

```
R1:
conf t
int e0/1
Desc LAN
ip add 10.1.1.1 255.255.255.0
no sh
int lo 0
ip add 10.2.2.2 255.255.255.0
int e0/0
Desc conn to R2
ip add 192.168.12.1 255.255.255.0
no shut
exit
```

```
R3:
conf t
int e0/1
Desc LAN
ip add 172.16.3.3 255.255.255.0
no sh
int lo 0
ip add 172.16.4.4 255.255.255.0
int e0/0
Desc conn to R2
ip add 192.168.23.3 255.255.255.0
no shut
exit
```

```
R2:
conf t
int e0/1
Desc conn to R1
ip add 192.168.12.2 255.255.255.0
no sh
int e0/2
Desc conn to R3
ip add 192.168.23.2 255.255.255.0
no shut
int e0/0
Desc conn to R4
ip add 192.168.24.2 255.255.255.0
no shut
exit
```

```
R4
conf t
int e0/0
Desc conn to R4
ip add 192.168.24.4 255.255.255.0
no shut
int e0/1
Desc conn to LAN
ip add 10.4.4.4 255.255.255.0
no shut
exit
```

```
=====
Route Filtering
```

1. Gateway

```
ip prefix-list GW-R3 seq 5 deny 192.168.23.0/24 le 32
```

```
router eigrp R2
add ipv4 au 100
topology base
Distribute-list gateway GW-RM in e0/2
exit
```

2. Route-MAP

```
Access-list 1 permit 10.1.1.0 0.0.0.255
Route-map abc deny 10
match ip add 1
Route-map abc permit 20
exit
```

```
router eigrp R2
add ipv4 au 100
topology base
Distribute-list route-map abc out e0/0
exit
```

3. ACL

```
Access-list 1 deny 10.1.1.0 0.0.0.255
Access-list 1 permit any
```

```
router eigrp R2
add ipv4 au 100
topology base
Distribute-list 1 out e0/0
exit
```

4. Prefix list

```
Class A 0-127
      128 64 32 16 8 4 2 1
0      0  0  0  0  0  0  0  0
127    0  1  1  1  1  1  1  1
```

A=0

Block class A Networks coming from R1

```
ip prefix-list CLASS-A seq 5 deny 0.0.0.0/1 ge 8
ip prefix-list CLASS-A seq 10 permit 0.0.0.0/0 le 32
```

```
router eigrp R2
add ipv4 au 100
topology base
Distribute-list prefix CLASS-A in e0/1
exit
```

! To remove the block

```
router eigrp R2
add ipv4 au 100
topology base
```

```
no Distribute-list prefix CLASS-A in e0/1
exit
```

Block class B Networks coming from R1

Class B 128-191

	128	64	32	16	8	4	2	1
128	1	0	0	0	0	0	0	0
191	1	0	1	1	1	1	1	1

B=10

```
ip prefix-list CLASS-B seq 5 deny 128.0.0.0/2 ge 16
ip prefix-list CLASS-B seq 10 permit 0.0.0.0/0 le 32
```

```
router eigrp R2
add ipv4 au 100
topology base
Distribute-list prefix CLASS-B in e0/1
exit
```

To remove the block

```
router eigrp R2
add ipv4 au 100
topology base
no Distribute-list prefix CLASS-B in e0/1
exit
```

Block class C Networks coming from R1

Class C 192-223

	128	64	32	16	8	4	2	1
192	1	1	0	0	0	0	0	0
223	1	1	0	1	1	1	1	1

C=110

```
ip prefix-list CLASS-C seq 5 deny 192.0.0.0/3 ge 24
ip prefix-list CLASS-C seq 10 permit 0.0.0.0/0 le 32
```

```
router eigrp R2
add ipv4 au 100
topology base
Distribute-list prefix CLASS-C in e0/1
exit
```

Block 150.5 Network with prefix length greater than 27 coming from R4

```
D 150.5.1.0/24 [90/3584000] via 192.168.24.4, 00:00:09, Ethernet0/0
D 150.5.2.0/26 [90/3584000] via 192.168.24.4, 00:00:09, Ethernet0/0
D 150.5.3.0/27 [90/3584000] via 192.168.24.4, 00:00:09, Ethernet0/0
D 150.5.4.0/28 [90/3584000] via 192.168.24.4, 00:00:09, Ethernet0/0
D 150.5.5.0/29 [90/3584000] via 192.168.24.4, 00:00:09, Ethernet0/0
D 150.5.6.0/27 [90/3584000] via 192.168.24.4, 00:00:09, Ethernet0/0
```

```
ip prefix-list R4-150-5 deny 150.5.0.0/16 ge 28
ip prefix-list R4-150-5 permit 0.0.0.0/0 le 32
```

Router Eigrp R2

```
Add ipv4 Au 100
topology base
distribute-list prefix R4-150-5 in e0/0
exit
```

Remove the block

```
Router Eigrp R2
Add ipv4 Au 100
topology base
no distribute-list prefix R4-150-5 in e0/0
exit
```

Block 150.5 Network with prefix length equal to /27 coming from R4

```
D      150.5.1.0/24 [90/3584000] via 192.168.24.4, 00:00:09, Ethernet0/0
D      150.5.2.0/26 [90/3584000] via 192.168.24.4, 00:00:09, Ethernet0/0
D      150.5.3.0/27 [90/3584000] via 192.168.24.4, 00:00:09, Ethernet0/0
D      150.5.4.0/28 [90/3584000] via 192.168.24.4, 00:00:09, Ethernet0/0
D      150.5.5.0/29 [90/3584000] via 192.168.24.4, 00:00:09, Ethernet0/0
D      150.5.6.0/27 [90/3584000] via 192.168.24.4, 00:00:09, Ethernet0/0
```

```
ip prefix-list 150-5-27 deny 150.5.0.0/16 ge 27 le 27
ip prefix-list 150-5-27 permit 0.0.0.0/0 le 32
```

```
Router Eigrp R2
Add ipv4 Au 100
topology base
distribute-list prefix 150-5-27 in e0/0
exit
```

=====