**Installation and Configure Nova**

**Step 1: Create the nova user**

# openstack user create --domain default --password service\_pass nova

**Step 2: Add the admin role to the nova user**

# openstack role add --project service --user nova admin

**Step 3: Create the nova service entity**

# openstack service create --name nova --description "OpenStack Compute" compute

**Step 4: Create the Compute service API endpoints**

# openstack endpoint create --region RegionOne compute public <http://192.168.0.180:8774/v2.1>

**Step 5: Create the Compute service API endpoints**

# openstack endpoint create --region RegionOne compute internal <http://10.10.100.181:8774/v2.1>

**Step 6: Create the Compute service API endpoints**

# openstack endpoint create --region RegionOne compute admin <http://10.10.100.181:8774/v2.1>

**Step 7: Create a Placement service user**

# openstack user create --domain default --password service\_pass placement

**Step 8: Add the Placement user to the service project with the admin role**

# openstack role add --project service --user placement admin

**Step 9: Create the Placement API entity**

# openstack service create --name placement --description "Placement API" placement

**Step 10: Create the Placement API endpoints**

# openstack endpoint create --region RegionOne placement public <http://192.168.0.180:8778>

**Step 11: Create the Placement API endpoints**

# openstack endpoint create --region RegionOne placement internal <http://10.10.100.181:8778>

**Step 12: Create the Placement API endpoints**

# openstack endpoint create --region RegionOne placement admin <http://10.10.100.181:8778>

**Step 13:** **Install Nova Components**

# yum install openstack-nova-api openstack-nova-conductor openstack-nova-console openstack-nova-novncproxy openstack-nova-scheduler openstack-nova-placement-api openstack-nova-compute -y

**Step 14:** **Login to database**

# mysql -u root -proot1234

# CREATE DATABASE nova;

GRANT ALL ON nova.\* TO 'novaUser'@'%' IDENTIFIED BY 'novaPass';

CREATE DATABASE nova\_api;

GRANT ALL ON nova\_api.\* TO 'novaUser'@'%' IDENTIFIED BY 'novaPass';

CREATE DATABASE nova\_cell0;

GRANT ALL ON nova\_cell0.\* TO 'novaUser'@'%' IDENTIFIED BY 'novaPass';

CREATE DATABASE placement;

GRANT ALL ON placement.\* TO 'novaUser'@'%' IDENTIFIED BY 'novaPass';

quit;

##### Step 15: Modify the /etc/nova/nova.conf

# vim /etc/nova/nova.conf

**[Default]**

my\_ip = 10.10.100.181

use\_neutron = True

enabled\_apis = osapi\_compute,metadata

firewall\_driver = nova.virt.firewall.NoopFirewallDriver

transport\_url = rabbit://openstack:rabbit@10.10.100.181

**[api]**

auth\_strategy=keystone

**[api\_database]**

connection=mysql+pymysql://novaUser:novaPass@10.10.100.181/nova\_api

**[database]**

connection=mysql+pymysql://novaUser:novaPass@10.10.100.181/nova

**[placement\_database]**

connection=mysql+pymysql://novaUser:novaPass@10.10.100.181/placement

**[cinder]**

os\_region\_name = RegionOne

**[glance]**

api\_servers = http://10.10.100.181:9292

**[keystone\_authtoken]**

auth\_uri = http://10.10.100.181:5000

auth\_url = http://10.10.100.181:5000/v3

memcached\_servers = 10.10.100.181:11211

auth\_type = password

project\_domain\_name = default

user\_domain\_name = default

project\_name = service

username = nova

password = service\_pass

**[neutron]**

service\_metadata\_proxy = True

metadata\_proxy\_shared\_secret = mystack

url = <http://10.10.100.181:9696>

auth\_url = <http://10.10.100.181:5000>

auth\_type = password

project\_domain\_name = default

user\_domain\_name = default

region\_name = RegionOne

project\_name = service

username = neutron

password = service\_pass

**[oslo\_concurrency]**

lock\_path = /var/lib/nova/tmp

**[placement]**

os\_region\_name = RegionOne

project\_domain\_name = Default

project\_name = service

auth\_type = password

user\_domain\_name = Default

auth\_url = http://10.10.100.181:5000/v3

username = placement

password = service\_pass

**[vnc]**

enabled = True

server\_listen = 0.0.0.0

server\_proxyclient\_address = 10.10.100.181

novncproxy\_base\_url = <http://192.168.0.180:6080/vnc_auto.html>

**[libvirt]**

virt\_type = qemu

cpu\_mode = none

##### Step 16: Modify the /etc/httpd/conf.d/00-nova-placement-api.conf

# vim /etc/httpd/conf.d/00-nova-placement-api.conf

<Directory /usr/bin>

<IfVersion >= 2.4>

Require all granted

</IfVersion>

<IfVersion < 2.4>

Order allow,deny

Allow from all

</IfVersion>

</Directory>

# systemctl restart httpd.service

**Step 17: Synchronize your database**

**a. Populate the nova-api database**

# su -s /bin/sh -c "nova-manage api\_db sync" nova

**b. Register the cell0 database**

# su -s /bin/sh -c "nova-manage cell\_v2 map\_cell0" nova

**c. Create the cell1 cell**

# su -s /bin/sh -c "nova-manage cell\_v2 create\_cell --name=cell1 --verbose" nova

**d. Populate the nova database**

# su -s /bin/sh -c "nova-manage db sync" nova

**e. Verify nova cell0 and cell1 are registered correctly**

**#** nova-manage cell\_v2 list\_cells

**Step 18:** **Enable all the Nova services and start all the Nova Services**

# systemctl enable openstack-nova-api.service openstack-nova-conductor.service openstack-nova-consoleauth.service openstack-nova-novncproxy.service openstack-nova-scheduler.service libvirtd.service openstack-nova-compute.service

# systemctl start openstack-nova-api.service openstack-nova-conductor.service openstack-nova-consoleauth.service openstack-nova-novncproxy.service openstack-nova-scheduler.service libvirtd.service openstack-nova-compute.service

**Step 19: Synchronize**

**Verify nova cell0 and cell1 are registered correctly**

**#** su -s /bin/sh -c "nova-manage cell\_v2 discover\_hosts --verbose" nova

**Step 20:** **Check for the smiling faces on nova-\* services to confirm your installation**

# openstack compute service list