



# Service Extension Templates-Supported Configuration Examples

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This appendix has the following sections.

- [Supported Service Extension Template Configuration Examples for Cisco Nexus 7000 Series Switches, on page 1](#)
- [Supported Service Extension Template Configuration Examples for Cisco Nexus 9000 Series Switches, on page 4](#)
- [Supported Service Extension Template Configuration Examples for Cisco ASR 9000 Series Routers , on page 6](#)

## 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 augmentation 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-community 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-community 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