



Installing the Cisco VSG on a Cisco Cloud Services Platform Virtual Services Appliance

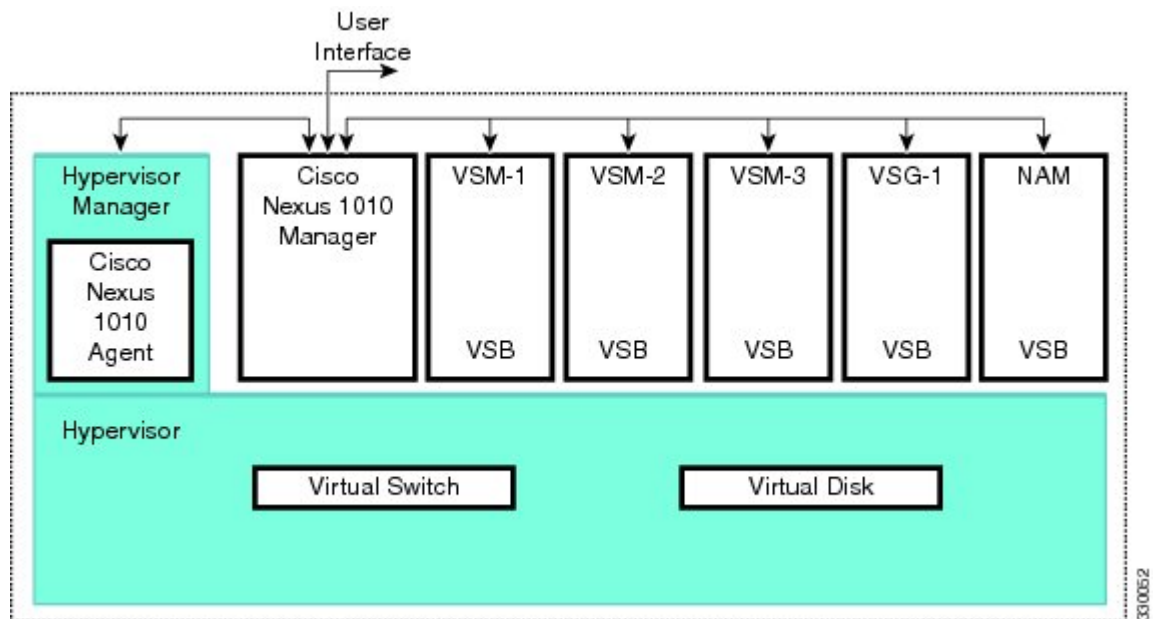
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Information About Installing the Cisco VSG on the Cisco Nexus 1010

The Cisco VSG software is provided with the other virtual service blade (VSB) software in the Cisco Nexus 1010 bootflash: repository directory. The Cisco Nexus 1010 has up to six virtual service blades (VSBs) on which you can choose to place a Cisco VSG, VSM, or Network Analysis Module (NAM).

Figure 1: Cisco Nexus 1010 Architecture Showing Virtual service Blades Usage



Prerequisites for Installing Cisco VSG on Nexus 1010

- You must first install the Cisco Nexus 1010 Virtual Services Appliance and connect it to the network. For procedures on installing the hardware, see the *Cisco Nexus 1010 Virtual Services Appliance Hardware Installation Guide*.
- After you install the hardware appliance and connect it to the network, you can configure the Cisco Nexus 1010 management software, migrate existing VSMs residing on a VM to the Cisco Nexus 1010 as virtual service blades (VSBs), and create and configure new VSBs that might host the Cisco VSG. For procedures on configuring the software, see the *Cisco Nexus 1010 Software Configuration Guide*.

Guidelines and Limitations

- The Cisco Nexus 1010 appliance and its hosted Cisco VSG VSBs must share the same management VLAN.

- Unlike the data and high availability (HA) VLANs that are set when a Cisco VSG VSB is created, a Cisco VSG VSB inherits its management VLAN from the Cisco Nexus 1010.

**Caution**

Do not change the management VLAN on a VSB. Because the management VLAN is inherited from the Cisco Nexus 1010, any changes to the management VLAN are applied to both the Cisco Nexus 1010 and all of its hosted VSBs.

Installing a Cisco VSG on a Cisco Nexus 1000V

You can install the Cisco VSG on a Cisco Nexus 1000V as a virtual service blade (VSB).

Before You Begin

- Log in to the CLI in EXEC mode.
- Know the name of the Cisco VSG VSB that you want to create.
- Whether you are using a new ISO file from the bootflash repository folder or from an existing VSB, do one of the following:
 - If you are using a new ISO file in the bootflash repository, you know the filename.
Cisco VSG: nexus-1000v.VSG1.2.iso
 - If you are using an ISO file from an existing VSB, you must know the name of the VSB type. This procedure includes information about identifying this name.
- Know the following properties for the Cisco VSG VSB:
 - HA ID –Management IP address
 - Cisco VSG name
 - Management subnet mask length
 - Default gateway IPV4 address
 - Administrator password
 - Data and HA VLAN IDs
- This procedure shows you how to identify and assign data and HA VLANs for the Cisco VSG VSB. Do not assign a management VLAN because the management VLAN is inherited from the Cisco Nexus 1000V.

Procedure

	Command or Action	Purpose
Step 1	switch# configure terminal	Enters global configuration mode.
Step 2	(config)# virtual-service-blade <i>name</i>	Creates the named VSB and places you into configuration mode for that service. The name can be an alphanumeric string of up to 80 characters.

	Command or Action	Purpose
Step 3	(config-vsbs-config)# show virtual-service-blade-type summary	(Optional) Displays a summary of all VSB configurations by type name, such as Cisco VSG, VSM, or NAM. You use this type name (in this case, the name for the Cisco VSG) in the next step.
Step 4	(config-vsbs-config)# virtual-service-blade-type [name name new iso file name]	Specifies the type and name of the software image file to add to this Cisco VSG VSB: <ul style="list-style-type: none"> • Use the new keyword to specify the name of the new Cisco VSG ISO software image file in the bootflash repository folder. • Use the name keyword to specify the name of the existing Cisco VSG VSB type. Enter the name of an existing type found in the command output.
Step 5	(config-vsbs-config)# description description	(Optional) Adds a description to the Cisco VSG VSB. The <i>description</i> is an alphanumeric string of up to 80 characters.
Step 6	(config-vsbs-config)# show virtual-service-blade name name	Displays the Cisco VSG VSB that you have just created including the interface names that you configure in the next step.
Step 7	(config-vsbs-config)# interface name vlan vlanid	Applies the interface and VLAN ID to this Cisco VSG. Use the interface names from the command output. <p>Note If you try to apply an interface that is not present, the following error is displayed:</p> <p>ERROR: Interface name not found in the associated virtual-service-blade type.</p> <p>Caution Do not assign a management VLAN. Unlike data and HA VLANs, the management VLAN is inherited from the Cisco Nexus 1000V.</p> <p>Caution To prevent loss of connectivity, you must configure the same data and HA VLANs on the hosted Cisco VSGs.</p>
Step 8	Repeat Step 7 to apply additional interfaces	
Step 9	(config-vsbs-config)# enable [primary secondary]	Initiates the configuration of the VSB and then enables it. If you enter the enable command without the optional primary or secondary keywords, it enables both. If you are deploying a redundant pair, you do not need to specify primary or secondary. If you are enabling a nonredundant VSB, you can specify its HA role as follows: <ul style="list-style-type: none"> • Use the primary keyword to designate the VSB in a primary role.

	Command or Action	Purpose
		<ul style="list-style-type: none"> • Use the secondary keyword to designate the VSB in a secondary role <p>The Cisco Nexus 1000V prompts you for the following:</p> <ul style="list-style-type: none"> • HA ID • Management IP address • Management subnet mask length • Default gateway IPV4 address • Cisco VSG name • Administrator password
Step 10	(config-vsbs-config)# show virtual-service-blade name name	<p>(Optional) Displays the new VSB for verification.</p> <p>While the Cisco Nexus 1000V management software is configuring the Cisco VSG, the output for this command progresses from in progress to powered on.</p>
Step 11	(config-vsbs-config)# copy running-config startup-config	<p>(Optional)</p> <p>Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.</p>

This example shows how to configure a Cisco Nexus 1000V appliance VSB as a Cisco VSG:

```

N1010# configure
Enter configuration commands, one per line. End with CNTL/Z.
N1010(config)# virtual-service-blade vsg1
N1010(config-vsbs-config)# virtual-service-blade-type new nexus-1000v.VSG1.2.iso
N1010(config-vsbs-config)# interface data vlan 72
N1010(config-vsbs-config)# interface ha vlan 72
N1010(config-vsbs-config)# enable
Enter vsb image: [nexus-1000v.VSG1.2.iso]
Enter HA id[1-4095]: 1233
Management IP version [V4/V6]: [V4]
Enter Management IP address: 10.193.73.42
Enter Management subnet mask: 255.255.248.0
IPv4 address of the default gateway: 10.193.72.1
Enter HostName: vsg-1
Enter the password for 'admin': Hello_123
N1010(config-vsbs-config)# end
N1010#

```

This example show how to install the Cisco VSG on a Cisco Nexus 1000V as a VSB.

```

N1010# configure
N1010(config)# virtual-service-blade vsg-1
N1010(config-vsbs-config)# show virtual-service-blade-type summary

```

```

-----
Virtual-Service-Blade-Type      Virtual-Service-Blade
-----
VSM SV1_3                      vsm-1 vsm-2
NAM-MV                          nam-1
VSG-1                          vsg-1
-----

```

```

N1010(config-vs-b-config)# virtual-service-blade-type new nexus-1000v.VSG1.2.iso
or
N1010(config-vs-b-config)# show virtual-service-blade name vsg-1

N1010(config-vs-b-config)# description vsg-1 for Tenant1
N1010(config-vs-b-config)# show virtual-service-blade name vsg-1
-----
    virtual-service-blade vsm2
    Description:
    Slot id: 2
    Host Name:
    Management IP:
    VSB Type Name : VSG-1.0
    Interface: ha vlan: 0
    Interface: management vlan: 231
    Interface: data vlan: 0
    Interface: internal vlan: NA
    Ramsize: 2048
    Disksize: 3
    Heartbeat: 0
    HA Admin role: Primary
    HA Oper role: NONE
    Status: VSB NOT PRESENT
    Location: PRIMARY
    SW version:
    HA Admin role: Secondary
    HA Oper role: NONE
    Status: VSB NOT PRESENT
    Location: SECONDARY
    SW version:
    VSB Info:
-----

N1010(config-vs-b-config)# interface data vlan 1044
or
N1010(config-vs-b-config)# interface ha vlan 1045

N1010(config-vs-b-config)# enable
-----
    Enter domain id[1-4095]: 1054
    Enter Management IP address: 10.78.108.40
    Enter Management subnet mask length 28
    IPv4 address of the default gateway: 10.78.108.117
    Enter Switchname: VSG-1
    Enter the password for 'admin': Hello_123
-----

N1010(config-vs-b-config)# show virtual-service-blade name vsg-1
-----
    virtual-service-blade vsg-1
    Description:
    Slot id: 1
    SW version: 4.0(4)SV1(3)
    Host Name: vsg-1
    Management IP: 10.78.108.40
    VSB Type Name : VSG-1.1
    Interface: ha vlan: 1044
    Interface: management vlan: 1032
    Interface: data vlan: 1045
    Interface: internal vlan: NA
    Ramsize: 2048
    Disksize: 3
    Heartbeat: 1156
    HA Admin role: Primary
    HA Oper role: STANDBY
    Status: VB POWERED ON
    Location: PRIMARY
    HA Admin role: Secondary
    HA Oper role: ACTIVE
    Status: VB POWERED ON
    Location: SECONDARY
    VB Info:
    Domain ID : 1054

```

```
-----
N1010(config-vsrb-config)# copy running-config startup-config
```

This example shows how to display a virtual service blade summary on the Cisco Nexus 1000V:

```
N1010# show virtual-service-blade summary
```

```
-----
Name      Role      State      Nexus1010-Module
-----
vsg-1     PRIMARY   VSB POWERED ON      Nexus1010-PRIMARY
vsg-1     SECONDARY VSB POWERED OFF      Nexus1010-SECONDARY
vsg9      PRIMARY   VSB NOT PRESENT      Nexus1010-PRIMARY
vsg9      SECONDARY VSB DEPLOY IN PROGRESS Nexus1010-SECONDARY
nam_1     PRIMARY   VSB POWERED OFF      Nexus1010-PRIMARY
nam_1     SECONDARY VSB NOT PRESENT      Nexus1010-SECONDARY
vsgc1     PRIMARY   VSB POWERED ON      Nexus1010-PRIMARY
vsgc1     SECONDARY VSB POWERED ON      Nexus1010-SECONDARY
nam_2     PRIMARY   VSB POWERED OFF      Nexus1010-PRIMARY
nam_2     SECONDARY VSB NOT PRESENT      Nexus1010-SECONDARY
-----
```

