Exporting and Importing a Virtual Service Blade

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Information About Exporting and Importing a Virtual Service Blade

You can export or import a virtual service blade (VSB) on the Cisco Nexus Cloud Services Platform by creating a copy of the VSB backup file. You can store this backup file remotely to use as a recovery mechanism, or when you need to move a VSB between two Cisco Nexus Cloud Services Platforms.

Guidelines and Limitations for Exporting and Importing a Virtual Service Blade

VSB import and export guidelines are as follows:

- You can create multiple export files with this process. Do not change the file suffix for numbering purposes. If you change the prefix for one file, you must change it for all files.
- You must shut down the VSB before creating the file to export.
- The `bootflash` export-import directory must be empty before you can create an export file or copy the file from external storage.

Exporting a Virtual Service Blade

You can create a backup copy of a VSB, store it remotely, and then reimport it to either recover a virtual supervisor module (VSM), or move a VSB between Cisco Nexus Cloud Services Platforms.

Exporting a Virtual Service Blade Backup File

Before You Begin

- Log in to the CLI of the Cisco Nexus Cloud Services Platform in EXEC mode.
- Know the name of the VSB for which you are creating a file to export.
- Enter the **copy running-config startup-config** command to save the running configuration before you begin this procedure.
- Verify that the `bootflash: export-import` directory is empty. If there are files in this directory, you must delete them before starting this procedure.
- Shut down the VSB that you want to back up before creating the file to export. This procedure includes a step for shutting down the VSB, and then a step for restarting the VSB after creating the file.

Procedure

	Command or Action	Purpose
Step 1	switch # **dir bootflash:export-import**	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	switch (config-vsb-config) # **delete bootflash:export-import** *foldername*	(Optional) Deletes the VSB compressed tar file and the folder that was created for export.
Step 3	switch # **configure terminal**	Enters global configuration mode.
Step 4	switch (config) # **virtual-service-blade** *name*	Enters the configuration mode for the named VSB.
Step 5	switch (config-vsb-config) # **shutdown [primary | secondary]**	Shuts down the VSB that you are exporting from. If you have a redundant pair of Cisco Nexus Cloud Services Platforms, you must specify whether to shut down the primary or secondary.
Step 6	switch (config-vsb-config) # **show virtual-service-blade summary**	(Optional) Displays the summary VSB configuration for verification.
Step 7	switch (config-vsb-config) # **export [primary | secondary]**	Creates a directory named for the slot ID of the exported VSB that contains a compressed tar image of the VSB.

	Command or Action	Purpose
		If you are exporting from a redundant pair of Cisco Nexus Cloud Services Platforms, you must specify whether you are exporting from the primary or secondary. **Note** The **export** command does not move the configuration file off of the Cisco Nexus Cloud Services Platform. It creates a backup copy that you must then copy to the remote storage location.
Step 8	switch (config-vsb-config) # **dir bootflash:export-import**	Displays the contents of the `bootflash: export-import` directory, including the directory name of the folder that contains the compressed tar image of the VSB for verification. You need this folder name in Step 11.
Step 9	switch (config-vsb-config) # **no shutdown [primary | secondary]**	Powers on the VSB that was powered off when creating the file for export. If you have a redundant pair of Cisco Nexus Cloud Services Platforms, you must specify primary or secondary.
Step 10	switch (config-vsb-config) # **show virtual-service-blade summary**	(Optional) Displays the VSB configuration for verification.
Step 11	switch (config-vsb-config) # **dir bootflash:export-import** */directory-name*	Displays the contents of the Cisco Nexus Cloud Services Platform export folder, including the filename of the VSB compressed tar image. **Note** • You identified this folder name in Step 8. • You can create multiple export files. Do not change the file suffix for numbering purposes. If you change the prefix for one file, you must change it for all files.

This example shows how to create a VSB backup file:

```
switch# dir bootflash:export-import

Usage for bootflash://sup-local
  496164864 bytes used
 3495215104 bytes free
 3991379968 bytes total

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)#
switch-1# configure terminal
switch-1(config)# virtual-service-blade vsm-1
switch-1(config-vsb-config)# shutdown secondary
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
```

```
Example of a successful completion of a VSB

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 of an error condition while exporting a VSB

switch-1(config-vsb-config)# export primary
ERROR: Please clean export-import directory first, then proceed.

Example of an error condition while exporting a secondary VSB

switch-1(config-vsb-config)# export secondary
ERROR: Cannot export active virtual-service-blade, please shut and retry.

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

switch-1(config-vsb-config)# no shutdown secondary
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

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
```

Copying the Exported Virtual Service Blade to an External Storage Location

You can copy the exported VSB to a remote storage location and then delete the folder created for this purpose from the Cisco Nexus Cloud Services Platform.

Before You Begin

- You have created a file to export and you know the name of this file and the name of the folder that it resides in.

Note You can create multiple files. If you do, use the first filename in this procedure. Do not change the file suffix for numbering purposes. If you change the prefix for one file, you must change it for all files.

- Log in to the CLI of the Cisco Nexus Cloud Services Platform in EXEC mode.
- Know the name of the path to a remote storage location.

- After copying the export backup file, delete the contents, including the files and folders, of the `export-import` directory. Do not delete the `export-import` folder.

Procedure

	Command or Action	Purpose
Step 1	switch # **copy bootflash:export-import** */folder-name/filename* **ftp:**	Copies the VSB image from the Cisco Nexus Cloud Services Platform `export-import` folder to a remote storage location.
Step 2	switch # **delete bootflash:export-import** */folder-name*	Deletes the VSB compressed tar file and the folder that was created for export.
Step 3	switch # **dir**	Displays the contents of the `export-import` directory for verification.

This example shows how to copy a VSB file to an external location:

```
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# delete bootflash:/export-import/1/Vdisk1.img.tar.00
switch# delete bootflash:/export-import/1
switch# dir
switch#
```

Importing a Virtual Service Blade

You can import a previously saved backup copy of a VSB from a remote storage location to the Cisco Nexus Cloud Services Platform.

Before You Begin

- Log in to the CLI of the active Cisco Nexus Cloud Services Platform in EXEC mode.
- Create and save a copy of the VSB configuration in a remote storage location.

Note You can create multiple VSB configuration files. If you do, 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, you must change it for all files.

- Know the name of the VSB and the path to the remote storage location.
- Verify that the `bootflash:export-import` folder is empty. If there are files in this directory, you must delete them before importing a VSB configuration file.

- If an imported HA VSB role does not match the role of the Cisco Nexus Cloud Services Platform on which it is imported, change the HA VSB role internally to match the Cisco Nexus Cloud Services Platform.

Procedure

	Command or Action	Purpose
Step 1	switch # **dir bootflash:export-import**	Displays the contents of the `bootflash:export-import` folder 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	switch (config-vsb-config) # **delete bootflash:export-import** *foldername*	(Optional) Deletes the VSB compressed tar file and the directory created for export.
Step 3	switch # **copy ftp:** *filename* **bootflash:export-import**	Copies the exported image file from a remote storage location into the Cisco Nexus Cloud Services Platform `export-import` directory in the `bootflash:export-import` folder. *filename*—The name of the export file. Multiple files might have been created. If so, copy these files into the `bootflash:export-import` folder and 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, you must change it for all files.
Step 4	switch # **configure terminal**	Enters global configuration mode.
Step 5	switch (config) # **virtual-service-blade** *name*	Enters configuration mode for the named VSB.
Step 6	switch (config-vsb-config) # **import primary** *filename*	Powers off the primary VSB, imports the specified VSB configuration file, and then removes the configuration file from the `bootflash:import-export` folder. *filename*—The name of the export file that you copied from the remote server to the `bootflash:repository`.
Step 7	switch (config-vsb-config)# **show virtual-service-blade summary**	(Optional) Displays a summary of all VSB configurations by type name. Verify that the primary VSB is powered off.
Step 8	Complete the following tasks:	• See Configuring Port Channels. • See Assigning Uplinks to a VSB Interface.
Step 9	switch # **no shutdown primary** *filename*	Powers on the primary VSB and imports the primary VSB configuration. *filename*—The name of the imported primary VSB.

	Command or Action	Purpose
Step 10	switch (config-vsb-config) # **show virtual-service-blade name** *name*	(Optional) Displays the VSB information for verification. From the command output, make a note of the control and management VSB Ethernet interfaces.
Step 11	switch (config-vsb-config) # **copy running-config startup-config**	Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

This example shows how to import a VSB backup file:

```
switch# dir bootflash export-import
switch# dir export-import

Usage for bootflash://sup-local
  496164864 bytes used
 3495215104 bytes free
 3991379968 bytes total
switch#
switch-1(config-vsb-config)# delete Vdisk1.img.tar.00
switch-1(config-vsb-config)#
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 *****
switch-1# configure terminal
switch-1(config)# virtual-service-blade VSM1
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)# show virtual-service-blade summary

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

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


switch-1(config)# virtual-service-blade VSM1
switch-1(config)# no shutdown primary
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)# copy running-config startup-config
```

Verifying the Export and Import of a Virtual Service Blade

To verify the export and import, use the following commands:

Command	Purpose
dir bootflash:export-import */folder-name*	Displays the contents of the `export-import` directory.
show virtual-service-blade summary	Displays the redundancy state (active or standby) and the redundancy role (primary or secondary) for each VSB.
show virtual-service-blade [name *name***]**	Displays the configuration for a specific VSB.

This example shows an `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
```

This example shows how to display summary information for a VSB:

```
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
```

This example shows how to display information for a named VSB:

```
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)#
```

Feature History for Export and Import

This section provides the feature release history.

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