Install Neutron

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Abstract:

On top of the OpenStack environment built up earlier, the installation of Neutron networking service will be guided through this document. Afterwards, a virtual switching infrastructure can be built.

The components waited to be installed included:

- 1. Neutron API server
- 2. Modular Layer 2 (ML2) plugin
- 3. DHCP agent
- 4. Metadata agent

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Creating the Neutron database on the controller node:
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```
# mysql
MariaDB [(none)] > create database neutron;
MariaDB [(none)] > grant all privileges on neutron.* to 'neutron'@'localhost'
identified by 'neutron';
MariaDB [(none)] > grant all privileges on neutron.* to 'neutron'@'%' identified
by 'neutron';
MariaDB [(none)] > quit;
Configuring the Neutron user, node, and endpoint in Keystone:
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```
On the controller node:
# source ~/adminrc
# openstack user create --domain Default --password=neutron neutron
# openstack role add --project service --user neutron admin
# openstack service create --name neutron --description "OpenStack Networking"
network
# openstack endpoint create --region RegionOne network public
http://controller01:9696
# openstack endpoint create --region RegionOne network internal
http://controller01:9696
# openstack endpoint create --region RegionOne network admin
http://controller01:9696
```

```
Installing Neutron packages:
On the controller node:
# apt -y install neutron-server neutron-dhcp-agent neutron-metadata-agent
neutron-plugin-ml2 python-neutronclient
On all other nodes:
# apt -y install neutron-plugin-ml2
On all nodes:
# nano /etc/neutron/neutron.conf
Update as:
[database]
connection = mysql+pymysql://neutron:neutron@controller01/neutron
[DEFAULT]
auth strategy = keystone
transport url = rabbit://openstack:rabbit@controller01
core plugin = ml2
[keystone authtoken]
auth uri = http://controller01:5000
```

auth_url = http://controller01:35357

```
memcached servers = controller01:11211
auth type = password
project domain name = default
user domain name = default
project name = service
username = neutron
password = neutron
On the controller node:
Update as:
[nova]
auth_url = http://controller01:35357
auth type = password
project domain name = default
user_domain_name = default
region name = RegionOne
project name = service
username = nova
password = nova
[DEFAULT]
dns domain = alvin.com
On the controller and compute nodes:
# nano /etc/nova/nova.conf
Updata as:
[neutron]
url = http://controller01:9696
auth url = <a href="http://controller01:35357">http://controller01:35357</a>
auth type = password
project domain name = default
user domain name = default
region name = RegionOne
project name = service
username = neutron
password = neutron
Starting neutron-server:
On the controller node:
# su -s /bin/sh -c "neutron-db-manage --config-file /etc/neutron/neutron.conf
--config-file /etc/neutron/plugins/ml2/ml2 conf.ini upgrade head" neutron
# systemctl restart nova-api nova-scheduler nova-conductor
On the compute nodes:
# systemctl restart nova-compute
On the controller node:
# systemctl restart neutron-server
Configuring the Neutron DHCP agent:
On the controller node:
# nano /etc/neutron/dhcp agent.ini
Update as:
[DEFAULT]
enable isolated metadata = True
Restarting the Neutron DHCP agent:
On the controller node:
# systemctl restart neutron-dhcp-agent
# systemctl status neutron-dhcp-agent
```

You should see something like this:

openstack network agent list --agent-type=dhcp

You should see something like this:

root@controller01: # openstack network agent listagent-type=dhcp						
I ID	Agent Type Host	l Availability Zone	l Alive	State	Binary	
cd86aadc=f5d6-42a0-a0f9-25ed9ee79f97 	DHCP agent controller01	nova 	:-)	UP	neutron-dhcp-agent	

Configuring the Neutron metadata agent:

```
On the controller node:
# nano /etc/nova/nova.conf
Update as:
[neutron]
...
service_metadata_proxy = true
metadata_proxy_shared_secret = MetadataSecret123
# nano /etc/neutron/metadata_agent.ini
Update as:
[DEFAULT]
...
nova_metadata_host = controller01
metadata_proxy_shared_secret = MetadataSecret123
```

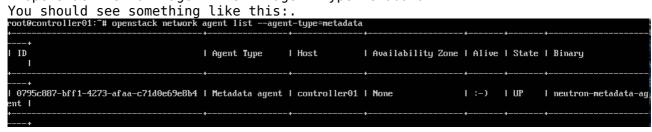
Restarting the Neutron metadata agnet:

```
On the controller node:
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systemctl restart nova-api neutron-metadata-agent
systemctl status neutron-metadata-agent

You should see something like this:

openstack network agent list --agent-type=metadata



Verifying the Neutron has been installed properly:

Check the dashboard through a web browser: http://controller01/horizon/ You should see this view:

