Service Extension Templates-Supported Configuration Examples

This appendix has the following sections.

Supported Service Extension Template Configuration Examples for Cisco Nexus 7000 Series Switches

This section provides service extension configuration examples for Cisco 7000 series switches.

Interface Configuration

```
interface port-channel 6.1001

            description towards PE
            encapsulation dot1q 1001
            vrf member <demo_name>
            bfd interval 50 min_rx 50 multiplier 3
            no ip redirects
            ip address 10.10.10.10/24
            no ipv6 redirects
            no shutdown

interface port-channel 6.1041

            description towards PE
            encapsulation dot1q 1041
            vrf member <demo_name>
            bfd interval 50 min_rx 50 multiplier 3
            no ip redirects
            ipv6 address 10:10:10:10:10:10:10:10/64
            no ipv6 redirects
            no shutdown
interface vlan 2471
  no shut
```

```
  vrf member <demo_name>
  ip address 10.10.10.10/24
  vrrpv3 1 address-family ipv4
    address 10.10.10.10
```

Note This configuration works for IPv4 and IPv6.

```
interface vlan 2475
  no shut
  vrf member <demo_name>
  ipv6 address 10:10:10:10:10:10:10:10/64
  vrrpv3 1 address-family ipv6
    address fe80::1 primary
    address 10:10:10:10:10:10:10:10
```

Note This configuration works for IPv4 and IPv6.

```
interface vlan 2400
  no shut
  vrf member <demo_name>
  ip address 10.10.10.10/24
  ipv6 address xxxx::x/64 ! dual stack or create a difference interface
```

Note This configuration works for IPv4 and IPv6.

VRF Configuration

```
vrf context <demo_name>

            ip route 10.32.10.0/24 10.42.10.4
            ip route 10.52.10.0/24 10.42.10.4
            ipv6 route 2001:db8::5/128 2001:db8:0:1:2a0:a502:0:19da
vrf context <demo_name>
  ip route 0.0.0.0/32 Ethernet2/5 10.2.56.6 track 10
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn
  address-family ipv6 unicast
    route-target both auto
    route-target both auto evpn
```

Note This works configuration for IPv4 and IPv6.

```
vrf context <demo_name>
  vni 50001
  ip route static bfd Vlan1050 68.50.50.50
  ip route 210.0.0.1/32 Vlan1050 68.50.50.50
```

Note This works configuration for IPv4 and IPv6.

Note User should enter the vlan value other than 1000-2000, which is reserved for bridge domain. If the range is configured differently, make sure the values within that range is not used.

```
vrf context <demo_name>
    ip route 0.0.0.0/32 port-channel 110.2513 69.83.32.37 track 1
```

```
    ip route 0.0.0.0/32 vlan 2500 16.16.16.2 track 2 200
    ipv6 route ::/128 port-channel 110.2577 2001:4888:16:2079:1e1:2a1:: track 1
    ipv6 route ::/128 vlan 2500 <v6 address of SVI on other BL> track 2 200
```

Note This configuration works for IPv4 and IPv6.

Router BGP Configuration

```
router bgp 65537
vrf <demo_name>
       local-as 65539
       address-family ipv4 unicast
           network 10.32.10.0/24 route-map <demo_name>_LOCAL_COMMUNITIES
           network 10.52.10.0/24 route-map <demo_name>_LOCAL_COMMUNITIES
           advertise l2vpn evpn
       neighbor 10.23.65.0 remote-as 65541
           bfd
           password 3 XXXX
           description towards PE
           address-family ipv4 unicast
                  send-community
                  route-map <demo_name>_ROUTE_POLICY in
                  route-map <demo_name>_LOCAL_ROUTE_POLICY out
router bgp 65539
  Vrf <demo_name>
    router-id 192.168.0.25
    address-family ipv4 unicast
      network 150.0.0.1/32 route-map ONLY_FABRIC
      advertise l2vpn evpn
     redistribute direct route-map vts-subnet-policy augumentation and deviation
      redistribute static route-map staticMap
      maximum-paths 32
      maximum-paths ibgp 32
    address-family ipv6 unicast
      advertise l2vpn evpn
      redistribute direct route-map vts-subnet-policy
      maximum-paths 32
      maximum-paths ibgp 32
    neighbor 68.50.50.50
      bfd
      remote-as 65538
      address-family ipv4 unicast
        send-community
        send-community extended
    neighbor 210.0.0.1
      bfd
      remote-as 65538
      update-source loopback150
      ebgp-multihop 255
      address-family ipv4 unicast
        send-community
        send-commuqnity extended
```

Note This configuration works for IPv4 only.

ICMP v6 Configuration

```
ip sla 11
icmp-echo 2009:2009:2009:10:1:56:0:5
vrf <demo_name>
threshold 500
timeout 500
frequency 1
ip sla schedule 11 life forever start-time now
```

Note This configuration works for IPv6 only.

Interface Loopback Configuration

```
interface loopback1
  vrf member <demo_name>
```

Note This configuration is done in L3 Service Extension.

Supported Service Extension Template Configuration Examples for Cisco Nexus 9000 Series Switches

This section provides service extension configuration examples for Cisco 9000 series switches.

Interface Configuration

```
int vlan 2471
  no shut
  vrf member <demo_name>
  ip address 10.10.10.10/24
  vrrpv3 1 address-family ipv4
    address 10.10.10.10
```

Note This configuration works for IPv4 and IPv6.

```
int vlan 2475
  no shut
  vrf member <demo_name>
  ipv6 address 10:10:10:10:10:10:10:10/64
  vrrpv3 1 address-family ipv6
    address fe80::1 primary
    address 10:10:10:10:10:10:10:10
```

Note This configuration works for IPv4 and IPv6.

```
interface vlan 2400
  no shut
  vrf member <demo_name>
  ip address 10.10.10.10/24
  ipv6 address xxxx::x/64 ! dual stack or create a difference interface
```

VRF Configuration

```
vrf context <demo_name>
  ip route 0.0.0.0/32 Ethernet2/5 10.2.56.6 track 10
  rd auto
  address-family ipv4 unicast
    route-target both auto
    route-target both auto evpn
  address-family ipv6 unicast
    route-target both auto
    route-target both auto evpn
```

Note This works configuration for IPv4 and IPv6.

```
vrf context <demo_name>
  vni 50001
  ip route static bfd Vlan1050 68.50.50.50
  ip route 210.0.0.1/32 Vlan1050 68.50.50.50
```

Note This works configuration for IPv4 and IPv6.

```
vrf context <demo_name>
    ip route 0.0.0.0/32 port-channel 110.2513 69.83.32.37 track 1
    ip route 0.0.0.0/32 vlan 2500 16.16.16.2 track 2 200
    ipv6 route ::/128 port-channel 110.2577 2001:4888:16:2079:1e1:2a1:: track 1
    ipv6 route ::/128 vlan 2500 <v6 address of SVI on other BL> track 2 200
```

Note This configuration works for IPv4 and IPv6.

Router BGP Configuration

```
router bgp 65539
Vrf <demo_name>
    router-id 192.168.0.25
    address-family ipv4 unicast
      network 150.0.0.1/32 route-map ONLY_FABRIC
      advertise l2vpn evpn
     redistribute direct route-map vts-subnet-policy
      redistribute static route-map staticMap
      maximum-paths 32
      maximum-paths ibgp 32
    address-family ipv6 unicast
      advertise l2vpn evpn
      redistribute direct route-map vts-subnet-policy
      maximum-paths 32
      maximum-paths ibgp 32
    neighbor 68.50.50.50

      bfd
      remote-as 65538
      address-family ipv4 unicast
        send-community
        send-community extended
    neighbor 210.0.0.1
      bfd
      remote-as 65538
      update-source loopback150
      ebgp-multihop 255
      address-family ipv4 unicast
        send-community
        send-commuqnity extended
```

Note This configuration works for IPv4 only.

Interface Loopback Configuration

```
interface loopback1
  vrf member <demo_name>
```

Note This configuration is done in L3 Service Extension.

Supported Service Extension Template Configuration Examples for Cisco ASR 9000 Series Routers

This section provides service extension configuration examples for Cisco ASR 9000 series routers.

Router OSPF Configuration

```
router ospf 700
  log adjacency changed detail
  router-id 16.16.16.16
  timers throttle lsa all 0 20 5000
  timers throttle spf 50 100 5000
  timers lsa min-arrival 15
  auto-cost reference-bandwidth 80000
  area 0
    network point-to-point
    interface GigabitEthernet0/0/0/2
      authentication
      message-digest-key 1 md5 encrypted 07982c55db2b9985d3391f02e639db9c
      network point-to-point
      passive enable
     !
  !
  vrf <demo_name>
  !
!
```

Router Static Configuration

```
router static
  address-family ipv4 unicast
    0.0.0.0/0 172.20.100.1
  !
!
```

Router BGP Configuration

```
router bgp 65540
  bgp router-id 49.1.1.1
  address-family ipv4 unicast
    maximum-paths ebgp 2
    maximum-paths ibgp 2
    !
  neighbor-group ng1
    remote-as 65539
    password encrypted 07982c55db2b9985d3391f02e639db9c
    update-source Loopback0
    address-family ipv4 unicast
      next-hop-self
    !
  !
  vrf <demo_name>
  rd auto
  bgp router-id 49.1.1.1
  address-family ipv4 unicast
  !
  neighbor 13.1.1.8
    remote-as 65539
    address-family ipv4 unicast
      route-policy vts-route-policy in
      default-originate
    !
   !
```

```
  !
!
```

VRF Configuration

```
vrf <demo_name>
  address-family ipv4 unicast
  !
!
```

Interface/{*any*}-subinterface Configuration

```
interface GigabitEthernet0/0/0/1.1
  vrf <demo_name>
  ipv4 address 10.10.10.10
  encapsulation dot1q 1002
!
```

We support the following subinterfaces:

```
TenGigE-subinterface
FortyGigE-subinterface
HundredGigE-subinterface
FastEthernet-subinterface
GigabitEthernet-subinterface
Bundle-Ether-subinterface
```

Interface BVI Configuration

```
interface BVI 1003
  service-policy input bvi-policymap
  vrf <demo_name>
  !
!
```

Interface NVE Configuration

```
interface nve1
  description desc123
  vrf <demo_name>
  shutdown
  !
!
```

l2vpn Configuration

```
l2vpn
  bridge group bg-name123
    bridge-domain-name
      interface GigabitEthernet
    !
  !
!
Any interface:
Subinterfaces:
TenGigE
FortyGigE
HundredGigE
FastEthernet
GigabitEthernet
Bundle-Ether
```