



## CHAPTER 3

# Configuring the Network Uplinks

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This chapter describes how to configure the uplink type and includes the following sections:

- [Information About Network Uplink Configurations, page 3-1](#)
- [Guidelines and Limitations, page 3-4](#)
- [Configuring Network Uplink Types, page 3-5](#)
- [Assigning a Native VLAN to a Port Channel, page 3-15](#)
- [Shutting Down Ports or Port Channel Interfaces, page 3-16](#)
- [Verifying the Uplink Configuration, page 3-18](#)
- [Additional References, page 3-21](#)
- [Feature History for Uplink, page 3-22](#)

## Information About Network Uplink Configurations

Cisco Nexus 1010 product family supports two types of network uplink configurations to connect to the network:

- [Flexible Network Uplink Configuration, page 3-1](#)
- [Static Network Uplink Configuration, page 3-4](#)

## Flexible Network Uplink Configuration

Flexible network configuration offers complete flexibility to connect Cisco Nexus 1010 to the network, thus enabling appropriate traffic segregation policies like VSB traffic segregation.

This configuration consists of the following features:

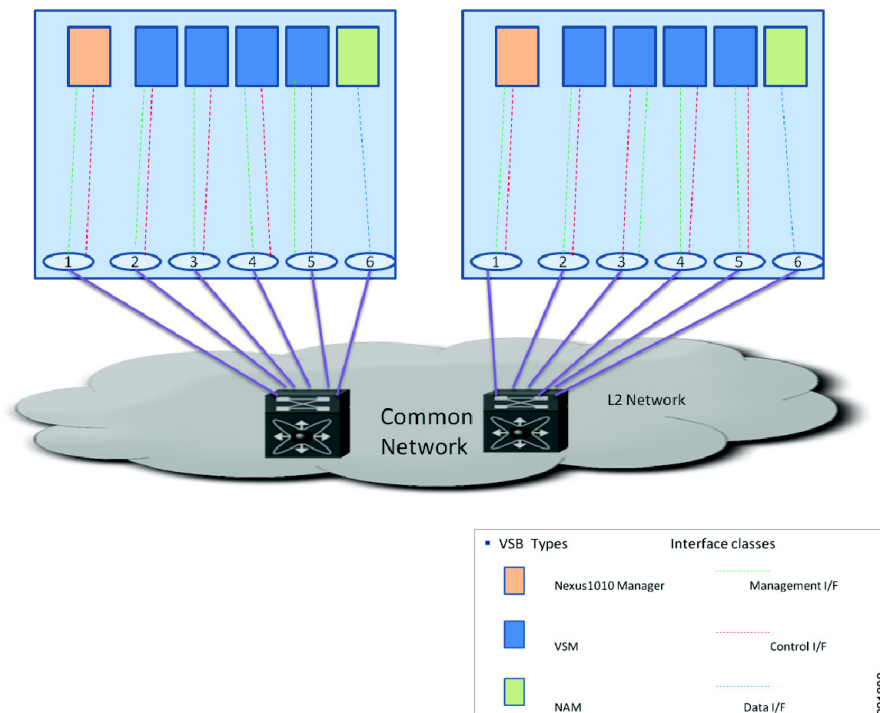
- Complete flexibility in terms of port configuration and usage
- Flexible building of ports into a port channel.
- Flexible assignment of a port or port channel to a VSB interface.
- Easy uplink configuration.
- Ability to achieve maximum uplink.

The default flexible network uplink configuration is the basic configuration with each physical port acting as uplink. See [Figure 3-1](#) and includes the following features:

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- Every physical port individually forms an uplink.
- Each uplink can be configured independently.
- Ability to achieve maximum uplink of 6Gbps.
- No default redundancy for uplinks.
- Physical ports cannot be bundled in a port channel.
- VSB traffic is segregated by default.
- VSB interface can be manually configured to share a port.

**Figure 3-1 Default Flexible Network Uplink Configuration**



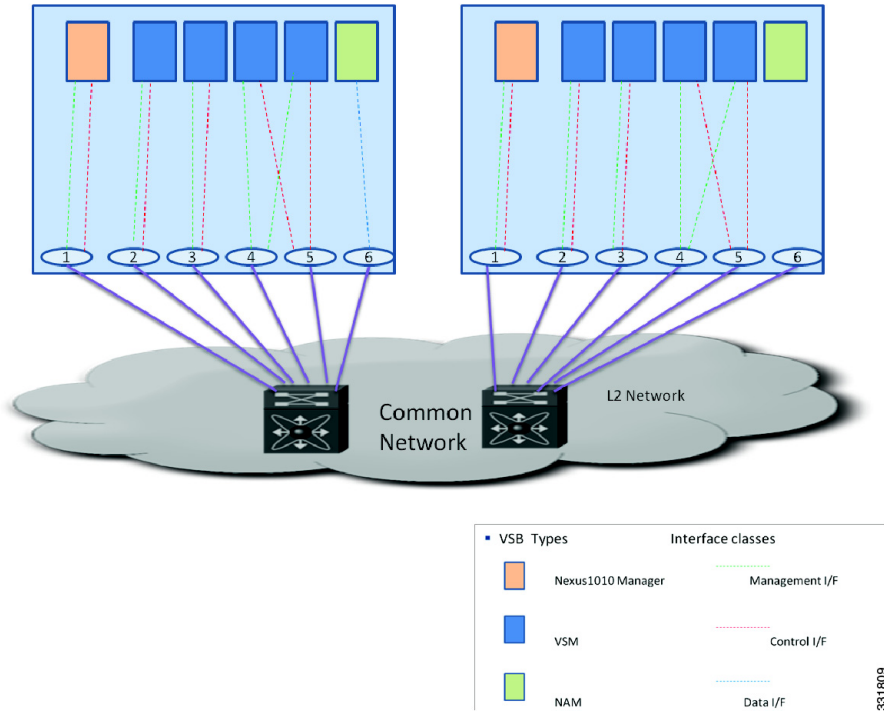
If the flexible configuration is selected during installation of Cisco Nexus 1010, then the default configuration is used to connect to the network. See the *Cisco Nexus 1010 Software Installation and Upgrade Guide, Release 4.2(1)SP1(4)* for more information.

You can then make changes to the default flexible network uplink configuration to suit your needs:

- For example, you can add ports to a port channel. See [Figure 3-3](#). See [Configuring Port Channels, page 3-11](#) for more information.
- For example, you can assign uplinks to a VSB interface. See [Figure 3-2](#). See [Assigning Uplinks to a VSB Interface, page 3-13](#) for more information.

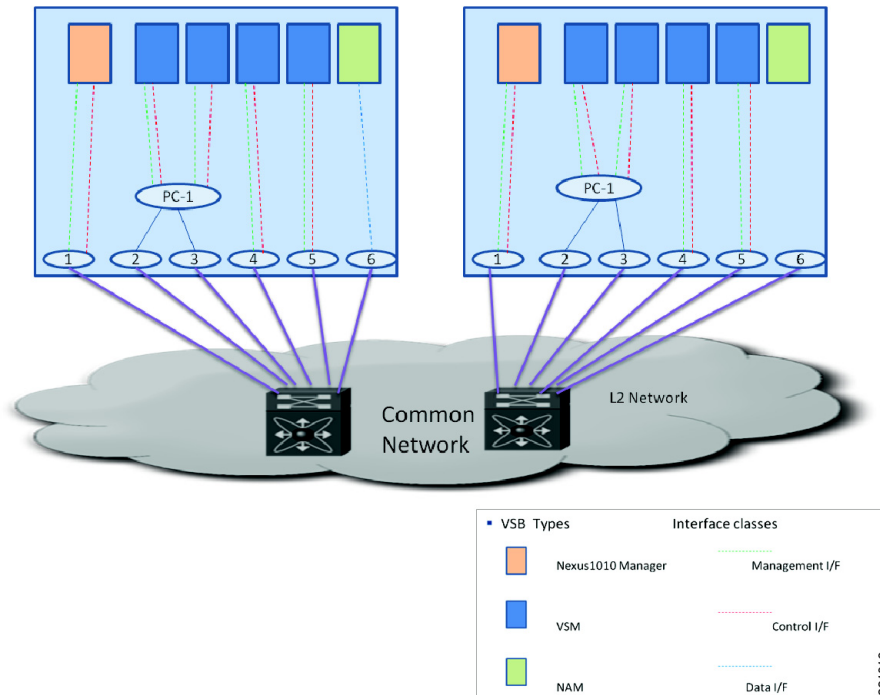
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**Figure 3-2 Assigning uplinks to flexible network configuration**



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**Figure 3-3 Adding port channels to flexible network configuration**



## Static Network Uplink Configuration

In a static network configuration, the Cisco Nexus 1010 product family is connected to the network using four fixed network uplink configurations.

- In configuration 1, control traffic, management traffic and data traffic share a single uplink.
- In configuration 2, control traffic, and management traffic share an uplink and data traffic is a separate uplink.
- In configuration 3, control traffic, and data traffic share an uplink and management traffic is a separate uplink.
- In configuration 4, control traffic, management traffic and data traffic are all on separate unlinks.

For more information on uplink configurations, see [Uplinks, page 1-6](#).

## Guidelines and Limitations

Follow these guidelines and limitations when configuring the Cisco Nexus 1010:

- A change to the uplink type does not take effect until you reload the software.
- Changing the uplink type is disruptive and leads to service disruption.
- You can change the uplink type only once before issuing a reboot.
- Use [Table 3-1](#) when modifying the network uplink type.

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**Table 3-1 Uplink Usage**

Uplink Type	Usage
1	When only the Cisco Nexus 1000V VSM is installed.
2	When only NAM is installed.
3	When the management and data traffic upstream must be separated.
4	When the management and data traffic upstream must be separated and control and data traffic must also be separated.
5	Flexible network uplink

## Configuring Network Uplink Types

This section includes the following topics:

- [Modifying the Uplink Type, page 3-5](#)
- [Migrating from Static Network Uplink to Flexible Network Uplink, page 3-7](#)
- [Migrating From Flexible Network Uplink to Static Network Uplink, page 3-9](#)
- [Configuring Port Channels, page 3-11](#)
- [Deleting Port Channels, page 3-12](#)
- [Assigning Uplinks to a VSB Interface, page 3-13](#)

## Modifying the Uplink Type

Use this procedure to modify the uplink type on an operational Cisco Nexus 1010.

### BEFORE YOU BEGIN

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

- You are logged in to the CLI in EXEC mode.
- You must reload the Cisco Nexus 1010 pair in order to activate the changes made in this procedure. This procedure includes a step for reloading.



**Caution** To prevent loss of connectivity, you must reconfigure the uplink switches to correspond with the change made in this procedure.

- The following are supported uplink types and the ports that carry each type of VLAN traffic.

**Table 3-2 Uplink Types and VLAN Ports**

Uplink type	Management VLAN	Control VLAN	Data VLAN
1	ports 1 and 2	ports 1 and 2	ports 1 and 2
2	ports 1 and 2	ports 1 and 2	ports 3-6

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**Table 3-2 Uplink Types and VLAN Ports (continued)**

Uplink type	Management VLAN	Control VLAN	Data VLAN
3	ports 1 and 2	ports 3-6	ports 3-6
4	ports 1 and 2	ports 3-4	ports 5-6

- For a description of each uplink, see the “Uplinks” section on page 1-6.

## SUMMARY STEPS

1. **config terminal**
2. **network uplink type *number***
3. **show network-uplink type**
4. **copy running-config startup-config**
5. **reload**

## DETAILED STEPS

	Command	Purpose
Step 1	<b>config t</b>  <b>Example:</b> switch# <b>config terminal</b> switch(config)#	Places you in the CLI Global Configuration mode.
Step 2	<b>network uplink type <i>number</i></b>  <b>Example:</b> switch(config)# <b>network uplink type 2</b> switch(config)#	Changes the uplink type for the Cisco Nexus 1010.  <i>number</i> : 1, 2, 3, or 4
Step 3	<b>show network-uplink type</b>  <b>Example:</b> switch(config)# <b>show network uplink type</b> Administrative topology id: 2 Operational topology id: 1 switch(config)#	Displays the uplink configuration for verification.
Step 4	<b>copy running-config startup-config</b>  <b>Example:</b> switch(config)# <b>copy running-config startup-config</b>	Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.
Step 5	<b>reload</b>  <b>Example:</b> switch(config)# <b>reload</b>  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  switch(config)#	

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## Migrating from Static Network Uplink to Flexible Network Uplink

Use this procedure to migrate from static network uplink type to flexible network uplink type.

### BEFORE YOU BEGIN

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

- You are logged in to the CLI in EXEC mode.
- By default, the control and management traffic are assigned to Ethernet1.
- After you change the uplink type from static to flexible, you can configure the port channel and assign uplink assignment to a VSB manually.
- You must reload the Cisco Nexus 1010 pair in order to activate the changes made in this procedure.
- Changing the uplink type from static to flexible is disruptive and leads to service disruption. After you change the uplink type from static to flexible, you must save the configuration and reload for new configuration to take into effect.
- When you change the uplink type from static to flexible, all the port channel, native VLAN, and port state configuration and retained in the flexible network type.

### SUMMARY STEPS

1. **config terminal**
2. **network uplink type** *number*
3. **network uplink type** *keyword*
4. (optional) **svs-domain**
5. (optional) **control uplink** *interface name*
6. (optional) **management uplink** *interface name*
7. **copy running-config startup-config**
8. **reload**
9. **show network-uplink type**

### DETAILED STEPS

	Command	Purpose
Step 1	<b>config terminal</b>  <b>Example:</b> switch# <b>config terminal</b> switch(config)#	Places you in the CLI Global Configuration mode.
Step 2	<b>network uplink type</b> <i>number</i>  <b>Example:</b> switch(config)# <b>network uplink type</b> 5 switch(config)#	Changes the uplink type for the Cisco Nexus 1010.

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	Command	Purpose
Step 3	<p><b>network uplink type</b> <i>keyword</i></p> <p><b>Example:</b>  <pre>switch(config)# network uplink type flexible switch(config)#</pre>           The command will change network-uplink type and network-uplink type cannot be changed again before reload. Change to [1-4] network-uplink type will lead to loss of native vlan config on all ports. Do you really want to proceed(yes/no)?            [no] yes            Note: Save the configuration and reload to bring the system with new network_uplink</p> <p><b>Example:</b>  <pre>switch(config)# network-uplink type flexible force</pre>           Note: The command will change network-uplink type and network-uplink type cannot be changed again before reload. Change to [1-4] network-uplink type will lead to loss of native vlan config on all ports.            Note: Save the configuration and reload to bring the system with new network_uplink</p>	<p>Changes the uplink type for the Cisco Nexus 1010 from static to flexible.</p> <p><b>Note</b> You can change the network type only once. In order to change the network type again, you must reload and then change the network type.</p> <p>You can use the force option to skip the confirmation step.</p>
Step 4	<p><b>svs-domain</b></p> <p><b>Example:</b>  <pre>switch(config)# svs-domain switch(config-svs-domain)#</pre></p>	<p>(optional) Configure an SVS domain and enter SVS domain configuration mode</p>
Step 5	<p><b>control uplink</b> <i>interface name</i></p> <p><b>Example:</b>  <pre>switch(config-svs-domain)# control uplink GigabitEthernet1 switch(config-svs-domain)#</pre></p>	<p>(optional) Changes the default control traffic interface name.</p> <p>Interface names can be GigabitEthernet interfaces or Portchannel interfaces.</p>
Step 6	<p><b>management uplink</b> <i>interface name</i></p> <p><b>Example</b>  <pre>switch(config-svs-domain)# management uplink GigabitEthernet2</pre></p>	<p>(optional) Changes the default management traffic interface name.</p> <p>Interface names can be GigabitEthernet interfaces or Portchannel interfaces.</p>
Step 7	<p><b>copy running-config startup-config</b></p> <p><b>Example:</b>  <pre>switch(config)# copy running-config startup-config</pre></p>	<p>Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.</p>



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	Command	Purpose
Step 8	<b>reload</b>  <b>Example:</b> switch(config-svs-domain)# <b>reload</b>  This command will reboot the system. (y/n)? [n] y 2011 Oct 27 10:26:30 switch %PLATFORM-2-PFM_SYSTEM_RESET: Manual system restart from Command Line Interface	
Step 9	<b>show network-uplink type</b>  <b>Example:</b> switch(config)# <b>show network uplink type</b> Administrative topology id: flexible Operational topology id: flexible	Displays the uplink configuration for verification.

## Migrating From Flexible Network Uplink to Static Network Uplink

Use this procedure to migrate from flexible network uplink to static network uplink.

### BEFORE YOU BEGIN

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

- You are logged in to the CLI in EXEC mode.
- This procedure is disruptive since both the active and standby should be reloaded together.
- You must reload the Cisco Nexus 1010 pair in order to activate the changes made in this procedure. This procedure includes a step for reloading.



**Caution** To prevent loss of connectivity, you must reconfigure the uplink switches to correspond with the change made in this procedure.

- The following are supported uplink types and the ports that carry each type of VLAN traffic.

**Table 3-3 Uplink Types and VLAN Ports**

Uplink type	Management VLAN	Control VLAN	Data VLAN
1	ports 1 and 2	ports 1 and 2	ports 1 and 2
2	ports 1 and 2	ports 1 and 2	ports 3-6
3	ports 1 and 2	ports 3-6	ports 3-6
4	ports 1 and 2	ports 3-4	ports 5-6
Flexible	There is no traffic segregation based on traffic class		

For a description of each uplink, see the “Uplinks” section on page 1-6.

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- When you migrate from flexible network uplink type to static network uplink type, all the port channel, native VLAN, and port state configuration are lost.
- You must ensure that the uplink connectivity should be same as what is required for that static network uplink type.
- If the system is not configured in required uplink type, then shutdown the system from ILO after saving the configuration for both active and standby and then reload.

### SUMMARY STEPS

1. **config terminal**
2. **network uplink type *number***
3. **show network-uplink type**
4. **copy running-config startup-config**
5. **reload**

### DETAILED STEPS

	Command	Purpose
Step 1	<b>config terminal</b>  <b>Example:</b> switch# <b>config terminal</b> switch(config)#	Places you in the CLI Global Configuration mode.
Step 2	<b>network uplink type <i>number</i></b>  <b>Example:</b> switch(config)# <b>network uplink type 2</b> switch(config)#	Changes the uplink type for the Cisco Nexus 1010. <i>number</i> : 1, 2, 3, or 4
Step 3	<b>show network-uplink type</b>  <b>Example:</b> switch(config)# <b>show network uplink type</b> Administrative topology id: 2 Operational topology id: 1 switch(config)#	Displays the uplink configuration for verification.

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	Command	Purpose
Step 4	<b>copy running-config startup-config</b>  <b>Example:</b> <pre>switch(config)# copy running-config startup-config</pre>	Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.
Step 5	<b>reload</b>  <b>Example:</b> <pre>switch(config)# reload</pre> <p>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</p> <pre>switch(config)#</pre>	

## Configuring Port Channels

Use this procedure to configure the port channels in the Cisco Nexus 1010. You can configure the port channels only in the flexible network uplink type configuration.

### BEFORE YOU BEGIN

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

- You are logged in to the CLI in EXEC mode.
- You must group the ports together in either HA or LACP mode.
- You must ensure that the ports are not used by any other port channel or by any VSB interface. To delete a port see [Deleting Port Channels, page 3-12](#).
- An ethernet interface with conflicting native VLAN cannot be part of an existing port channel

### SUMMARY STEPS

1. **config terminal**
2. **[no] interface *name***
3. **interface ethernet *name***
4. **channel-group *id* mode {ha | active}**
5. **show network port-channel summary**

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## DETAILED STEPS

	Command	Purpose
Step 1	<b>config terminal</b>  <b>Example:</b> switch# <b>config terminal</b> switch(config)#	Places you in the CLI Global Configuration mode.
Step 2	<b>[no] interface name</b>  <b>Example:</b> switch(config)# <b>[no] interface</b> <b>PortChannel1</b> switch(config-if)#	Places you into configuration mode for the port channel or creates a port channel ID if the port channel does not exist. Valid port channel ID range is 1-6.
Step 3	<b>interface ethernet name</b>  <b>Example:</b> switch(config)# <b>interface</b> <b>GigabitEthernet4</b> switch(config-if)#	Places you into configuration mode for the named ethernet interface.  Interface names can be only GigabitEthernet interfaces.
Step 4	<b>channel-group id mode {ha   active}</b>  <b>Example:</b> switch(config-if)# <b>channel-group 1 mode</b> <b>active</b> switch(config-if)#	Assigns ethernet interface to a port channel.  The mode can be either HA or Active.
Step 5	<b>show network port-channel summary</b>  <b>Example:</b> switch(config)# show network port-channel summary  ----- Group Port-Channel Adm-State Type Member-Ports ----- 1 PortChannel1 up ha Gi1 Gi2 -----	

## Deleting Port Channels

Use this procedure to delete port channels. You must delete ports from the port channel and then delete the port channel.

### BEFORE YOU BEGIN

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

- You are logged in to the CLI in EXEC mode.
- You must shut the VSBs using the port or the port channel containing the port.

### SUMMARY STEPS

1. **config t**
2. **interface ethernet name**

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### 3. no channel-group

#### DETAILED STEPS

	Command	Purpose
Step 1	<b>config t</b>  <b>Example:</b> switch# <b>config t</b> switch(config)#	Places you in the CLI Global Configuration mode.
Step 2	<b>interface ethernet name</b>  <b>Example:</b> switch(config)# <b>interface</b> <b>GigabitEthernet4</b> switch(config-if)#	Places you into configuration mode for the named interface.  Interface names can be only GigabitEthernet interfaces.
Step 3	<b>no channel-group</b>  <b>Example:</b> switch(config-if)# <b>no channel-group</b> switch(config-if)#	Deletes the port channel.

## Assigning Uplinks to a VSB Interface

Use this procedure to assign uplinks to a VSB interface. You can assign uplinks to a VSB interface only in the flexible network uplink type configuration.

#### BEFORE YOU BEGIN

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

- You are logged in to the CLI in EXEC mode.
- By default, uplinks are assigned to the first available free port or port channel.
- If both free ports and port channels are available, then free ports get preference over port channel.
- If no free ports are available, then you must assign the uplink manually.
- A VSB can have different uplinks for every port or port channel.

#### SUMMARY STEPS

1. **config t**
2. **virtual-service-blade name**
3. **interface name**
4. **[no] interface name uplink name**
5. **show network {[uplink] | summary}**

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## DETAILED STEPS

	Command	Purpose
Step 1	<b>config t</b>  <b>Example:</b> switch# config t switch(config)#	Places you in the CLI Global Configuration mode.
Step 2	<b>virtual-service-blade name</b>  <b>Example:</b> switch(config)# <b>virtual-service-blade vsm-5</b> switch(config-vs-b-config)#	Places you into configuration mode for the named virtual service blade.
Step 3	<b>interface name</b>  <b>Example:</b> switch(config-vs-b-config)# <b>interface control vlan 347</b>	Places you into configuration mode for the named interface.
Step 4	<b>[no] interface name uplink name</b>  <b>Example:</b> switch(config-vs-b-config)# <b>interface control uplink PortChannel2</b>	Assigns VSB Ethernet interface to an uplink.
Step 5	<b>show network summary</b>	Displays VSB Ethernet interfaces assigned to an uplink.

**-Example:**

```
switch(config)#show network summary
```

```
-----
      Port      State      Uplink-Interface  Speed  RefCnt   MTU   Nat-Vlan
      Oper  Admin      Oper  Admin
-----
          Gi1      up       up
          Gi2      up       up
          Gi3      up       up
          Gi4     down      up
          Gi5     down      up
          Gi6     down      up
          Po1      up       up
VsbEth6/1      up       up      Gi3    Gi3    1000
VsbEth6/2      up       up      Gi3    Gi3    1000
VsbEth6/3      up       up      Gi3    Gi3    1000
control0       up       up      Po1    Po1    1000
mgmt0          up       up      Po1    Po1    1000
-----
```

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## Assigning a Native VLAN to a Port Channel

Use this procedure to configure a native VLAN corresponding to an Ethernet interface. This procedure is applicable to both static and flexible network uplink type. Native VLAN changes can take effect immediately except for cases which involve Cisco Nexus 1010 VLANs and interfaces

### BEFORE YOU BEGIN

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

- You are logged in to the CLI in EXEC mode.
- You cannot assign native VLAN to an Ethernet interface which is a part of a port channel
- You can add an Ethernet interface to a port channel only if the Ethernet interface and the port channel have the same native VLAN configuration.
- After you configure the native VLANs in Cisco Nexus 1010, you must also configure all the upstream switches with the same native VLAN.
- When you modify the control or management native VLAN uplink configuration, you must first save the configuration and then shutdown Cisco Nexus 1010 from ILO . Now you can change native VLAN configuration on the uplink switch and then restart the Cisco Nexus 1010.
- When you change the network uplink configuration from flexible to static, all the ports and port channels will loose their native VLAN configuration.
- When you delete an Ethernet interface from a port channel, its retains the native VLAN configuration.

### SUMMARY STEPS

1. **config terminal**
2. **interface *name***
3. **native vlan *id***
4. **show network summary**

### DETAILED STEPS

	Command	Purpose
Step 1	<b>config t</b>  <b>Example:</b> switch# <b>config terminal</b> switch(config)#	Places you in the CLI Global Configuration mode.
Step 2	<b>interface <i>name</i></b>  <b>Example:</b> switch(config)# <b>interface</b> <b>GigabitEthernet1</b> switch(config-if)#	Places you into configuration mode for the named interface.  Interface names can be GigabitEthernet interfaces or Portchannel interfaces.

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	Command	Purpose
Step 3	<b>native vlan <i>id</i></b>  <b>Example:</b> switch(config-if)# <b>native vlan 346</b> switch(config-if)#	Modifies the native VLAN ID.
Step 4	<b>show network summary</b>  <b>Example:</b> switch# show network summary  <pre> -----       Port      State      Uplink-Interface  Speed  RefCnt    MTU    Nat-Vlan             Oper  Admin      Oper  Admin -----           Gi1      up       up                1000    0    9000           Gi2      up       up                1000    0    9000           Gi3      up       up                1000    3    9000           Gi4      down     up                1000    0    9000           Gi5      down     up                1000    0    9000           Gi6      down     up                1000    0    9000           Po1      up       up                1000   13    9000 VsbEth6/1      up       up           Gi3    Gi3    1000    9000 VsbEth6/2      up       up           Gi3    Gi3    1000    9000 VsbEth6/3      up       up           Gi3    Gi3    1000    9000 control0      up       up           Po1    Po1    1000    9000 mgmt0         up       up           Po1    Po1    1000    9000 ----- </pre>	

## Shutting Down Ports or Port Channel Interfaces

Use this procedure to shut down ports or port channels to shut traffic for certain VSBs.

### BEFORE YOU BEGIN

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

- You are logged in to the CLI in EXEC mode.

### SUMMARY STEPS

- config terminal**
- interface *name***
- [no] shutdown [ primary | secondary]**
- show network summary**
- (optional) show network port-channel summary**



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## DETAILED STEPS

	Command	Purpose
Step 1	<b>config terminal</b>  <b>Example:</b> switch# <b>config terminal</b> switch(config)#	Places you in the CLI Global Configuration mode.
Step 2	<b>interface name</b>  <b>Example:</b> switch(config)# <b>interface</b> <b>GigabitEthernet1</b> switch(config-if)	Enters interface configuration mode for the specified interface.
Step 3	<b>[no] shutdown [ primary   secondary]</b>  <b>Example:</b> switch(config-if) <b>shutdown</b>	Shuts down the port or port channel interface.  If a redundant pair of Cisco Nexus 1010s, you must specify whether to shut down the primary or secondary.
Step 4	<b>show network summary</b>  <b>Example:</b> switch# show network summary  <pre> -----       Port      State      Uplink-Interface  Speed  RefCnt   MTU   Nat-Vlan       Oper  Admin      Oper  Admin -----           Gi1      up       up           Gi2      up       up           Gi3      up       up           Gi4      down      up           Gi5      down      up           Gi6      down      up           Po1      up       up VsbEth6/1      up       up      Gi3   Gi3    1000   9000 VsbEth6/2      up       up      Gi3   Gi3    1000   9000 VsbEth6/3      up       up      Gi3   Gi3    1000   9000   control0      up       up      Po1   Po1    1000   9000     mgmt0      up       up      Po1   Po1    1000   9000           </pre>	
Step 5	<b>(optional) show network port-channel summary</b>	

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## Verifying the Uplink Configuration

To verify the uplink configuration, use the following commands:

Command	Purpose
<code>show network-uplink type</code>	Displays information about network uplinks, such as addresses, duplex settings, and traffic. See <a href="#">Example 3-1 on page 3-18</a>
<code>show network</code>	Displays information about the network. See <a href="#">Example 3-2 on page 3-18</a>
<code>show network cdp neighbors</code>	Display uplink connectivity for the active or standby Cisco Nexus 1010. See <a href="#">Example 3-3 on page 3-19</a>
<code>show network counters</code>	Displays statistical information about the network. <a href="#">Example 3-4 on page 3-19</a>
<code>show network summary</code>	Displays summary information about the network. <a href="#">Example 3-5 on page 3-20</a>
<code>show network port-channel summary</code>	Displays summary information port channels in the network. <a href="#">Example 3-6 on page 3-20</a>
<code>show network uplink</code>	Displays information about network uplinks. <a href="#">Example 3-7 on page 3-20</a>

### Example 3-1 Network Uplink Type

This example shows how to display the uplink configuration:

```
switch# show network uplink type
Administrative topology id: 2
Operational topology id: 1
switch#
```

### Example 3-2 Network

This example shows how to display information about the network:

```
switch# show network
GigabitEthernet5 is down (not connected)
  Hardware: Ethernet, address: 0010.18a5.c524 (bia 0010.18a5.c524)
  MTU 9000 bytes, BW 1000000 Kbit, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA
  full-duplex, 1000 Mb/s
  Auto-Negotiation is turned on
    0 packets input, 0 bytes
    0 multicast frames, 0 compressed
    0 input errors, 0 frame, 0 overrun, 0 fifo
    0 packets output, 0 bytes
    0 underrun, 0 output errors, 0 collisions
```

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```

0 fifo, 0 carrier errors

GigabitEthernet6 is down (Administratively down)
Hardware: Ethernet, address: 0010.18a5.c526 (bia 0010.18a5.c526)
MTU 9000 bytes, BW 1000000 Kbit, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA
full-duplex, 1000 Mb/s
Auto-Negotiation is turned on
  0 packets input, 0 bytes
  0 multicast frames, 0 compressed
  0 input errors, 0 frame, 0 overrun, 0 fifo
  0 packets output, 0 bytes
  0 underrun, 0 output errors, 0 collisions
  0 fifo, 0 carrier errors

```

### Example 3-3 Network cdp neighbors

This example shows how to display uplink connectivity for Cisco Nexus 1010:

```

switch# show network cdp neighbors
Capability Codes: R - Router, T - Trans-Bridge, B - Source-Route-Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater,
                  V - VoIP-Phone, D - Remotely-Managed-Device,
                  s - Supports-STP-Dispute

```

Device-ID	Local Intrfce	Hldtme	Capability	Platform	Port ID
sfish-cat3k-K5-stack2 GigabitEthernet1/0/45	GigabitEthernet1	173	S I	cisco WS-C375	
sfish-cat3k-K5-stack1 GigabitEthernet1/0/45	GigabitEthernet2	133	S I	cisco WS-C375	
sfish-cat3k-K5-stack2 GigabitEthernet1/0/46	GigabitEthernet3	173	S I	cisco WS-C375	
sfish-cat3k-K5-stack1 GigabitEthernet1/0/46	GigabitEthernet4	133	S I	cisco WS-C375	

### Example 3-4 Network Counters

This example shows how to display statistical information about the network:

```

switch# show network counters
-----
          Port          InOctets    InUcastPkts    InMcastPkts
-----
GigabitEthernet1      146344975      1163124        105444
GigabitEthernet2      128022491      1110953        280235
GigabitEthernet3       28839731       209796         11722
GigabitEthernet4      107951630      907268         269112
GigabitEthernet5           0                0                0
GigabitEthernet6           0                0                0
  PortChannel1        274367466      2274077        385679
  VsbEthernet1/1       17208966        81687           0
  VsbEthernet1/2        230213         2011            0
  VsbEthernet1/3           0                0                0
-----
          Port          OutOctets    OutUcastPkts    OutMcastPkts
-----
GigabitEthernet1       73351536       339419         105444
GigabitEthernet2        34200           200           280235

```

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```

GigabitEthernet3      48242      405      11722
GigabitEthernet4      35492      206      269112
GigabitEthernet5        0          0         0
GigabitEthernet6        0          0         0
  PortChannel1         73385736   339619   385679
  VsbEthernet1/1       36137879   158796   0
  VsbEthernet1/2       35632175   415746   0
  VsbEthernet1/3       41904366   148529   0

```

### Example 3-5 Network Summary

This example shows how to display summary information about the network

```
switch# show network summary
```

```

-----
      Port      State      Uplink-Interface  Speed  RefCnt  MTU  Nat-Vlan
      Oper  Admin      Oper  Admin
-----
      Gi1      up       up
      Gi2      up       up
      Gi3      up       up
      Gi4      down     up
      Gi5      down     up
      Gi6      down     up
      Po1      up       up
VsbEth6/1  up       up      Gi3    Gi3    1000  9000
VsbEth6/2  up       up      Gi3    Gi3    1000  9000
VsbEth6/3  up       up      Gi3    Gi3    1000  9000
  control0  up       up      Po1    Po1    1000  9000
  mgmt0     up       up      Po1    Po1    1000  9000
-----

```

### Example 3-6 Network Port Channel Summary

This example shows how to display information about the port channels in a network.

```
switch#show network port-channel summary
```

```

-----
Group  Port-Channel  Adm-State  Type      Member-Ports
-----
  1    PortChannel1  up         ha        Gi1 Gi2
-----

```

### Example 3-7 Network Uplinks

This example shows how to display information about network uplinks:

```

switch# show network
GigabitEthernet5 is down (not connected)
  Hardware: Ethernet, address: 0010.18a5.c524 (bia 0010.18a5.c524)
  MTU 9000 bytes, BW 1000000 Kbit, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA
  full-duplex, 1000 Mb/s
  Auto-Negotiation is turned on
  0 packets input, 0 bytes
  0 multicast frames, 0 compressed
  0 input errors, 0 frame, 0 overrun, 0 fifo
  0 packets output, 0 bytes
  0 underrun, 0 output errors, 0 collisions
  0 fifo, 0 carrier errors

GigabitEthernet6 is down (Administratively down)
  Hardware: Ethernet, address: 0010.18a5.c526 (bia 0010.18a5.c526)

```

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```

MTU 9000 bytes, BW 1000000 Kbit, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA
full-duplex, 1000 Mb/s
Auto-Negotiation is turned on
    0 packets input, 0 bytes
    0 multicast frames, 0 compressed
    0 input errors, 0 frame, 0 overrun, 0 fifo
    0 packets output, 0 bytes
    0 underrun, 0 output errors, 0 collisions
    0 fifo, 0 carrier errors

```

## Additional References

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

- [Related Documents, page 3-21](#)
- [Standards, page 3-21](#)
- [MIBs, page 3-21](#)
- [RFCs, page 3-22](#)

## Related Documents

Related Topic	Document Title
Software setup configuration	<a href="#">Setting Up the Management Software, page 2-1</a>
Virtual service blade configuration	<a href="#">Configuring Virtual Service Blades, page 4-1</a>
Connecting uplinks to the network	<i>Cisco Nexus 1010 Virtual Services Appliance Hardware Installation Guide</i>
Cisco Nexus 1010 commands	<i>Cisco Nexus 1010 Command Reference, Release 4.2(1)SP1(4)</i>

## 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	—

## ■ Feature History for Uplink

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## RFCs

RFCs	Title
No RFCs are supported by this feature	—

## Feature History for Uplink

This section provides the uplink feature release history.

Feature Name	Releases	Feature Information
Flexible Network Uplink	4.0(4)SP1(4)	This feature was introduced.
Uplink	4.0(4)SP1(1)	This feature was introduced.