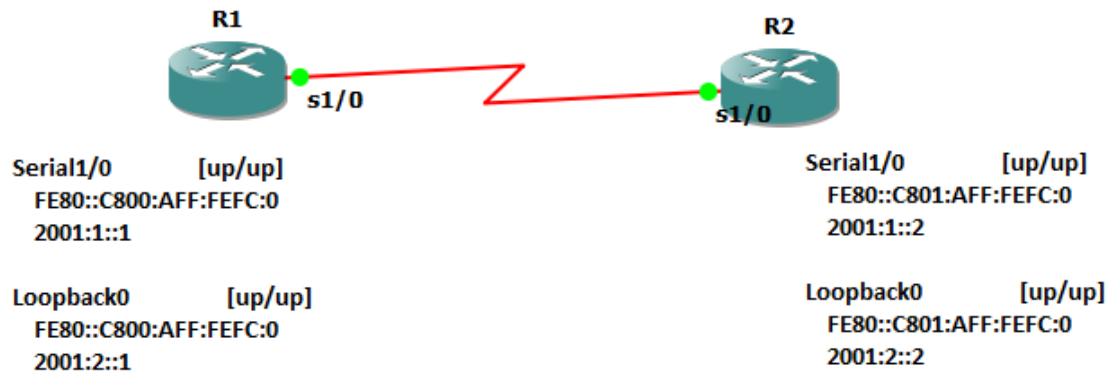


IPv6



ACL a.k.a Traffic-filter

```
DualStack.R2#ping ipv6 2001:2::1
```

Type escape sequence to abort.

Sending 5, 100-byte ICMP Echos to 2001:2::1, timeout is 2 seconds:

!!!!

Success rate is 100 percent (5/5), round-trip min/avg/max = 20/34/56 ms

```
DualStack.R1(config)#int s1/0
```

```
DualStack.R1(config-if)#ipv6 traffic-filter WAN-in in
```

```
DualStack.R2#ping ipv6 2001:2::1
```

Type escape sequence to abort.

Sending 5, 100-byte ICMP Echos to 2001:2::1, timeout is 2 seconds:

AAAAA

Success rate is 0 percent (0/5)

```
DualStack.R1#sh ipv6 access-list
```

IPv6 access list WAN-in

deny icmp any any (5 matches) sequence 10

permit ipv6 any any sequence 20

Static routing

-: R1 :-

```
ipv6 route 2001:2::2/128 Serial1/0
ipv6 route 2001:B::/64 Null0
```

BGP

-: R2 :-

router bgp 1

```
bgp router-id 2.2.2.2
bgp log-neighbor-changes
neighbor 2001:2::1 remote-as 1
neighbor 2001:2::1 description iBGP to directly connected IPv6 Nei
neighbor 2001:2::1 update-source Loopback0
!
address-family ipv4
no neighbor 2001:2::1 activate
no auto-summary
no synchronization
exit-address-family
!
address-family ipv6
neighbor 2001:2::1 activate
neighbor 2001:2::1 prefix-list To-R1 out
network 2001:A::/64
network 2001:C::/64
exit-address-family
```

```
ipv6 prefix-list To-R1 seq 5 permit 2001:A::/64
```

DualStack.R2#sh bgp ipv6 uni sum

Neighbor	V	AS	MsgRcvd	MsgSent	TblVer	InQ	OutQ	Up/Down	State/PfxRcd
2001:2::1	4	1	71	72	5	0	0	00:45:28	2

DualStack.R2#sh bgp ipv6 uni nei 2001:2::1 route

BGP table version is 5, local router ID is 2.2.2.2

Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
r RIB-failure, S Stale

Origin codes: i - IGP, e - EGP, ? - incomplete

Network	Next Hop	Metric	LocPrf	Weight	Path
*>i2001:B::/64	2001:2::1	0	100	0	i
*>i2001:D::/64	2001:2::1	0	100	0	i

DualStack.R2#sh bgp ipv6 uni nei 2001:2::1 adv

BGP table version is 5, local router ID is 2.2.2.2

Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,

r RIB-failure, S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete

Network	Next Hop	Metric	LocPrf	Weight	Path
*> 2001:A::/64	::	0	32768	i	

Total number of prefixes 1

-: R1 :-

router bgp 1

```
bgp router-id 1.1.1.1
bgp log-neighbor-changes
neighbor 2001:2::2 remote-as 1
neighbor 2001:2::2 description iBGP to directly connected IPv6 Nei
neighbor 2001:2::2 update-source Loopback0
!
address-family ipv4
no neighbor 2001:2::2 activate
no auto-summary
no synchronization
exit-address-family
!
address-family ipv6
neighbor 2001:2::2 activate
neighbor 2001:2::2 prefix-list To-R2 out
neighbor 2001:2::2 route-map From-R2 in
network 2001:B::/64
network 2001:D::/64
exit-address-family
```

```
ipv6 prefix-list To-R2 seq 5 permit 2001:B::/64
ipv6 prefix-list To-R2 seq 10 permit 2001:D::/64
```

```
route-map From-R2 permit 10
match as-path 10
set local-preference 130
```

```
ip as-path access-list 10 permit .*
```

DualStack.R1#**sh bgp ipv6 uni sum**

Neighbor	V	AS	MsgRcvd	MsgSent	TblVer	InQ	OutQ	Up/Down	State/PfxRcd
2001:2::2	4	1	74	73	11	0	0	00:47:14	1

DualStack.R1#**sh bgp ipv6 uni nei 2001:2::2 route**

BGP table version is 11, local router ID is 1.1.1.1
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
 r RIB-failure, S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete

Network	Next Hop	Metric	LocPrf	Weight	Path
*>2001:A::/64	2001:2::2	0	130	0	i

Total number of prefixes 1

DualStack.R1#**sh bgp ipv6 uni nei 2001:2::2 adv**

BGP table version is 11, local router ID is 1.1.1.1

Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
r RIB-failure, S Stale

Origin codes: i - IGP, e - EGP, ? - incomplete

Network	Next Hop	Metric	LocPrf	Weight	Path
*> 2001:B::/64	::	0	32768		i
*> 2001:D::/64	::	0	32768		i

Total number of prefixes 2