Installing Cisco Nexus 1000V for KVM

This chapter contains the following sections:

Steps to Install the Cisco Nexus 1000V for KVM

You can use the following high-level procedure to guide you through the installation process.

Before You Begin

- Decide on a deployment model. See Supported Topologies.

- Make sure that your network, servers, operating system, hypervisor, and MAAS deployment meet the minimum requirements. See System Requirements.

- Gather the required network information for the Juju configuration file (config.yaml file). See Canonical documentation at this URL: http://maas.ubuntu.com/docs/install.html.

- Gather the required network information for the global configuration file. See Preparing the Configuration and Mapping Files.

- Gather any unique network information for the VEMs. See Mapping File Parameters.

Procedure

	Command or Action	Purpose
Step 1	Install and configure MAAS.	See Installing and Configuring MAAS, on page 2.

	Command or Action	Purpose
Step 2	Install and configure Juju.	See Installing and Configuring Juju, on page 2.
Step 3	Install and configure the Cloud Archive OpenStack services.	See Installing and Configuring the Cloud Archive OpenStack Services, on page 3.
Step 4	Install and configure the Cisco Nexus 1000V for KVM.	See Installing and Configuring the Cisco Nexus 1000V for KVM, on page 4.
Step 5	Install and configure the VXLAN Gateway.	(Optional) See Installing and Configuring the VXLAN Gateway Using Juju Charms, on page 4.

Installing and Configuring MAAS

You need to install and configure MAAS. For detailed information about this procedure, see the Canonical documentation at this URL: http://maas.ubuntu.com/docs/install.html.

Procedure

Step 1 Install the following MAAS packages.

- maas

- maas-region-controller

- maas-cluster-controller

- maas-dhcp/maas-dns

Step 2 Set up the initial MAAS configuration:
a) Designate the MAAS server API URL.
b) Create a MAAS admin account.
c) Import the boot images (only necessary during the first time setup).
d) Configure DHCP.
e) Configure the immediate upstream switch to be in STP PortFast mode for fast convergence on ports in the forwarding state.

Installing and Configuring Juju

You need to install and configure Juju. For detailed information about this procedure, see the Canonical documentation at this URL http://juju.ubuntu.com/install.

The following procedure is required to deploy the Cisco Nexus 1000V for KVM.

Procedure

Step 1 Install a stable Juju-core.

Step 2 Synchronize the Juju cloud tool.

Step 3 Configure Juju.

    a) Generate the Juju configuration file.

    b) Customize the Juju configuration file in MAAS mode.

    c) Create a MAAS bootstrap node.

Installing and Configuring the Cloud Archive OpenStack Services

You install and configure the Cloud Archive OpenStack services using the jujucharm-n1k Debian package that you get from the Cisco Nexus 1000V for KVM Personal Package Archive.

For more details about this procedure, see the Canonical documentation at http://juju.ubuntu.com/docs/config-openstack.html.

Procedure

Step 1 Set up the virtual machines, physical servers, and/or local containers based on your deployment model.

Step 2 Enter the following command:
sudo apt-add-repository "https://*user:password*@private-ppa.launchpad.net/springfield-team/havana-staging-2013.2.2/ubuntu main"

Step 3 Enter the following command:
sudo apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv -keys *key-id*

Step 4 Enter the following command:
sudo apt-get update

Step 5 Enter the following command:
Note All the charms are contained in the tar file brought in by the jujucharm-n1k.

sudo apt-get install jujucharm-n1k

Step 6 Enter the following command:
cd ~

Step 7 Enter the following command:
tar zxf /opt/cisco/n1kv/charms/jujucharm-n1k-precise_5.2.1.sk1.2.2.YYYYMMDDhhmm.tar.gz

Step 8 Enter the following command:
cd ./jujucharm-n1k/charms

Step 9 Deploy the OpenStack services.

Note Certain OpenStack and Cisco Nexus 1000V for KVM services are packaged together in another charm Debian package that you download and install locally. For information about installing these services, see Installing and Configuring the Cisco Nexus 1000V for KVM, on page 4.

juju deploy -u --config *config-file* **--repository=. local:precise/***service*

Installing and Configuring the Cisco Nexus 1000V for KVM

Perform this procedure to install and configure the Cisco Nexus 1000V for KVM on a physical server or as a VM. To deploy the Cisco Nexus 1000V for KVM on a Cisco Cloud Services Platform, see Installing VSM on the Cisco Nexus Cloud Services Platform.

Before You Begin

Make sure that you have defined the necessary parameters in the global configuration file and mapping file for your deployment.

Procedure

Step 1 Deploy the primary VSM.

juju deploy –u --config *config-file* **--repository=. local:precise/vsm vsm-primary**

Step 2 Deploy the secondary VSM.

juju deploy –u --config *config-file* **--repository=. local:precise/vsm vsm-secondary**

Step 3 Deploy VEMs.

a) **juju deploy –u --config** *config-file* **--repository=. local:precise/vem**

b) **juju add-relation nova-compute vem**

c) **juju add-relation vsm:dvs vem:dvs**

d) **juju add-relation quantum-gateway vem**

e) (Optional) **juju set vem mapping=`cat** *host-mapping-file* **`**

Installing and Configuring the VXLAN Gateway Using Juju Charms

If you want to deploy the VXLAN Gateway with the Cisco Nexus 1000V for KVM, you can install the VXLAN Gateway using the vxlan-gateway charm. (Alternatively, you can install the VXLAN Gateway using an ISO file. For more information, see Installing and Configuring the VXLAN Gateway.)

Note The VXLAN Gateway is an optional addition to the Cisco Nexus 1000V for KVM deployment.

Before You Begin

Make sure that the Nova cloud controller is started before deploying the VXLAN Gateway charm. To start the Nova cloud controller, use the **juju status nova-cloud-controller** command.

Procedure

Step 1 Deploy the VXLAN Gateway.

a) **juju deploy –u --config** *config-file* **--repository=. local:precise/vxlan-gateway**

b) **juju add-relation nova-cloud-controller vxlan-gateway**

Step 2 Configure the VXLAN Gateway data and management interfaces.
For details, see Creating the VXLAN Gateway Data Interface and Creating a VXLAN Gateway Management Interface.