



Preparing for Installation

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Preparing the Configuration and Mapping Files

Before you can deploy the Cisco Nexus 1000V for KVM, you need to configure several charms with specific configuration information. You do this by defining specific charm parameters in a global configuration file that you create.



Note

You must maintain consistency between the global configuration file parameter names and the charm's config.yaml file parameter names. Do not introduce new parameter names in the global configuration file.

If your deployment requires it, you can deploy VEMs with unique configuration parameters instead of using the configuration parameters that are defined for all VEMs in the config.yaml file. To do this, you need to create a mapping file.

OpenStack Charm Parameters

You must modify the global configuration file for the following Cisco Nexus 1000V for KVM-related OpenStack charms:

- nova-cloud-controller
- nova-compute
- openstack-dashboard

- quantum-gateway

For each charm, define the openstack-origin parameter with the following value:

openstack-origin:deb

`https://user:password@private-ppa.launchpad.net/springfield-team/havana-staging-2013.2.2/ubuntu-precise main|key-id`

The following sections provide information about the OpenStack charm parameters that you need to define in the global configuration file.

nova-cloud-controller Charm Parameters

Parameter	Description
openstack-origin: <i>debian-pkg-location</i>	Location of the Cisco Nexus 1000V for KVM Debian package.
n1kv-vsm-username: <i>vsm-username</i>	Login for accessing the Cisco Nexus 1000V for KVM (VSM).
n1kv-vsm-password: <i>vsm-password</i>	Secure password for accessing the Cisco Nexus 1000V for KVM (VSM).
n1kv-vsm-ip: <i>vsm-ip-address</i>	IP address of the VSM.

This example shows the nova-cloud controller portion of the global configuration file:

```
nova-cloud-controller:
openstack-origin: deb
https://joe:wxYPMj1Ht0wCbWCLzLc@private-ppa.launchpad.net/springfield-team/havana-staging-2013.2.2/ubuntu-precise main|ABCDEFABCDEFABC
n1kv-vsm-username: nexus
n1kv-vsm-password: nexus123
n1kv-vsm-ip: 192.168.10.1
.
.
.
```

nova-compute Charm Parameters

Parameter	Description
openstack-origin: <i>debian-pkg-location</i>	Location of the Cisco Nexus 1000V for KVM Debian package.

This example shows the nova-compute portion of the global configuration file:

```
nova-compute:
openstack-origin: deb
https://joe:wxYPMj1Ht0wCbWCLzLc@private-ppa.launchpad.net/springfield-team/havana-staging-2013.2.2/ubuntu-precise main|ABCDEFABCDEFABC
.
.
.
```

quantum-gateway Charm Parameters

Parameter	Description
openstack-origin: <i>debian-pkg-location</i>	Location of the Cisco Nexus 1000V for KVM Debian package.
l3-agent: {enable disable}	Parameter for enabling or disabling the Layer 3 agent. Following are the valid values: <ul style="list-style-type: none"> • enable—Brings up the Linux router as part of the quantum-gateway. • disable—Does not bring up the Linux router.

This example shows the quantum-gateway portion of the global configuration file:

```
quantum-gateway:
openstack-origin: deb
https://joe:wyFMyJLHt0WcbWCLzLc@private-ppa.launchpad.net/springfield-team/havana-staging-2013.2.2/ubuntu
precise main|ABCDEFABCDEFABC
n1kv-agent: enable
.
.
```

openstack-dashboard Charm Parameters

Parameter	Description
openstack-origin: <i>debian-pkg-location</i>	Location of the Cisco Nexus 1000V for KVM Debian package.

This example shows the openstack-dashboard portion of the global configuration file:

```
openstack-dashboard:
openstack-origin: deb
https://joe:wyFMyJLHt0WcbWCLzLc@private-ppa.launchpad.net/springfield-team/havana-staging-2013.2.2/ubuntu
precise main|ABCDEFABCDEFABC
.
.
```

Cisco Nexus 1000V for KVM VSM Charm Parameters

This table lists the Cisco Nexus 1000V for KVM VSM charm parameters that you need to define in the global configuration file.

For the vsm charm, define the n1kv-source parameter with the following value:

```
n1kv-source:deb https://user:password@private-ppa.launchpad.net/springfield-team/n1kv-staging/ubuntu
precise main|key-id
```

Parameter	Description
n1kv-source: <i>debian-pkg-location</i>	Location of the Cisco Nexus 1000V for KVM Debian package.

Parameter	Description
n1kv-vsm-domain-id: <i>domain-id</i>	Domain number that the VSM will control.
n1kv-vsm-password: <i>vsm-password</i>	Secure password for accessing the Cisco Nexus 1000V for KVM (VSM).
n1kv-vsm-name: <i>vsm-name</i>	Name of the VSM.
n1kv-vsm-role: { primary secondary }	High availability role. Valid values are primary or secondary.
n1kv-vsm-ip: <i>management-IP-address</i>	IP address of the management interface.
n1kv-vsm-mgmt-netmask: <i>management-ip-subnet-mask</i>	IP address subnet mask of the management interface.
n1kv-vsm-gateway: <i>management-subnet-default-gateway</i>	IP address of the management subnet default gateway.
n1kv-vsm-ctrl-mac:	MAC address of the VSM's control TAP interface. This parameter is optional for the primary VSM, but required for the secondary VSM.
n1kv-vsm-mgmt-mac	MAC address of the VSM's management TAP interface. This parameter is optional for the primary VSM, but required for the secondary VSM.
n1kv-vsm-pkt-mac:	MAC address of the VSM's packet TAP interface. This parameter is optional for the primary VSM, but required for the secondary VSM.
n1kv-vsm-console-pts:	(Optional) Console port of the VSM VM.
n1kv-vsm-vm-vcpu:	(Optional) Number of vCPUs in the VSM VM. The default and recommended value is two vCPUs.
n1kv-vsm-disk-size:	(Optional) Disk size (GB) of the VSM VM.
n1kv-phy-intf-bridge:	(Optional) Host interface to which the VSM bridge is attached. The bridge connects the VSM with the upstream network. The default value is Ethernet 0 (eth0).

This example shows the primary VSM portion of the global configuration file:

```
vsm-primary:
n1kv-source: deb
https://joe:wxYPMYJLHt0WCbWCLzLc@https://private-ppa.launchpad.net/springfield-team/n1kv-staging/ubuntu
precise main|ABCDEFABCDEFABC
n1kv-vsm-domain-id: 101
n1kv-vsm-password: nexus123
```

```
nlkv-vsm-name: vsm-primary
nlkv-vsm-role: primary
nlkv-vsm-ip: 192.168.10.2
nlkv-vsm-mgmt-netmask: 255.255.255.0
nlkv-mgmt-gateway: 192.168.10.3
.
```

This example shows the secondary VSM portion of the global configuration file:

```
vsm-secondary:
nlkv-source: deb
https://joe:wxymyJlHt0WChwCLzLc@https://private-ppa.launchpad.net/springfield-team/nlkv-staging/ubuntu
  precise main|ABCDEFABCDEFABC
nlkv-vsm-domain-id: 101
nlkv-vsm-password: nexus123
nlkv-vsm-name: vsm-secondary
nlkv-vsm-role: secondary
nlkv-vsm-ip: 0.0.0.0
nlkv-vsm-mgmt-netmask: 0.0.0.0
nlkv-mgmt-gateway: 0.0.0.0
nlkv-vsm-ctrl-mac: 00:01:00:00:00:00
nlkv-vsm-mgmt-mac: 00:02:00:00:00:00
nlkv-vsm-pkt-mac: 00:03:00:00:00:00
.
```

Cisco Nexus 1000V for KVM VEM Charm Parameters

This table lists the Cisco Nexus 1000V for KVM VEM charm parameters. You define the parameters that will be the same among all of the VEMs in your network. For any parameters that you want to customize, you create a mapping file in YAML syntax in the MAAS node’s file system. In the mapping file, you configure a section for each node by using the node ID and include any of the VEM configuration parameters listed in this table.

For the vem charm, define the nlkv-source parameter with the following value:

```
nlkv-source:deb https://user:password@private-ppa.launchpad.net/springfield-team/nlkv-staging/ubuntu
precise main|key-id
```

Parameter	Description
nlkv-source: <i>debian-pkg-location</i>	Location of the Cisco Nexus 1000V for KVM Debian package.
vtep_config: <i>virt port-name profile profile-name</i> [<i>mode static dhcp [address ip-address]</i>]	Virtual Tunnel Endpoint (VTEP) port configuration. Only static IP and MAC addresses are supported.
nlkv-node_type: { <i>compute network</i> }	Type of node that the VEM is intended to be installed on. The default value is compute .
nlkv-vtep_in_same_subnet: { <i>yes no</i> }	Setting that indicates whether multiple VTEPs are located in the same subnet. The default value is no .

This example shows the VEM portion of the global configuration file:

```
vem:
nlkv-source: deb
```

```

https://joe:wxyPMYJlHt0WCbWCLzLc@private-ppa.launchpad.net/springfield-team/nlkv-staging/ubuntu
  precise main|ABCDEFABCDEFABC
vtep_config:
node_type: network
vtep_in_same_subnet: yes
vtep_config: 'virt vtep1-nw2 profile vxlan-vtep mode static address 6.0.8.253 netmask
255.255.0.0 mac 0e:1f:56:cf:82:53'

```

```

.
.
.

```

This example shows a mapping file with configuration parameters for two nodes. Each section is separated by the node ID. Within each section, node-specific parameters are defined because they are different from the ones in the config.yaml file.

```

maas-node-6:
  host_mgmt_intf: eth1
  uplink_profile: phys eth2 profile sys-uplink
maas-node-11:
  host-mgmt-intf: eth0
  uplink_profile: phys eth0 profile sys-uplink
  node_type: network
  vtep_config: 'virt vtep1-nw2 profile vxlan-vtep mode static address 6.0.8.253 netmask
255.255.0.0 mac 0e:1f:56:cf:82:53'

```

Cisco Nexus 1000V for KVM VXLAN Gateway Charm Parameters

You must modify the global configuration file for the vxlan-gateway charm.

The following table lists the Cisco Nexus 1000V for KVM VXLAN Gateway charm parameter that you need to define in the global configuration file.

For the vxlan-gateway charm, define the `n1kv-source` parameter with the following value:

n1kv-source:deb <https://user:password@private-ppa.launchpad.net/springfield-team/nlkv-staging/ubuntu-precise/main>|*key-id*

Parameter	Description
n1kv-source: <i>debian-pkg-location</i>	Location of the Cisco Nexus 1000V for KVM Debian package.

This example shows the VXLAN Gateway portion of the global configuration file:

```

vxlan-gateway:
n1kv-source: deb
https://joe:wxyPMYJlHt0WCbWCLzLc@https://private-ppa.launchpad.net/springfield-team/nlkv-staging/ubuntu
  precise main|ABCDEFABCDEFABC
.
.
.

```