Registering Service VMs Installed on VMware

This section contains the following topics:

Registering Service VMs on VMware

Registering service VMs with Prime Network Services Controller ensures that Prime Network Services Controller recognizes and can communicate with the VMs.

The following topics describe how to register Cisco and third-party VMs that are deployed on VMware with Prime Network Services Controller:

- For Cisco service VMs, see Registering Cisco VMs Deployed on VMware, on page 1.

Registering Cisco VMs Deployed on VMware

This procedure describes how to register VSM VMs that have been installed directly on the hypervisor. Cisco VMs that are instantiated on a hypervisor through Prime Network Services Controller are automatically registered with Prime Network Services Controller upon instantiation.

You do not need to register a VSG that is installed directly on the hypervisor. The deployment procedure automatically registers the VM with Prime Network Services Controller.

Before you begin

- Configure NTP on the required hypervisor.
- Install the required Cisco VMs on the hypervisor.
- Confirm that each Cisco VM is deployed and powered on.
- Make sure that a network path exists between each VM management IP address and the Prime Network Services Controller management IP address.

SUMMARY STEPS

1. In the hypervisor, navigate to the VM to be registered with Prime Network Services Controller.
2. Open a console window for the VM.
3. In the CLI, register the VM as follows:

DETAILED STEPS

Step 1 In the hypervisor, navigate to the VM to be registered with Prime Network Services Controller.

Step 2 Open a console window for the VM.

Step 3 In the CLI, register the VM as follows:

- VSM (Version 5.2(1)SV3(1.1) and higher)

```
vm-name# configure terminal
vm-name(config)# nsc-policy-agent
vm-name(config-nsc-policy-agent)# registration-ip n.n.n.n
vm-name(config-nsc-policy-agent)# shared-secret MySharedSecret
vm-name(config-nsc-policy-agent)# policy-agent-image bootflash:vsmcpa.n.n.n.bin
vm-name(config-nsc-policy-agent)# copy running-config startup-config
```

- VSM (Versions prior to 5.2(1)SV3(1.1))

```
vm-name# configure
vm-name(config)# vnm-policy-agent
vm-name(config-vnm-policy-agent)# registration-ip n.n.n.n
vm-name(config-vnm-policy-agent)# shared-secret MySharedSecret
vm-name(config-vnm-policy-agent)# policy-agent-image bootflash: vnmc-vsgpa.n.n.n.bin
vm-name(config-vnm-policy-agent)# copy running-config startup-config
```

Deleting the Default Service Path

By default, Prime Network Services Controller includes a service path for use with the automatic instantiation of network services. This service path can cause issues if it is used by a port profile. As a result, we recommend that you remove the default service path from Prime Network Services Controller.

SUMMARY STEPS

1. Choose **Policy Management > Service Policies > root > Policies > Service Path**.
2. In the General tab, choose the default service path and then click **Delete**.

DETAILED STEPS

Step 1 Choose **Policy Management > Service Policies > root > Policies > Service Path**.

Step 2 In the General tab, choose the default service path and then click **Delete**.

Note Instead of service path configurations from PNSC GUI, use vservice node configurations from VSM CLI to use Cisco Virtual Security Gateway. For deployment configurations, see the Cisco Virtual Security Gateway Deployment Guide. Use the Cisco VSG-L2 adjacent and Cisco VSG-L3 adjacent configurations.

Managing Service VMs and the Device Adapter

The following topics can help troubleshoot issues that you might encounter with the Prime Network Services Controller Device Adapter and service VMs:

Prime Network Services Controller IP Address Change

If you change the management IP address of Prime Network Services Controller, configure service VMs that were previously registered with Prime Network Services Controller so that they can continue to communicate with Prime Network Services Controller. See the following topics for more information:

Reregistering Service VMs

After changing the Prime Network Services Controller management IP address, you must register service VMs with the new IP address as follows.

Before you begin

Confirm the following:

- Each Cisco VM is deployed and powered on.
- A network path exists between each VM management IP address and the new Prime Network Services Controller management IP address.

SUMMARY STEPS

1. For each VSM registered with Prime Network Services Controller:
2. For each VSG registered with Prime Network Services Controller:

DETAILED STEPS

Step 1 For each VSM registered with Prime Network Services Controller:
a) Uninstall the policy agent by entering the following commands:

```
vsm# config
vsm(config)# xxx-policy-agent
vsm(config-policy-agent)# no policy-agent-image
```

where *xxx*-policy-agent is either vnm-policy-agent or nsc-policy-agent, depending on the VSM version.

b) Reinstall the policy agent and register the VSM with the new Prime Network Services Controller IP address as shown in Registering Cisco VMs Deployed on VMware, on page 1.

Step 2 For each VSG registered with Prime Network Services Controller:

a) Uninstall the policy agent by entering the following commands:

```
vsg# config
vsg(config)# vnm-policy-agent
vsg(config-policy-agent)# no policy-agent-image
```

b) Reinstall the policy agent and register the VSG with the new Prime Network Services Controller IP address by entering the following commands:

```
vsg# configure terminal
vsg(config)# vnm-policy-agent
vsg(config-vnmc-policy-agent)# registration-ip n.n.n.n
vsg(config-vnmc-policy-agent)# shared-secret MySharedSecret
vsg(config-vnmc-policy-agent)# policy-agent-image bootflash:xxxx-vsgpa.n.n.n.bin
vsg(config-vnmc-policy-agent)# copy running-config startup-config
```

The name of the policy agent image (vnmc-vsgpa.*n.n.n*.bin or nsc-vsgpa.*n.n.n*.bin) depends on whether you are using VMware or Hyper-V Hypervisor.

Updating Nexus 1000V Services After Changing the Prime Network Services Controller IP Address

If you change the IP address of the Prime Network Services Controller server, you must update vsm-service as follows so that Prime Network Services Controller can maintain communications with Nexus 1000V switches.

Before you begin

Obtain the Prime Network Services Controller debug plugin nsc-dplug.3.5.*n.x*.bin. If you need assistance in locating this file, contact the Cisco Technical Assistance Center.

You can contact the TAC over the phone or via the Web:

- Regional phone numbers are available at
  http://www.cisco.com/c/en/us/support/web/tsd-cisco-worldwide-contacts.html#numbers.

- To use the Web, go to http://www.cisco.com/cisco/web/support/index.html.

Step 1 Log in to Prime Network Services Controller via the console.

Step 2 Stop the pmon services by entering the following commands:

```
# connect local-mgmt
(local-mgmt)# service stop
```

Step 3   Load the Prime Network Services Controller debug plugin:

```
(local-mgmt)# update bootflash:/nsc-dplug.3.5.n.x.bin
```

A $ prompt is displayed when the **update bootflash** command is complete.

Step 4   Delete the database for the vsm-service:

```
$ sudo bash
# rm /opt/cisco/vsm-service/db/flash/dme.db
```

Step 5   Restart pmon services:

```
# connect local-mgmt
(local-mgmt)# service start
```

Step 6   Use the Prime Network Services Controller XML API to identify and delete the stale extpolClient object for vsm-service.

For more information, see the Cisco Prime Network Services Controller XML API Guide.

Troubleshooting Devices and Services

You can use to troubleshoot faults associated with managed devices and services.

SUMMARY STEPS

1. Choose **Resource Management > Managed Resources > root >** *tenant*.
2. In the Network Services tab, choose the required service or device, and then click **Edit**.
3. In the General tab, review the Status area for any issues or states affecting reachability, configuration, or association.
4. In the Faults tab, review the displayed faults. To view additional information about a fault, double-click the entry, or choose the entry and then click **Properties**.

DETAILED STEPS

Step 1   Choose **Resource Management > Managed Resources > root >** *tenant*.

Step 2   In the Network Services tab, choose the required service or device, and then click **Edit**.

Step 3   In the General tab, review the Status area for any issues or states affecting reachability, configuration, or association.

Step 4   In the Faults tab, review the displayed faults. To view additional information about a fault, double-click the entry, or choose the entry and then click **Properties**.