

```
R1:
conf t
interface Loopback0
 ip address 10.1.1.1 255.255.255.0
!
interface Loopback1
 ip address 10.1.2.2 255.255.255.0
!
interface Loopback2
 ip address 10.1.3.3 255.255.255.0
!
interface Loopback3
 ip address 10.1.4.4 255.255.255.0
!
interface Ethernet0/0
 description conn to R2 in AS 200
 ip address 10.12.1.1 255.255.255.0
!

router bgp 100
 bgp router-id 1.1.1.1
 bgp log-neighbor-changes
 network 10.1.1.0 mask 255.255.255.0
 network 10.1.2.0 mask 255.255.255.0
 network 10.1.3.0 mask 255.255.255.0
 network 10.1.4.0 mask 255.255.255.0
 neighbor 10.12.1.2 remote-as 200
 neighbor 10.12.1.2 send-community both
 neighbor 10.12.1.2 route-map RM-WELL-KNOWN-COMM out
exit
```

```
access-list 1 permit 10.1.1.0 0.0.0.255
access-list 2 permit 10.1.2.0 0.0.0.255
access-list 3 permit 10.1.3.0 0.0.0.255
access-list 4 permit 10.1.4.0 0.0.0.255
```

```
route-map RM-WELL-KNOWN-COMM permit 10
 match ip address 1
 set community internet
route-map RM-WELL-KNOWN-COMM permit 20
 match ip address 2
 set community no-advertise
route-map RM-WELL-KNOWN-COMM permit 30
 match ip address 3
 set community local-AS
route-map RM-WELL-KNOWN-COMM permit 40
 match ip address 4
 set community no-export
route-map RM-WELL-KNOWN-COMM permit 50
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R2:
conf t
interface Loopback0
 ip address 192.168.2.2 255.255.255.0
!
interface Loopback1
 ip address 2.2.2.2 255.255.255.0
```

```

ip ospf 1 area 0
!
interface Ethernet0/0
description conn to R1
ip address 10.12.1.2 255.255.255.0
!
interface Ethernet0/1
description conn to R2
ip address 10.23.1.2 255.255.255.0
ip ospf 1 area 0
!
interface Ethernet0/2
description conn to R5
ip address 10.25.1.2 255.255.255.0
ip ospf 1 area 0
!
interface Ethernet0/3
ip address 10.28.1.2 255.255.255.0

router bgp 65100
bgp router-id 2.2.2.2
bgp log-neighbor-changes
bgp confederation identifier 200
bgp confederation peers 65200
network 192.168.2.0
neighbor 3.3.3.3 remote-as 65100
neighbor 3.3.3.3 update-source Loopback1
neighbor 3.3.3.3 next-hop-self
neighbor 3.3.3.3 send-community both
neighbor 5.5.5.5 remote-as 65200
neighbor 5.5.5.5 ebgp-multihop 255
neighbor 5.5.5.5 update-source Loopback1
neighbor 5.5.5.5 next-hop-self
neighbor 5.5.5.5 send-community both
neighbor 10.12.1.1 remote-as 100
neighbor 10.28.1.8 remote-as 400
neighbor 10.28.1.8 send-community both
exit

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R3:
conf t
interface Loopback0
ip address 192.168.3.3 255.255.255.0
!
interface Loopback1
ip address 3.3.3.3 255.255.255.0
ip ospf 1 area 0
!
interface Ethernet0/0
description conn to R2
ip address 10.23.1.3 255.255.255.0
ip ospf 1 area 0
!
interface Ethernet0/1
description conn to R4
ip address 10.34.1.3 255.255.255.0
ip ospf 1 area 0

```

```
router bgp 65100
  template peer-policy RR-POL-TEMP
    route-reflector-client
    send-community both
  exit-peer-policy
  !
  template peer-session RR-SESS-TEMP
    remote-as 65100
    version 4
    timers 30 90
  exit-peer-session
  !
  bgp router-id 3.3.3.3
  bgp log-neighbor-changes
  bgp confederation identifier 200
  network 192.168.3.0
  neighbor 2.2.2.2 inherit peer-session RR-SESS-TEMP
  neighbor 2.2.2.2 inherit peer-policy RR-POL-TEMP
  neighbor 4.4.4.4 inherit peer-session RR-SESS-TEMP
  neighbor 4.4.4.4 inherit peer-policy RR-POL-TEMP
exit
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R4:
conf t
interface Loopback0
  ip address 192.168.4.4 255.255.255.0
  !
interface Loopback1
  ip address 4.4.4.4 255.255.255.0
  ip ospf 1 area 0
  !
interface Ethernet0/0
  description conn to R3
  ip address 10.34.1.4 255.255.255.0
  ip ospf 1 area 0
  !
interface Ethernet0/1
  description conn to R6
  ip address 10.46.1.4 255.255.255.0
  ip ospf 1 area 0
```

```
router bgp 65100
  bgp router-id 4.4.4.4
  bgp log-neighbor-changes
  bgp confederation identifier 200
  bgp confederation peers 65200
  neighbor 3.3.3.3 remote-as 65100
  neighbor 3.3.3.3 update-source Loopback1
  neighbor 6.6.6.6 remote-as 65200
  neighbor 6.6.6.6 ebgp-multihop 255
  neighbor 6.6.6.6 update-source Loopback1
  neighbor 6.6.6.6 send-community
exit
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R5:
conf t
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```
interface Loopback0
 ip address 192.168.5.5 255.255.255.0
!
interface Loopback1
 ip address 5.5.5.5 255.255.255.0
 ip ospf 1 area 0
!
interface Ethernet0/0
 description conn to R2
 ip address 10.25.1.5 255.255.255.0
 ip ospf 1 area 0
!
interface Ethernet0/1
 description conn to R6
 ip address 10.56.1.5 255.255.255.0
 ip ospf 1 area 0

router bgp 65200
 bgp router-id 1.2.3.4
 bgp log-neighbor-changes
 bgp confederation identifier 200
 bgp confederation peers 65100
 network 192.168.5.0
 neighbor 2.2.2.2 remote-as 65100
 neighbor 2.2.2.2 ebgp-multihop 255
 neighbor 2.2.2.2 update-source Loopback1
 neighbor 6.6.6.6 remote-as 65200
 neighbor 6.6.6.6 update-source Loopback1
 neighbor 6.6.6.6 send-community
exit
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R6:
conf t
interface Loopback0
 ip address 192.168.6.6 255.255.255.0
!
interface Loopback1
 ip address 6.6.6.6 255.255.255.0
 ip ospf 1 area 0
!
interface Ethernet0/0
 description conn to R4
 ip address 10.46.1.6 255.255.255.0
 ip ospf 1 area 0
!
interface Ethernet0/1
 description conn to R5
 ip address 10.56.1.6 255.255.255.0
 ip ospf 1 area 0
!
interface Ethernet0/2
 description conn to R7
 ip address 10.67.1.6 255.255.255.0

router bgp 65200
 bgp router-id 6.6.6.6
 bgp log-neighbor-changes
 bgp confederation identifier 200
```

```
bgp confederation peers 65100
network 192.168.6.0
neighbor 4.4.4.4 remote-as 65100
neighbor 4.4.4.4 ebgp-multihop 255
neighbor 4.4.4.4 update-source Loopback1
neighbor 4.4.4.4 next-hop-self
neighbor 4.4.4.4 send-community
neighbor 5.5.5.5 remote-as 65200
neighbor 5.5.5.5 update-source Loopback1
neighbor 5.5.5.5 next-hop-self
neighbor 5.5.5.5 send-community
neighbor 10.67.1.7 remote-as 300
neighbor 10.67.1.7 send-community
exit
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Ebgp peers

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R7 :
conf t
interface Loopback0
 ip address 10.7.7.7 255.255.255.0
!
interface Ethernet0/0
 description conn to R6 in AS 200
 ip address 10.67.1.7 255.255.255.0
!
```

```
router bgp 300
 bgp router-id 7.7.7.7
 bgp log-neighbor-changes
 network 10.7.7.0 mask 255.255.255.0
 neighbor 10.67.1.6 remote-as 200
exit
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R8:
conf t
interface Loopback0
 ip address 192.168.8.8 255.255.255.0
!
interface Ethernet0/0
 ip address 10.28.1.8 255.255.255.0
!
router bgp 400
 bgp log-neighbor-changes
 network 192.168.8.0
 neighbor 10.28.1.2 remote-as 200
ex
```

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