Managing Server Connections

This chapter contains the following sections:

Information About Server Connections

In order to connect to vCenter Server or an ESX server, you must first define the connection in theCisco Nexus 1000V including the following:

- A connection name

- The protocol used

- The server IP address

- The server DNS name

- All communication with vCenter Server is secured by the Transport Layer Security (TLS) protocol.

Guidelines and Limitations

InterCloud Extender will fail to attach as a module on the VSM if its tunnel interface and the VSM management are on the same subnet.

Connecting to the vCenter Server

Before You Begin

Before beginning this procedure, you must be logged in to the CLI in EXEC mode.

You must know the following:

- The datacenter name

- The vCenter Server IP address or hostname.

You must be sure the following is set up:

- The vCenter Server management station is installed and running.

- The ESX servers are installed and running.

- The Cisco Nexus 1000V appliance is installed.

- The management port is configured.

- The DNS is already configured if you are configuring a connection using a hostname.

- An extension with vCenter Server has been registered. The extension includes the extension key and public certificate for the VSM. vCenter Server uses the extension to verify the authenticity of the request it receives from the VSM. For instructions about adding and registering an extension, see the *Cisco Nexus 1000V Installation and Upgrade Guide*.

Procedure

	Command or Action	Purpose
Step 1	switch# **configure terminal**	Places you in global configuration mode.
Step 2	switch(config)# **svs connection** *name*	Places you in connection configuration mode for adding this connection between the Cisco Nexus 1000V and either a particular ESX server or vCenter Server. By using a name, information for multiple connections can be stored in the configuration.
Step 3	switch(config-svs-conn)# **protocol vmware-vim** [**http**]	Use the **http** keyword to specify that this connection uses the VIM protocol. This command is stored locally. **http**: Specifies that the VIM protocol runs over HTTP. The default is to use HTTP over SSL (HTTPS).
Step 4	Do one of the following:	• If you are configuring an IP address, go to Step 5. • If you are configuring a hostname, go to Step 6.
Step 5	switch(config-svs-conn)# **remote ip address** *ipaddress*	Specifies the IP address of the ESX server or vCenter Server for this connection. This command is stored locally. Go to step 7 to configure the datacenter name.

	Command or Action	**Purpose**
Step 6	switch(config-svs-conn)# **remote hostname** *hostname*	Specifies the DNS name of the ESX server or vCenter Server for this connection. This command is stored locally.
		Note　DNS is already configured.
Step 7	switch(config-svs-conn)# **vmware dvs datacenter-name** *name*	Identifies the datacenter name in the vCenter Server where the Cisco Nexus 1000V is to be created as a distributed virtual switch (DVS). You can use this command before or after connecting. The datacenter name is stored locally.
Step 8	switch(config-svs-conn)# **connect**	Initiates the connection. If the username and password have not been configured for this connection, the you are prompted for a username and password.
		The default is no connect. There can be only one active connection at a time. If a previously defined connection is up, an error message appears and the command is rejected until you close the previous connection by entering no connect.

```
switch# config t
switch(config)# svs connection VC
switch(config-svs-conn)# protocol vmware-vim
switch(config-svs-conn)# remote ip address 192.168.0.1
switch(config-svs-conn)# vmware dvs datacenter-name Hamilton-DC
switch(config-svs-conn)# connect
switch# show svs connections
connection VC:
    ip address: 192.168.0.1
    protocol: vmware-vim https
    certificate: default
    datacenter name: Hamilton-DC
    DVS uuid: ac 36 07 50 42 88 e9 ab-03 fe 4f dd d1 30 cc 5c
    config status: Enabled
    operational status: Connected
switch#
```

Configuring Host Mapping

This section includes the following topics:

- Information about Host Mapping

- Removing Host Mapping from a Module

- Mapping to a New Host

- Viewing Host Mapping

Information about Host Server Connections

When a VSM detects a new VEM, it automatically assigns a free module number to the VEM and then maintains the mapping between the module number and the universally unique identifier (UUID) of a host server. This mapping is used to assign the same module number to a given host server.

Removing Host Mapping from a Module

Before You Begin

Before beginning this procedure, be sure you have done the following:

- Logged in to theCisco Nexus 1000V in EXEC mode.
- Removed the host from the Cisco Nexus 1000V DVS on vCenter

Procedure

	Command or Action	Purpose
Step 1	switch# **configure terminal**	Places you in global configuration mode.
Step 2	switch(config)# **no vem** *module-number*	Removes the specified module from software.
		Note If the module is still present in the slot, the command is rejected, as shown in this example.
Step 3	switch(config)# **show module vem mapping**	(Optional) Displays the mapping of modules to host servers.
Step 4	switch(config)# **copy running-config startup-config**	Copies the running configuration to the startup configuration.

```
switch# configure terminal
switch(config)# no vem 4
switch(config)# no vem 3
cannot modify slot 3: host module is inserted
switch(config)# show module vem mapping
Mod     Status          UUID                                License Status
---     -----------     ---------------------------------   --------------
  3     powered-up      93312881-309e-11db-afa1-0015170f51a8   licensed
switch(config-vem-slot)# copy running-config startup-config
```

Mapping to a New Host

Before You Begin

Before beginning this procedure, be sure you have done the following:

- Logged in to the CLI in EXEC mode

• Removed the host from the Cisco Nexus 1000V DVS on vCenter

Note If you do not first remove the existing host server mapping, the new host server is assigned a different module number.

Procedure

	Command or Action	**Purpose**
Step 1	switch# **configure terminal**	Places you in global configuration mode.
Step 2	switch(config)# **vem** *module number*	Places you in VEM slot configuration mode.
Step 3	switch(config-vem-slot)# **host vmware id** *server-bios-uuid*	Assigns a different host server UUID to the specified module.
Step 4	switch(config-vem-slot)# **show module vem mapping**	(Optional) Displays the mapping of modules to host servers.
Step 5	switch(config-vem-slot)# **copy running-config startup-config**	Copies the running configuration to the startup configuration.

```
switch# config t
switch(config)# vem 3
switch(config-vem-slot)# host vmware id 6dd6c3e3-7379-11db-abcd-000bab086eb6
switch(config-vem-slot)# show module vem mapping
Mod      Status       UUID                                  License Status
---      ----------   ------------------------------------  --------------
  3      powered-up   93312881-309e-11db-afa1-0015170f51a8  licensed
  4         absent    6dd6c3e3-7379-11db-abcd-000bab086eb6  licensed

switch(config-vem-slot)# copy running-config startup-config
```

Viewing Host Mapping

• Use this procedure in EXEC mode to view the mapping of modules to host servers.

Procedure

Display the mapping on modules to host servers by entering the following command: **show module vem mapping**

```
Mod Status      UUID                                  License Status
--- ----------- ------------------------------------- --------------
3   powered-up  93312881-309e-11db-afa1-0015170f51a8  licensed
n1000v(config)#
```

Verifying the Domain

Use the following command to verify the configured domain:

Command	Description
show svs domain	Displays the domain configured on the Cisco Nexus 1000V.

```
n1000v# show svs domain
SVS domain config:
Domain id: 98
Control vlan: 70
Packet vlan: 71
Sync state: -
n1000v#
```

Verifying the Configuration

Use one of the following commands to verify the configuration:

Command	Description
show running-config	Displays the current configuration. If the Cisco Nexus 1000V is not connected to a vCenter Server or ESX server, the output is limited to connection-related information.
show svs domain	Displays the domain configured on the Cisco Nexus 1000V.
show module	Displays module information.
show server_info	Displays server information.
show interface brief	Displays interface information, including the uplinks to vCenter Server.
show interface virtual	Displays virtual interface information.
show module vem mapping	Displays the mapping of modules to host servers.

Verifying Module Information

Use one of the following commands to verify the configuration:

Command	Description
show module	Displays module information.
show server_info [*name*]	Displays server information.
show interface brief	Displays interface information, including the uplinks to vCenter Server.
show interface virtual	Displays virtual interface information.

Feature History for Server Connections

Feature Name	Releases	Feature Information
Server Connections	Release 5.2(1)IC1(1.1)	This feature was introduced.