



Installing the Cisco Nexus Cloud Services Platform Software

This chapter describes how to install the Cisco Nexus Cloud Services Platform software and includes the following sections:

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Note

For information about upgrading the Cisco Nexus 1000V software as a virtual service blade (VSB), see the *Cisco Nexus 1000V Software Installation and Upgrade Guide, Release 4.2(1)SV2(2.1)*.

For an overview of the Cisco Nexus Cloud Services Platform product family and procedures for configuring the software after it is installed, see the *Cisco Nexus Cloud Services Platform Software Configuration Guide*.

Information About the Software Installation

The Cisco Nexus Cloud Services Platform software is preinstalled as an ISO image.

Step 1

Verify that you have the correct Cisco Integrated Management Controller (CIMC) software installed. See the [Verifying the CIMC Software Version, page 2-4](#).

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- Step 2** Gather information about the management software. See the [Gathering Information About the Management Software, page 2-6](#).
 - Step 3** Set up the primary Cisco Nexus Cloud Services Platform. See the [Setting up the Primary Cisco Nexus Cloud Services Platform, page 2-10](#)
 - Step 4** Set up the secondary Cisco Nexus Cloud Services Platform. See the [Setting up the Secondary Cisco Nexus Cloud Services Platform, page 2-16](#).
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Prerequisites

Before you install the Cisco Nexus Cloud Services Platform Release 4.2(1)SP1(6.2), you must know or do the following:

- Have the latest firmware release.



Caution

We recommend that you upgrade the firmware using the Cisco Host Upgrade Utility (HUU). Failing to do so might result in network setup failure and/or system reboots. When you use the HUU upgrade menu, choose the option to upgrade the CIMC, BIOS, and all other components of the hardware. For information about the Cisco HUU, see [Cisco Host Upgrade Utility Information, page 2-3](#).

- Install the following Cisco Integrated Management Controller (CIMC) software:
 - Version 1.5(1f) for the Cisco Nexus 1110 product family
 - Version 1.4(3s)4 for the Cisco Nexus 1010 product family
- See the [Verifying the CIMC Software Version, page 4](#) section to verify that you have the correct CIMC version installed.



Note

- For firmware releases prior to 1.4(3), the Cisco HUU does not support the Cisco Nexus 1010 and Cisco Nexus 1010-X. In such cases, use the Cisco Nexus Virtual Services Appliance CIMC GUI to manually update to CIMC version 1.4(3) and then use the Cisco Host Upgrade Utility to upgrade to firmware version 1.4(3s)4.
 - Upgrade to the latest CIMC version using the manual procedure in the [Cisco UCS C-Series Servers Integrated Management Controller CLI Configuration Guide, Release 1.4](#).
 - Upgrade the BIOS firmware version using the manual procedure in the [Cisco UCS C-Series Rack-Mount Server BIOS Upgrade Guide](#).
- For firmware release 1.4(3) or later releases, the Cisco UCS Host Upgrade Utility tool supports the Cisco Nexus Virtual Services Appliance. For more information, see the [Cisco Host Upgrade Utility tool documentation](#).

Guidelines and Limitations

The Cisco Nexus Cloud Services Platform product family guidelines and limitations are as follows:

- The domain ID must be unique within the control VLAN.

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- If other Cisco Nexus Cloud Services Platforms or Cisco Nexus 1000Vs are in the same control VLAN, the domain ID must also be unique across all of them.
- When you are setting up the software, configure the uplink type for your system. Once you configure an uplink type, the only way to modify it is to reload the software.
- The HA standalone role is not supported for the Cisco Nexus Cloud Services Platform.
- The Cisco Nexus Cloud Services Platform is not supported in the non-HA mode.
- We recommend that you configure a primary Cisco Nexus Cloud Services Platform with a secondary backup. Although you can configure a primary Cisco Nexus Cloud Services Platform without a secondary backup, this configuration in a production environment is not supported.
- You must configure the same domain ID, uplink type, control VLAN, management VLAN, control uplink, and management uplink for both the primary and secondary Cisco Nexus Cloud Services Platforms.
- The pairing of the Cisco Nexus Cloud Services Platform must match the hardware platform. For example, a Cisco Nexus 1010-X will only pair with another Cisco Nexus 1010-X and a Cisco Nexus 1110-X will only pair with a Cisco Nexus 1110-X. You cannot pair a Cisco Nexus 1010 with a Cisco Nexus 1010-X or pair a Cisco Nexus 1110-S with a Cisco Nexus 1110-X or any other model.

Cisco Host Upgrade Utility Information

The Cisco Host Upgrade Utility (HUU) is a tool that you can use to upgrade the firmware on one or multiple Cisco UCS C-Series servers. The HUU detects the current version of the following components that you have already installed and guides you to upgrade them to the latest version:

- Cisco Integrated Management Controller (CIMC)
- System BIOS
- LAN on Motherboard (LOM)
- RAID controllers
- Cisco UCS P81E Virtual Interface Card (VIC)
- Cisco UCS VIC 1225
- Cisco UCS VIC 1225-T
- Network adapters

You can obtain information about the minimum required version of the Cisco HUU and how to download the HUU iso from the following sources:

- For the Cisco Nexus 1010 product family, see the [Cisco Host Upgrade Utility Release 1.4\(3\) Quick Start Guide](#).
- For the Cisco Nexus 1110 product family, see the [Cisco Host Upgrade Utility 1.5\(1\) User Guide](#).

You must use the instructions provided in the HUU documentation to upgrade the firmware before you install the Cisco Nexus Cloud Services Platform, Release 4.2(1)SP1(6.2).



Caution

You must ensure that you are using the appropriate HUU versions to upgrade your firmware. You cannot use the HUU versions for the Cisco Nexus 1010 and Cisco Nexus 1110 product families interchangeably.

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Verifying the CIMC Software Version

You can verify the CIMC software version installed on your Cisco Nexus Cloud Services Platform.

BEFORE YOU BEGIN

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

- Log in to the Cisco Nexus Cloud Services Platform from the command-line interface (CLI) or a web browser.
- If CIMC software 1.4(3s)4 or later versions is installed, you will see the product ID N1K-C1010 on the Cisco Nexus 1010 or the product ID N1K-C1010X on the Cisco Nexus 1010-X in the output of the **show hardware** command.
- If CIMC software version 1.5(1f) or higher is installed, you will see the product ID N1K-1110-S on the Cisco Nexus 1110-S or the product ID N1K-1110-X on Cisco Nexus 1110-X in the output of the **show hardware** command.

Step 1 From the Cisco Nexus Cloud Services Platform do one of the following to display the product ID (PID):

- From the command-line interface (CLI), enter the **show hardware** command. Look in the Switch Hardware ID information for the PID.

Example:

```
switch# show hardware
unset
Software
loader: version unset
kickstart: version unset
system: version unset
kickstart image file is: unset
kickstart compile time: unset [unset]
system image file is: unset
system compile time: unset [unset]

Hardware
cisco unset ("unset")
unset with unset unset of memory.
Processor Board ID unset

Device name: unset
bootflash: unset kB
Disk Storage capacity for VM virtual disks: 345945 MB
Number of physical 1Gbps ethernet ports: 6
Number of CPU Cores: 16
CPU Cores details:
model name : Intel(R) Xeon(R) CPU E5-2650 0 @ 2.00GHz
model name : Intel(R) Xeon(R) CPU E5-2650 0 @ 2.00GHz
model name : Intel(R) Xeon(R) CPU E5-2650 0 @ 2.00GHz
model name : Intel(R) Xeon(R) CPU E5-2650 0 @ 2.00GHz
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model name : Intel(R) Xeon(R) CPU E5-2650 0 @ 2.00GHz
model name : Intel(R) Xeon(R) CPU E5-2650 0 @ 2.00GHz
model name : Intel(R) Xeon(R) CPU E5-2650 0 @ 2.00GHz
```

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```
model name : Intel(R) Xeon(R) CPU E5-2650 0 @ 2.00GHz
model name : Intel(R) Xeon(R) CPU E5-2650 0 @ 2.00GHz
model name : Intel(R) Xeon(R) CPU E5-2650 0 @ 2.00GHz
```

```
Kernel uptime is unset day(s), unset hour(s), unset minute(s), unset second(s)
```

```
plugin
Core Plugin, Ethernet Plugin, Virtualization Plugin
```

```
-----
Switch hardware ID information
-----
```

```
Switch is booted up
Switch type is : Nexus 1110-S (Virtual Services Appliance) 2 slot Chassis
Model number is Nexus 1110-S
PID-VID-SN: N1K-C1110-S-2.0-1846886525134693056
```

```
-----
Chassis has 2 Module slots
-----
```

```
Module1 ok
Module type is : Cisco Virtual Services Appliance
0 submodules are present
Model number is Nexus 1110-S
H/W version is 2.0
UUID is 0F823778-D54A-4970-E999-2077C67F0133
Manufacture date is 02/22/2012
Serial number is
```

```
Module2 ok
Module type is : Cisco Virtual Services Appliance
0 submodules are present
Model number is Nexus 1110-S
H/W version is 2.0
UUID is 68143FE5-207B-4989-F297-0937998C9424
Manufacture date is 02/22/2012
Serial number is QCI1410A4LP
```

- From a web browser, open the Server Summary window and view the server properties. See [Figure 2-1](#) for an example.

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Figure 2-1 CIMC Window with Product ID (PID)



Step 2 Do one of the following:

- If the PID displayed is N1K-1110-S on Cisco Nexus 1110-S or N1K-1110-X on Cisco Nexus 1110-X or N1K-C1010 on the Cisco Nexus 1010 or N1K-C1010-X on the Cisco Nexus 1010-X, you can proceed with the installation or upgrade to the Cisco Nexus Cloud Services Platform Release 4.2(1)SP1(6.2).
- If the PIDs displayed are not as mentioned above, do not install or upgrade to Release 4.2(1)SP1(6.2). Instead you must replace the Cisco Nexus Cloud Services Platform using the RMA process. For more information, see the Replacing a Cisco Nexus Cloud Services Platform section.

Gathering Information About the Management Software

Before you begin the installation, you must have the following information for your Cisco Nexus Cloud Services Platform:

- [Administrator Credentials, page 2-7](#)
- [HA Redundancy Role, page 2-7](#)
- [HA Redundancy States, page 2-8](#)
- [Domain ID, page 2-8](#)
- [Network Uplinks, page 2-8](#)
- [VLANs, page 2-9](#)

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Administrator Credentials

When you set up the system software, you are required to create an administrator password. [Table 2-1](#) lists password strength guidelines:

Table 2-1 Guidelines for strong passwords

Strong passwords characteristics	Weak password characteristics
<ul style="list-style-type: none"> • At least eight characters • Uppercase letters • Lowercase letters • Numbers • Special characters 	<ul style="list-style-type: none"> • Consecutive characters, such as “abcd” • Repeating characters, such as “aaabbb” • Dictionary words • Proper names

HA Redundancy Role

The Cisco Nexus Cloud Services Platform product family is provided in redundant pairs for high availability. When setting up the device, you configure a high availability role—primary or secondary. [Table 2-2](#) describes these roles.



Note

The HA standalone role is not supported for the Cisco Nexus Cloud Services Platform product family. The Cisco Nexus Cloud Services Platform is not supported in a non HA-mode.

Table 2-2 HA Redundancy Roles

Role	Description
Primary	<ul style="list-style-type: none"> • The primary role coordinates the active/standby redundancy state with the secondary Cisco Nexus Cloud Services Platform. • The primary role takes precedence during bootup when negotiating the active/standby redundancy state. If the secondary Cisco Nexus Cloud Services Platform is not in the active state at bootup, the primary Cisco Nexus Cloud Services Platform takes the active redundancy state. • You assign the primary role to the first Cisco Nexus Cloud Services Platform that you install in a dual system.
Secondary	<ul style="list-style-type: none"> • The secondary role coordinates the active/standby state with the primary Cisco Nexus Cloud Services Platform. • You assign the secondary role to the second Cisco Nexus Cloud Services Platform that you install in a dual system.

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HA Redundancy States

Table 2-3 describes the HA redundancy states.

Table 2-3 HA Redundancy States

Redundancy State	Description
Active	<p>Controls the system and is visible to the outside world.</p> <p>The active system is remotely accessed through the network after the initial setup.</p> <p>The user interface for managing the Cisco Nexus Cloud Services Platform is only available only through the active system.</p>
Standby	<p>Synchronizes its configuration with the active Cisco Nexus Cloud Services Platform so that it is continuously ready to take over in case of a failure or manual switchover.</p> <p>You cannot use Telnet or Secure Shell (SSH) protocols to communicate with the standby Cisco Nexus Cloud Services Platform.</p> <p>The standby Cisco Nexus Cloud Services Platform is not network addressable and is accessed through the serial port.</p> <p>The user interface for managing the Cisco Nexus Cloud Services Platform is not available through the standby system.</p>

Domain ID

The primary and secondary Cisco Nexus Cloud Services Platforms use the domain ID to identify each other. The Cisco Nexus Cloud Services Platforms must be in the same switching domain, and share the same management IP address.

Network Uplinks

The Cisco Nexus Cloud Services Platform product family supports two types of network uplink configurations to connect to the network.

- **Flexible Network Uplink**—Flexible network configuration offers complete flexibility to connect the Cisco Nexus Cloud Services Platform product family to the network and allows you to achieve a maximum of six uplinks.
- **Static Network Uplink**— In a static network configuration, the Cisco Nexus Cloud Services Platform product family is connected to the network using four fixed network uplink configurations. See [Table 2-4 Network Uplink Types, page 2-9](#).

As a result you can connect your system to the network using one of the following five supported uplink types:

- One uplink
- Two uplinks with common management and control traffic
- Two uplinks with common control and data traffic
- Three uplinks
- Flexible network uplink

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Note After you configure an uplink type, the only way to modify it is to reload the software.

See the *Cisco Nexus Cloud Services Platform Software Configuration Guide*, for more information about network uplink types.

During the installation of the Cisco Nexus Cloud Services Platform product family you can set up the flexible network uplink type or the static network uplink type. If you modify the uplink type, a reload is required each time that the uplink type is modified for it to take effect.

See the *Cisco Nexus Cloud Services Platform Software Configuration Guide*, for information about migrating the network uplink types.

Table 2-4 shows the four supported network uplink types and the ports that carry each type of VLAN traffic.

Table 2-4 Network Uplink Types

Uplink type	Uplink Description	Management VLAN	Control VLAN	Data VLAN
1	All traffic shares a single uplink.	Ports 1 and 2	Ports 1 and 2	Ports 1 and 2
2	Two uplinks with common management and control traffic.	Ports 1 and 2	Ports 1 and 2	Ports 3 to 6
3	Two uplinks with common control and data traffic.	Ports 1 and 2	Ports 3 to 6	Ports 3 to 6
4	Management, Control, and Data traffic are on three different uplinks.	Ports 1 and 2	Ports 3 to 4	Ports 5 to 6
Flexible	There is no traffic segregation based on traffic class			

VLANs

Control and management VLANs are used by the Cisco Nexus Cloud Services Platform product family to manage and communicate with its virtual service blades. These VLANs are added as a part of the initial setup of the management software. Control and packet VLANs are also added to each virtual service blade when the VSB is created. The management VLAN is inherited from the Cisco Nexus Cloud Services Platform product family by each virtual service blade.

If you modify a control, packet, or management VLAN on the Cisco Nexus Cloud Services Platform product family, the change is effective immediately. You must reload the switch so that any changes to the control and management VLANs can take effect on the Cisco Nexus Cloud Services Platform. However, for service continuity, you must configure the same control and packet VLANs on the hosted VSMs. Otherwise, the Cisco Nexus Cloud Services Platform loses communication with its VSMs.

This section includes the following topics:

- [Management VLAN, page 2-10](#)
- [Control VLAN, page 2-10](#)

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Management VLAN

The management VLAN is the VLAN that forwards traffic for the management port of the Cisco Nexus Cloud Services Platform. If your virtual service blade uses the management class of traffic, it inherits the management VLAN from the Cisco Nexus Cloud Services Platform.

The management VLAN is used by the outside world to reach the Cisco Nexus Cloud Services Platform management 0 interface.

The Cisco Nexus Cloud Services Platform and its hosted Cisco Nexus 1000 Virtual Supervisor Modules (VSMs) share the same management VLAN in a static topology. Unlike the control and packet VLANs that are set when a VSB is created, the management VLAN is inherited. In a static topology, the management VLAN on a VSB cannot be changed. Because the management VLAN is inherited from the Cisco Nexus Cloud Services Platform, if you change management VLAN for the Cisco Nexus Cloud Services Platform, the change is applied to both the Cisco Nexus Cloud Services Platform and all of its hosted Cisco Nexus 1000 VSMs in the next reload.

However, this constraint does not exist in a flexible topology where the management VLAN of a VSB can be different from the Cisco Nexus Cloud Services Platform host.

Control VLAN

The control VLAN is a Layer 2 interface used for communication between the redundant Cisco Nexus Cloud Services Platforms. This interface handles low-level control packets such as heartbeats as well as any configuration data that needs to be exchanged between the Cisco Nexus Cloud Services Platforms.

Setting up the Primary Cisco Nexus Cloud Services Platform

You can set up the management software for the following:

- The primary Cisco Nexus Cloud Services Platform in a redundant HA pair

We recommend that you configure a primary Cisco Nexus Cloud Services Platform with a secondary backup. Although you can configure a primary Cisco Nexus Cloud Services Platform without a secondary backup, this configuration in a production environment is not supported.

BEFORE YOU BEGIN

- You have the following information available for this Cisco Nexus Cloud Services Platform:
 - Administrator password
 - HA role (primary or secondary)
If you do not specify an HA role, the role is configured as primary.
 - Network uplink type
 - Control VLAN ID
 - Domain ID
 - Management VLAN ID
 - Management 0 IP address
This IP address appears as the mgmt0 port on the appliance.
 - Default gateway IP address
 - SSH service key type and number of key bits

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DETAILED STEPS

Step 1 Log in to the Cisco Nexus Cloud Services Platform CLI using one of the following methods:

- Login from a terminal server.

```
Example:
telnet 172.25.182.99 2005
Trying 172.25.182.99...
Connected to 172.25.182.99.
Escape character is '^]'
switch#

---- System Admin Account Setup ----
Enter the password for "admin":
Confirm the password for "admin":
```

- Login from a serial over LAN (SoL) connection through CIMC:

```
Example:
ssh admin@172.25.182.230
admin@172.25.182.230's password:
switch# connect host
CISCO Serial Over LAN:
Close Network Connection to Exit

---- System Admin Account Setup ----
Enter the password for "admin":
Confirm the password for "admin":
```

The setup wizard starts automatically

Step 2 Enter and confirm the Administrator password.

```
Example:

---- System Admin Account Setup ----
Enter the password for "admin":
Confirm the password for "admin":
```

Step 3 Enter the HA role. If you do not specify a role, the primary role is assigned.

```
Example:

Enter HA role[primary/secondary]: primary
```



Note The HA standalone role is not supported for the Cisco Nexus Cloud Services Platform product family. The Cisco Nexus Cloud Services Platform is not supported in a non-HA mode

Step 4 Enter the uplink type. To specify a static network uplink, enter a value from 1 to 4. To specify a flexible network uplink, enter the value 5.



Note After you configure an uplink type, the only way to modify it is to reload the software.

```
Example:
Enter network-uplink type <1-5>:
  1. Ports 1-2 carry all management, control and data vlans
  2. Ports 1-2 management and control, ports 3-6 data
```

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3. Ports 1-2 management, ports 3-6 control and data
 4. Ports 1-2 management, ports 3-4 control, ports 5-6 data
 5. Flexible
- 5

Step 5 Enter the VLAN ID for the control VLAN.

Example:

```
Enter control vlan <1-3967, 4048-4093>: 1481
```

Step 6 Enter the control uplink.

Example:

```
Enter control uplink <1-6>: 1
```

Step 7 Enter the domain ID.

Example:

```
Enter the domain id<1-4095>: 121
```

Step 8 Enter the VLAN ID for the management VLAN.

Example:

```
Enter management vlan<1-3967,4048-4093>: 1490
```

Step 9 Enter the management uplink.

Example:

```
Enter management uplink <1-6>: 1
```

When you have completed this process, the Cisco Nexus Cloud Services Platform software saves the configuration and automatically reboots to configure the network uplinks.

After the new configuration is saved into nonvolatile storage, the running and the startup copies of the configuration are identical.

```
Saving boot configuration. Please wait...
```

```
[#####] 100%
System is going to reboot to configure network uplinks
```

After the switch reboot, the default static or flexible topology will be configured. See [Figure 2-2](#) for an example of a default flexible network uplink configuration without a vPC and VSS. See [Figure 2-3](#) for an example of a default flexible network configuration with a vPC and VSS.

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Figure 2-2 Default Flexible Network Uplink Configuration without vPC and VSS

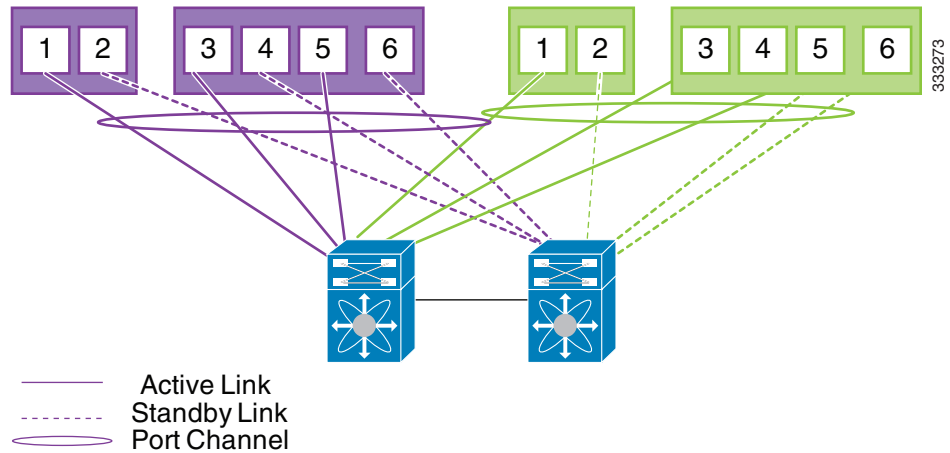
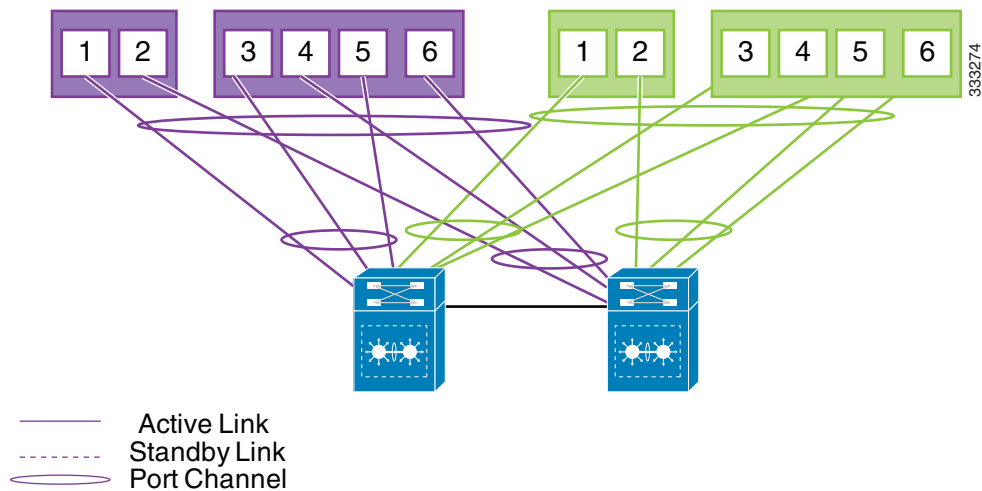


Figure 2-3 Default Flexible Network Uplink Configuration with vPC and VSS



For more information, see the *Cisco Nexus Cloud Services Platform Software Configuration Guide*.

Step 10 Enter **yes** if you want to enter the basic configuration dialog.

Example:

```
Would you like to enter the basic configuration dialog (yes/no): yes
```

```
---- 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.
```

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Step 11 Enter **no** if you do not want to create another login account.

Example:

```
Create another login account (yes/no) [n]: no
```

Step 12 Enter **no** if you do not want to configure a read-only SNMP community string.

Example:

```
Configure read-only SNMP community string (yes/no) [n]: no
```

Step 13 Enter **no** if you do not want to configure a read-write SNMP community string.

Example:

```
Configure read-write SNMP community string (yes/no) [n]:
```

Step 14 Enter a name for the appliance.

Example:

```
Enter the VSA name [Nexus1010]:
```

Step 15 Enter **yes** if you want to configure out-of-band management, and then enter the management 0 IPv4 or IPv6 address.

This IP address appears as the mgmt0 port on the appliance.

Example:

```
Continue with Out-of-band (mgmt0) management configuration? [yes/no] [y]: yes
Mgmt0 IP address type V4/V6? (V4): V4
Mgmt0 IPv4 address: 45.45.45.3
Mgmt0 IPv4 netmask prefix : 255.255.255.0
```

Step 16 Answer **yes** if you want to configure the default gateway.

Example:

```
Configure the default-gateway: (yes/no) [y]: yes
IPv4 address of the default gateway: 45.45.45.1
```

Step 17 Enter **no** if you do not want to configure advanced IP options.

Example:

```
Configure Advanced IP options (yes/no)? [n]: no
```

Step 18 Enter **no** if you do not want to enable the Telnet service.

Example:

```
Enable the telnet service? (yes/no) [y]: no
```

Step 19 Enter **yes** if you want to enable the SSH service, and then enter the key type and number of key bits.

Example:

```
Enable the ssh service? (yes/no) [y]: yes
Type of ssh key you would like to generate (dsa/rsa) : rsa
Number of key bits <768-2048> : 1024
```

Step 20 Enter **yes** if you want to configure the HTTP server.

Example:

```
Configure http-server?yes/no) (y): yes
```

Step 21 Enter **no** if you do not want to configure the NTP server.

The configuration is summarized.

Example:

```
Configure NTP server? (yes/no) [n]: no
```

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The following configuration will be applied:

```
switchname N1010
interface mgmt0
ip address 45.45.45.3 255.255.255.0
no shutdown
vrf context management
ip route 0.0.0.0/0 45.45.45.1
no telnet server enable
ssh key rsa 1024 force
ssh server enable
feature http-server
```

Step 22 Do one of the following:

- If you do not want to edit the configuration enter **no** and continue with the next step.
- If you want to edit the configuration, enter **yes** and return to [Step 11](#) to revisit each command.

Example:

```
Would you like to edit the configuration? (yes/no) [n]:no
```

Step 23 Enter **yes** if you want to use and save this configuration.



Caution

If you do not save the configuration now, none of your changes are part of the configuration the next time that the switch is rebooted. Enter **yes** to save the new configuration to ensure that the kickstart and system images are also automatically configured.

Example:

```
Use this configuration and save it? (yes/no) [y]: yes
[#####] 100%
```

After the new configuration is saved into nonvolatile storage, the running and the startup copies of the configuration are identical.



Note

You can use the setup routine to update the configuration that you made in [Step 11](#) through [Step 23](#) at any time by entering the **setup** command in EXEC mode. After the setup begins, press **Enter** to skip a command. Press **Ctrl+c** to skip the remaining commands.

Step 24 Verify the configuration :

```
switch# show running configuration
!Command: show running-config
!Time: Thu Feb 27 02:57:25 2014

version 4.2(1)SP1(6.1)
no feature telnet

username admin password 5 $1$BzSSk6qR$m.FMEvkOXzutuLwrmVeUe/ role network-admin

banner motd #Cisco VSA#

ip domain-lookup
ip domain-lookup
hostname N1010
snmp-server user admin network-admin auth md5 0xb64ad6879970f0e57600c443287a79f0
priv 0xb64ad6879970f0e57600c443287a79f0 localizedkey

vrf context management
ip route 0.0.0.0/0 45.45.45.1
vlan 1,1481,1490
```

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```
port-channel load-balance ethernet source-mac
port-profile default max-ports 32

vdc N1010 id 1
  limit-resource vlan minimum 16 maximum 2049
  limit-resource monitor-session minimum 0 maximum 2
  limit-resource vrf minimum 16 maximum 8192
  limit-resource port-channel minimum 0 maximum 768
  limit-resource u4route-mem minimum 32 maximum 32
  limit-resource u6route-mem minimum 16 maximum 16
  limit-resource m4route-mem minimum 58 maximum 58
  limit-resource m6route-mem minimum 8 maximum 8
network-uplink type 5
interface GigabitEthernet1
interface GigabitEthernet2
interface GigabitEthernet3
interface GigabitEthernet4
interface GigabitEthernet5
interface GigabitEthernet6
svs-domain
  control uplink GigabitEthernet1
  management uplink GigabitEthernet1

interface mgmt0
  ip address 45.45.45.3/24

interface control0
line console
svs-domain
  domain id 121
  control vlan 1481
  management vlan 1490
  svs mode L2
switch#
```

Setting up the Secondary Cisco Nexus Cloud Services Platform

You can set up the management software for the secondary Cisco Nexus Cloud Services Platform in a redundant pair.

We recommend that you configure the same domain ID, uplink type, control VLAN, management VLAN, control uplink, management uplink for both primary and secondary Cisco Nexus Cloud Services Platforms.

DETAILED STEPS

Step 1 Enter and confirm the Administrator password.

Example:

```
---- System Admin Account Setup ----
Enter the password for "admin":
```

Step 2 Enter the HA role.

Example:

```
Enter HA role[primary/secondary]: secondary
```


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Step 3 Enter the uplink type.



Note After you configure an uplink type, the only way you can modify it is to reload the software.

Example:

Enter network-uplink type <1-5>:

1. Ports 1-2 carry all management, control and data vlans
2. Ports 1-2 management and control, ports 3-6 data
3. Ports 1-2 management, ports 3-6 control and data
4. Ports 1-2 management, ports 3-4 control, ports 5-6 data
5. Flexible

5

Step 4 Enter the VLAN ID for the control VLAN.

Example:

Enter control vlan <1-3967, 4048-4093>: **347**

Step 5 Enter the control uplink type.

Example:

Enter control uplink <1-6>: **1**

Step 6 Enter the domain ID.

Example:

Enter the domain id<1-4095>: **3477**

Step 7 Enter the VLAN ID for the management VLAN.

Example:

Enter management vlan<1-3967,4048-4093>: **180**

Step 8 Enter the management uplink type.

Example:

Enter management uplink <1-6>: **2**

The following things occur on the switch:

- After the new configuration is saved into nonvolatile storage, the running and the startup copies of the configuration are identical.
- The system reboots to configure the network uplinks.
- The system restarts and synchronizes its configuration with the primary Cisco Nexus 1000V.

Example:

Saving boot configuration. Please wait...

[#####] 100%

System is going to reboot to configure network uplinks

HA mode set to secondary. Rebooting now...

Step 9 Verify the configuration using the following command:

show running configuration

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Configuration Example for Network Uplinks

This example shows how to configure a flexible network uplink configuration during installation:

```

---- System Admin Account Setup ----
Enter the password for "admin":
Confirm the password for "admin":
Enter HA role[primary/secondary]: secondary

-
Enter network-uplink type <1-5>:
1. Ports 1-2 carry all management, control and data vlans
2. Ports 1-2 management and control, ports 3-6 data
3. Ports 1-2 management, ports 3-6 control and data
4. Ports 1-2 management, ports 3-4 control, ports 5-6 data
5. Flexible
5

-
Enter control vlan <1-3967, 4048-4093>: 347
Enter control uplink <1-6>: 1

-
Enter the domain id<1-4095>: 3477

-
Enter management vlan <1-3967, 4048-4093>: 180
Enter management uplink <1-6>: 2

-
Saving boot configuration. Please wait...
[#####] 100%
System is going to reboot to configure network uplinks

```

This example shows how to configure a static network uplink configuration during installation:

```

---- System Admin Account Setup ----
Enter the password for "admin":
Confirm the password for "admin":
Enter HA role[primary/secondary]: secondary

-
Enter network-uplink type <1-5>:
1. Ports 1-2 carry all management, control and data vlans
2. Ports 1-2 management and control, ports 3-6 data
3. Ports 1-2 management, ports 3-6 control and data
4. Ports 1-2 management, ports 3-4 control, ports 5-6 data
5. Flexible
1

-
Enter control vlan <1-3967, 4048-4093>: 300

-
Enter the domain id<1-4095>: 300

-
Enter management vlan <1-3967, 4048-4093>: 233

-
Saving boot configuration. Please wait...
[#####] 100%
System is going to reboot to configure network uplinks

```

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Verifying the Cisco Nexus Cloud Services Platform Configuration

To verify the Cisco Nexus Cloud Services Platform configuration, use the following commands:

Command	Purpose
show running-configuration	Displays the Cisco Nexus Cloud Services Platform running configuration. See Example 2-1 on page 2-19 .
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 2-2 on page 2-21 .
show svcs domain	Displays the domain information for the Cisco Nexus Cloud Services Platform. See Example 2-3 on page 2-22 .
show network cdp neighbors	Displays the uplink connectivity for the active or standby Cisco Nexus Cloud Services Platform. See Example 2-4 on page 2-22 .

Example 2-1 Setup Configuration

This example shows how to display and verify the Cisco Nexus Cloud Services Platform setup configuration:

```
switch# show running-configuration
!Command: show running-config
!Time: Mon Sep 10 21:31:34 2012

version 4.2(1)SP1(5.1)
feature telnet

username admin password 5 $1$8oEF.umL$mRRZTm3.sWL2ED5KZydz61 role network-admin

banner motd #Cisco VSA#

ip domain-lookup
ip domain-lookup
hostname N1110-S
snmp-server user admin network-admin auth md5 0xb64ad6879970f0e57600c443287a79f0 priv
0xb64ad6879970f0e57600c443287a79f0 localizedkey
snmp-server community public group network-admin

vrf context management
ip route 0.0.0.0/0 10.78.109.97
vlan 1,1352,1360
port-channel load-balance ethernet source-mac
port-profile default max-ports 32

vdc N1110-S id 1
limit-resource vln minimum 16 maximum 2049
limit-resource monitor-session minimum 0 maximum 2
```

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```

limit-resource vrf minimum 16 maximum 8192
limit-resource port-channel minimum 0 maximum 768
limit-resource u4route-mem minimum 32 maximum 32
limit-resource u6route-mem minimum 16 maximum 16
limit-resource m4route-mem minimum 58 maximum 58
limit-resource m6route-mem minimum 8 maximum 8
network-uplink type 4
interface GigabitEthernet1
interface GigabitEthernet2
interface GigabitEthernet3
interface GigabitEthernet4
interface GigabitEthernet5
interface GigabitEthernet6
interface PortChannel1
interface PortChannel2
interface PortChannel3
virtual-service-blade VSM1
virtual-service-blade-type name VSM-1.1
interface control vlan 1361
interface packet vlan 1362
ramsize 2048
disksize 3
numcpu 1
cookie 1555871292
no shutdown
interface VsbEthernet1/1
interface VsbEthernet1/2
interface VsbEthernet1/3
virtual-service-blade NAMC-1
virtual-service-blade-type name NAM-1.1
interface data vlan 1352
ramsize 2048
disksize 53
numcpu 2
cookie 753232953
no shutdown secondary
interface VsbEthernet2/1
virtual-service-blade DCNM61
virtual-service-blade-type name DCNM-VSB-6.1
interface eth1 vlan 0
ramsize 8192
disksize 80
numcpu 2
cookie 969732378
no shutdown primary
interface VsbEthernet3/1
virtual-service-blade VSG12
virtual-service-blade-type name VSG-1.2
interface data vlan 1365
interface ha vlan 1364
ramsize 2048
disksize 3
numcpu 1
cookie 2051820775
no shutdown primary
no shutdown secondary
interface VsbEthernet4/1
interface VsbEthernet4/2
interface VsbEthernet4/3
virtual-service-blade VSM-OVA
virtual-service-blade-type name VSM-1.2
interface control vlan 1364
interface packet vlan 1366
ramsize 2048

```

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```

disksize 3
numcpu 1
cookie 448734513
no shutdown primary
no shutdown secondary
interface VsbEthernet5/1
interface VsbEthernet5/2
interface VsbEthernet5/3
virtual-service-blade VSG-OVA
virtual-service-blade-type name VSG-1.2
interface data vlan 1356
interface ha vlan 1355
ramsize 2048
disksize 3
numcpu 1
cookie 2105102293
no shutdown
interface VsbEthernet6/1
interface VsbEthernet6/2
interface VsbEthernet6/3

interface mgmt0
ip address 10.78.109.100/28

interface control0
line console
boot kickstart bootflash:/nexus-1010-kickstart-mz.4.2.1.SP1.5.1.bin
boot system bootflash:/nexus-1010-mz.4.2.1.SP1.5.1.bin
boot kickstart bootflash:/nexus-1010-kickstart-mz.4.2.1.SP1.5.1.bin
boot system bootflash:/nexus-1010-mz.4.2.1.SP1.5.1.bin
svs-domain
domain id 2222
control vlan 1360
management vlan 1352
svs mode L2

```

Example 2-2 Redundancy Status

```

switch# show system redundancy status
Redundancy role
-----
      administrative:  primary
      operational:    primary
Redundancy mode
-----
      administrative:  HA
      operational:    None
This supervisor (sup-1)
-----
      Redundancy state:  Active
      Supervisor state:  Active
      Internal state:   Active with no standby
Other supervisor (sup-2)
-----
      Redundancy state:  Not present
-----
switch#

```

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Example 2-3 Domain

```
switch# show svcs domain
SVS domain config:
  Domain id:      3555
  Control vlan:  305
  Management vlan: 233
  L2/L3 Control mode: L2
  L3 control interface: NA
  Status: Config not pushed to VC.
switch#
```

Example 2-4 CDP neighbors (standby)

```
switch# show network cdp neighbors
...
Device-ID                Local Intrfce Hldtme Capability Platform      Port ID
-----
sfish-cat3k-K5-stack2 eth2          166      R T B S I r cisco WS-C375 GigabitEthernet1/0/23
switch#
```

Getting Started with the Cisco Nexus Cloud Services Platform

After you complete the software installation, you can configure the Cisco Nexus Cloud Services Platform product family.

-
- Step 1** Configuring port channels for flexible network uplink. Use this procedure to configure port channels after you set up the flexible network uplink type.
 - Step 2** Setting up remote management. Use this procedure to set up remote management in your startup configuration for use in recovering an unreachable Cisco Nexus Cloud Services Platform.
 - Step 3** Do one of the following to add a service blade to the new Cisco Nexus Cloud Services Platform:
 - Create a new virtual service blade.
 - Migrate an existing VSM from a VM to the Cisco Nexus Cloud Services Platform.
-

See the *Cisco Nexus Cloud Services Platform Software Configuration Guide* for more information.

Feature History for Software Installation

This section provides the software installation and upgrade release history.

Feature Name	Releases	Feature Information
Cisco Nexus 1110-S and Cisco Nexus 1110-X	4.2(1)SP1(5.1a)	This hardware was introduced.
Flexible Network Uplink	4.2(1)SP1(4)	This feature was introduced.
Cisco Nexus 1010-X	4.2(1)SP1(3)	This hardware was introduced.
Software upgrade	4.2(1)SP1(2)	This feature was introduced.

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