



Configuring the Domain

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Information About Domains

You must create a domain for the Cisco Nexus 1000V. This process is part of the initial setup of the Cisco Nexus 1000V when you install the software. If you need to create a domain later, you can do so by using the **setup** command or the procedures described in this chapter.

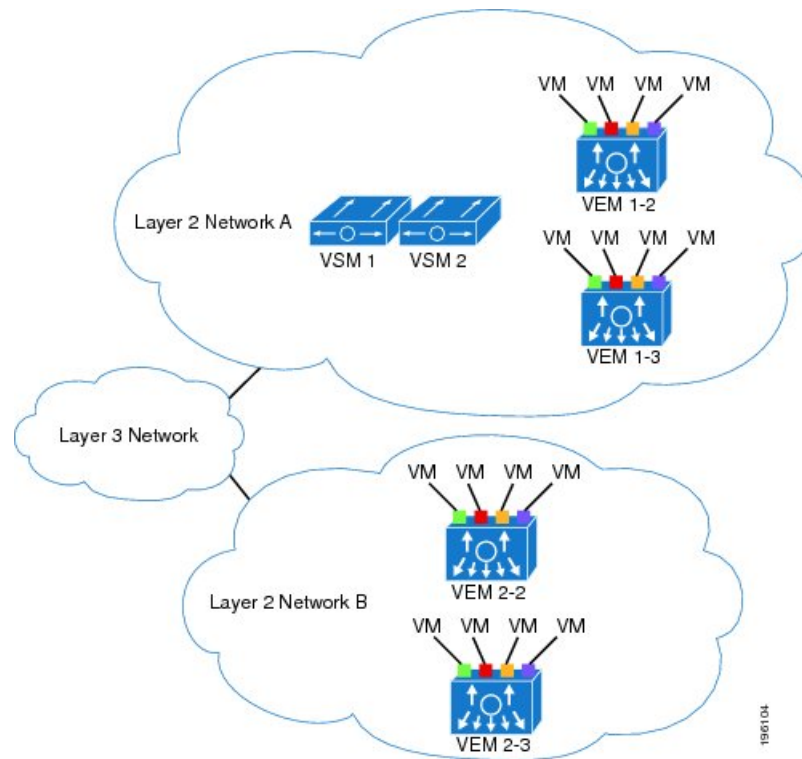
Layer 3 Control

Layer 3 control, or IP connectivity, is supported between the Virtual Supervisor Module (VSM) and the Virtual Ethernet Module (VEM) for control and packet traffic. With Layer 3 control, a VSM can be Layer 3 accessible and can control hosts that reside in a separate Layer 2 network. In the Layer 3 mode, all the VEMs hosts that are managed by VSM and the VSM can be in different networks.

To implement Layer 3 control, you must configure the VSM in Layer 3 mode.

Figure 1: Example of Layer 3 Control IP Connectivity

In this figure, VSM 1 controls VEMs in Layer 2 Network A and VSM 2 controls VEMs in Layer 2 Network B.



Guidelines and Limitations

Follow these usage guidelines and limitations while configuring the domain:

- UDP port 4785 is required for Layer 3 communication between the VSM and VEM. If you have a firewall in your network and are configuring Layer 3 control, make sure that UDP port 4785 is open on your upstream switch or firewall device. For more information, see the documentation for your upstream switch or firewall device.
- Different hosts can use different VLANs for Layer 3 control.

Configuring the Domain

Creating a Domain

You can create a domain ID for the Cisco Nexus 1000V that identifies the VSM and VEMs. This process is part of the initial setup of the Cisco Nexus 1000V when installing the software. If you need to create a domain after initial setup, you can do so by using this procedure.

Before you begin

You must be logged in to the CLI in EXEC mode.

You must know the following information:

- A unique domain ID for this Cisco Nexus 1000V instance.

Procedure

	Command or Action	Purpose
Step 1	switch# config t	Places you in global configuration mode.
Step 2	switch(config)# svs-domain	Places you in SVS domain configuration mode.
Step 3	switch(config-svs-domain)# domain id number	Creates the domain ID for this Cisco Nexus 1000V instance.
Step 4	(Optional) switch(config-vlan)# show svs domain	Displays the domain configuration.
Step 5	switch(config-vlan)# exit	Returns you to global configuration mode.
Step 6	(Optional) switch(config)# copy running-config startup-config	Copies the running configuration to the startup configuration.

Example

```
switch(config)# svs-domain
switch(config-svs-domain)# domain id 100
switch(config)# show svs domain
SVS domain config: Domain id: 100
Control vlan: 1
Packet vlan: 1
Control mode: L3
Switch guid: 558fdf84-5428-7fd7-b921- adf70a8a8ce9
L3 control interface: mgmt0

switch(config)#
switch(config)# copy run start
[#####] 100%
switch(config)#
```



Note To change the domain ID in a dual VSM system and for more information, see the *Cisco Nexus 1000V for Microsoft Hyper-V High Availability and Redundancy Configuration Guide*.

Configuring the Layer 3 Interface

Before you begin

You must be logged in to the CLI in EXEC mode.

When control 0 is used for Layer 3 transport, you must enable proxy-arp on the control 0 VLAN gateway router

Procedure

	Command or Action	Purpose
Step 1	switch# config t	Enters global configuration mode.
Step 2	switch(config) Interface control 0 Example: switch(config)# interface control 0 switch(config-if)# ip address 10.197.140.231 255.255.255.192 switch(config-if)# exit	Assigns an IP address to the control 0 interface
Step 3	switch(config)# vrf context default Example: switch(config)# vrf context default switch(config)# ip route 0.0.0.0/0 10.197.140.193 switch(config)# exit	Sets the IP route under the VRF context default.
Step 4	switch(config)# svs-domain Example: switch# conf t Enter configuration commands, one per line. End with CNTL/Z. switch(config)# svs-domain	Enters the SVS domain configuration mode.
Step 5	switch(config)# svs mode L3 interface control0 Example: switch(config-svs-domain)# svs mode L3 interface control0 mgmt0 switch(config-svs-domain)# svs mode L3 interface control0	Sets the SVS mode Layer 3 interface to control 0. Note Once the interface is changed, the VEM goes offline and reverts to the online mode again

After the network service refresh and the logical switch remediate, once the OD data reaches the VEM, verify if the control 0 has been assigned. Refer to the commands in the below example to verify this.

Example

```
switch(config-svs-domain)# sh svs domain
SVS domain config:
Domain id: 321
Control vlan: 1
Packet vlan: 1
Control mode: L3
Switch guid: f64fea85-ccd1-49c7-a57c-17f96a6d9416
L3 control interface: control0 -----> L3 control interface is set to control0

switch(config-svs-domain)# sh msp internal info config-summary
data-version 1.0
switch-domain 321
switch-name switch
cp-version 5.2(1)SM3(2.1) [gdb]
```

```

control-vlan 1
system-primary-mac 00:1d:d8:b7:1c:0c
active-vsm packet mac 00:1d:d8:b7:1c:0e
active-vsm mgmt mac 00:1d:d8:b7:1c:0d
standby-vsm ctrl mac 001d-d8b7-1c12
inband-vlan 1
svs-mode L3
l3control-ipaddr 10.197.140.231
upgrade state 0 mac 001d-d8b7-1c12 l3control-ipv4 null
sequence-number 72
end-version 1.0

switch# module vem 3 execute vemcmd show data
data-version 1.0
switch-domain 321
switch-name VSM-219-pri
cp-version 5.2(1)SM3(2.1) [gdb]
control-vlan 1
system-primary-mac 00:1d:d8:b7:1c:0c
active-vsm packet mac 00:1d:d8:b7:1c:0e
active-vsm mgmt mac 00:1d:d8:b7:1c:0d
standby-vsm ctrl mac 001d-d8b7-1c12
inband-vlan 1
svs-mode L3
l3control-ipaddr 10.197.140.231
upgrade state 0 mac 001d-d8b7-1c12 l3control-ipv4 null
sequence-number 72 -----> OD change is reflected on VEM.
end-version 1.0
    
```

Feature History for the VSM Domain

This table only includes updates for those releases that have resulted in additions to the feature.

Feature Name	Releases	Feature Information
VSM Domain	5.2(1)SM1(5.1)	This feature was introduced.

