

[illegible]

1. R2, R3,R4 & R5 I'm using OSPF for IBGP connectivity
2. Between R1 & R2 – EBGP and R5 & R6 – EBGP

➤ SITE_1_NOIDA#show run | section bgp

- router bgp 64512
- no synchronization
- bgp router-id 1.1.1.1
- bgp log-neighbor-changes
- network 192.168.1.0
- neighbor 95.1.1.2 remote-as 100
- neighbor 95.1.1.2 allowas-in
- no auto-summary

➤ SITE_1_NOIDA#

➤ **R2#show run | section bgp**

- router bgp 100
- no synchronization
- bgp router-id 2.2.2.2
- bgp log-neighbor-changes
- neighbor 5.5.5.5 remote-as 100
- neighbor 5.5.5.5 update-source Loopback1
- neighbor 5.5.5.5 next-hop-self
- neighbor 95.1.1.1 remote-as 64512
- no auto-summary
- R2#

➤ **R5#show run | section bgp**

- router bgp 100
- no synchronization
- bgp router-id 5.5.5.5
- bgp log-neighbor-changes
- neighbor 1.1.1.1 remote-as 100
- neighbor 1.1.1.1 update-source Loopback1
- neighbor 1.1.1.1 next-hop-self
- neighbor 96.1.1.1 remote-as 64512
- no auto-summary
- R5#

➤ **SITE_2_PUNE#show run | section bgp**

- router bgp 64512
- no synchronization
- bgp router-id 6.6.6.6
- bgp log-neighbor-changes
- network 192.168.2.0
- neighbor 96.1.1.2 remote-as 100
- neighbor 96.1.1.2 allowas-in
- no auto-summary
- SITE_2_PUNE#

OSPF configuration for IBGP connectivity –

➤ R2#

- interface Serial4/0
- ip ospf 100 area 0
- interface Serial4/1
- ip ospf 100 area 0
- interface Loopback1
- ip ospf 100 area 0

➤ R3#show run | section ospf

- router ospf 100
- log-adjacency-changes
- network 0.0.0.0 255.255.255.255 area 0
- R3#

➤ R4#show run | section ospf

- router ospf 100
- log-adjacency-changes
- network 0.0.0.0 255.255.255.255 area 0
- R4#

➤ R5#

- interface Serial4/0
- ip ospf 100 area 0
- interface Serial4/1
- ip ospf 100 area 0
- interface Loopback1
- ip ospf 100 area 0

MPLS configuration –

➤ R2#

```
interface Serial4/0
mpls
interface Serial4/1
mpls
```

➤ R3#

```
interface Serial4/0
mpls
interface Serial4/1
mpls
```

➤ R4#

```
interface Serial4/0
mpls
interface Serial4/1
mpls
```

➤ R5#

```
interface Serial4/0
mpls
interface Serial4/1
mpls
```

Now you can verify that both sites are able to communicate or not – lets try –

```
SITE_1_NOIDA#ping 192.168.2.1 source gigabitEthernet 0/0

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.2.1, timeout is 2 seconds:
Packet sent with a source address of 192.168.1.1
!!!!!! ✓
Success rate is 100 percent (5/5), round-trip min/avg/max = 48/76/104 ms
SITE_1_NOIDA#
```

```
SITE_2_PUNE#ping 192.168.1.1 source gigabitEthernet 0/0

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.1.1, timeout is 2 seconds:
Packet sent with a source address of 192.168.2.1
!!!!!! ✓
Success rate is 100 percent (5/5), round-trip min/avg/max = 48/63/80 ms
SITE_2_PUNE#
```

As you can see that both sites are able to communicate to each other.

Now lets try traceroute –

```
SITE_1_NOIDA#traceroute 192.168.2.1 source gigabitEthernet 0/0
Type escape sequence to abort.
Tracing the route to 192.168.2.1

 0  10.1.1.1  0 msec  0 msec  0 msec
 1  95.1.1.2  12 msec  12 msec  4 msec
 2  10.1.2.2 [MPLS: Label 17 Exp 0] 48 msec 48 msec 52 msec
 3  10.1.4.2  52 msec  60 msec  64 msec
 4  96.1.1.1  52 msec  56 msec  20 msec
SITE_1_NOIDA#
```

```
SITE_2_PUNE#traceroute 192.168.1.1 source gigabitEthernet 0/0
Type escape sequence to abort.
Tracing the route to 192.168.1.1

 0  10.1.1.1  0 msec  0 msec  0 msec
 1  96.1.1.2  16 msec  20 msec  20 msec
 2  10.1.3.1 [MPLS: Label 16 Exp 0] 56 msec 48 msec 56 msec
 3  10.1.1.1  20 msec  32 msec  36 msec
 4  95.1.1.1  60 msec  64 msec  52 msec
SITE_2_PUNE#
```

Theory part will be uploaded shortly.

Request you to please like, share & don't forget to comment so that I can enhanced my technical skills.

Thank you everyone for supporting me.

You can directly contact to me on this e-mail id to get more notes. –
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Thank you –

Umesh Prajapati.

Umesh prajapati