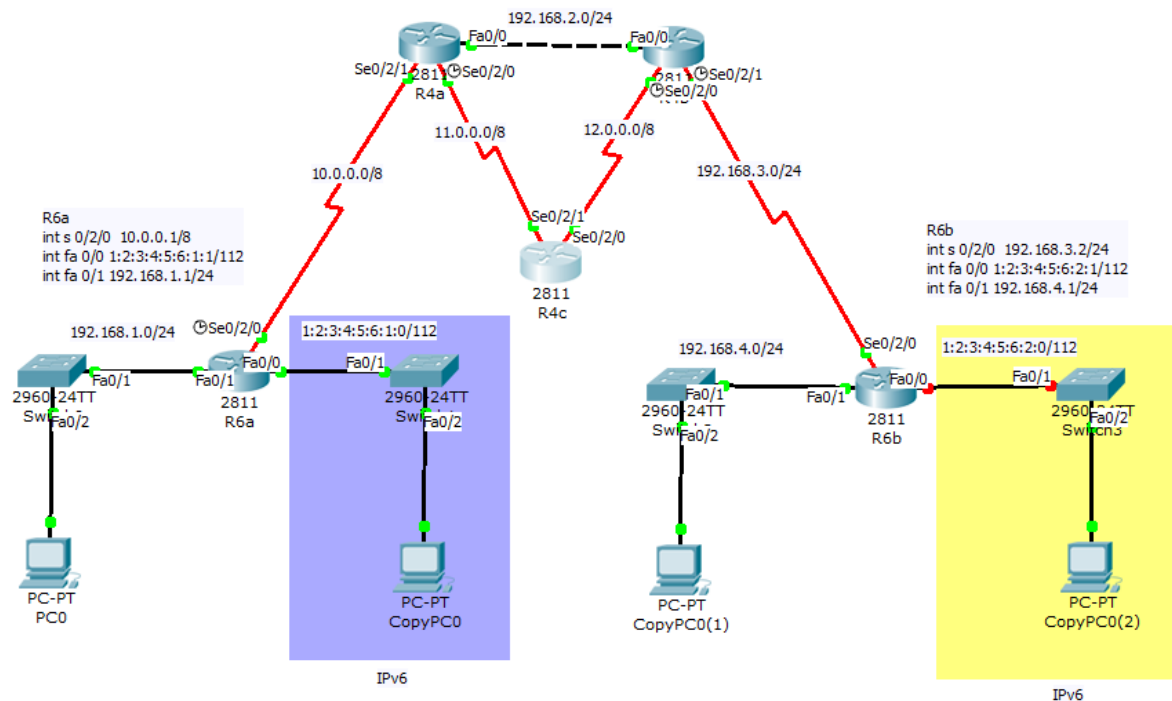


IPv6 Manual Tunnel

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Topology



Basic Configurations

R6a

```
!  
version 12.4  
no service timestamps log datetime msec  
no service timestamps debug datetime msec  
no service password-encryption  
!  
hostname R6a  
!  
ipv6 unicast-routing  
!  
interface FastEthernet0/0  
no ip address  
duplex auto  
speed auto  
ipv6 address 1:2:3:4:5:6:1:1/112  
!  
interface FastEthernet0/1  
ip address 192.168.1.1 255.255.255.0  
duplex auto  
speed auto  
!  
interface Serial0/2/0  
ip address 10.0.0.1 255.0.0.0  
clock rate 128000  
!  
interface Serial0/2/1  
no ip address  
shutdown  
!  
interface Vlan1  
no ip address  
shutdown  
!  
router eigrp 101  
network 10.0.0.0  
network 192.168.1.0  
no auto-summary  
!  
ip classless  
!  
line con 0  
line vty 0 4  
login  
!  
end
```

R6b

```
!
```

```
version 12.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname R6b
!
ipv6 unicast-routing
!
interface FastEthernet0/0
no ip address
duplex auto
speed auto
ipv6 address 1:2:3:4:5:6:2:1/112
shutdown
!
interface FastEthernet0/1
ip address 192.168.4.1 255.255.255.0
duplex auto
speed auto
!
interface Serial0/2/0
ip address 192.168.3.2 255.255.255.0
!
interface Serial0/2/1
no ip address
shutdown
!
interface Vlan1
no ip address
shutdown
!
router eigrp 101
network 192.168.4.0
network 192.168.3.0
no auto-summary
!
ip classless
!
line con 0
line vty 0 4
login
!
end
```

R4a

```
!
version 12.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
```

```

!
hostname R4a
!
interface FastEthernet0/0
ip address 192.168.2.1 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
no ip address
duplex auto
speed auto
shutdown
!
interface Serial0/2/0
ip address 11.0.0.1 255.0.0.0
clock rate 128000
!
interface Serial0/2/1
ip address 10.0.0.2 255.0.0.0
!
interface Vlan1
no ip address
shutdown
!
router eigrp 101
network 11.0.0.0
network 192.168.2.0
network 10.0.0.0
no auto-summary
!
ip classless
!
no cdp run
!
line con 0
line vty 0 4
login
!
end

```

R4b

```

!
version 12.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname R4b
!
interface FastEthernet0/0

```

```
ip address 192.168.2.2 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
no ip address
duplex auto
speed auto
shutdown
!
interface Serial0/2/0
ip address 12.0.0.1 255.0.0.0
clock rate 128000
!
interface Serial0/2/1
ip address 192.168.3.1 255.255.255.0
clock rate 128000
!
interface Vlan1
no ip address
shutdown
!
router eigrp 101
network 12.0.0.0
network 192.168.2.0
network 192.168.3.0
no auto-summary
!
ip classless
!
no cdp run
!
line con 0
line vty 0 4
login
!
end
```

R4c

```
!
version 12.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname R4c
!
interface FastEthernet0/0
no ip address
duplex auto
speed auto
```

```

shutdown
!
interface FastEthernet0/1
no ip address
duplex auto
speed auto
shutdown
!
interface Serial0/2/0
ip address 12.0.0.2 255.0.0.0
!
interface Serial0/2/1
ip address 11.0.0.2 255.0.0.0
!
interface Vlan1
no ip address
shutdown
!
router eigrp 101
network 11.0.0.0
network 12.0.0.0
no auto-summary
!
ip classless
!
no cdp run
!
line con 0
line vty 0 4
login
!
!
!
end

```

IPv6 Manual Tunnel

R6a

```

R6a(config)#interface tunnel 101
R6a(config-if)#tunnel mode ipv6ip
R6a(config-if)#tunnel source s 0/2/0
R6a(config-if)#tunnel destination 192.168.3.2
R6a(config-if)#ipv6 address 1:2:3:4:5:6:4:2/112
R6a(config-if)#ipv6 rip TU enable
R6a(config-if)#exit
R6a(config)#interface fa0/0
R6a(config-if)#ipv6 rip TU enable

```

R6b

```
R6b(config)#interface tunnel 101
R6b(config-if)#tunnel mode ipv6ip
R6b(config-if)#tunnel source s 0/2/0
R6b(config-if)#tunnel destination 10.0.0.1
R6b(config-if)#ipv6 address 1:2:3:4:5:6:4:1/112
R6b(config-if)#ipv6 rip TU enable
R6b(config-if)#exit
R6b(config)#interface fa0/0
R6b(config-if)#ipv6 rip TU enable
```

Testing the tunnel

- show ip interface brief
- ping 1:2:3:4:5:6:4:1
- ping 1:2:3:4:5:6:4:2
- show ipv6 route