



Migrating a VSB to the Cisco Nexus 1110 Series

This chapter describes how to move or migrate a virtual service blade (VSB) to from the Cisco Nexus 1010 series to the Cisco Nexus 1110 Series and includes the following sections:

- [Information About Migrating a VSB, page 7-1](#)
- [Guidelines and Limitations, page 7-1](#)
- [Migrating a VSB to the Cisco Nexus 1110 Series, page 7-2](#)
- [Migrating an OVA to the Cisco Nexus Cloud Services Platform Product Family, page 7-6](#)
- [Verifying the Migration, page 7-7](#)
- [Additional References, page 7-8](#)
- [Feature History for Migration, page 7-9](#)

Information About Migrating a VSB

After you have installed the Cisco Nexus Cloud Services Platform, you can move, or migrate your VSBs from the Cisco Nexus 1010 series to the Cisco Nexus 1110 Series. For information on VSB, see [Information About Virtual Service Blades, page 4-1](#).

Guidelines and Limitations

The Cisco Nexus Cloud Services Platform has the following guidelines and limitations for migrating a VSB from Cisco Nexus 1010 series to the Cisco Nexus 1110 Series:

- An HA pair cannot be formed with the Cisco Nexus 1110-S and Cisco Nexus 1110-X. An HA pair can only be formed with the same hardware.
- You must use the same management VLAN for both the Cisco Nexus 1010 series and the Cisco Nexus 1110 Series.
- You must use the same RAM size and disk size for the new VSB on the Cisco Nexus Cloud Services Platform that you used for migrating the VSB on the Cisco Nexus 1110 Series.

[Send document comments to nexus1k-docfeedback@cisco.com.](mailto:nexus1k-docfeedback@cisco.com)

Migrating a VSB to the Cisco Nexus 1110 Series

-
- Step 1** Verify that the Cisco Nexus 1010 series has the VSBs configured that need to be migrated to the Cisco Nexus 1110 Series.
 - Step 2** Set up the Cisco Nexus 1110 Series in a redundant HA pair. See the *Cisco Nexus Cloud Services Platform Software Installation and Upgrade Guide, Release 4.2(1)SP1(6.1)*.
 - Step 3** Migrate the HA VSBs such as the VSM and Cisco VSG to Cisco Nexus 1110 Series. See [Migrating HA VSB to Cisco Nexus 1110 Series, page 7-2](#).
 - Step 4** Migrate the non HA VSBs such as the NAM to Cisco Nexus 1110 Series. See [Migrating a Non HA VSB to the Cisco Nexus 1110 Series, page 7-5](#).
-

Migrating HA VSB to Cisco Nexus 1110 Series

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- You have installed a primary and secondary Cisco Nexus 1110 Series in HA mode.
- Log in to the CLI of the Cisco Nexus 1110 Series in EXEC mode.
- Know the name of the VSB that you want to move or migrate from the Cisco Nexus 1010 series.
- When creating the secondary virtual service, use the same information that you used for the primary VSB for the following:
 - ISO filename
 - Management IP address
 - Domain ID
 - Hostname
 - Default gateway
 - Control and packet VLAN IDs



Note If you use a value that results in a mismatch with the Cisco Nexus 1110 Series, the synchronization between the Cisco Nexus 1110 Series and the Cisco Nexus 1010 series overwrites your configuration on the Cisco Nexus 1010 series.

- When creating the secondary virtual service, use the same information that you used for the VSB for the following:
 - RAM size
 - Disk size
- Designate the secondary VSM as active. If primary VSM is active, then change it to make the secondary VSM active

Send document comments to nexus1k-docfeedback@cisco.com.

DETAILED STEPS

- Step 1** From the CLI of the primary VSB on Cisco Nexus 1010, initiate a manual switchover, and then shut down the primary VSB.

config t

virtual-service-blade *name*

login virtual-service-blade name primary

After logging into the VSB, use the **system switchover** command to initiate a manual switchover.

When the switchover completes and the CLI returns to the Cisco Nexus 1010, use the **shut primary** command to shut the primary VSB.

- Step 2** From the CLI of the active Cisco Nexus 1110 Series, use the following commands to create a primary virtual service for the VSB that you want to migrate. Use the same information that you used to create the VSB on Cisco Nexus 1010.

Example:

```
switch# configure terminal
switch(config)# virtual-service-blade VB-1
switch(config-vs-b-config)# virtual-service-blade-type new dcos_vsm.iso
switch(config-vs-b-config)# interface control vlan 1322
switch(config-vs-b-config)# interface packet vlan 1323
switch(config-vs-b-config)# enable primary
Enter domain id[1-4095]: 1322
Management IP version [V4/V6]: [V4]
Enter Management IP address: 10.78.109.67
Enter Management subnet mask: 255.255.255.224
IPv4 address of the default gateway: 10.78.109.65
Enter HostName: switch
Enter the password for 'admin': xz35vb1zx
switch(config-vs-b-config)#
```

- Step 3** Verify that the configuration is complete.

Example:

```
switch(config-vs-b-config)# show virtual-service-blade summary
```

```
-----
Name                Role      State                Nexus1010-Module
-----
VB-1                PRIMARY  VSB DEPLOY IN PROGRESS  Nexus1010-PRIMARY
VB-1                SECONDARY VSB NOT PRESENT        Nexus1010-SECONDARY
```

Example:

```
switch(config-vs-b-config)# show virtual-service-blade summary
```

```
-----
Name                Role      State                Nexus1010-Module
-----
VB-1                PRIMARY  VSB POWERED ON        Nexus1010-PRIMARY
VB-1                SECONDARY VSB NOT PRESENT        Nexus1010-SECONDARY
```

After you create the virtual service on the primary Cisco Nexus 1110 Series, an HA pair forms between the secondary VSB on the Cisco Nexus 1010 series and the primary virtual service on the Cisco Nexus 1110 Series.

- Step 4** From the CLI of the primary VSB on the Cisco Nexus 1110 Series, use the following command to verify the redundancy status of the VSBs.

Send document comments to nexus1k-docfeedback@cisco.com.

If the output indicates the following, then you can proceed with a system switchover.

- The presence of an active VSB
- The presence of a standby VSB in the HA standby redundancy state

Example:

```
switch# show system redundancy status
Redundancy role
-----
administrative: primary
operational: primary
Redundancy mode
-----
administrative: HA
operational: HA
This supervisor (sup-1)
-----
Redundancy state: Standby
Supervisor state: HA standby
Internal state: HA standby
Other supervisor (sup-2)
-----
Redundancy state: Active
Supervisor state: Active
Internal state: Active with HA standby
```

- Step 5** From the CLI of the secondary VSB on the Cisco Nexus 1010, initiate a manual switchover to the standby virtual service on the Cisco Nexus 1110 Series.

After logging into the VSB, use the **system switchover** command to initiate a manual switchover.

When the switchover completes and the CLI returns to the Cisco Nexus 1010, use the **shut secondary** command to shut the secondary VSB.

Example:

```
switch# system switchover
-----
2009 Mar 31 04:21:56 n1000v %% VDC-1 %% %SYSMGR-2-HASWITCHOVER_PRE_START:
This supervisor is becoming active (pre-start phase).
2009 Mar 31 04:21:56 n1000v %% VDC-1 %% %SYSMGR-2-HASWITCHOVER_START:
This supervisor is becoming active.
2009 Mar 31 04:21:57 n1000v %% VDC-1 %% %SYSMGR-2-SWITCHOVER_OVER: Switchover completed.
2009 Mar 31 04:22:03 n1000v %% VDC-1 %% %PLATFORM-2-MOD_REMOVE: Module 1 removed (Serial
number )
switch#
```

Before continuing with the next step, wait until the switchover completes and the standby supervisor becomes active. The following occurs when the switchover is complete:

- The VSB on the Cisco Nexus 1010 reboots.
- The virtual service configuration on the Cisco Nexus 1110 Series is overwritten to match what is on the VSB on the Cisco Nexus 1010.
- The primary virtual service on the Cisco Nexus Cloud Services Platform is now the active VSB.

- Step 6** From the CLI of the active Cisco Nexus 1110 Series, use the following commands to create a new secondary virtual service. Use the same information that you used to create the primary virtual service.

After you enter these commands, the Cisco Nexus 1110 Series prompts you for additional information. After you create the secondary virtual service on the active Cisco Nexus 1110 Series, an HA pair is formed between the primary virtual service and the secondary virtual service on the Cisco Nexus 1110 Series.

Example:

Send document comments to nexus1k-docfeedback@cisco.com.

```
switch# configure terminal
switch(config)# virtual-service-blade VB-1
switch(config-vs-b-config)# enable secondary
Enter vsb image: [dcos_vsm.iso]
Enter domain id[1-4095]: 1322
Management IP version [V4/V6]: [V4]
Enter Management IP address: 10.78.109.67
Enter Management subnet mask length: 27
IPv4 address of the default gateway: 10.78.109.65
Enter HostName: switch
Enter the password for 'admin': xz35vblzx
```

Step 7 Verify that the configuration is complete.

Example:

```
switch(config-vs-b-config)# show virtual-service-blade summary
```

```
-----
Name                Role        State                Nexus1010-Module
-----
VB-1                PRIMARY    VSB POWERED ON      Nexus1010-PRIMARY
VB-1                SECONDARY  VSB DEPLOY IN PROGRESS Nexus1010-SECONDARY
```

Example:

```
switch(config-vs-b-config)# show virtual-service-blade summary
```

```
-----
Name                Role        State                Nexus1010-Module
-----
VB-1                PRIMARY    VSB POWERED ON      Nexus1010-PRIMARY
VB-1                SECONDARY  VSB POWERED ON      Nexus1010-SECONDARY
```

The VSB is migrated from the Cisco Nexus 1010 series to the Cisco Nexus 1110 Series

Migrating a Non HA VSB to the Cisco Nexus 1110 Series

- Step 1** From the CLI of Cisco Nexus Cloud Services Platform, use the following commands to power off the non HA VSB on the Cisco Nexus Cloud Services Platform.
- Step 2** Export the non-HA VSB to the Cisco Nexus Cloud Services Platform. See the Creating a VSB Backup File section for more information.
- Step 3** Copy a VSB configuration file to external storage location. See the Copying the VSB Backup File to an External Storage Location section for more information.
- Step 4** Import the non-HA VSB to the Cisco Nexus 1110 Series. See the Importing a VSB Backup File section for more information.
- Step 5** From the CLI of the Cisco Nexus 1110 Series, to power on the imported non-HA VSB on Cisco Nexus 1110 Series.

Example:

```
switch# configure terminal
switch(config)# virtual-service-blade NAM
switch(config-vs-b-config)# shut
switch(config-vs-b-config)# export
Note: export started..
Note: please be patient..
...
```

Send document comments to nexus1k-docfeedback@cisco.com.

```
Note: export completed...
switch(config-vs-b-config)# copy bootflash:export-import/1/ ftp:
Enter the source filename: Vdisk1.img.tar.00
Enter vrf (If no input, current vrf 'default' is considered):
Enter hostname for the ftp server: 10.78.109.51
Enter username: administrator
Password:
**** Transfer of file Completed Successfully ****

On Cisco Nexus 1110 Series CLI:
switch# configure terminal
switch(config)# copy ftp: bootflash:export-import
Enter source filename: Vdisk1.img.tar.00
Enter vrf (If no input, current vrf 'default' is considered):
Enter hostname for the ftp server: 10.78.109.51
Enter username: administrator
Password:
**** Transfer of file Completed Successfully ****

switch#configure terminal
switch(config)#virtual-service-blade NAM
switch(config-vs-b-config)#import primary Vdisk1.img.tar.00
Note: import started..
Note: please be patient..
...
Note: Import cli returns check VSB status for completion
switch(config-vs-b-config)#no shutdown
```

Migrating an OVA to the Cisco Nexus Cloud Services Platform Product Family

You can export an OVA from ESX and import it into the Cisco Nexus Cloud Services Platform product family as a VSB. You must involves run the migration tool script on the OVA, and then take the generated tar file and use it for importing into the Cisco Nexus Cloud Services Platform product family.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- You must have the following binaries installed:
 - /bin/cp
 - /bin/mkdir
 - bin/rm
 - bin/mv
 - bin/tar
 - vmware-vdiskmanager
- You must save the configuration on the VSB before export on ESX.

DETAILED STEPS

Step 1 Export the VSB to ESX and then copy the exported OVA into the **esx_migration_tool/** directory.

Send document comments to nexus1k-docfeedback@cisco.com.

Step 2 Run the migration tool script on the OVA.

If the version number of the VSB is supported by the migration tool, enter the following command to run the migration script.

```
./migration.sh <OVA file name> <vsb_type> <cookie> <ha-role> <vmware-vdiskmanager_location>
[-v vsb_version]
```

where

- OVA filename—The name of the exported OVA file from ESX
- VSB type—Cisco VSG type such as VSM, VSG, or NAM
- Cookie—A positive integer unique for every slot. The cookie value for the primary and secondary Cisco Nexus Cloud Services Platform must be the same.
- HA role—Either primary or secondary, and should be imported with the same HA role in the Cisco Nexus Cloud Services Platform.
- Vmware-vdiskmanager location—The path in which the vmware-vdiskmanager binary can be found.
- VSB version—The version number of the particular VSB.
- Vbtype_xml_file_path—The complete file path where the xml template file of the VSB is placed.

Example:

```
./migration.sh VSM.ova VSM 123456 primary /usr/bin/ -v 4.2(1)SV1(4a)
```

If the version number of the VSB is not supported by the migration tool, use the following command to run the migration script.

```
./migration.sh <OVA file name> <vsb_type> <cookie> <ha-role> <vmware-vdiskmanager_location>
[-f vbtype_xml_file_path]
```

Example:

```
./migration.sh VSM.ova VSM 678910 secondary /usr/bin/ -f /tmp/ovf_vbtype.xml
```

Step 3 After the script executes, locate the split tar files in the **esx_migration_tool/** directory.

Step 4 Import the VSB to the Cisco Nexus Cloud Services Platform using the tar file. See the Importing a VSB Backup File section for more information.

Step 5 Configure the interface VLAN values and power on the VSB.

Verifying the Migration

To verify the migration, use the following commands:

Command	Purpose
show virtual-service-blade summary	Displays the redundancy state (active or standby) and the redundancy role (primary or secondary) for each virtual service. See Example 7-2 on page 7-8 .
show system redundancy status	Displays the redundancy state (active or standby) and the redundancy role (primary or secondary) for the Cisco Nexus Cloud Services Platforms. See Example 7-2 on page 7-8 .

Send document comments to nexus1k-docfeedback@cisco.com.

Example 7-1 Virtual Service Blade Configuration

```
switch(config-vsbl-config)# show virtual-service-blade summary
```

```
-----
Name                Role        State                Nexus1010-Module
-----
VB-1                PRIMARY    VSB NOT PRESENT     Nexus1010-PRIMARY
VB-1                SECONDARY  VSB DEPLOY IN PROGRESS Nexus1010-SECONDARY
```

```
switch(config-vsbl-config)# show virtual-service-blade summary
```

```
-----
Name                Role        State                Nexus1010-Module
-----
VB-1                PRIMARY    VSB NOT PRESENT     Nexus1010-PRIMARY
VB-1                SECONDARY  VSB POWERED ON      Nexus1010-SECONDARY
```

Example 7-2 System Configuration

```
switch# show system redundancy status
```

```
Redundancy role
-----
administrative: primary
operational: primary
Redundancy mode
-----
administrative: HA
operational: HA
This supervisor (sup-1)
-----
Redundancy state: Standby
Supervisor state: HA standby
Internal state: HA standby
Other supervisor (sup-2)
-----
Redundancy state: Active
Supervisor state: Active
Internal state: Active with HA standby
```

Additional References

For additional information related to Migrating a VSB to the Cisco Nexus 1110 series, see the following sections:

- [Related Documents, page 7-9](#)
- [Feature History for Migration, page 7-9](#)

Send document comments to nexus1k-docfeedback@cisco.com.

Related Documents

Related Topic	Document Title
Software setup configuration	<i>Cisco Nexus Cloud Services Platform Software Installation and Upgrade Guide, Release 4.2(1)SP1(6.1)</i>
Virtual service configuration	Configuring Virtual Service Blades section.
Cisco Nexus Cloud Services Platform installation	<i>Cisco Nexus Cloud Services Platform Hardware Installation Guide</i>
Cisco Nexus Cloud Services Platform commands	<i>Cisco Nexus Cloud Services Platform Command Reference, Release 4.2(1)SP1(6.1)</i>

Feature History for Migration

This section provides the migration feature release history.

Feature Name	Releases	Feature Information
VSB Migration	4.0(4)SP1(3)	This feature was introduced.

Send document comments to nexus1k-docfeedback@cisco.com.