



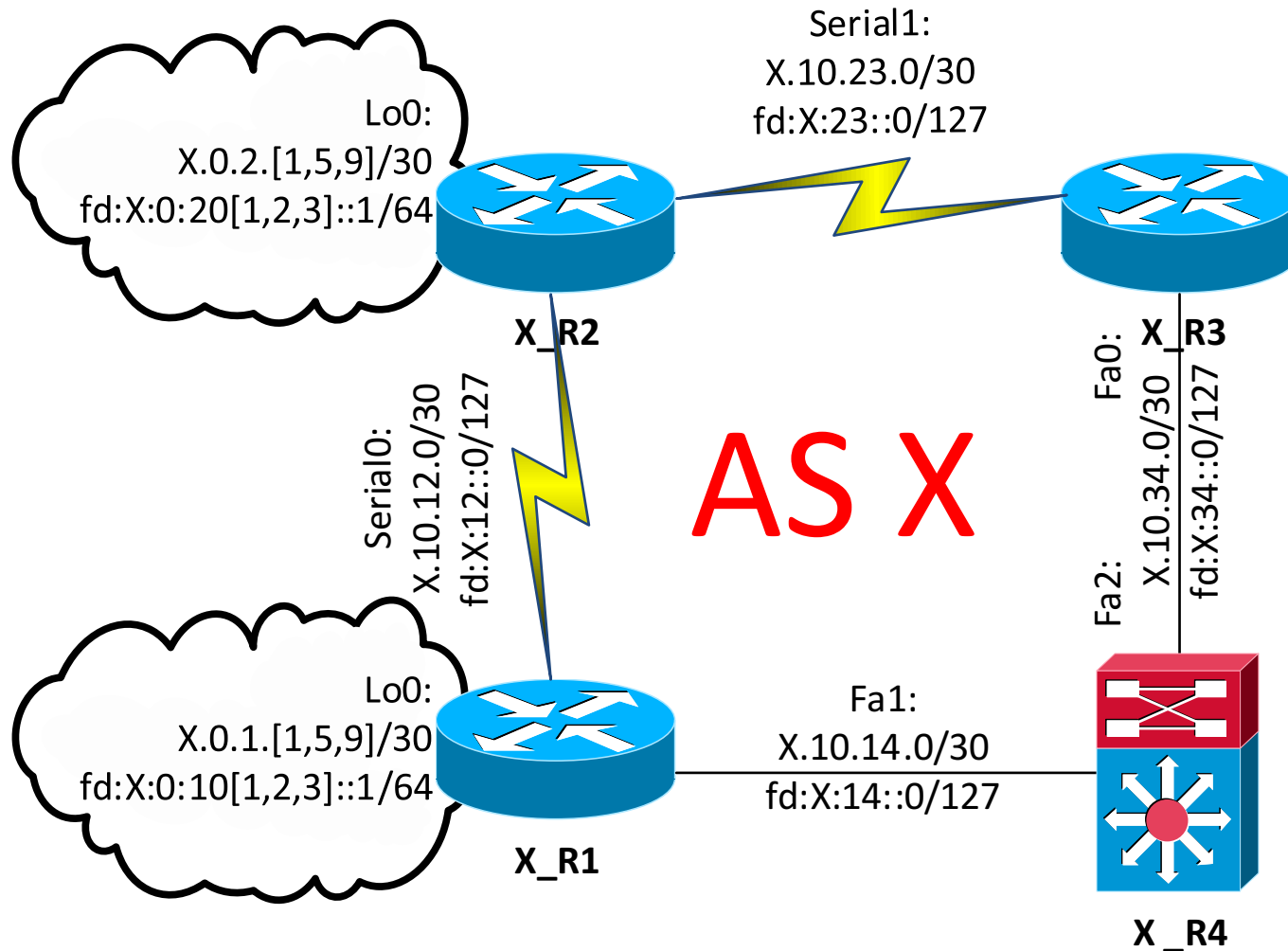
Laboratories BGP



ROUTE Module 7

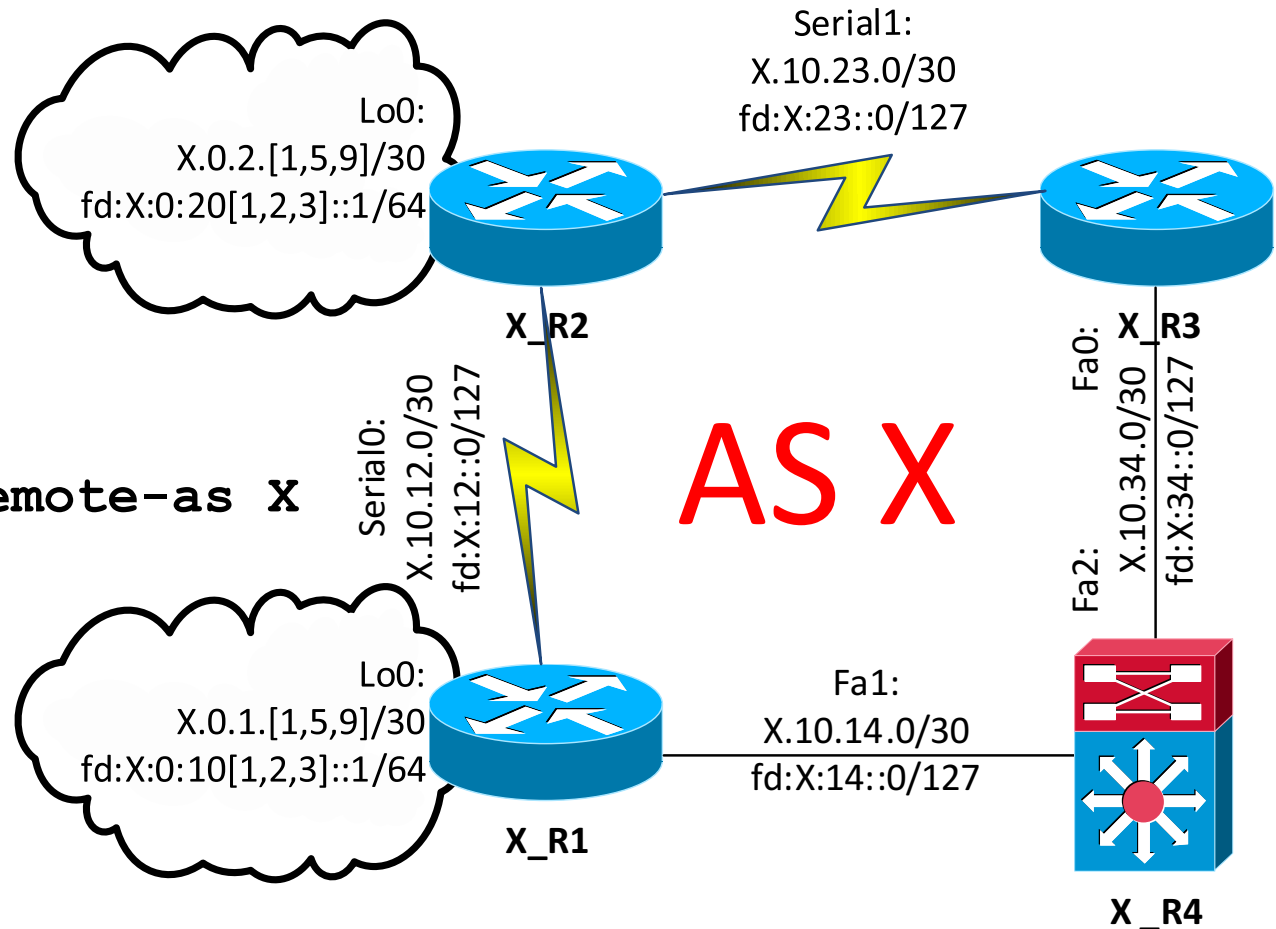
Basic Topology ①

- Odd X uses EIGRP, even X uses OSPF



Lab 7.1: R1 and R4 for iBGP Peering

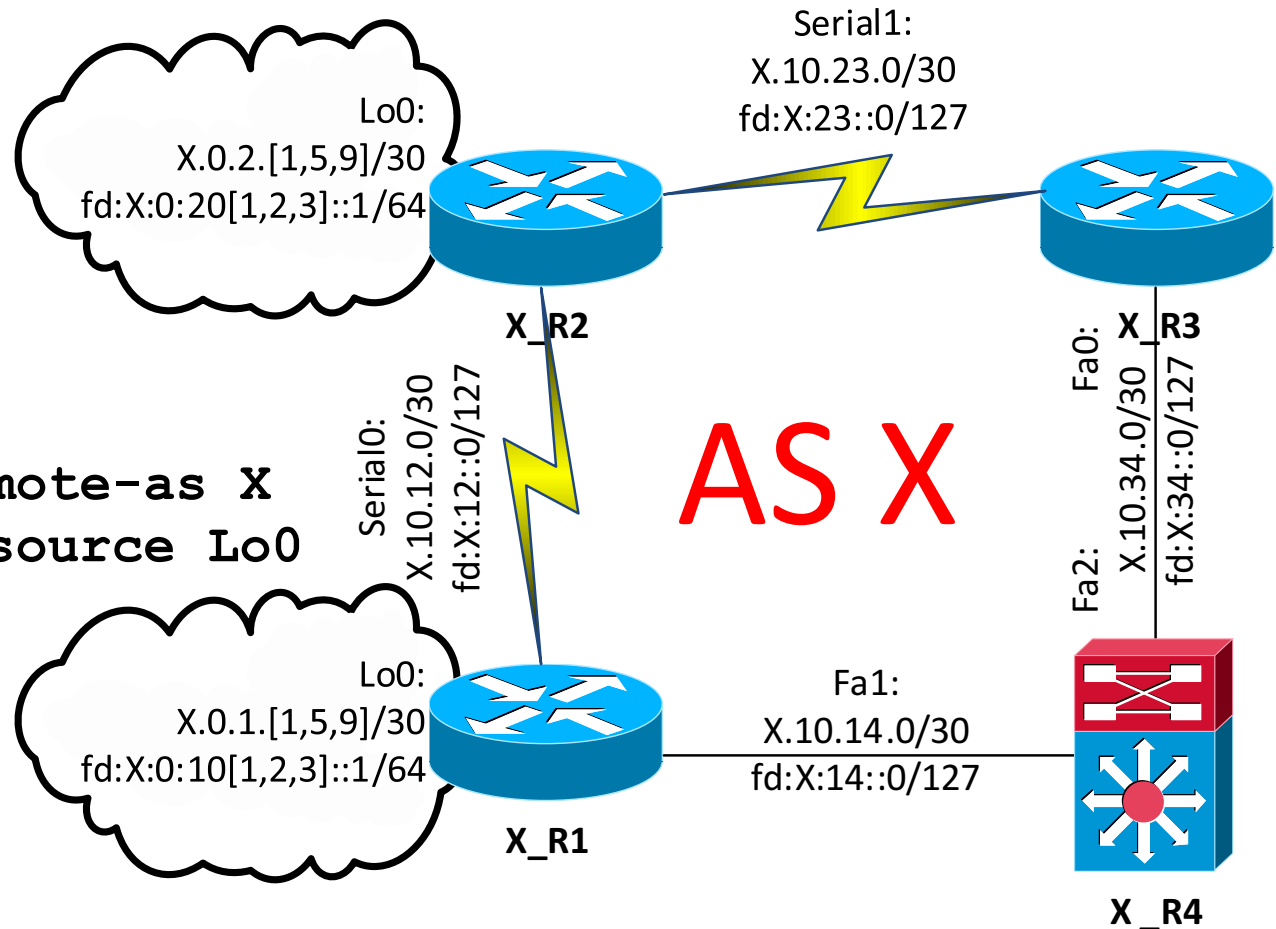
- R1 and R4:
(conf) #
router bgp X
neighbor ... remote-as X



show ip bgp summary

Lab 7.2: Loopback as Update Source

- R1 and R2:
(conf) #
router bgp X
neighbor ... remote-as X
nei ... update-source Lo0



Lab 7.3: MP-BGP

- R1 and R2:

(conf) #

```
router bgp X
```

```
address-family ipv4
```

```
neighbor ... activate
```

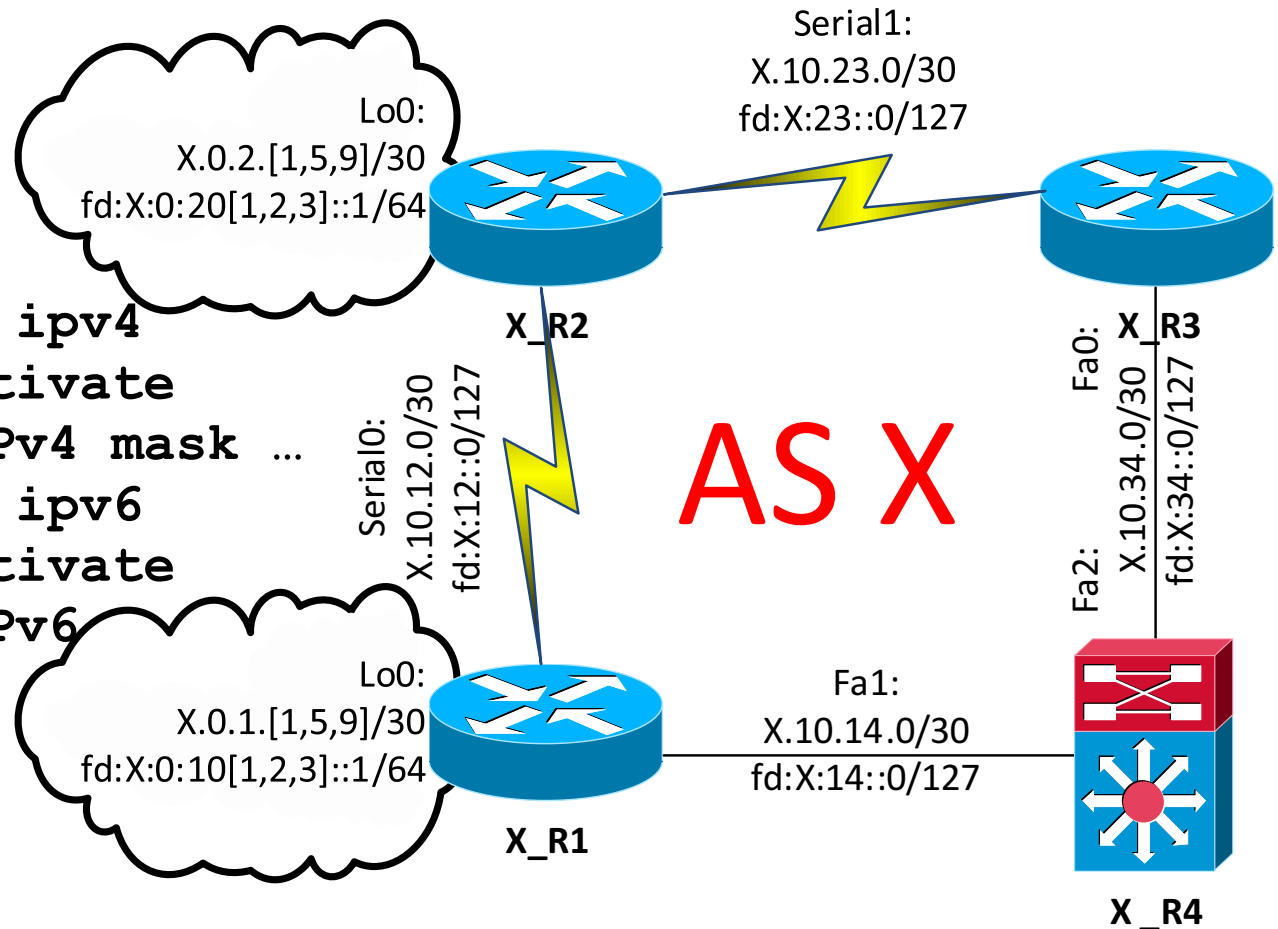
```
network Lo0_IPv4 mask ...
```

```
address-family ipv6
```

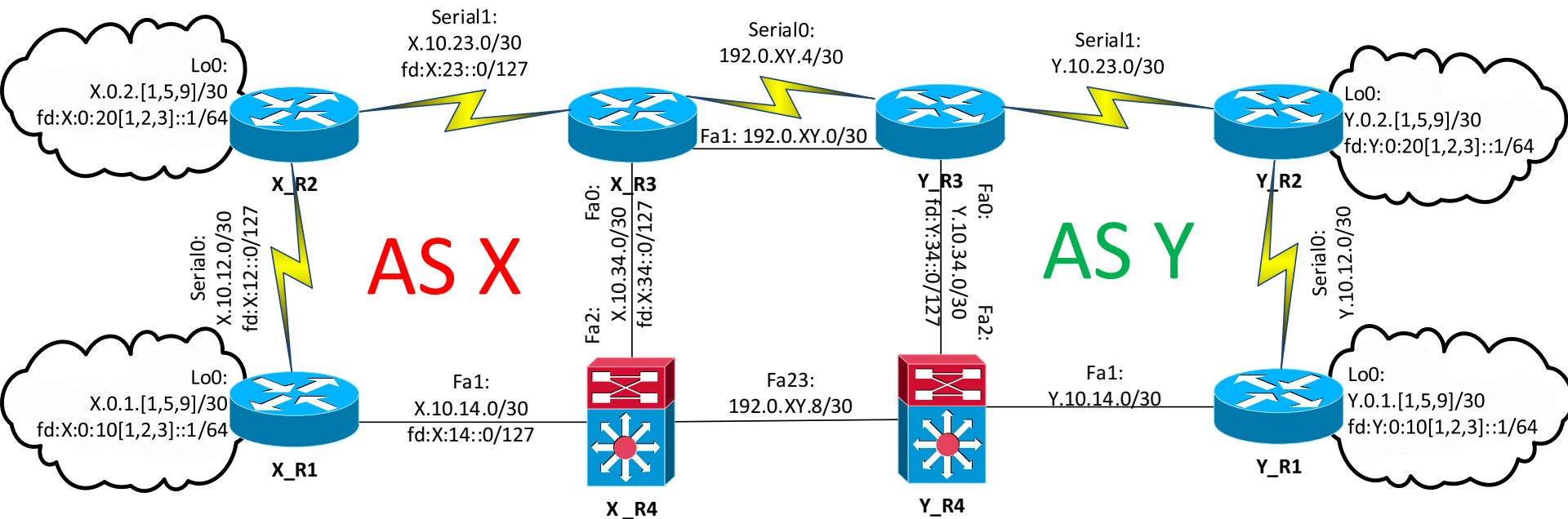
```
neighbor ... activate
```

```
network Lo0_IPv6
```

```
# show ip bgp
```

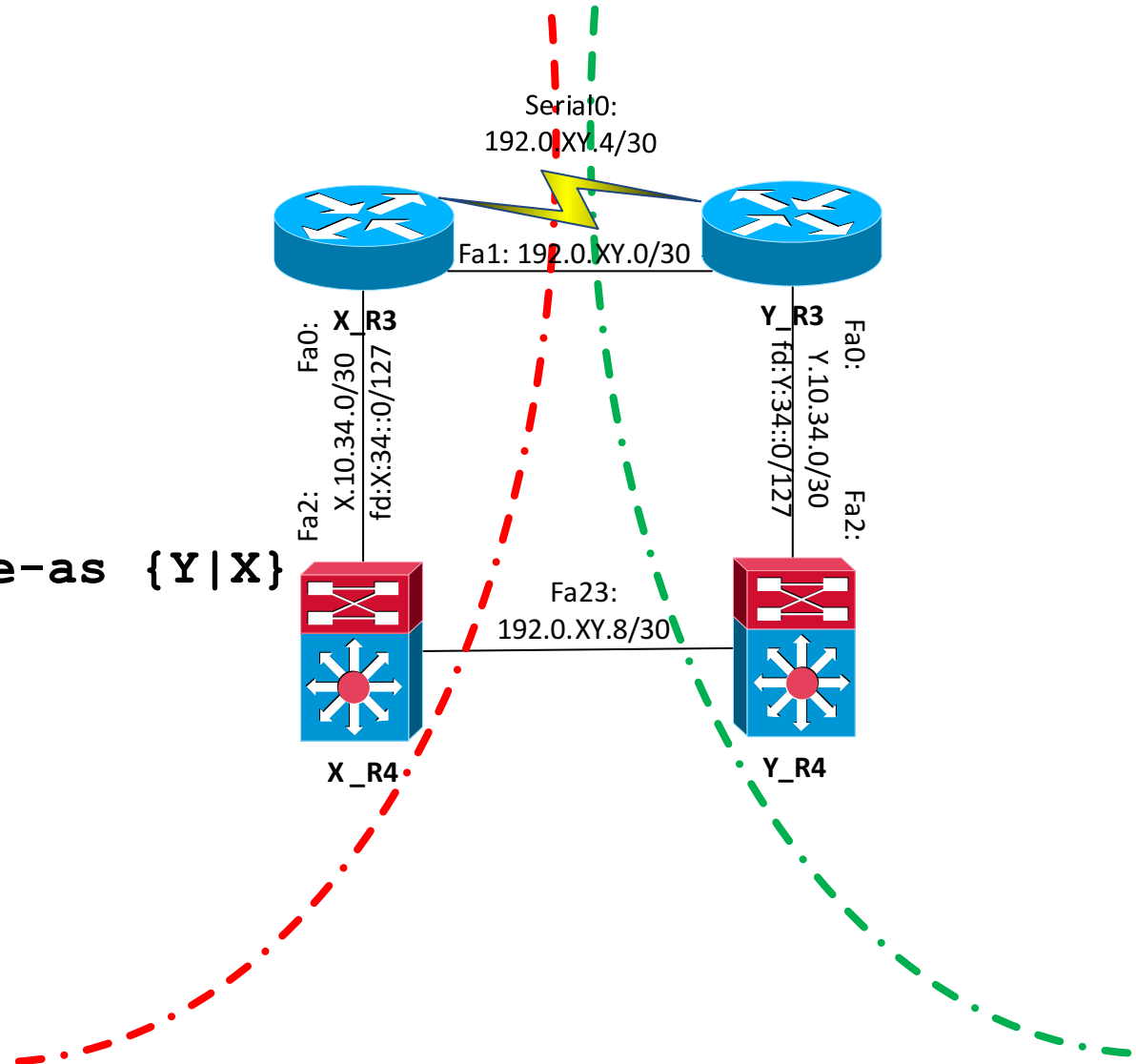


Basic Topology ②



Lab 7.4: eBGP Peering

- Between R3s and R4s:
(conf) #
router bgp {X|Y}
neighbor ... remote-as {Y|X}

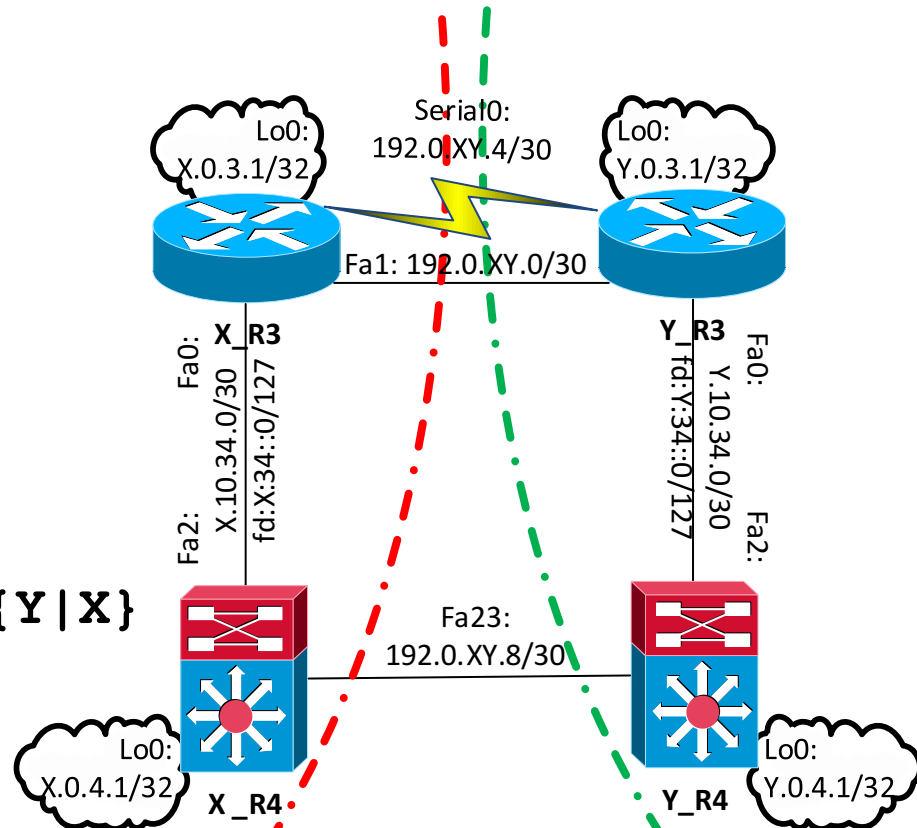


Lab 7.5: eBGP Multihop

- Between R3s:
(conf) #
router bgp {X|Y}
neighbor ... remote-as {Y|X}
nei ... update-so Lo0
nei ... ebgp-multihop 2

(conf) #
ip route <Lo0_X_R3> <NH_X_R3>

sh ip bgp summary



Lab 7.6: Advertising Routes

■ R3, R4:

(conf) #

```
router bgp X
```

```
address-family ipv4
```

```
neighbor ... activate
```

```
redistribute connected
```

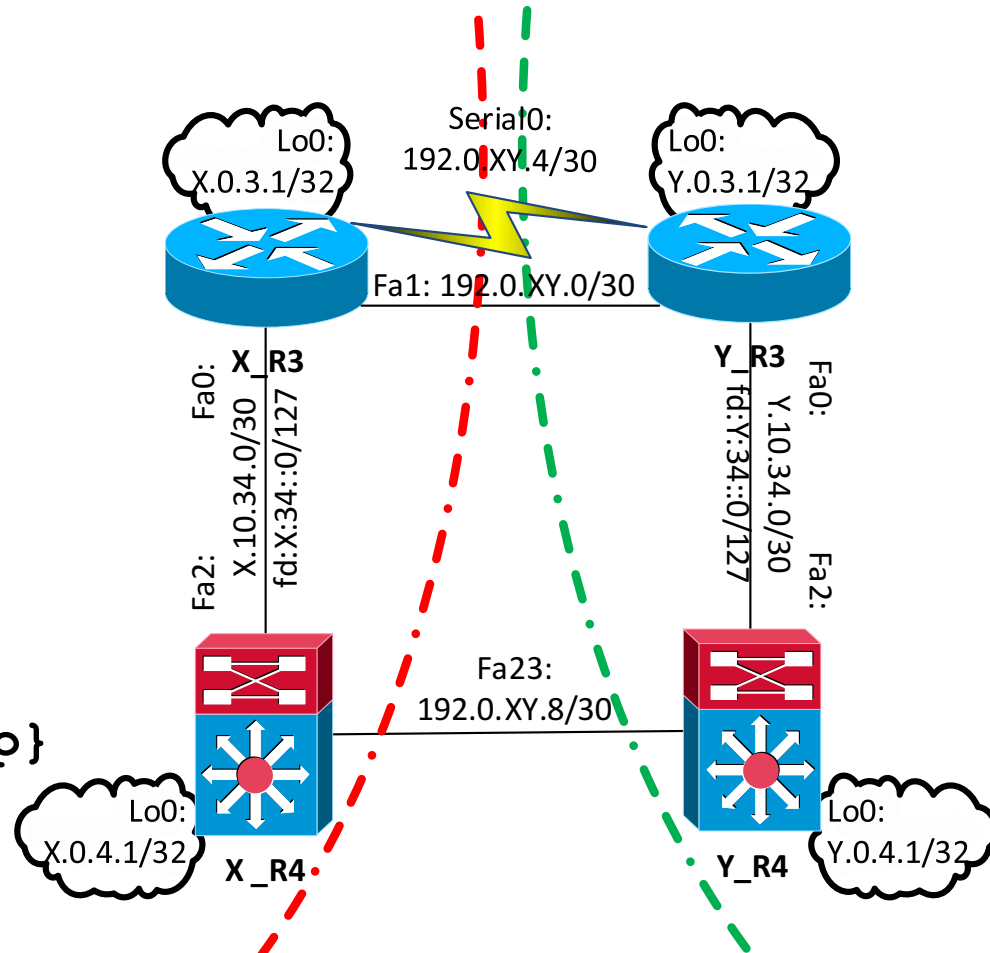
```
redistribute {ospf|eigrp}
```

```
address-family ipv6
```

```
neighbor ... activate
```

```
redistribute connected
```

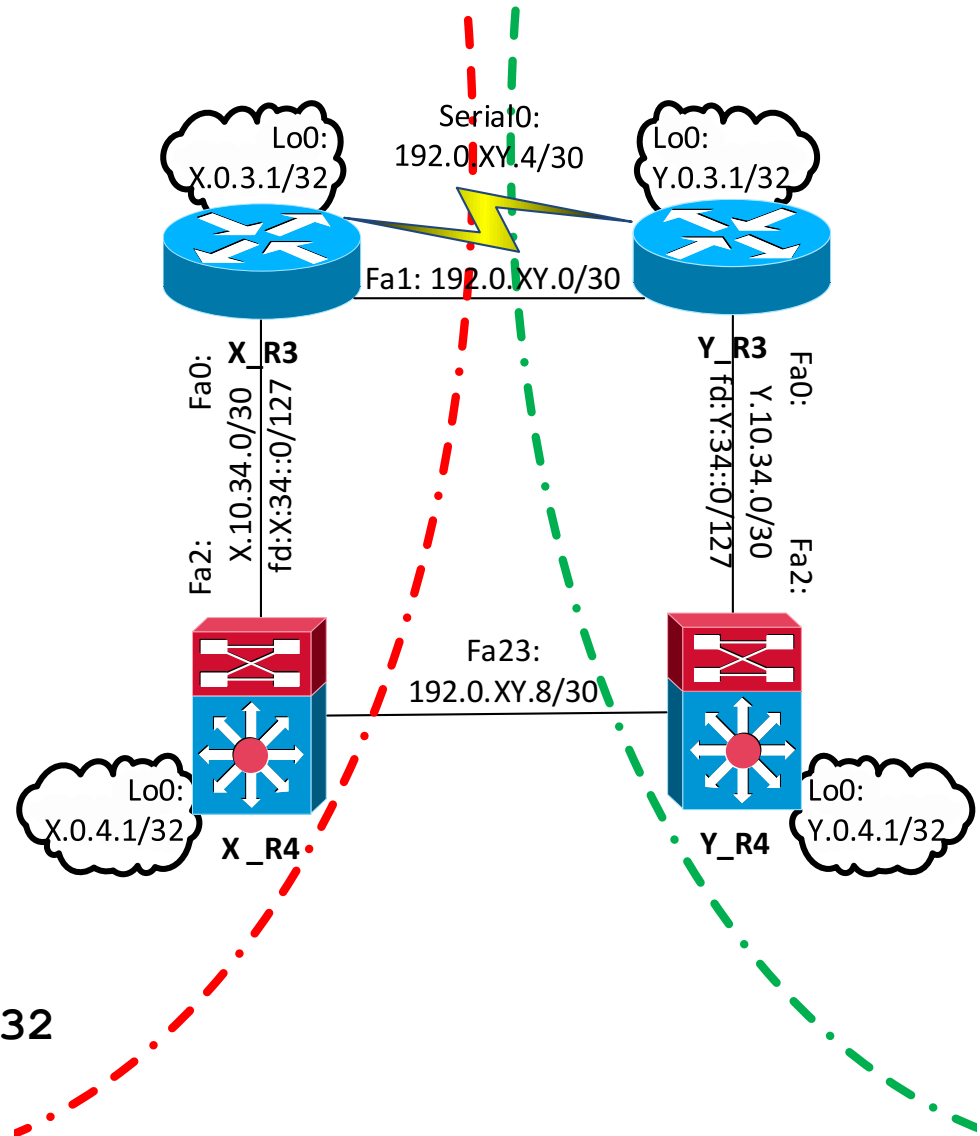
```
redistribute {ospf|eigrp} include-connected
```



Lab 7.7: Aggregate AS Address Space

- On R3s and R4s:

```
(conf) #
router bgp X
 address-family ipv4
  aggregate-address X.0.0.0
    mask 255.0.0.0
 address-family ipv6
  aggregate-address fd:X::/32
```



Lab 7.8: Default Route Propagation

■ R4

- Configure NM16ESW as the new eBGP peer

■ NM16ESW:

(conf) #

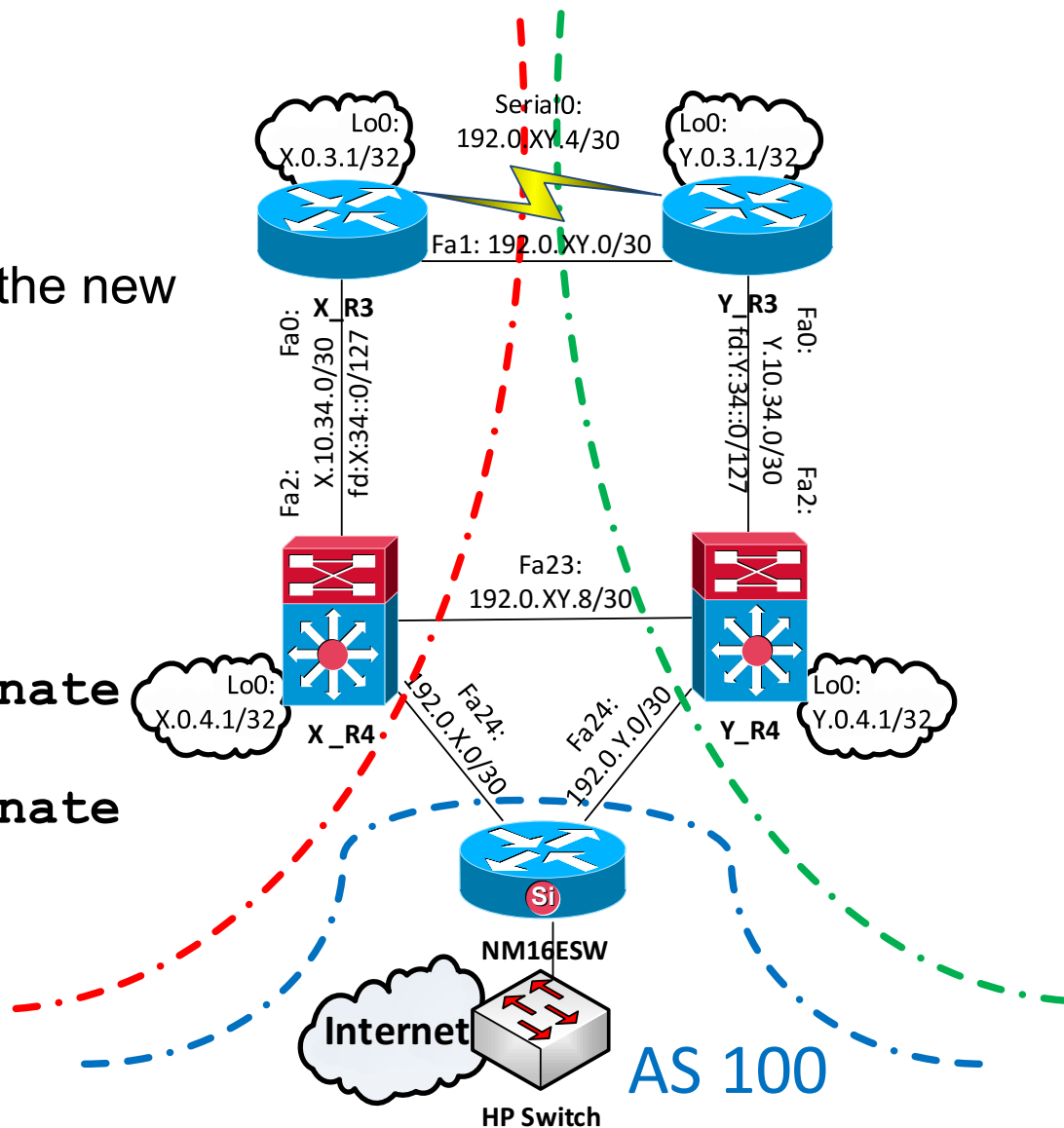
```
router bgp 100
```

```
address-family ipv4
```

```
nei ... default-originate
```

```
address-family ipv6
```

```
nei ... default-originate
```



Lab 7.9: Peer-Groups

- Remove R1,R2 and R4 iBGP peering
- Create full-mesh iBGP connectivity
- (conf) #

```
router bgp X
```

```
  nei iBGP-PeerGrp peer-group
```

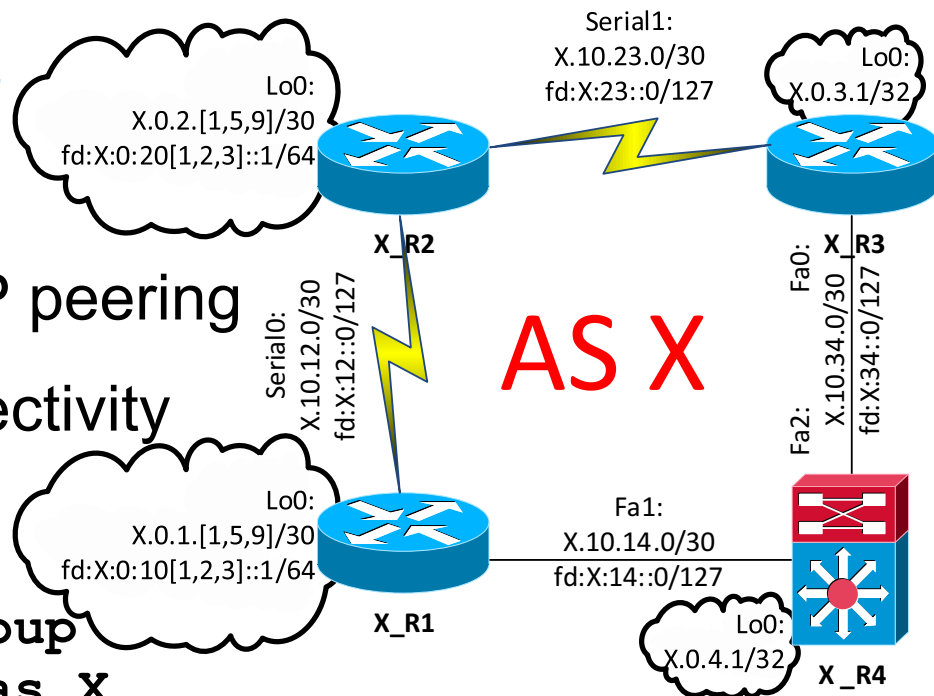
```
  nei iBGP-PeerGrp remote-as X
```

```
  nei iBGP-PeerGrp update-sou Lo0
```

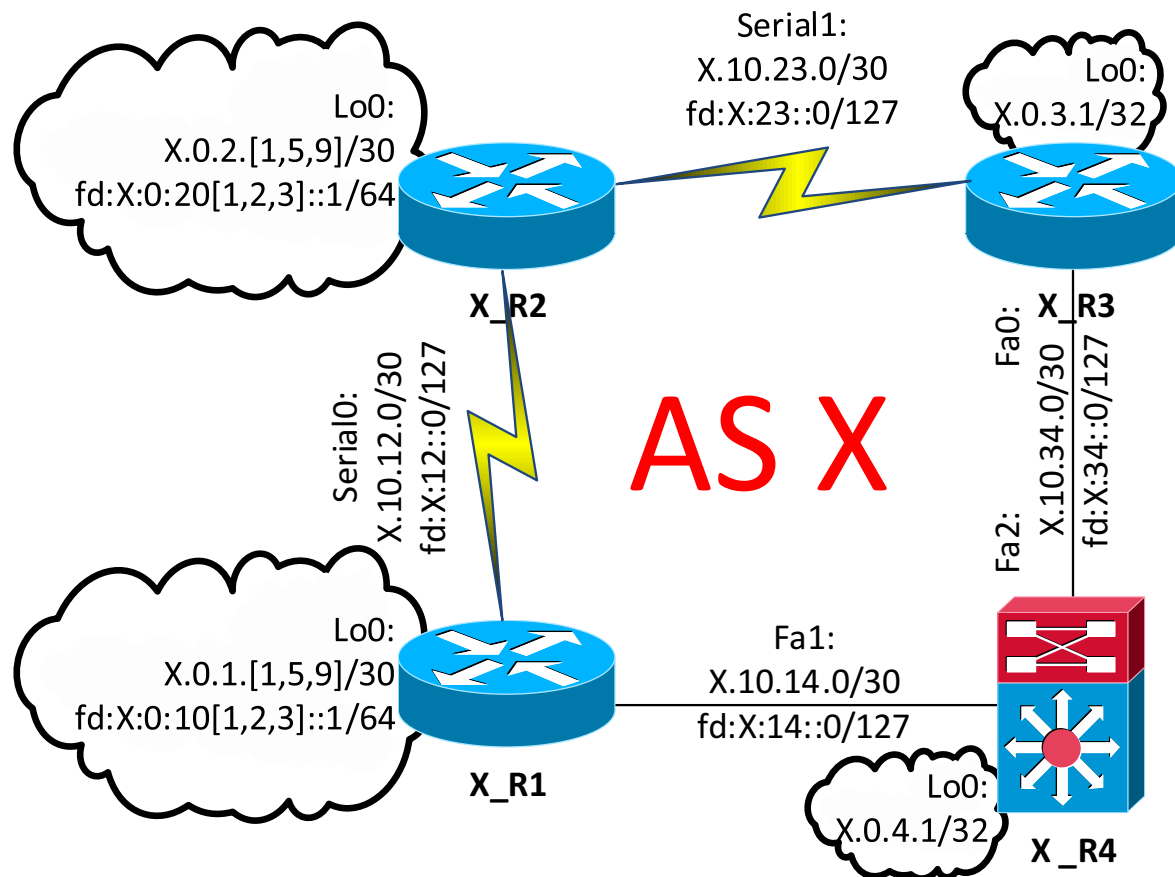
```
  nei ... peer-group iBGP-PeerGrp
```

```
    address-family ipv4
```

```
    address-family ipv6
```



Lab 7.10: Authentication



- Authenticate iBGP

- (conf) #

```
router bgp X
```

```
  nei iBGP-PeerGrp password C1P
```



Labs created by [Vladimír Veselý](#) for C1P practice.

Last update: 2016-04-19