



Configuring Floating L3Outs Using the CLI

- [Creating a VLAN Pool for Floating L3Out Using the CLI, on page 1](#)
- [Configuring a VMM Domain Profile for VMware VDS Using the CLI, on page 2](#)
- [Configuring a Floating L3Out Using the CLI, on page 2](#)
- [Configuring a Secondary IP Using the CLI, on page 3](#)
- [Configuring the Avoidance of Suboptimal Traffic From an ACI Internal EP to a Floating L3Out Using the CLI, on page 4](#)
- [Configuring Maximum Number of Paths for Redistribution of Routes in Fabric Using the CLI, on page 5](#)
- [Configuring Multiple Next-Hops Using the CLI, on page 5](#)
- [Verifying Floating L3Out Using the CLI, on page 5](#)

Creating a VLAN Pool for Floating L3Out Using the CLI

This section demonstrates how to configure a VLAN pool specifically to use with the floating Layer 3 outside network connection (L3Out).



Note The VLAN pool for the L3Out must have a static VLAN range. It must also be the same for the VMware vSphere Distributed Switch (VDS) Virtual Machine Manager (VMM) domain and the Layer 3 domain. After you configure the VLAN pool, you configure the VMM and Layer 3 domains, adding the same VLAN pool to each domain.

To configure a VLAN pool for floating L3Out:

Example:

```
vlan-domain dom1
  vlan 300-400
  exit
```

What to do next

Create a VMM Domain Profile for VMware VDS. See the procedure [Configuring a VMM Domain Profile for VMware VDS Using the CLI, on page 2](#).

Configuring a VMM Domain Profile for VMware VDS Using the CLI

Use this procedure to create a Virtual Machine Manager (VMM) profile for the VMware vSphere Distributed Switch (VDS) if you have not already done so and want to use floating Layer 3 Out network communication (L3Out).



Note To use a floating Layer 3 outside network connection (L3Out), you must configure a VLAN pool that has a static VLAN range for the VMM domain. Also, the VLAN pool must be the same as the VLAN pool of the L3Out domain. For example, both the range for the L3Out domain and the Virtual Machine Manager (VMM) domain must be 200-209.

To configure a VMM domain profile for VMware VDS:

Example:

```
vmware-domain vmmdom1
  vlan-domain member dom1
  vcenter 192.168.66.2 datacenter prodDC
  username administrator password *****
  configure-dvs
  exit
exit
```

What to do next

Configure a floating L3Out. See procedure [Configuring a Floating L3Out Using the CLI, on page 2](#).

Configuring a Floating L3Out Using the CLI

This section demonstrates how to create a floating L3Out.

Before you begin

You must have created the following:

- A VLAN pool for floating L3Out
- A VMM domain profile for VMware VDS

To configure a floating L3Out:

Example:

```
tenant t1
  vrf context vrf1
  exit
  l3out l3out
  vrf member vrf1
  exit
  external-l3 epg instp l3out l3out
  vrf member vrf1
  exit
  exit
leaf 101
  vrf context tenant t1 vrf vrf1 l3out l3out
  exit
leaf 101
  virtual-interface-profile ipv4 vlan 680 tenant Floating vrf Floating l3out CLI
  ip address 1.68.0.3/16
  physical-domain Floating-CP-L3out floating-addr 1.68.0.9/16
  exit
  vlan-domain member CP-L3
  exit
  virtual-interface-profile ipv6 vlan 680 tenant Floating vrf Floating l3out CLI
  ipv6 address 2000:68::2/64 preferred
  physical-domain Floating-CP-L3out floating-addr 2000:68::9/16
  vlan-domain member CP-L3
  exit
```

What to do next

- (Optional) [Configuring a Secondary IP Using the CLI, on page 3](#).
- [Verifying Floating L3Out Using the CLI, on page 5](#) and that the port group exists on the VMware VDS.

Configuring a Secondary IP Using the CLI

This section demonstrates how to configure a secondary and floating secondary IP using the CLI.

To configure a secondary and floating secondary IP:

```
leaf 101
  virtual-interface-profile vlan 100 tenant t1 vrf v1
  ip address 10.1.1.1/24
  ip address 10.1.1.3/24 secondary
  ip address 11.1.1.1/24 secondary
  ip address 11.1.1.3/24 secondary
  vmm-domain mininet floating-addr 10.1.1.100/24
  ip address 11.1.1.100/24 secondary
  exit
```

```
exit
exit
```

Configuring the Avoidance of Suboptimal Traffic From an ACI Internal EP to a Floating L3Out Using the CLI

This section demonstrates how to configure next hop propagation and direct-attached host route advertising using the CLI

Before you begin

The following must be configured:

- For Next Hop Propagation, the floating L3Out must be in a physical domain, not in a VMM domain.
 - A BD, EPG, and a contract between the EPG and L3Out EPG
-

Step 1 To configure next hop propagation:

Example:

```
tenant t1 vrf v1 route-map sap match
prefix-list p1
leaf 101
  vrf context tenant t1 vrf v1
  route-map sap
  match prefix-list p1
  set next-hop-unchanged
  exit
  exit
  exit
  exit
```

Step 2 Configuring direct-attached host route advertising:

Example:

```
leaf 101
  router bgp 100
  vrf member tenant t1 vrf v1
  redistribute static route-map r2
  redistribute attached-host route-map r1
  exit
  exit
  exit
```

Configuring Maximum Number of Paths for Redistribution of Routes in Fabric Using the CLI

The following example provides information on how to configure the BGP Max Path feature using the CLI.

Before you begin

Refer to the *Verified Scalability Guide for Cisco APIC* on the [Cisco APIC documentation page](#) for the acceptable values for the following fields.

Enter the following commands, where the `maximum-paths local` command is used specifically to configure the maximum number of paths for redistribution of routes in the fabric using the CLI:

```
apicl(config)# leaf 101
apicl(config-leaf)# template bgp address-family newAf tenant t1
apicl(config-bgp-af)# maximum-paths local 12
apicl(config-bgp-af)# exit
apicl(config-leaf)# exit
apicl#
```

Configuring Multiple Next-Hops Using the CLI

The following example provides information on how to configure multiple next-hops using the CLI.

Enter the following commands, where the `set next-hop-unchanged` and `set redist-multipath` commands are used specifically to configure the multiple next-hops using the CLI:

```
apicl(config)# leaf 101
apicl(config-leaf)# template route-profile test_rp tenant t1
apicl(config-leaf-template-route-profile)# set next-hop-unchanged
apicl(config-leaf-template-route-profile)# set redist-multipath
apicl(config-leaf-template-route-profile)# exit
apicl(config-leaf)# exit
apicl#
```

Verifying Floating L3Out Using the CLI

This section demonstrates how to verify a floating L3Out configuration.

Step 1 To verify floating L3Out on leaf nodes (anchor leaf):

In this example, the anchor leaf has the primary IP, secondary IP, and floating primary IP.

Example:

```
Switch# show ip interface brief vrf floating:vrf1
IP Interface Status for VRF "floating:vrf1"(9)
Interface Address      Interface Status
vlan14      192.168.1.254/24      protocol-up/link-up/admin-up
vlan17      192.168.2.254/24      protocol-up/link-up/admin-up
vlan49      172.16.1.251/24      protocol-up/link-up/admin-up
lo2         11.11.11.11/32       protocol-up/link-up/admin-up

Switch# show ip interface vlan49
IP Interface Status for VRF "floating:vrf1"
vlan49, Interface status: protocol-up/link-up/admin-up, iod: 110, mode: external
IP address: 172.16.1.251, IP subnet: 172.16.1.0/24
IP address: 172.16.1.250, IP subnet: 172.16.1.0/24 secondary anchor-floating-ip
IP address: 172.16.1.254, IP subnet: 172.16.1.0/24 secondary
IP broadcast address: 255.255.255.255
IP primary address route-preference: 0, tag:

Switch# # show vlan id 49 extended

VLAN Name          Encap          Ports
-----
49 floating:vrf1:l3out- vxlan-14876650, Eth1/5, Eth1/6, Po1, Po2
   L3Out:vlan-208      vlan-208
```

Step 2 To verify floating L3Out on non-anchor leaf nodes:

When using a VMM domain, if there is no external VM connected, the non-anchor leaf does not have floating IP. When using a physical domain, the floating IP and VLAN are provisioned based on AEP. If the leaf has an AEP that contains the L3Out domain for floating L3Out, the floating IP is provisioned.

Example:

```
Switch# show ip interface brief vrf floating:vrf1
IP Interface Status for VRF "floating:vrf1"(6)
Interface Address      Interface Status
```
