**BGP**

<https://www.youtube.com/watch?v=VH8EaC4V-NU&t=997s>

Rules

1. To Run eBGP between directly connected router we need to have point to point ip connectivity
2. To Run iBGP between directly connected or dynamically connected (like ibgp over OSPF) we need to have loopback address reachability between routers

Here iBGP Loop prevention mechanism doesn’t forward the route learned from one iBGP router (R1) to another iBGP router (R3)

1. To Avoid this, we can use Mesh connection to R2 to R3
2. Or else another method is to use route reflector on R1 – iBGP router to R3 iBGP router

A diagram of a network

Description automatically generated

R1

A screen shot of a computer

Description automatically generated

OSPF

Router ospf 100

Network 0.0.0.0 255.255.255.255 area 85

Sh ip ospf neighbor

Ping 2.2.2.2

Ping 3.3.3.3

BGP

Router bgp 100

Redistribute connected ------ ### BGP will started to advertise it connected network to peering neighbor

Neighbor 2.2.2.2 reomte-as 100

Neighbor 2.2.2.2 description R2

Neighbor 3.3.3.3 reomte-as 100

Neighbor 3.3.3.3 description R3

No synchronization

No auto-summary

Bgp log-neighbor-changes

Neighbor 3.3.3.3 route-reflector-client

Sh ip bgp sum

Clear ip bgp \* soft ---------------------- will not disrupt the existing bgp routing table \*\*recommended\*\*

clear ip bgp \* soft in

clear ip bgp \* soft out

Here iBGP Loop prevention mechanism doesn’t forward the router learned from one iBGP router (R1) to another iBGP router (R3)

1. To Avoid this we can use Mesh connection to R2 to R3
2. Or else another method is to use route reflector on R1 – iBGP router

R2

A screen shot of a computer

Description automatically generated

OSPF

Router ospf 100

Network 0.0.0.0 255.255.255.255 area 85

BGP

ibgp

Router bgp 100

Redistribute connected

Neighbor 1.1.1.1 reomte-as 100

Neighbor 1.1.1.1 description R1

Neighbor 1.1.1.1 update-source loopback 0 ####when we are peering using loopback interface in BGP means need to use this command ######

no synchronization

No auto-summary

Bgp log-neighbor-changes

ebgp

Router bgp 100

Neighbor 172.158.1.2 reomte-as 400

Neighbor 172.158.1.2 description R4

R3

A screenshot of a computer screen

Description automatically generated

OSPF

Router ospf 100

Network 0.0.0.0 255.255.255.255 area 85

BGP

ibgp

Router bgp 100

Redistribute connected

Neighbor 1.1.1.1 reomte-as 100

Neighbor 1.1.1.1 description R1

Neighbor 1.1.1.1 update-source loopback 0 ####when we are peering using loopback interface in BGP means need to use this command ######

no synchronization

No auto-summary

Bgp log-neighbor-changes

ebgp

Router bgp 100

Neighbor 172.168.1.2 remote-as 500

Neighbor 1.1.1.1 description R5

R4

A screenshot of a computer

Description automatically generated

BGP

ebgp

Router bgp 400

Redistribute connected

Neighbor 172.158.1.1 reomte-as 100

Neighbor 172.158.1.1 description R2

R5

A black background with yellow text

Description automatically generated

BGP

ebgp

Router bgp 500

Redistribute connected

Neighbor 172.168.1.1 reomte-as 100

Neighbor 172.168.1.1 description R3