

```
R1:
conf t
int e0/0
Desc conn to R2
ip add 10.12.1.1 255.255.255.0
no shut
int lo0
ip add 20.1.0.1 255.255.255.0
int lo1
ip add 20.1.1.1 255.255.255.0
int lo2
ip add 20.1.2.1 255.255.255.0
int lo3
ip add 20.1.3.1 255.255.255.0
exit

router bgp 100
  bgp router-id 1.1.1.1
  bgp log-neighbor-changes
  network 20.1.0.0 mask 255.255.255.0
  network 20.1.1.0 mask 255.255.255.0
  network 20.1.2.0 mask 255.255.255.0
  network 20.1.3.0 mask 255.255.255.0
  neighbor 10.12.1.2 remote-as 200
exit
```

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

```
router bgp 200
  bgp router-id 2.2.2.2
  neighbor 10.12.1.1 remote-as 100
  neighbor 10.23.1.3 remote-as 200
  neighbor 10.23.1.3 next-hop-self
```

```
R3
conf t
int e0/0
Desc conn to R2
ip add 10.23.1.3 255.255.255.0
no shut
int e0/1
Desc conn to R4
ip add 10.34.1.3 255.255.255.0
no shut
exit
```

```
router bgp 200
  bgp router-id 3.3.3.3
```

```
neighbor 10.23.1.2 remote-as 200
neighbor 10.23.1.2 next-hop-self
neighbor 10.34.1.4 remote-as 400
exit
```

```
R4;
conf t
int e0/0
Desc conn to R3
ip add 10.34.1.4 255.255.255.0
no shut
int lo 0
ip add 4.4.4.4 255.0.0.0
exit
```

```
router bgp 400
  bgp router-id 4.4.4.4
  network 4.0.0.0
  neighbor 10.34.1.3 remote-as 200
exit
```

R3:

```
router bgp 200
  aggregate-address 20.1.0.0 255.255.252.0
exit
```

```
router bgp 200
aggregate-address 20.1.0.0 255.255.252.0 as-set
exit
```

```
router bgp 200
aggregate-address 20.1.0.0 255.255.252.0 as-set summary-only
exit
```

Unsuppress MAP

```
-----
access-list 1 permit 20.1.3.0 0.0.0.255
```

```
route-map RM-UNSUPP permit 10
  match ip address 1
exit
```

```
router bgp 200
neighbor 10.34.1.4 unsuppress-map RM-UNSUPP
exit
```

suppress MAP

```
-----
access-list 1 permit 20.1.3.0 0.0.0.255
```

```
route-map RM-SUPP permit 10
  match ip address 1
exit
```

```
router bgp 200
```

```
aggregate-address 20.1.0.0 255.255.252.0 as-set suppress-map RM-SUPP
exit
```

```
=====
MED
```

```
R1:
```

```
conf t
int s2/0
Desc conn to R2
ip add 10.12.1.1 255.255.255.0
no sh
int e0/0
Desc conn to R4
ip add 10.14.1.1 255.255.255.0
no sh
int lo0
ip add 1.1.1.1 255.0.0.0
int lo 1
ip add 11.1.1.1 255.0.0.0
exit
```

```
router bgp 100
  bgp log-neighbor-changes
  network 1.0.0.0
  network 11.0.0.0
  neighbor 10.12.1.2 remote-as 200
  neighbor 10.14.1.4 remote-as 200
exit
```

```
R2
```

```
conf t
int s2/0
Desc conn to R1
ip add 10.12.1.2 255.255.255.0
no sh
int e0/0
Desc conn to R3
ip add 10.23.1.2 255.255.255.0
no sh
int lo0
ip add 2.2.2.2 255.0.0.0
exit
```

```
router bgp 200
  network 2.0.0.0
  neighbor 10.12.1.1 remote-as 100
  neighbor 10.23.1.3 remote-as 200
neighbor 10.23.1.3 next-hop-self
exit
```

```
R3:
```

```
conf t
int e0/0
ip add 10.23.1.3 255.255.255.0
no sh
int s2/0
ip add 10.34.1.3 255.255.255.0
no sh
```

```
exit
int lo 0
ip add 3.3.3.3 255.0.0.0
exit
```

```
router bgp 200
  bgp log-neighbor-changes
  network 3.0.0.0
  neighbor 10.23.1.2 remote-as 200
  neighbor 10.34.1.4 remote-as 200
exit
```

```
R4
conf t
int s2/0
Desc conn to R3
ip add 10.34.1.4 255.255.255.0
no sh
int e0/0
Desc conn to R1
ip add 10.14.1.4 255.255.255.0
no sh
int lo0
ip add 4.4.4.4 255.0.0.0
exit
```

```
router bgp 200
  network 4.0.0.0
  neighbor 10.14.1.1 remote-as 100
  neighbor 10.34.1.3 remote-as 200
  neighbor 10.34.1.3 next-hop-self
exit
```

=====

R4:MED for specific route

```
access-list 1 permit 4.0.0.0 0.255.255.255
```

```
route-map RM-MED permit 10
  match ip address 1
  set metric 210
route-map RM-MED permit 20
exit
```

```
router bgp 200
  network 4.0.0.0
  neighbor 10.14.1.1 remote-as 100
  neighbor 10.14.1.1 route-map RM-MED out
  neighbor 10.23.1.2 remote-as 200
  neighbor 10.34.1.3 remote-as 200
  neighbor 10.34.1.3 next-hop-self
exit
```

R2: MED all routes from a neig

```
router bgp 200
```

```
network 2.0.0.0
neighbor 10.12.1.1 remote-as 100
neighbor 10.12.1.1 route-map RM-MED out
neighbor 10.23.1.3 remote-as 200
neighbor 10.23.1.3 next-hop-self
neighbor 10.34.1.4 remote-as 200
exit
```

```
route-map RM-MED permit 10
  set metric 101
exit
```

Deterministic MED

```
Router bgp 400
  bgp deterministic-med
  bgp always-compare-med
exit
```

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