

```
ibgp neig
Directly connected --phy interfaces
Directly connected -Loopback
indirect/uncommon subnet
Ebgp
Directly connected --phy interfaces
Directly connected -Loopback
indirect/uncommon subnet
Network command
loop prevention mech
```

```
-----
R1:
conf t
int e0/0
Desc conn to R2
ip add 10.12.1.1 255.255.255.0
no sh
int lo 0
ip add 1.1.1.1 255.255.255.255
exit

router bgp 100
bgp router-id 1.1.1.1
neig 10.12.1.2 remote-as 100
exit
```

```
R2:
conf t
int e0/0
Desc conn to R1
ip add 10.12.1.2 255.255.255.0
no sh
int e0/1
Desc conn to R3
ip add 10.23.1.2 255.255.255.0
no sh
int lo 0
ip add 2.2.2.2 255.255.255.255
exit
```

```
Router bgp 100
bgp router-id 2.2.2.2
neig 10.12.1.1 remote-as 100
neig 3.3.3.3 remote-as 100
neig 3.3.3.3 update-source lo0
exit
```

```
ip route 3.3.3.3 255.255.255.255 10.23.1.3
```

```
R3:
conf t
int e0/0
Desc conn to R2
ip add 10.23.1.3 255.255.255.0
no sh
int lo0
ip add 3.3.3.3 255.255.255.255
```

```
exit

router bgp 100
  bgp router-id 3.3.3.3
  neig 2.2.2.2 remote-as 100
  neig 2.2.2.2 update-source lo0
  neig 2.2.2.2 transport connection-mode passive
exit

ip route 0.0.0.0 0.0.0.0 10.23.1.2
```

```
=====
R1
router bgp 100
  neig 10.23.1.3 remote-as 100
  net 10.12.1.0 m 255.255.255.0
exit
```

```
R2:
router bgp 100
  net 10.12.1.0 m 255.255.255.0
  net 10.23.1.0 m 255.255.255.0
exit
```

```
R3:
router bgp 100
  neig 10.12.1.1 remote-as 100
  net 10.23.1.0 m 255.255.255.0
exit
```

```
=====
R1---R2 Ebgp neig on directly connected neig
```

```
R1
router bgp 100
  neig 10.12.1.2 remote-as 200
exit
```

```
R2
router bgp 200
  neig 10.12.1.1 remote-as 100
exit
```

```
-----
R2---R3 Ebgp neig on loopback
```

```
R2:
router bgp 200
  neig 3.3.3.3 remote-as 300
  neig 3.3.3.3 update-source lo0
  neig 3.3.3.3 disable-connected-check
exit
```

```
R3:
router bgp 300
  neig 2.2.2.2 remote-as 200
  neig 2.2.2.2 update-source lo0
  neig 2.2.2.2 disable-connected-check
```

```
exit
```

```
-----  
-  
R1--R3 uncommon subnets multihop ebgp session
```

```
R1:
```

```
S          3.3.3.3 [1/0] via 10.12.1.2
```

```
router bgp 100  
neig 3.3.3.3 remote-as 300  
neig 3.3.3.3 update-source lo0  
neig 3.3.3.3 ebgp-multihop  
exit
```

```
R3:
```

```
S          1.1.1.1 [1/0] via 10.23.1.2
```

```
router bgp 300  
neig 1.1.1.1 remote-as 100  
neig 1.1.1.1 update-source lo0  
neig 1.1.1.1 ebgp-multihop  
exit
```

```
=====  
Network Command in BGP:  
-----
```

```
R3:
```

```
conf t  
int e0/0  
Desc conn to R1  
ip add 10.13.1.3 255.255.255.0  
no sh  
int lo0  
ip add 192.168.3.3 255.255.255.255  
exit
```

```
router eigrp 1  
net 10.13.1.3 0.0.0.0  
net 192.168.3.3 0.0.0.0  
exit
```

```
R4:
```

```
conf t  
int e0/0  
Desc conn to R1  
ip add 10.14.1.4 255.255.255.0  
no sh  
int lo0  
ip add 192.168.4.4 255.255.255.255  
exit
```

```
ip route 0.0.0.0 0.0.0.0 10.14.1.1
```

```
R5:
```

```
conf t  
int e0/0
```

```
Desc conn to R1
ip add 10.15.1.5 255.255.255.0
no sh
int lo0
ip add 192.168.5.5 255.255.255.255
exit
```

```
router ospf 1
net 10.15.1.5 0.0.0.0 area 0
net 192.168.5.5 0.0.0.0 area 0
exit
```

```
R1:
conf t
int e0/0
Desc conn to R2-Ebgp neig
ip add 192.168.12.1 255.255.255.0
no shut
int e0/1
Desc conn to R3-Eigrp
ip add 10.13.1.1 255.255.255.0
no sh
int e0/2
Desc conn to R4-Static route
ip add 10.14.1.1 255.255.255.0
no sh
int e0/3
Desc conn to R5 --OSPF
ip add 10.15.1.1 255.255.255.0
no sh
int lo 0
ip add 1.1.1.1 255.255.255.255
exit
```

```
router eigrp 1
net 10.13.1.1 0.0.0.0
exit
```

```
ip route 192.168.4.4 255.255.255.255 10.14.1.4
```

```
router ospf 1
net 10.15.1.1 0.0.0.0 area 0
exit
```

```
router bgp 65100
  bgp log-neighbor-changes
  network 192.168.3.3 mask 255.255.255.255
  network 192.168.4.4 mask 255.255.255.255
  network 192.168.5.5 mask 255.255.255.255
  network 192.168.33.0
  redistribute connected route-map RM
  neighbor 192.168.12.2 remote-as 65200
```

```
route-map RM permit 10
  match interface Loopback0
```

```
exit
```

```
R2:
```

```
conf t
```

```
int e0/0
```

```
Desc conn to R1-Ebgp neig
```

```
ip add 192.168.12.2 255.255.255.0
```

```
no shut
```

```
int lo0
```

```
ip add 2.2.2.2 255.255.255.255
```

```
exit
```

```
router bgp 65200
```

```
  bgp log-neighbor-changes
```

```
  network 2.2.2.2 mask 255.255.255.255
```

```
  neighbor 192.168.12.1 remote-as 65100
```

```
  neighbor 192.168.12.1 soft-reconfiguration inbound
```

```
!RIB-ADJ-IN
```

```
sh ip bgp neig 192.168.12.1 received-routes
```

```
!RIB-ADJ-OUT
```

```
sh ip bgp neig 192.168.12.1 advertised-route
```

```
!LOC-RIB
```

```
sh ip bgp
```