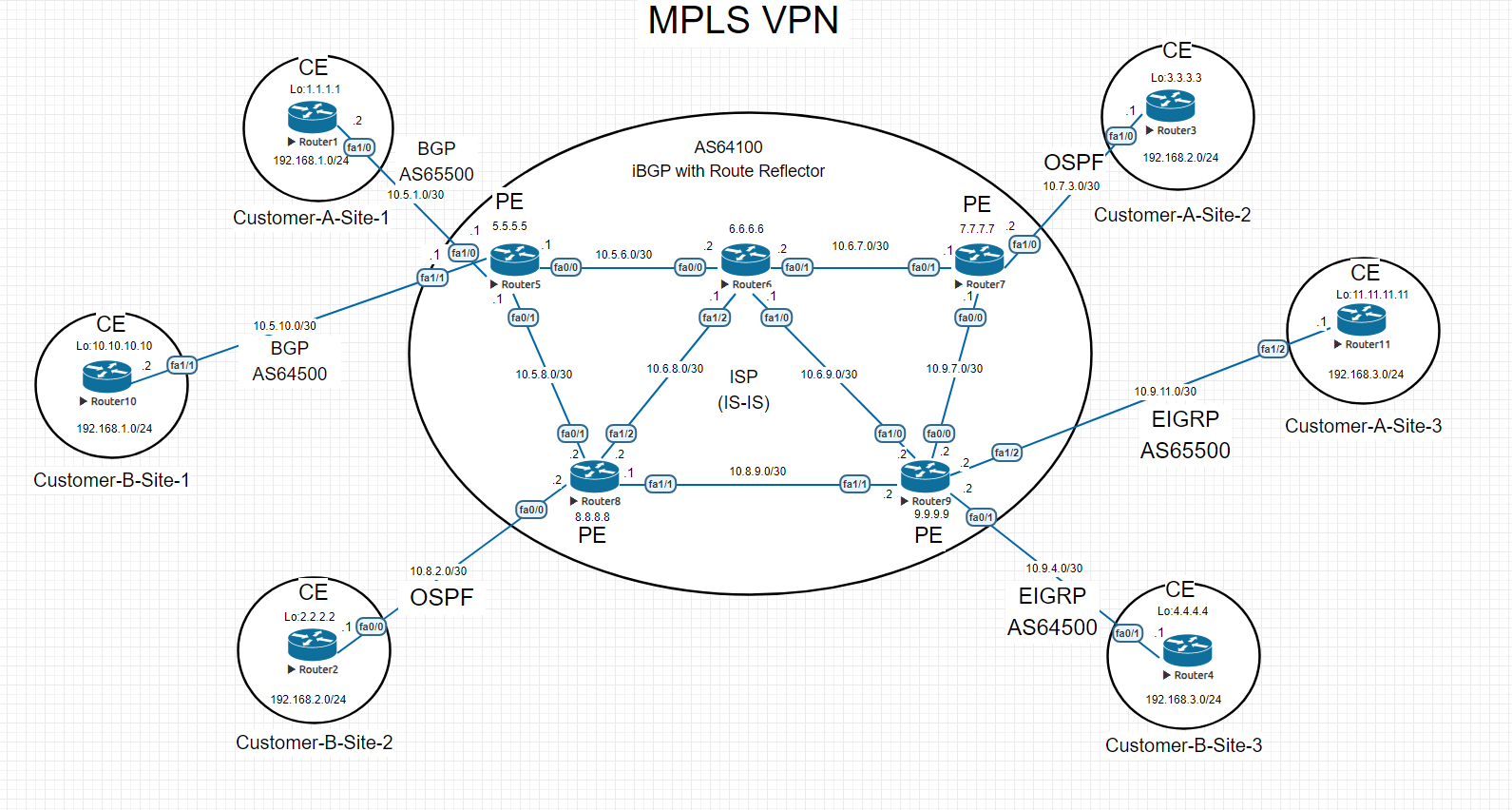
|  |  |  |
| --- | --- | --- |
|  |  |  |
| 10.5.1.0/30 | 2001:db8:1:1::1/64 | 2001:db8:1:1::2/64 |
| 10.5.10.0/30 | 2001:db8:1:2::1/64 | 2001:db8:1:2::2/64 |
| 10.8.2.0/30 | 2001:db8:1:3::1/64 | 2001:db8:1:3::2/64 |
| 10.5.6.0/30 | 2001:db8:1:4::1/64 | 2001:db8:1:4::2/64 |
| 10.5.8.0/30 | 2001:db8:1:5::1/64 | 2001:db8:1:5::2/64 |
| 10.6.8.0/30 | 2001:db8:1:6::1/64 | 2001:db8:1:6::2/64 |
| 10.8.9.0/30 | 2001:db8:1:7::1/64 | 2001:db8:1:7::2/64 |
| 10.6.9.0/30 | 2001:db8:1:8::1/64 | 2001:db8:1:8::2/64 |
| 10.6.7.0/30 | 2001:db8:1:9::1/64 | 2001:db8:1:9::2/64 |
| 10.9.7.0/30 | 2001:db8:1:10::1/64 | 2001:db8:1:10::2/64 |
| 10.7.3.0/30 | 2001:db8:1:11::1/64 | 2001:db8:1:11::2/64 |
| 10.9.11.0/30 | 2001:db8:1:12::1/64 | 2001:db8:1:12::2/64 |
| 10.9.4.0/30 | 2001:db8:1:13::1/64 | 2001:db8:1:13::2/64 |
|  |  |  |
| 192.168.1.0/24 | 2001:db8:2:1::1/64 |  |
| 192.168.2.0/24 | 2001:db8:3:1::1/64 |  |
| 192.168.3.0/24 | 2001:db8:4:1::1/64 |  |
|  |  |  |
| 1.1.1.1 | 2001:db8:8:1::1/128 |  |
| 2.2.2.2 | 2001:db8:9:1::1/128 |  |
| 3.3.3.3 | 2001:db8:10:1::1/128 |  |
| 4.4.4.4 | 2001:db8:8:11::1/128 |  |
| 5.5.5.5 | 2001:db8:8:12::1/128 |  |
| 6.6.6.6 | 2001:db8:8:13::1/128 |  |
| 7.7.7.7 | 2001:db8:8:14::1/128 |  |
| 8.8.8.8 | 2001:db8:8:15::1/128 |  |
| 9.9.9.9 | 2001:db8:8:16::1/128 |  |
| 10.10.10.10 | 2001:db8:8:17::1/128 |  |
| 11.11.11.11 | 2001:db8:8:18::1/128 |  |
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# Router 1

conf t

hostname R1

no ip domain lookup

Ipv6 unicast-routing

int f1/0

Ipv6 address 2001:db8:1:1::1/64

ip add 10.5.1.2 255.255.255.252

no shut

int lo 0

Ipv6 address 2001:db8:8:1::1/128

ip add 1.1.1.1 255.255.255.255

int lo 1

Ipv6 address 2001:db8:2:1::1/64

ip add 192.168.1.1 255.255.255.0

no shut

exit

router bgp 65500

bgp router-id 1.1.1.1

neighbor 10.5.1.1 remote-as 64100

network 1.1.1.1 mask 255.255.255.255

network 192.168.1.0 mask 255.255.255.0

Neighbor 2001:db8:1:1::2 remote-as 64100

Network 2001:db8:2:1::1/64

Network 2001:db8:8:1::1/128

end

--------------------------------

# Router 2

conf t

hostname R2

no ip domain lookup

Ipv6 unicast-routing

router ospf 208

network 192.168.2.0 0.0.0.255 area 0

network 2.2.2.2 0.0.0.0 area 0

network 10.8.2.0 0.0.0.3 area 0

network 2001:db8:1:3::1/64 area 0

network 2001:db8:9:1::1/128 area 0

network 2001:db8:3:1::1/64area 0

int f0/0

Ipv6 address 2001:db8:1:3::1/64

ip add 10.8.2.1 255.255.255.252

no shut

int lo 0

ip add 2.2.2.2 255.255.255.255

Ipv6 address 2001:db8:9:1::1/128

no shut

int lo 1

ip add 192.168.2.1 255.255.255.0

Ipv6 address 2001:db8:3:1::1/64

no shut

end

--------------------------------

# Router 3

conf t

hostname R3

no ip domain lookup

Ipv6 unicast-routing

router ospf 307

network 192.168.2.0 0.0.0.255 area 0

network 3.3.3.3 0.0.0.0 area 0

network 10.7.3.0 0.0.0.3 area 0

network 2001:db8:1:11::1/64 area 0

network 2001:db8:10:1::1/128 area 0

network 2001:db8:3:1::1/64 area 0

int f1/0

ip add 10.7.3.1 255.255.255.252

Ipv6 address 2001:db8:1:11::1/64

no shut

int lo 0

ip add 3.3.3.3 255.255.255.255

Ipv6 address 2001:db8:10:1::1/128

no shut

int lo 1

ip add 192.168.2.1 255.255.255.0

Ipv6 address 2001:db8:3:1::1/64

no shut

end

--------------------------------

# Router 4

conf t

hostname R4

no ip domain lookup

Ipv6 unicast-routing

int f0/1

ip add 10.9.4.1 255.255.255.252

Ipv6 address 2001:db8:1:13::1/64

no shut

int lo 0

ip add 4.4.4.4 255.255.255.255

Ipv6 address 2001:db8:8:11::1/128

no shut

exit

int lo 1

ip add 192.168.3.1 255.255.255.0

Ipv6 address 2001:db8:4:1::1/64

no shut

exit

router eigrp 64500

network 10.9.4.0 0.0.0.3

network 192.168.3.0 0.0.0.255

network 4.4.4.4 0.0.0.0

no auto-summary

network 2001:db8:1:13::1/64

network 2001:db8:8:11::1/128

network 2001:db8:4:1::1/64

end

ISP--------------------------------

# Router 5

conf t

hostname R5

no ip domain lookup

Ipv6 unicast-routing

router isis 100

is-type level-2-only

net 00.0000.0000.0005.00

exit

ip vrf cust-a

rd 64100:100

route-target export 64100:100

route-target import 64100:100

exit

ip vrf cust-b

rd 64100:200

route-target export 64100:200

route-target import 64100:200

exit

mpls label range 500 599

mpls ip

int f1/1

ip vrf forwarding cust-b

ip add 10.5.10.1 255.255.255.252

Ipv6 address 2001:db8:1:2::1/64

no shut

int f1/0

ip vrf forwarding cust-a

ip add 10.5.1.1 255.255.255.252

Ipv6 address 2001:db8:1:1::2/64

no shut

int lo 1

ip add 5.5.5.5 255.255.255.255

Ipv6 address 2001:db8:8:12::1/128

ip router isis 100

no shut

int f0/1

ip add 10.5.8.1 255.255.255.252

Ipv6 address 2001:db8:1:5::1/64

ip router isis 100

mpls ip

no shut

int f0/0

Ipv6 address 2001:db8:1:4::1/64

ip add 10.5.6.1 255.255.255.252

ip router isis 100

mpls ip

no shut

exit

router bgp 64100

neighbor 6.6.6.6 remote-as 64100

neighbor 6.6.6.6 update-source lo1

address-family ipv4 vrf cust-a

neighbor 10.5.1.2 remote-as 65500

exit-address-family

address-family ipv4 vrf cust-b

neighbor 10.5.10.2 remote-as 64500

exit-address-family

address-family vpnv4

neighbor 6.6.6.6 activate

neighbor 6.6.6.6 send-community extended

!!!!!!!!!

router bgp 64100

neighbor 2001:db8:8:13::1/128 remote-as 64100

neighbor 2001:db8:8:13::1/128 update-source lo1

Address-family ipv6 unicast vrf cust-a

neighbor 2001:db8:1:1::1/64 remote-as 65500

exit-address-family

address-family ipv6 unicast vrf cust-b

neighbor 2001:db8:1:2::2/64 remote-as 64500

exit-address-family

Address-family vpnv6 unicast

neighbor 2001:db8:8:13::1/128 activate

neighbor 2001:db8:8:13::1/128 send-community extended

exit

end

ISP--------------------------------

# Router 6

conf t

hostname R6

no ip domain lookup

Ipv6 unicast-routing

router isis 100

is-type level-2-only

net 00.0000.0000.0006.00

exit

mpls label range 600 699

mpls ip

router bgp 64100

no auto

no synchro

template peer-session PE

remote-as 64100

update-source lo1

exit

template peer-policy PE

send-community extended

route-reflector-client

exit

neighbor 1.1.1.1 remote-as 65500

neighbor 1.1.1.1 ebgp-multihop 2

neighbor 1.1.1.1 update-source lo1

neighbor 10.10.10.10 remote-as 64500

neighbor 10.10.10.10 ebgp-multihop 2

neighbor 10.10.10.10 update-source lo1

neighbor 5.5.5.5 inherit peer-session PE

neighbor 7.7.7.7 inherit peer-session PE

neighbor 8.8.8.8 inherit peer-session PE

neighbor 9.9.9.9 inherit peer-session PE

address-family vpnv4

neighbor 5.5.5.5 activate

neighbor 5.5.5.5 inherit peer-policy PE

neighbor 7.7.7.7 activate

neighbor 7.7.7.7 inherit peer-policy PE

neighbor 8.8.8.8 activate

neighbor 8.8.8.8 inherit peer-policy PE

neighbor 9.9.9.9 activate

neighbor 9.9.9.9 inherit peer-policy PE

exit

!!!!!!!!!!!!!!!

neighbor 2001:db8:8:1::1/128 remote-as 65500

neighbor 2001:db8:8:1::1/128 ebgp-multihop 2

neighbor 2001:db8:8:1::1/128 update-source lo1

neighbor 2001:db8:8:17::1/128 remote-as 64500

neighbor 2001:db8:8:17::1/128 ebgp-multihop 2

neighbor 2001:db8:8:17::1/128 update-source lo1

neighbor 2001:db8:8:12::1/128 inherit peer-session PE

neighbor 2001:db8:8:14::1/128 inherit peer-session PE

neighbor 2001:db8:8:15::1/128 inherit peer-session PE

neighbor 2001:db8:8:16::1/128 inherit peer-session PE

address-family vpnv6

neighbor 2001:db8:8:12::1/128 activate

neighbor 2001:db8:8:12::1/128 inherit peer-policy PE

neighbor 2001:db8:8:14::1/128 activate

neighbor 2001:db8:8:14::1/128 inherit peer-policy PE

neighbor 2001:db8:8:15::1/128 activate

neighbor 2001:db8:8:15::1/128 inherit peer-policy PE

neighbor 2001:db8:8:16::1/128 activate

neighbor 2001:db8:8:16::1/128 inherit peer-policy PE

!!!!!!!!!!!!!!!!

int f0/0

ip add 10.5.6.2 255.255.255.252

Ipv6 address 2001:db8:1:4::2/64

ip router isis 100

mpls ip

no shut

int f4/1

Ipv6 address 2001:db8:1:6::1/64

ip add 10.6.8.1 255.255.255.252

ip router isis 100

mpls ip

no shut

int f1/0

ip add 10.6.9.1 255.255.255.252

Ipv6 address 2001:db8:1:8::1/64

ip router isis 100

mpls ip

no shut

int f0/1

Ipv6 address 2001:db8:1:9::1/64

ip add 10.6.7.2 255.255.255.252

ip router isis 100

mpls ip

no shut

int lo 1

ip add 6.6.6.6 255.255.255.255

Ipv6 address 2001:db8:8:13::1/128

ip router isis 100

no shut

exit

ISP--------------------------------

# Router 7

conf t

hostname R7

no ip domain lookup

Ipv6 unicast-routing

router isis 100

is-type level-2-only

net 00.0000.0000.0007.00

exit

ip vrf cust-a

router ospf 703 vrf cust-a

domain-id 0.0.0.8

network 0.0.0.0 255.255.255.255 area 0

network 0:0:0:0:0:ffff:0:0/128 area 0

redistribute bgp 64100 subnet

ip vrf cust-a

rd 64100:100

route-target export 64100:100

route-target import 64100:100

exit

mpls label range 700 799

mpls ip

int f0/1

ip add 10.6.7.1 255.255.255.252

Ipv6 address 2001:db8:1:9::2/64

ip router isis 100

mpls ip

no shut

int f0/0

Ipv6 address 2001:db8:1:10::1/64

ip add 10.9.7.1 255.255.255.252

ip router isis 100

mpls ip

no shut

int f1/0

ip vrf forwarding cust-a

ip add 10.7.3.2 255.255.255.252

Ipv6 address 2001:db8:1:11::2/64

int lo 1

ip add 7.7.7.7 255.255.255.255

Ipv6 address 2001:db8:8:14::1/128

ip router isis 100

no shut

exit

router bgp 64100

neighbor 6.6.6.6 remote-as 64100

neighbor 6.6.6.6 update-source loopback 1

address-family ipv4 vrf cust-a

redistribute ospf 703

address-family vpnv4

neighbor 6.6.6.6 activate

neighbor 6.6.6.6 send-community extended

exit

!!!!

router bgp 64100

neighbor 2001:db8:8:13::1/128 remote-as 64100

neighbor 2001:db8:8:13::1/128 update-source loopback 1

address-family ipv6 unicast vrf cust-a

redistribute ospf 703

address-family vpnv6

neighbor 2001:db8:8:13::1/128 activate

neighbor 2001:db8:8:13::1/128 send-community extended

!!!!

end

ISP--------------------------------

# Router 8

conf t

hostname R8

no ip domain lookup

Ipv6 unicast-routing

router isis 100

is-type level-2-only

net 00.0000.0000.0008.00

exit

ip vrf cust-b

rd 64100:200

route-target export 64100:200

route-target import 64100:200

exit

mpls label range 800 899

mpls ip

router ospf 802 vrf cust-b

domain-id 0.0.0.8

network 0.0.0.0 255.255.255.255 area 0

network 0:0:0:0:0:ffff:0:0/128 area 0

redistribute bgp 64100 subnet

int f0/0

ip vrf forwarding cust-b

Ipv6 address 2001:db8:1:3::2/64

ip add 10.8.2.2 255.255.255.252

no shut

int f0/1

ip add 10.5.8.2 255.255.255.252

Ipv6 address 2001:db8:1:5::2/64

ip router isis 100

mpls ip

no shut

int f4/1

ip add 10.6.8.2 255.255.255.252

Ipv6 address 2001:db8:1:6::2/64

ip router isis 100

mpls ip

no shut

int f1/1

ip add 10.8.9.1 255.255.255.252

Ipv6 address 2001:db8:1:7::1/64

ip router isis 100

mpls ip

no shut

int lo 1

ip add 8.8.8.8 255.255.255.255

Ipv6 address 2001:db8:8:15::1/128

ip router isis 100

no shut

exit

router bgp 64100

neighbor 6.6.6.6 remote-as 64100

neighbor 6.6.6.6 update-source loopback 1

address-family ipv4 vrf cust-b

redistribute ospf 802 vrf cust-b

exit

address-family vpnv4

neighbor 6.6.6.6 activate

neighbor 6.6.6.6 send-community extended

exit

end

!!!!!

router bgp 64100

neighbor 2001:db8:8:13::1/128 remote-as 64100

neighbor 2001:db8:8:13::1/128 update-source loopback 1

address-family ipv6 unicast vrf cust-b

redistribute ospf 802 vrf cust-b

exit

address-family vpnv6

neighbor 2001:db8:8:13::1/128 activate

neighbor 2001:db8:8:13::1/128 send-community extended

exit

end

!!!!!

ISP--------------------------------

# Router 9

conf t

hostname R9

no ip domain lookup

Ipv6 unicast-routing

router isis 100

is-type level-2-only

net 00.0000.0000.0009.00

exit

ip vrf cust-a

rd 64100:100

route-target export 64100:100

route-target import 64100:100

exit

ip vrf cust-b

rd 64100:200

route-target export 64100:200

route-target import 64100:200

exit

mpls label range 900 999

mpls ip

int f0/1

ip vrf forwarding cust-b

ip add 10.9.4.2 255.255.255.252

Ipv6 address 2001:db8:1:13::2/64

no shut

int f4/1

ip vrf forwarding cust-a

ip add 10.9.11.2 255.255.255.252

Ipv6 address 2001:db8:1:12::1/64

no shut

int f0/0

Ipv6 address 2001:db8:1:10::2/64

ip add 10.9.7.2 255.255.255.252

ip router isis 100

mpls ip

no shut

int f1/0

ip add 10.6.9.2 255.255.255.252

Ipv6 address 2001:db8:1:8::2/64

ip router isis 100

mpls ip

no shut

int f1/1

Ipv6 address 2001:db8:1:7::2/64

ip add 10.8.9.2 255.255.255.252

ip router isis 100

mpls ip

no shut

int lo 1

ip add 9.9.9.9 255.255.255.252

Ipv6 address 2001:db8:8:16::1/128

ip router isis 100

no shut

router eigrp 910

address-family ipv4 vrf cust-a

address-family ipv6 unicast vrf cust-a

autonomous-system 65500

no auto-summary

network 10.9.11.0 0.0.0.3

network 2001:db8:1:12::1/64

redistribute bgp 64100 metric 1000 100 255 1 1500

router eigrp 904

address-family ipv4 vrf cust-b

address-family ipv6 unicast vrf cust-b

autonomous-system 64500

no auto-summary

network 10.9.4.0 0.0.0.3

network 2001:db8:1:13::1/64

redistribute bgp 64100 metric 1000 100 255 1 1500

exit

router bgp 64100

neighbor 6.6.6.6 remote-as 64100

neighbor 6.6.6.6 update-source loopback 1

address-family ipv4 vrf cust-b

!redistribute eigrp 904 vrf cust-b ---- not working in eve-ng

network 4.4.4.4 mask 255.255.255.255

network 192.168.3.0 mask 255.255.255.0

address-family ipv4 vrf cust-a

!redistribute eigrp 910 vrf cust-a ---- not working in eve-ng

network 192.168.3.0 mask 255.255.255.0

network 11.11.11.11 mask 255.255.255.255

exit

address-family vpnv4

neighbor 6.6.6.6 activate

neighbor 6.6.6.6 send-community extended

exit

end

!!!!!

router bgp 64100

neighbor 2001:db8:8:13::1/128 remote-as 64100

neighbor 2001:db8:8:13::1/128 update-source loopback 1

address-family ipv6 unicast vrf cust-b

!redistribute eigrp 904 vrf cust-b ---- not working in eve-ng

network 2001:db8:8:11::1/128

network 2001:db8:4:1::1/64 mask 255.255.255.0

address-family ipv6 unicast vrf cust-a

!redistribute eigrp 910 vrf cust-a ---- not working in eve-ng

network 2001:db8:4:1::1/64

network 2001:db8:8:18::1/128

exit

address-family vpnv6

neighbor 2001:db8:8:13::1/128 activate

neighbor 2001:db8:8:13::1/128 send-community extended

exit

end

!!!!

Customer--------------------------------

# Router 10

conf t

hostname R10

no ip domain lookup

Ipv6 unicast-routing

int f1/1

ip add 10.5.10.2 255.255.255.252

Ipv6 address 2001:db8:1:2::2/64

no shut

int lo 0

ip add 10.10.10.10 255.255.255.255

Ipv6 address 2001:db8:8:17::1/128

int lo 1

ip add 192.168.1.1 255.255.255.0

Ipv6 address 2001:db8:2:1::1/64

no shut

exit

router bgp 64500

bgp router-id 10.10.10.10

neighbor 10.5.10.1 remote-as 64100

network 10.10.10.10 mask 255.255.255.255

network 192.168.1.0 mask 255.255.255.0

neighbor 2001:db8:1:2::1/64 remote-as 64100

network 2001:db8:8:17::1/128

network 2001:db8:2:1::1/64

end

!

--------------------------------

# Router 11

conf t

hostname R11

no ip domain lookup

Ipv6 unicast-routing

int f4/1

ip add 10.9.11.1 255.255.255.252

Ipv6 address 2001:db8:1:12::2/64

no shut

int lo 0

ip add 11.11.11.11 255.255.255.255

Ipv6 address 2001:db8:8:18::1/128

int lo 1

ip add 192.168.3.1 255.255.255.0

Ipv6 address 2001:db8:4:1::1/64

no shut

router eigrp 65500

network 10.9.11.0 0.0.0.3

network 192.168.3.0 0.0.0.255

network 11.11.11.11 0.0.0.0

network 2001:db8:1:12::1/64

network 2001:db8:4:1::1/64

network 2001:db8:8:18::1/128

no auto-summary

exit

end

!