CHAPTER 6

VSB Backup and Recovery

This chapter describes how to backup and recover a VSB, and includes the following sections:

Information About VSB Backup and Recovery

You can create a backup copy of a VSB and store it remotely to use as a recovery mechanism or when you need to move a VSB between Cisco Nexus Virtual Services Appliances.

Figure 6-1 shows the process for backing up and recovering a VSB.

Guidelines and Limitations

The following are guidelines and limitations to use when backing up and recovering a VSB:

- Multiple export files may be created with this process. Do not change the file suffix for numbering purposes. If you change the prefix for one file, then you must change it for all.
- You must shut down the VSB before creating the file to export.
- The bootflash: export-import directory must be empty prior to either creating an export file or copying the file back from external storage.
- Configuration files do not have enough information to re-create a VSM.
- For periodic backups, VSB should be exported once (after connecting to vCenter Server) and only the VSM configuration should be periodically backup.

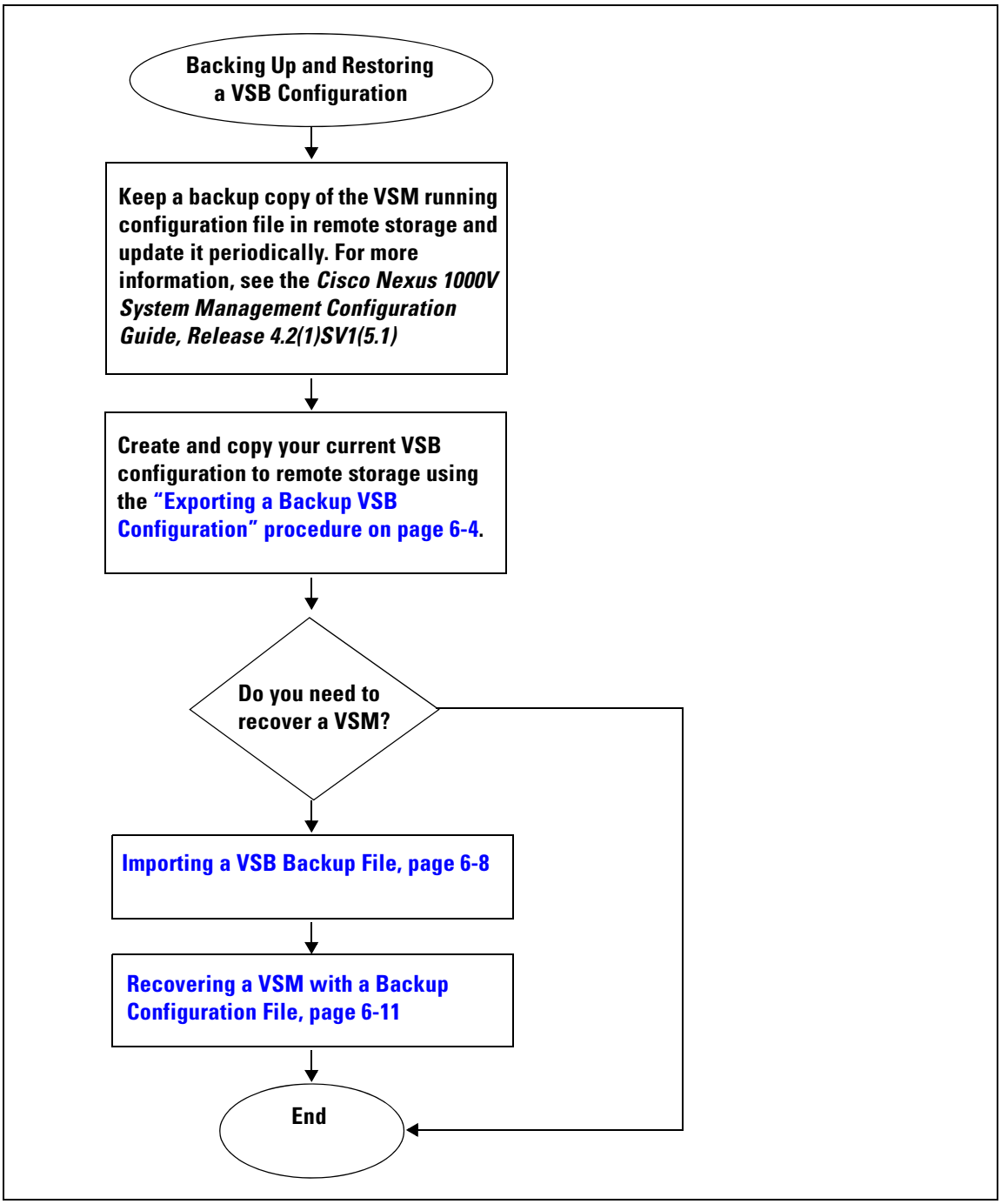
Configuring VSB Backup and Restoration

This section includes the following topics and procedures:

Flowchart: Backing Up and Restoring a VSB Configuration

You can use the following process for backing up and restoring a VSB configuration.

Figure 6-1 Flow Chart: Backing Up and Restoring a VSB Configuration



Exporting a Backup VSB Configuration

You can use the following procedures to create a backup copy of a VSB, store it remotely, and then re-import it to either recover a VSM or move a VSB between Cisco Nexus Virtual Services Appliances.

- Creating a VSB Backup File, page 6-4
- Copying the VSB Backup File to External Storage, page 6-7

Creating a VSB Backup File

You can use this procedure to create a file for exporting a VSB.

BEFORE YOU BEGIN

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

- You are logged in to the CLI of the Cisco Nexus Virtual Services Appliance in EXEC mode.
- You know the name of the VSB for which you are creating a file to export.
- You have verified that the bootflash: export-import directory is empty. If files are present in this directory, you must delete them before starting this procedure.
- You must shut down the VSB that you want to backup before creating the file to export. This procedure includes a step for shutting down the VSB and then a step to restart the VSB after creating the file.

Note Multiple files may be created. Do not change the file suffix for numbering purposes. If you change the prefix for one file, then you must change it for all.

SUMMARY STEPS

1. **dir bootflash:export-import**
2. (Optional) **delete bootflash:export-import** *foldername*
3. **config t**
4. **virtual-service-blade** *name*
5. **shutdown [primary | secondary]**
6. **show virtual-service-blade summary**
7. **export [primary | secondary]**
8. **dir bootflash:export-import**
9. **no shutdown [primary | secondary]**
10. **show virtual-service-blade summary**

DETAILED STEPS

	Command	Purpose
Step 1	**dir bootflash:export-import** **Example**: switch# **dir bootflash:export-import** DOCS-CPPA# dir export-import Usage for bootflash://sup-local 496164864 bytes used 3495215104 bytes free 3991379968 bytes total switch#	Displays the contents of the export-import directory for verification that the directory is empty. If there is anything in this directory, you must use the next step to delete it before proceeding.
Step 2	**delete bootflash:export-import** *foldername* **Example**: switch-1(config-vsb-config)# **delete bootflash:/export-import/1/*.*** switch-1(config-vsb-config)# **delete bootflash:/export-import/1** switch-1(config-vsb-config)#	Deletes the VSB compressed tar file and its folder created for export.
Step 3	**config t** **Example:** switch-1# config t switch-1(config)#	Enters CLI Global Configuration mode.
Step 4	**virtual-service-blade** *name* **Example:** switch-1(config)# virtual-service-blade vsm-1 switch-1(config-vsb-config)#	Enters configuration mode for the named virtual service blade.
Step 5	**shutdown [primary | secondary]** **Example:** switch-1(config-vsb-config)# shutdown secondary switch-1(config-vsb-config)#	Shuts down the VSB you are exporting from. If a redundant pair of Cisco Nexus Virtual Services Appliances, you must specify whether to shut down the primary or secondary.
Step 6	**show virtual-service-blade summary**	Displays the virtual service blade configuration for verification.

Example:

```
switch-1(config-vsb-config)# show virtual-service-blade summary

--------------------------------------------------------------------------------
Name                 Role        State                    Nexus1010-Module
--------------------------------------------------------------------------------
VSM1                  PRIMARY     VSB POWERED ON          Nexus1010-PRIMARY
VSM1                  SECONDARY   VSB POWERED OFF          Nexus1010-SECONDARY
```

	Command	Purpose

Step 7	**export [primary | secondary]**
	
	Example:
	`switch-1(config-vsb-config)# export secondary`
	`Note: export started..`
	`Note: please be patient..`
	`Note: please be patient..`
	`Note: please be patient..`
	`Note: export completed...switch-1(config-vsb-config)#`
	
	Example:
	`switch-1(config-vsb-config)# export primary`
	`ERROR: Please clean export-import directory first, then proceed.`
	`switch-1(config-vsb-config)#`
	
	Example:
	`switch-1(config-vsb-config)# export secondary`
	`ERROR: Cannot export active virtual-service-blade, please shut and retry.`
		Creates a directory named for the slot id of the exported VSB containing a compressed tar image of the VSB.
		
		If exporting from a redundant pair of Cisco Nexus Virtual Services Appliances, you must specify whether exporting from the primary or secondary.
		
		Note The export command does not move the configuration file off of the Cisco Nexus Virtual Services Appliance. The export command creates a backup copy that you must then copy to remote storage. There is a separate procedure for this.

Step 8	**dir bootflash:export-import**
	
	Example:
	`switch-1(config-vsb-config)# dir bootflash:export-import`
	`  4096  Sep 08 19:12:52 2011 1/`
	
	`Usage for bootflash://sup-local`
	`310870016 bytes used`
	`3680509952 bytes free`
	`3991379968 bytes total`
		Displays the contents of the bootflash: export-import directory, including the directory name of the folder containing the compressed tar image of the VSB, for verification.
		
		Note You need this folder name in Step 11.

Step 9	**no shutdown [primary | secondary]**
	
	Example:
	`switch-1(config-vsb-config)# no shutdown secondary`
	
	`switch-1(config-vsb-config)#`
		Powers on the VSB that was powered off when creating the file for export.
		
		If a redundant pair of Cisco Nexus Virtual Services Appliances, you must specify primary or secondary.

Step 10	**show virtual-service-blade summary**	Displays the virtual service blade configuration for verification.

Command	Purpose

Example:
`switch-1(config-vsb-config)# show virtual-service-blade summary`
 	
`----------`
`Name  Role  State  Nexus1010-Module`
`----------`
`VSM1  PRIMARY  VSB POWERED ON  Nexus1010-PRIMARY`
`VSM1  SECONDARY  VSB POWERED ON  Nexus1010-SECONDARY`	

Step 11 **dir bootflash:export-import** */directory-name*
 	
Example:
`switch-1(config-vsb-config)# dir bootflash:export-import/1`
`  279955021  Sep 08 19:13:21 2011 Vdisk1.img.tar.00`
 	
`Usage for bootflash://sup-local`
`  310870016 bytes used`
`  3680509952 bytes free`
`  3991379968 bytes total`
	Displays the contents of the Cisco Nexus Virtual Services Appliance export folder, including the filename of the VSB compressed tar image.
	
	Note You identified this folder name in Step 8.
	
	Note Multiple files may be created. Do not change the file suffix for numbering purposes. If you change the prefix for one file, then you must change it for all.

Copying the VSB Backup File to External Storage

Use this procedure to copy a VSB configuration file to remote storage and then delete the folder created for this purpose from the Cisco Nexus Virtual Services Appliance.

BEFORE YOU BEGIN

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

- You have created a file to export using the "Creating a VSB Backup File" procedure on page 6-4 and you know the name of this file and the name of the folder it resides in.

Note Multiple files may be created. If so, use the first filename in this procedure. Do not change the file suffix for numbering purposes. If you change the prefix for one file, then you must change it for all.

- You are logged in to the CLI of the Cisco Nexus Virtual Services Appliance in EXEC mode.
- You know name of the path to a remote storage location.
- After copying the export backup file, delete the contents, including files and folders, of the export-import directory. Do not delete the export-import folder.

SUMMARY STEPS

1. **copy bootflash:export-import/***folder-name/filename* **ftp:**
2. **delete bootflash:export-import** *foldername*
3. **dir**

DETAILED STEPS

	Command	Purpose
Step 1	**copy bootflash:export-import** */folder-name/filename* **ftp:** **Example:** switch# copy bootflash:export-import/1/Vdisk1.img.tar.00 ftp: 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#	Copies the VSB image from the Cisco Nexus Virtual Services Appliance export-import folder to remote storage.
Step 2	**delete bootflash:export-import** *foldername* **Example:** switch# **delete bootflash:/export-import/1/Vdisk1.img.tar.00** switch# **delete bootflash:/export-import/1** switch#	Deletes the VSB compressed tar file and its folder created for export.
Step 3	**dir** **Example:** switch# **dir** switch#	Displays the contents of the export-import directory for verification.

Importing a VSB Backup File

You can use the following procedure to import a previously-saved backup copy of a VSB from remote storage to the Cisco Nexus Virtual Services Appliance.

BEFORE YOU BEGIN

- You are logged in to the CLI of the active Cisco Nexus Virtual Services Appliance in EXEC mode.
- You have previously created and saved a copy of the Cisco Nexus Virtual Services Appliance configuration in a remote storage location using the "Exporting a Backup VSB Configuration" procedure on page 6-4.

Note Multiple files may be created. If so, use only the first filename with the import command. Do not change the file suffix for numbering purposes. If you change the prefix for one file, then you must change it for all.

- You know the name of the VSB and the path to the remote storage location.

- You have verified that the bootflash: export-import directory is empty. If files are present in this directory, you must delete them before importing a VSB configuration file.
- If an imported VSB role does not match the role of the Cisco Nexus Virtual Services Appliance on which it is imported, then the VSB role should be changed internally to match the Cisco Nexus Virtual Services Appliance role.

SUMMARY STEPS

1. **dir bootflash:export-import**
2. (Optional) **delete bootflash:export-import** *foldername*
3. **copy ftp:***filename* **bootflash:export-import**
4. **config t**
5. **virtual-service-blade** *name*
6. **import [primary | secondary]** *filename*
7. **show virtual-service-blade summary**
8. **show virtual-service-blade name** *name*
9. **copy running-config startup-config**

DETAILED STEPS

	Command	Purpose
Step 1	**dir bootflash:export-import** **Example**: switch# **dir bootflash:export-import** DOCS-CPPA# dir export-import Usage for bootflash://sup-local 496164864 bytes used 3495215104 bytes free 3991379968 bytes total switch#	Displays the contents of the export-import directory for verification that the directory is empty. If there is anything in this directory, you must use the next step to delete it before proceeding.
Step 2	(Optional) **delete bootflash:export-import** *foldername* **Example**: switch-1(config-vsb-config)# **delete Vdisk1.img.tar.00** switch-1(config-vsb-config)#	Deletes the VSB compressed tar file and its folder created for export.

	Command	Purpose

Step 3	**copy ftp:***filename* **bootflash:export-import**
	
	Example:
	`switch# copy ftp:Vdisk1.img.tar.00 bootflash:export-import`
	`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 *****`
		Copies the exported image file from remote storage into the Cisco Nexus Virtual Services Appliance export-import folder in the bootflash: repository.
		• *fiename*: The name of the export file. Multiple files may have been created. If so, use only the first filename with the import command. Do not change the file suffix for numbering purposes. If you change the prefix for one file, then you must change it for all.

Step 4	**config t**
	
	Example:
	`switch-1# config t`
	`switch-1(config)#`
		Enters CLI Global Configuration mode.

Step 5	**virtual-service-blade** *name*
	
	Example:
	`switch-1(config)# virtual-service-blade vsm-5`
	`switch-1(config-vsb-config)#`
		Enters configuration mode for the named virtual service blade.

Step 6	**import primary** *filename*
	
	Example:
	`switch-1(config-vsb-config)# import primary Vdisk1.img.tar.00`
	`Note: import started..`
	`Note: please be patient..`
	`Note: Import cli returns check VSB status for completion`
	`switch-1(config-vsb-config)#`
		Powers off the primary VSB, imports the specified VSB configuration file, and then removes the configuration file from the export-import folder.
		• *fiename*: The name of the export file that you copied from the remote server to the bootflash: repository.

Step 7	**show virtual-service-blade summary**	Displays a summary of all virtual service blade configurations by type name, such as VSM or NAM. Verify that the primary VSB is powered off.

Example:

```
switch-1(config-vsb-config)# show virtual-service-blade summary

--------------------------------------------------------------------------------
Name                Role        State                    Nexus1010-Module
--------------------------------------------------------------------------------

VSM1                PRIMARY     VSB POWERED OFF          Nexus1010-PRIMARY
VSM1                SECONDARY   VSB POWERED ON           Nexus1010-SECONDARY
```

Step 8	**show virtual-service-blade name** *name*	Displays the virtual service blade information for verification. From the command output, make a note of the control and management VSB Ethernet interfaces.

Command	Purpose

Example:
`switch-1(config-vsb-config)# show virtual-service-blade name VSM1`
`virtual-service-blade VSM1`
`  Description:`
`  Slot id:  1`
`  Host Name:`
`  Management IP:`
`  VSB Type Name :  VSM-1.1`
`  vCPU:  1`
`  Ramsize:  2048`
`  Disksize:  3`
`  Heartbeat:  0`
`  HA Admin role: Primary`
`  HA Oper role: NONE`
`  Status:  VSB POWERED OFF`
`  Location:  PRIMARY`
`  SW version:`
`  VsbEthernet1/1/1:  control  vlan:  1306  state:  up`
`  VsbEthernet1/1/2:  management  vlan:  1304  state:  up`
`  VsbEthernet1/1/3:  packet  vlan:  1307  state:  up`
`  Interface:  internal  vlan:  NA  state:  up`
`  HA Admin role: Secondary`
`  HA Oper role: NONE`
`  Status:  VSB POWERED ON`
`  Location:  SECONDARY`
`  SW version:`
`  VSB Info:`
`switch-1(config-vsb-config)#`	

Step 9 **`copy running-config startup-config`** **Example:** `switch-1(config-vsb-config)# copy running-config startup-config`	Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

Recovering a VSM with a Backup Configuration File

You can use this procedure to recover a VSM using a backup configuration file.

BEFORE YOU BEGIN

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

- You have imported your backup copy of the configuration file using the "Importing a VSB Backup File" procedure on page 6-8.
- You have a copy of the VSM running configuration in remote storage.
- You are logged in to the CLI of the Cisco Nexus Virtual Services Appliance in EXEC mode.
- This procedure includes a step for updating Cisco Nexus 1000V licenses. For more information, see the *Cisco Nexus 1000V License Configuration Guide, Release 4.2(1)SV1(5.1)*.
- This procedure requires you to shutdown the VSM management and control ports to prevent communication with VEMs and vCenter during the recovery. You need to know the IDs of the VSM control and management ports and the VSB serial port.
- This procedure requires you to setup the VSM software. You need to have the following information available for the VSM VSB:

- Admin password
- Domain ID
- HA Role (must be set to the same role as that of the VSM on which it is imported)
- Management 0 IP address
- Management 0 netmask
- Default gateway IP address

For detailed information about setting up the VSM software, see the *Cisco Nexus 1000V Getting Started Guide, Release 4.2(1)SV1(5.1)*

For detailed information about the vCenter server connection, see the

Step 1 From the Cisco Nexus Virtual Services Appliance, shut down the control and management interfaces of the VSM VSB.

```
config t
interface vethernet slot/port
shut

Example:
switch-1# config t
switch-1(config)# interface vethernet1/1
switch-1(config-if)# shut
```

The VSM management and control interfaces are no longer communicating with VEMs and vCenter.

Step 2 Verify that the control and management interfaces are down.

```
show virtual-service-blade name name

Example:
switch-1(config)# show virtual-service-blade name VSM1
virtual-service-blade VSM1
  Description:
  Slot id:        1
  Host Name:
  Management IP:
  VSB Type Name :  VSM-1.1
  vCPU:           1
  Ramsize:        2048
  Disksize:       3
  Heartbeat:      0
  HA Admin role: Primary
    HA Oper role: NONE
    Status:       VSB POWERED OFF
    Location:     PRIMARY
    SW version:
  VsbEthernet1/1/1:   control    vlan:   1306    state:     down
  VsbEthernet1/1/2:  management    vlan:   1304    state:     down
  VsbEthernet1/1/3:    packet    vlan:   1307    state:     up
  Interface:         internal    vlan:     NA    state:     up
  HA Admin role: Secondary
    HA Oper role: NONE
    Status:       VSB POWERED ON
    Location:     SECONDARY
    SW version:
  VSB Info:
switch-1(config)#
```

Step 3 Power on the VSB VSM.

virtual-service-blade *name*
no shutdown [primary | secondary]

```
Example:
switch-1(config)# virtual-service-blade VSM1
switch-1(config)# no shutdown primary
switch-1(config)#
```

Step 4 Log in to Cisco Nexus Virtual Services Appliance serial port of the primary VSM.

Step 5 Erase the startup configuration.

config t
write erase

```
Example:
n1000v# config t
n1000v(config)# write erase
Warning: This command will erase the startup-configuration.
Do you wish to proceed anyway? (y/n)  [n] y
```

The previous configuration is erased. You will replace it with the previously-saved backup of your running configuration in Step 11.

Step 6 Reboot the system.

reload

```
n1000v# reload
This command will reboot the system. (y/n)? [n] y
2009 Oct 30 21:51:34 s1 %$ VDC-1 %$ %PLATFORM-2-PFM_SYSTEM_RESET: Manual system restart
from Command Line Interface
n1000v#
```

The Cisco Nexus Virtual Services Appliance boots up and the setup wizard starts.

Step 7 Use the setup wizard to configure the VSM. Accept defaults for all except the following:

- Admin password
- Domain ID
- HA Role (must be set to the same role as that of the VSM on which it is imported)
- Management 0 IP address
- Management 0 netmask
- Default gateway IP address

```
Example:
---- System Admin Account Setup ----
Enter the password for "admin":
Confirm the password for "admin":
Enter the domain id<1-4095>: 152
Enter HA role[standalone/primary/secondary]: primary

[########################################] 100%

         ---- Basic System Configuration Dialog ----
This setup utility will guide you through the basic configuration of
the system. Setup configures only enough connectivity for management
of the system.
*Note: setup is mainly used for configuring the system initially,
when no configuration is present. So setup always assumes system
defaults and not the current system configuration values.
Press Enter at anytime to skip a dialog. Use ctrl-c at anytime
to skip the remaining dialogs.
```

```
Would you like to enter the basic configuration dialog (yes/no): yes
Create another login account (yes/no) [n]: no
Configure read-only SNMP community string (yes/no) [n]: no
Configure read-write SNMP community string (yes/no) [n]: no
Enter the switch name: n1000v
Continue with Out-of-band (mgmt0) management configuration? [yes/no] [y]: yes
Mgmt0 IPv4 address: 172.28.15.152
Mgmt0 IPv4 netmask: 255.255.255.0
Configure the default-gateway: (yes/no) [y]: yes

            IPv4 address of the default gateway : 172.23.233.1
Enable the telnet service? (yes/no) [y]: no
Enable the ssh service? (yes/no) [y]: no
Enable the http-server? (yes/no) [y]: no
Configure NTP server? (yes/no) [n]: no
Configure svs domain parameters? (yes/no) [y]: no
Vem feature level will be set to 4.2(1)SV1(4),
Do you want to reconfigure? (yes/no) [n] no
```

The system summarizes the new setup configuration.

Step 8 Copy the running configuration to the startup configuration.

copy running-config startup-config

Example:

```
n1000v# copy running-config startup-config
[########################################] 100%
n1000v#
```

Step 9 Reopen the management interface of the VSM VSB.

config t
interface vethernet *slot/port*
no shut

Example:

```
switch-1# config t
switch-1(config)# interface vethernet1/2
switch-1(config-if)# no shut
```

The VSM management interface is again communicating with VEMs and vCenter.

Step 10 Verify that the management interface is up.

show virtual-service-blade name *name*

Example:

```
switch-1(config)# show virtual-service-blade name VSM1
virtual-service-blade VSM1
. . .
VsbEthernet1/1/1:   control    vlan:   1306    state:     down
  VsbEthernet1/1/2:  management    vlan:   1304    state:     up
  VsbEthernet1/1/3:    packet    vlan:   1307    state:     up
  Interface:         internal    vlan:     NA    state:     up
. . .
switch-1(config)#
```

Step 11 Copy your saved running configuration backup to the VSM bootflash.

copy bootflash:*filename*

Example:

```
switch-1(config)# copy bootflash:VSM1-periodic-startup-config.txt running-config
switch-1(config)#
```

Step 12 Copy the running configuration to the startup configuration.

copy running-config startup-config

```
Example:
n1000v# copy running-config startup-config
[########################################] 100%
n1000v#
```

Step 13 Reopen the control interface of the VSM VSB.

config t
interface vethernet *slot/port*
no shut

```
Example:
switch-1# config t
switch-1(config)# interface vethernet1/1
switch-1(config-if)# no shut
```

The VSM control interface is again communicating with VEMs and vCenter.

Step 14 Verify that the control interface is up.

show virtual-service-blade name *name*

```
Example:
switch-1(config)# show virtual-service-blade name VSM1
virtual-service-blade VSM1
. . .
VsbEthernet1/1/1:   control    vlan:   1306    state:     up
  VsbEthernet1/1/2:  management    vlan:   1304    state:     up
  VsbEthernet1/1/3:    packet    vlan:   1307    state:     up
  Interface:         internal    vlan:     NA    state:     up
. . .
switch-1(config)#
```

Step 15 Check the modules by entering the **show module** command at the VSM CLI.

```
Example:
n1000v(config)# show module
Mod Ports Module-Type                      Model              Status
--- ----- ------------------------------- ------------------ ------------
1   0     Virtual Supervisor Module        Nexus1000V         active *
2   0     Virtual Supervisor Module        Nexus1000V         ha-standby
3   248   Virtual Ethernet Module          NA                 ok
4   248   Virtual Ethernet Module          NA                 ok

Mod Sw               Hw
--- ---------------- ------------------------------------------------
1   4.2(1)SV1(4a)    0.0
2   4.2(1)SV1(4a)    0.0
3   4.2(1)SV1(4a)    VMware ESXi 4.0.0 Releasebuild-208167 (1.9)
4   4.2(1)SV1(4a)    VMware ESX 4.1.0 Releasebuild-260247 (2.0)

Mod MAC-Address(es) Serial-Num
--- -------------------------------------- ----------
1 00-19-07-6c-5a-a8 to 00-19-07-6c-62-a8 NA
2 00-19-07-6c-5a-a8 to 00-19-07-6c-62-a8 NA
3 02-00-0c-00-03-00 to 02-00-0c-00-03-80 NA
4 02-00-0c-00-04-00 to 02-00-0c-00-04-80 NA

Mod Server-IP       Server-UUID                          Server-Name
--- --------------- ------------------------------------ --------------------
```

```
1   10.78.109.44    NA                                   NA
2   10.78.109.44    NA                                   NA
3   10.78.109.72    44454c4c-4300-1046-8043-b6c04f563153 10.78.109.72
4   10.78.109.71    44454c4c-3300-1056-8057-b3c04f583153 10.78.109.71

* this terminal session

n1000v(config)#
```

Step 16 Enable the HA peer.

enable [**primary** | **secondary**]

Example:
switch-1(config)# **enable secondary**
The VSM is again operating in HA mode with a primary and secondary module.

Step 17 You have completed this procedure.

Verifying the Backup and Recovery

To verify the backup and recovery, use the following commands:

Command	Purpose
dir bootflash:export-import /*folder-name*	Displays the contents of the export-import directory folder.
show virtual-service-blade summary	Displays the redundancy state (active or standby) and the redundancy role (primary or secondary) for each VSB. **Note** This command is only recognized by the active Cisco Nexus Virtual Services Appliance. See Example 6-2 on page 6-17
show virtual-service-blade [name *name***]**	Displays the configuration for a specific virtual service blade. See Example 6-3 on page 6-17

Example 6-1 export-import directory

```
switch-1(config-vsb-config)# dir bootflash:export-import/1
  279955021     Sep 08 19:13:21 2011  Vdisk1.img.tar.00

Usage for bootflash://sup-local
  310870016 bytes used
 3680509952 bytes free
 3991379968 bytes total
```

Example 6-2 Virtual Service Blade Summary

```
switch-1(config-vsb-config)# show virtual-service-blade summary

--------------------------------------------------------------------------------
Name                Role        State                    Nexus1010-Module
--------------------------------------------------------------------------------

VSM1                PRIMARY     VSB POWERED OFF          Nexus1010-PRIMARY
VSM1                SECONDARY   VSB POWERED ON           Nexus1010-SECONDARY
```

Example 6-3 Virtual Service Blade

```
switch# show virtual-service-blade name VSM1
virtual-service-blade VSM1
  Description:
  Slot id:        1
  Host Name:
  Management IP:
  VSB Type Name :  VSM-1.1
  vCPU:           1
  Ramsize:        2048
  Disksize:       3
  Heartbeat:      0
  HA Admin role: Primary
    HA Oper role: NONE
    Status:       VSB POWERED OFF
    Location:     PRIMARY
    SW version:
  VsbEthernet1/1/1:   control    vlan:   1306    state:     down
  VsbEthernet1/1/2:  management    vlan:   1304    state:     down
  VsbEthernet1/1/3:    packet    vlan:   1307    state:     up
  Interface:         internal    vlan:     NA    state:     up
  HA Admin role: Secondary
    HA Oper role: NONE
    Status:       VSB POWERED ON
    Location:     SECONDARY
    SW version:
  VSB Info:
switch-1(config)#
```

Additional References

For additional information related to implementing system-level HA features, see the following sections:

- Related Documents, page 6-18
- Standards, page 6-18
- MIBs, page 6-18
- RFCs, page 6-18

Related Documents

Related Topic	Document Title
Software setup configuration	*Cisco Nexus Virtual Services Appliance Software Installation and Upgrade Guide, Release 4.2(1)SP1(5.1)*
Virtual service configuration	Configuring Virtual Service Blades, page 4-1
Cisco Nexus Virtual Services Appliance installation	*Cisco Nexus Virtual Services Appliance Hardware Installation Guide*
Complete command syntax, command modes, command history, defaults, usage guidelines, and examples for all Cisco Nexus Virtual Services Appliance commands.	*Cisco Nexus Virtual Services Appliance Command Reference, Release 4.2(1)SP1(5.1)*

Standards

Standards	Title
No new or modified standards are supported by this feature, and support for existing standards has not been modified by this feature.	—

MIBs

MIBs	MIBs Link
No MIBs are supported by this feature	

RFCs

RFCs	Title
No RFCs are supported by this feature	—

Feature History for Export and Import

This section provides the export and import feature release history.

Feature Name	Releases	Feature Information
VSB export and import	4.2(1)SP1(3)	This feature was introduced.