

# LAB6: (Pre-fix) BGP – IPv4

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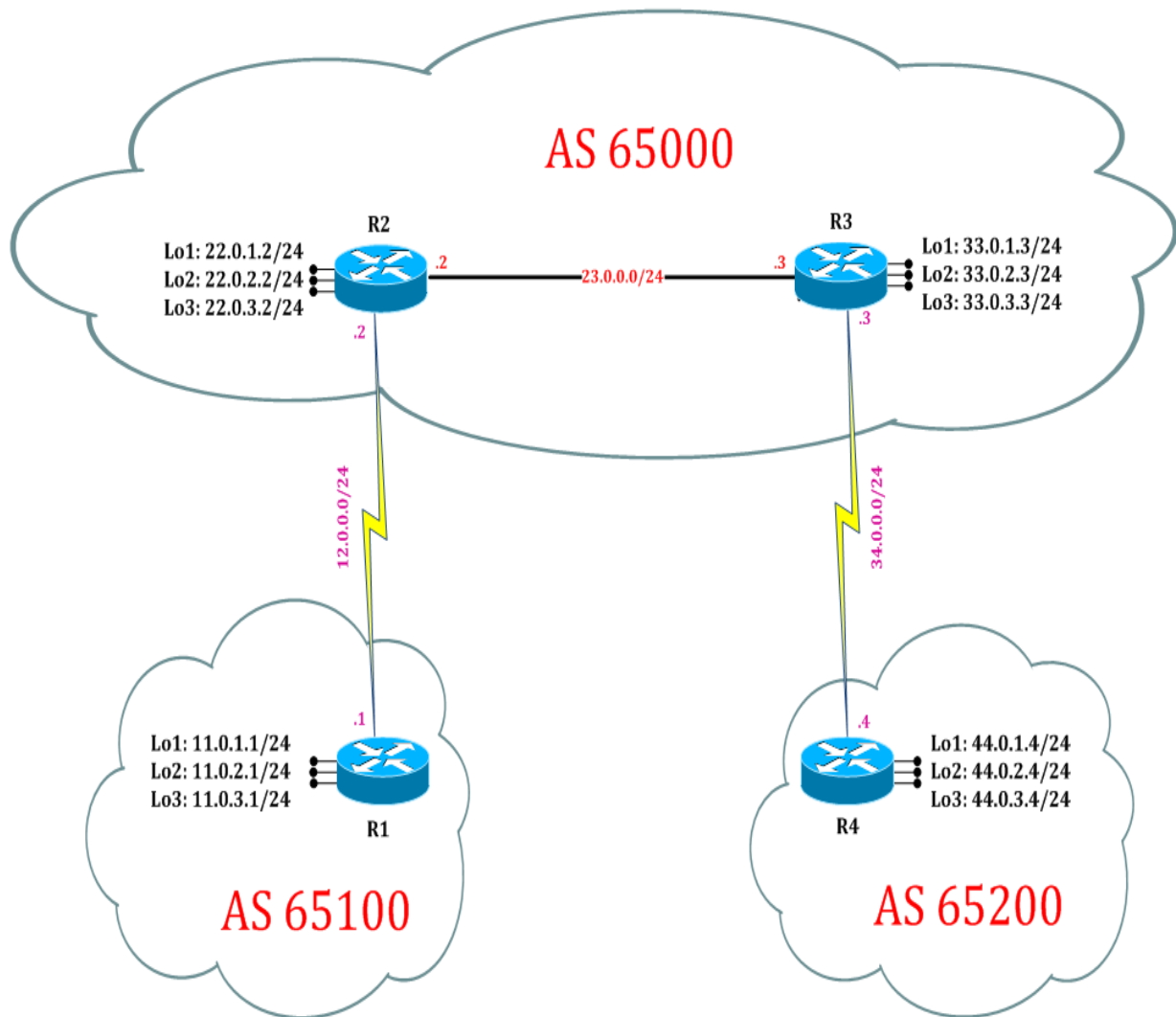
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**BGP: Summarization**

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# LAB 6: Diagram

Note: This Lab was developed on Cisco IOS Version 15.2(4) M1 ADVENTERPRISEK9-M.



# LAB 6: BGP Summarization with Pre-fix List

## Task 1: Configure IPv4 BGP Summarization with Pre-fix List

Step 1 Summarize with BGP routes in router mode with Pre-fix Address

R3:

```
router bgp 65000
address-family ipv4
aggregate-address 11.0.0.0 255.255.252.0
neighbor 44.0.1.4 prefix-list iii out
exit
ip prefix-list iii seq 5 deny 11.0.0.0/8 ge 23
ip prefix-list iii seq 10 permit 0.0.0.0/0 le 32
```

(Using prefix-list we are denying 11.0.0.0 network having mask greater or equal to 23 and rest any route it will allow but should be less than 32 because route with 32 mask will be host address.)

Step 2 Verify receipt of summary route in other router's bgp table by following command

R4# show ip bgp

BGP table version is 11, local router ID is 44.0.3.4  
Status codes: s suppressed, d damped, h history, \* valid, > best, i - internal,

r RIB-failure, S Stale, m multipath, b backup-path, f RT-Filter,  
x best-external, a additional-path, c RIB-compressed,

Origin codes: i - IGP, e - EGP, ? - incomplete

RPKI validation codes: V valid, I invalid, N Not found

Network	Next Hop	Metric	LocPrf	Weight	Path
*> 11.0.0.0/22	33.0.1.3	0		0	65000 i
*> 22.0.1.0/24	33.0.1.3			0	65000 i
*> 22.0.2.0/24	33.0.1.3			0	65000 i
*> 22.0.3.0/24	33.0.1.3			0	65000 i
*> 33.0.1.0/24	33.0.1.3	0		0	65000 i
*> 33.0.2.0/24	33.0.1.3	0		0	65000 i
*> 33.0.3.0/24	33.0.1.3	0		0	65000 i
*> 44.0.1.0/24	0.0.0.0	0		32768	i
*> 44.0.2.0/24	0.0.0.0	0		32768	i
*> 44.0.3.0/24	0.0.0.0	0		32768	i

(Here only summarized route is received using prefix-list.)