LAB14: (Pre-fix) BGP – IPv6

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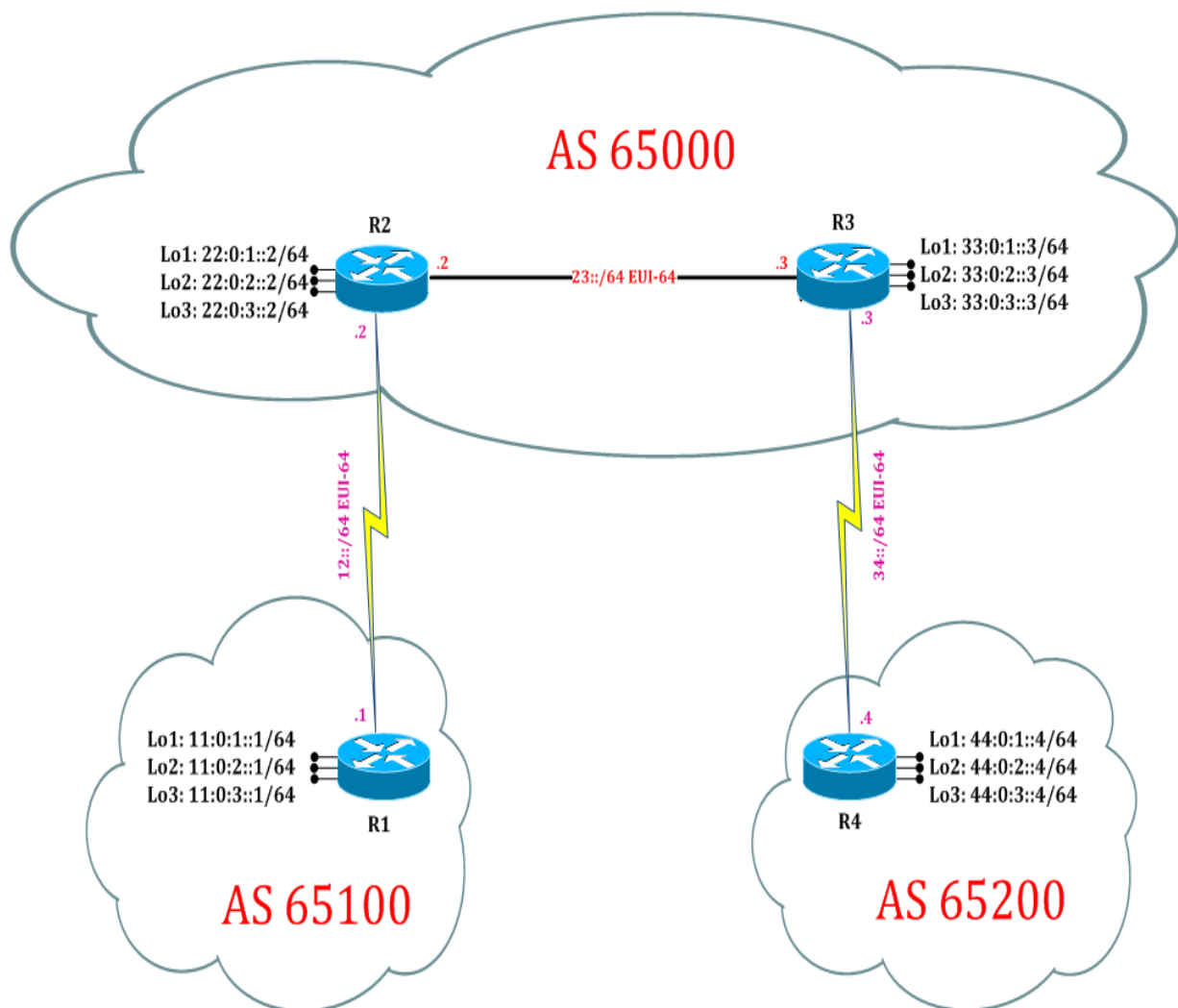

Routing Switching Tigers Forum

BGP: Summarization

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LAB 14: Diagram

Note: This Lab was developed on Cisco IOS Version15.2(4) M1 ADVENTERPRISEK9-M.

LAB 14: BGP IPv6 Summarization with Pre-fix Address

Task 1: Configure IPv6 BGP Summarization with Pre-fix Address

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

R3:
router bgp 65000
address-family ipv6
aggregate-address 11::/16
neighbor 44:0:1::4 prefix-list ooo out
exit
exit
ipv6 prefix-list ooo seq 5 deny 11::/16 ge 32
ipv6 prefix-list ooo seq 10 permit ::/0 le 128

(Here with prefix-list we are denying 11:: 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 bgp ipv6 unicast

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::/16	33:0:1::3	0		0	65000 i
*> 22:0:1::/64	33:0:1::3			0	65000 i
*> 22:0:2::/64	33:0:1::3			0	65000 i
*> 22:0:3::/64	33:0:1::3			0	65000 i
*> 33:0:1::/64	33:0:1::3	0		0	65000 i
*> 33:0:2::/64	33:0:1::3	0		0	65000 i
*> 33:0:3::/64	33:0:1::3	0		0	65000 i
*> 44:0:1::/64	::	0		32768	i
*> 44:0:2::/64	::	0		32768	i
*> 44:0:3::/64	::	0		32768	i

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