

Modernizing Networks Using IPv6



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Agenda



IPv6 addressing review and strategy

IPv6 (dual-stack) migration:

- EIGRP
- BGP
- DMVPN/NHRP



Common IPv6 Addressing Types



::/128 - Unspecified



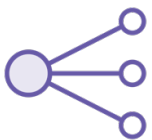
fe80::/10 - Link Local Addressing (LLA)



fc00::/7 - Unique Local Addressing (ULA)



2000::/3 - Global Unicast Addressing (GUA)



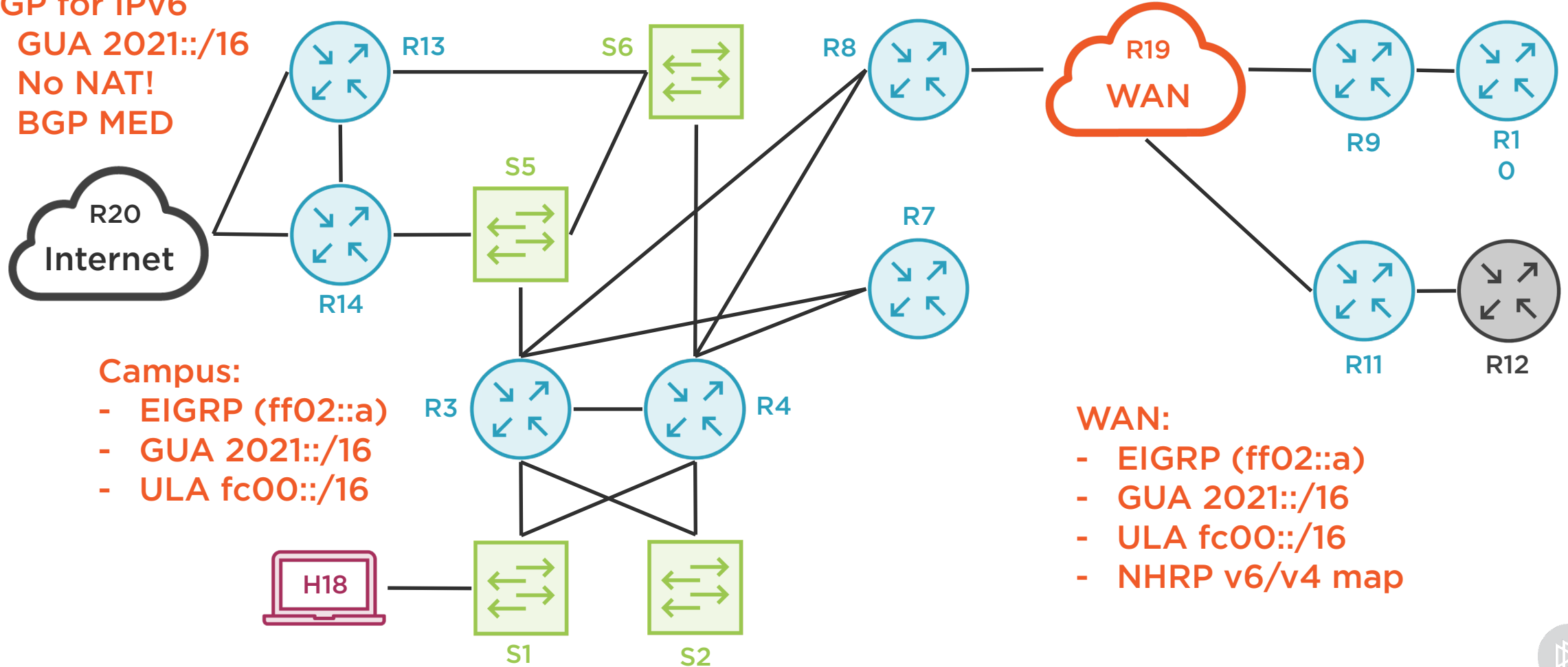
ff00::/8 - Multicast Addressing



The Globomantics Network

BGP for IPv6

- GUA 2021::/16
- No NAT!
- BGP MED



Campus:

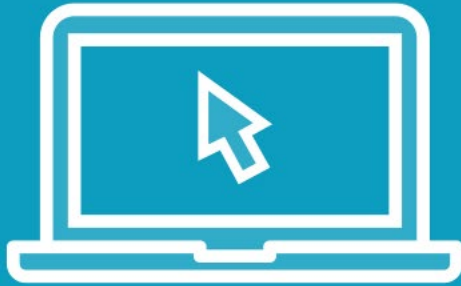
- EIGRP (ff02::a)
- GUA 2021::/16
- ULA fc00::/16

WAN:

- EIGRP (ff02::a)
- GUA 2021::/16
- ULA fc00::/16
- NHRP v6/v4 map



Demo



EIGRP using IPv6



Demo



Advanced IPv6 EIGRP features



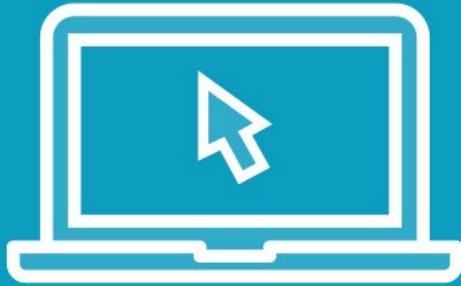
Demo



Carrying IPv6 prefixes in BGP



Demo



IPv6 over DMVPN with EIGRP



Summary



More on IPv6

- "Securely Transitioning Enterprise Networks to IPv6"

Other technologies in new labs!

- OSPF
- MPLS
- More BGP
- SNMP, HTTP, TACACS, etc.

Thank you!

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