



Service Extension Templates-Supported Configuration Examples

This appendix has the following sections.

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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. 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-commuqntity 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.

BFD Multi-hop Configuration

```

router bgp 100
vrf abcs
neighbor <IPv4 or v6 address>
bfd multihop interval 900 min_rx 900 multiplier 4

```



Note This configuration works for IPv4 and IPv6.

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.

BFD Multi-hop Configuration

```

router bgp 100
  vrf abcs
  neighbor <IPv4 or v6 address>
    bfd multihop interval 900 min_rx 900 multiplier 4

```



Note This configuration works for IPv4 and IPv6.

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

```