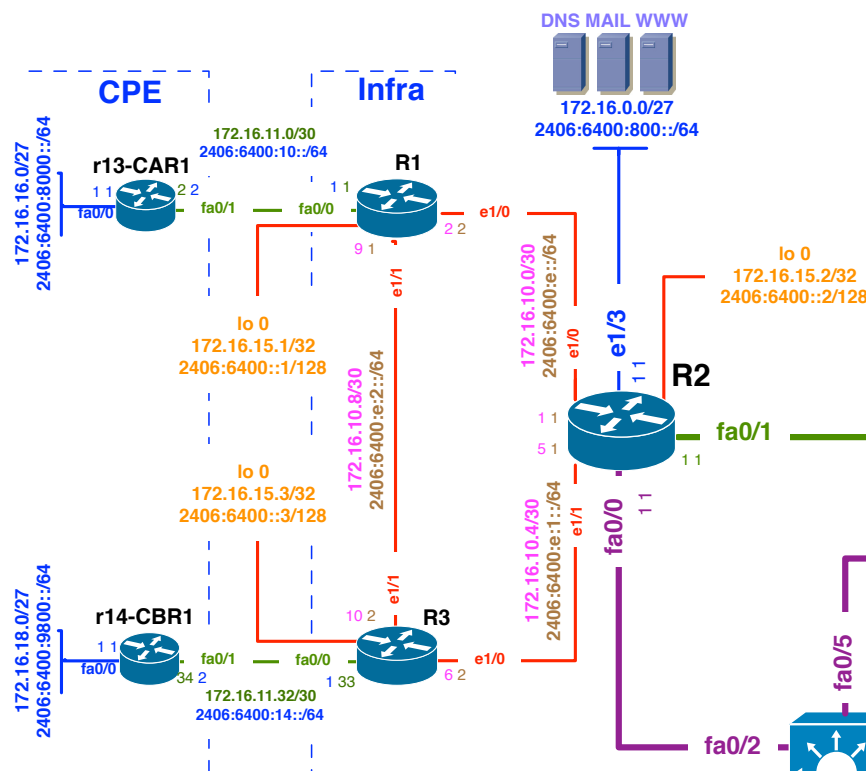


BGP Customer Conf Region 1:



IPV4 WAN Interface POP1 Router1 Conf:

```

config t
interface fa0/0
description Customer WAN R1-CAR1
no ip redirects
no ip directed-broadcast
no ip unreachable
no cdp enable
ip address 172.16.11.1 255.255.255.252
no shutdown
exit
exit
wr
  
```

Verify Configuration:

```

ping 172.16.11.1      [!!!!]
ping 172.16.11.2      [!!!!]
  
```

IPV6 WAN Interface POP1 Router1 Conf:

```
config t
interface fa0/0
ipv6 address 2406:6400:0010:0000::1/64
ipv6 enable
exit
exit
wr
```

Verify Configuration:

```
ping 2406:6400:0010:0000::1      [!!!!]
ping 2406:6400:0010:0000::2      [!!!!]
```

IPV4 WAN Interface POP2 Router3 Conf:

```
config t
interface fa0/0
description Customer WAN R3-CBR1
no ip redirects
no ip directed-broadcast
no ip unreachable
no cdp enable
ip address 172.16.11.33 255.255.255.252
no shutdown
exit
exit
wr
```

Verify Configuration:

```
ping 172.16.11.33      [!!!!]
ping 172.16.11.34      [!!!!]
```

IPV6 WAN Interface POP2 Router3 Conf:

```
config t
interface fa0/0
ipv6 address 2406:6400:0014:0000::1/64
ipv6 enable
exit
exit
wr
```

Verify Configuration:

```
ping 2406:6400:0014:0000::1      [!!!!]
ping 2406:6400:0014:0000::2      [!!!!]
```

IPv4 eBGP POP1 Router1 Conf:

```
config t
router bgp 17821
address-family ipv4
neighbor IPV4-eBGP-CUSTOMER-REG1-POP1 peer-group
neighbor 172.16.11.2 remote-as 65001
neighbor 172.16.11.2 peer-group IPV4-eBGP-CUSTOMER-REG1-POP1
neighbor IPV4-eBGP-CUSTOMER-REG1-POP1 default-originate
exit
exit
exit
wr
```

Verify Configuration:

```
sh bgp ipv4 unicast summary      [Number of prefixes received from peers]
sh bgp ipv4 unicast              [Any new prefix?]
sh ip route bgp                  [Any new prefix?]
sh bgp ipv4 unicast neighbors [Customer Router] received-routes/routes
sh ip route
ping 172.16.16.1                 [!!!!]
```

IPv6 eBGP POP1 Router1 Conf:

```
config t
router bgp 17821
address-family ipv6
neighbor IPV6-eBGP-CUSTOMER-REG1-POP1 peer-group
neighbor 2406:6400:0010:0000::2 remote-as 65001
neighbor 2406:6400:0010:0000::2 peer-group IPV6-eBGP-CUSTOMER-REG1-POP1
neighbor IPV6-eBGP-CUSTOMER-REG1-POP1 default-originate
exit
exit
exit
wr
```

Verify Configuration:

```
sh bgp ipv6 unicast summary      [Number of prefixes received from peers]
sh bgp ipv6 unicast              [Any new prefix?]
sh ipv6 route bgp                [Any new prefix?]
sh bgp ipv6 unicast neighbors [Customer Router] received-routes/routes
sh ipv6 route
ping 2406:6400:8000::1          [!!!!]
```

IPv4 eBGP POP2 Router3 Conf:

```
config t
router bgp 17821
address-family ipv4
neighbor IPV4-eBGP-CUSTOMER-REG1-POP2 peer-group
neighbor 172.16.11.34 remote-as 65002
neighbor 172.16.11.34 peer-group IPV4-eBGP-CUSTOMER-REG1-POP2
neighbor IPV4-eBGP-CUSTOMER-REG1-POP2 default-originate
exit
exit
exit
wr
```

Verify Configuration:

```
sh bgp ipv4 unicast summary      [Number of prefixes received from peers]
sh bgp ipv4 unicast              [Any new prefix?]
sh ip route bgp                  [Any new prefix?]
sh bgp ipv4 unicast neighbors [Customer Router] received-routes/routes
sh ip route
ping 172.16.18.1                [!!!!]
```

IPv6 eBGP POP2 Router3 Conf:

```
config t
router bgp 17821
address-family ipv6
neighbor IPV6-eBGP-CUSTOMER-REG1-POP2 peer-group
neighbor 2406:6400:0014:0000::2 remote-as 65002
neighbor 2406:6400:0014:0000::2 peer-group IPV6-eBGP-CUSTOMER-REG1-POP2
neighbor IPV6-eBGP-CUSTOMER-REG1-POP2 default-originate
exit
exit
exit
wr
```

Verify Configuration:

```
sh bgp ipv6 unicast summary      [Number of prefixes received from peers]
sh bgp ipv6 unicast              [Any new prefix?]
sh ipv6 route bgp                [Any new prefix?]
sh bgp ipv6 unicast neighbors [Customer Router] received-routes/routes
sh ipv6 route
ping 2406:6400:9800::1          [!!!!]
```

IPV4 WAN Interface POP1 Router13 Conf:

```
config t
interface fa0/1
description Upstream WAN r13-CAR1-R1
no ip redirects
no ip directed-broadcast
no ip unreachable
ip address 172.16.11.2 255.255.255.252
no cdp enable
no shutdown
exit
exit
wr
```

Verify Configuration:

```
ping 172.16.11.2      [!!!!]
ping 172.16.11.1      [!!!!]
```

IPV6 WAN Interface POP1 Router13 Conf:

```
config t
interface fa0/1
ipv6 address 2406:6400:0010:0000::2/64
ipv6 enable
exit
exit
wr
```

Verify Configuration:

```
ping 2406:6400:0010:0000::2      [!!!!]
ping 2406:6400:0010:0000::1      [!!!!]
```

IPv4 WAN Interface POP2 Router14 Conf:

```
config t
interface fa0/1
description Upstream WAN r14-CBR1-R3
no ip redirects
no ip directed-broadcast
no ip unreachable
ip address 172.16.11.34 255.255.255.252
no cdp enable
no shutdown
exit
exit
wr
```

Verify Configuration:

```
ping 172.16.11.34      [!!!!]
ping 172.16.11.33      [!!!!]
```

IPv6 WAN Interface POP2 Router14 Conf:

```
config t
interface fa0/1
ipv6 address 2406:6400:0014:0000::2/64
ipv6 enable
exit
exit
wr
```

Verify Configuration:

```
ping 2406:6400:0014:0000::2      [!!!!]
ping 2406:6400:0014:0000::1      [!!!!]
```

IPv4 eBGP POP1 Router13 Conf:

```
config t
router bgp 65001
address-family ipv4
no auto-summary
no synchronization
neighbor 172.16.11.1 remote-as 17821
neighbor 172.16.11.1 activate
exit
exit
exit
wr
```

IPv4 eBGP Prefix Announcement POP1 Router13 Conf:

```
config t
router bgp 65001
address-family ipv4
network 172.16.16.0 mask 255.255.255.0
exit
exit
ip route 172.16.16.0 255.255.255.0 null 0 permanent
exit
wr
```

Verify Configuration:

```
sh bgp ipv4 unicast summary      [Number of prefixes received from peers]
sh bgp ipv4 unicast             [Any prefix?]
sh ip route bgp                 [Any prefix?]
sh bgp ipv4 unicast neighbors [POP Router] received-routes/routes
sh ip route
ping 172.16.15.1                [!!!!!!]
```

IPv6 eBGP POP1 Router13 Conf:

```
config t
router bgp 65001
address-family ipv6
no synchronization
neighbor 2406:6400:0010:0000::1 remote-as 17821
neighbor 2406:6400:0010:0000::1 activate
exit
exit
exit
wr
```

IPv6 eBGP Prefix Announcement POP1 Router13 Conf:

```
config t
router bgp 65001
address-family ipv6
network 2406:6400:8000::/48
exit
exit
ipv6 route 2406:6400:8000::/48 null 0
exit
wr
```

Verify Configuration:

```
sh bgp ipv6 unicast summary      [Number of prefixes received from peers]
sh bgp ipv6 unicast              [Any prefix?]
sh ipv6 route bgp                [Any prefix?]
sh bgp ipv6 unicast neighbors [POP Router] received-routes/routes
sh ipv6 route
ping 2406:6400::1               [!!!!!!]
```

IPv4 eBGP POP2 Router14 Conf:

```
config t
router bgp 65002
address-family ipv4
no auto-summary
no synchronization
neighbor 172.16.11.33 remote-as 17821
neighbor 172.16.11.33 activate
exit
exit
exit
wr
```

IPv4 eBGP Prefix Announcement POP2 Router14 Conf:

```
config t
router bgp 65002
address-family ipv4
network 172.16.18.0 mask 255.255.255.0
exit
exit
ip route 172.16.18.0 255.255.255.0 null 0 permanent
exit
wr
```

Verify Configuration:

```
sh bgp ipv4 unicast summary      [Number of prefixes received from peers]
sh bgp ipv4 unicast              [Any prefix?]
sh ip route bgp                  [Any prefix?]
sh bgp ipv4 unicast neighbors [POP Router] received-routes/routes
sh ip route
ping 172.16.15.3                 [!!!!!!]
```


IPv6 eBGP POP2 Router14 Conf:

```
config t
router bgp 65002
address-family ipv6
no synchronization
neighbor 2406:6400:0014:0000::1 remote-as 17821
neighbor 2406:6400:0014:0000::1 activate
exit
exit
exit
wr
```

IPv6 eBGP Prefix Announcement POP2 Router14 Conf:

```
config t
router bgp 65002
address-family ipv6
network 2406:6400:9800::/48
exit
exit
ipv6 route 2406:6400:9800::/48 null 0
exit
wr
```

Verify Configuration:

```
sh bgp ipv6 unicast summary      [Number of prefixes received from peers]
sh bgp ipv6 unicast             [Any prefix?]
sh ipv6 route bgp               [Any prefix?]
sh bgp ipv6 unicast neighbors [POP Router] received-routes/routes
sh ipv6 route
ping 2406:6400::3              [!!!!]
```