OpenStack and VM setup – Dell Server

Here Packstack installation on CentOS is shown as an example of installation

1. **Download packstack/openstack on the server OS using wget commands**

```
yum install -y https://www.rdoproject.org/repos/rdo-release.rpm
```

```
[root@localhost ~]# yum install -y https://www.rdoproject.org/repos/rdo-release.
rpm
Loaded plugins: fastestmirror
rdo-release.rpm                                             | 6.4 kB     00:00
Examining /var/tmp/yum-root-dunjke/rdo-release.rpm: rdo-release-stein-3.noarch
Marking /var/tmp/yum-root-dunjke/rdo-release.rpm to be installed
Resolving Dependencies
--> Running transaction check
---> Package rdo-release.noarch 0:stein-3 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

================================================================================
 Package             Arch           Version          Repository            Size
================================================================================
Installing:
 rdo-release         noarch         stein-3          /rdo-release         3.1 k

Transaction Summary
================================================================================
Install  1 Package

Total size: 3.1 k
Installed size: 3.1 k
Downloading packages:
```

2. **Update all the packages and repositories on the Server OS**

```
yum update -y
```

```
[root@localhost ~]# yum update -y
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
 * base: mirrors.tummy.com
 * extras: mirrors.tummy.com
 * openstack-stein: mirrors.tummy.com
 * rdo-qemu-ev: mirrors.tummy.com
 * updates: mirrors.tummy.com
openstack-stein                                          | 2.9 kB     00:00
rdo-qemu-ev                                              | 2.9 kB     00:00
(1/2): rdo-qemu-ev/x86_64/primary_db                       |  73 kB   00:00
(2/2): openstack-stein/x86_64/primary_db                   | 1.0 MB   00:00
Resolving Dependencies
--> Running transaction check
---> Package NetworkManager.x86_64 1:1.18.0-5.el7 will be updated
---> Package NetworkManager.x86_64 1:1.18.0-5.el7_7.1 will be an update
---> Package NetworkManager-libnm.x86_64 1:1.18.0-5.el7 will be updated
---> Package NetworkManager-libnm.x86_64 1:1.18.0-5.el7_7.1 will be an update
---> Package NetworkManager-team.x86_64 1:1.18.0-5.el7 will be updated
```

3. **Install openstack/packstack from the downloaded file**

```
yum install -y openstack-packstack
```

```
Complete!
[root@localhost ~]# yum install -y openstack-packstack
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
 * base: mirrors.tummy.com
 * extras: mirrors.tummy.com
 * openstack-stein: mirrors.syringanetworks.net
 * rdo-qemu-ev: mirror.fileplanet.com
 * updates: mirrors.tummy.com
Resolving Dependencies
--> Running transaction check
---> Package openstack-packstack.noarch 1:14.0.0-1.el7 will be installed
--> Processing Dependency: openstack-packstack-puppet = 1:14.0.0-1.el7 for packa
ge: 1:openstack-packstack-14.0.0-1.el7.noarch
--> Processing Dependency: python2-pyOpenSSL >= 16.2.0 for package: 1:openstack-
packstack-14.0.0-1.el7.noarch
--> Processing Dependency: python2-setuptools for package: 1:openstack-packstack
-14.0.0-1.el7.noarch
--> Processing Dependency: python2-pbr for package: 1:openstack-packstack-14.0.0
-1.el7.noarch
--> Processing Dependency: python2-netaddr for package: 1:openstack-packstack-14
.0.0-1.el7.noarch
--> Processing Dependency: python-netifaces for package: 1:openstack-packstack-1
4.0.0-1.el7.noarch
```

4. **Run and install everything related to packstack using all-in-one command:**

```
packstack –allinone
```

```
Complete!
[root@localhost ~]# packstack --allinone
Welcome to the Packstack setup utility

The installation log file is available at: /var/tmp/packstack/20200204-002411-19
CN3i/openstack-setup.log
Packstack changed given value  to required value /root/.ssh/id_rsa.pub

Installing:
Clean Up                                             [ DONE ]
Discovering ip protocol version                      [ DONE ]
Setting up ssh keys                                  [ DONE ]
```

5. **Final setup output will look like this:**

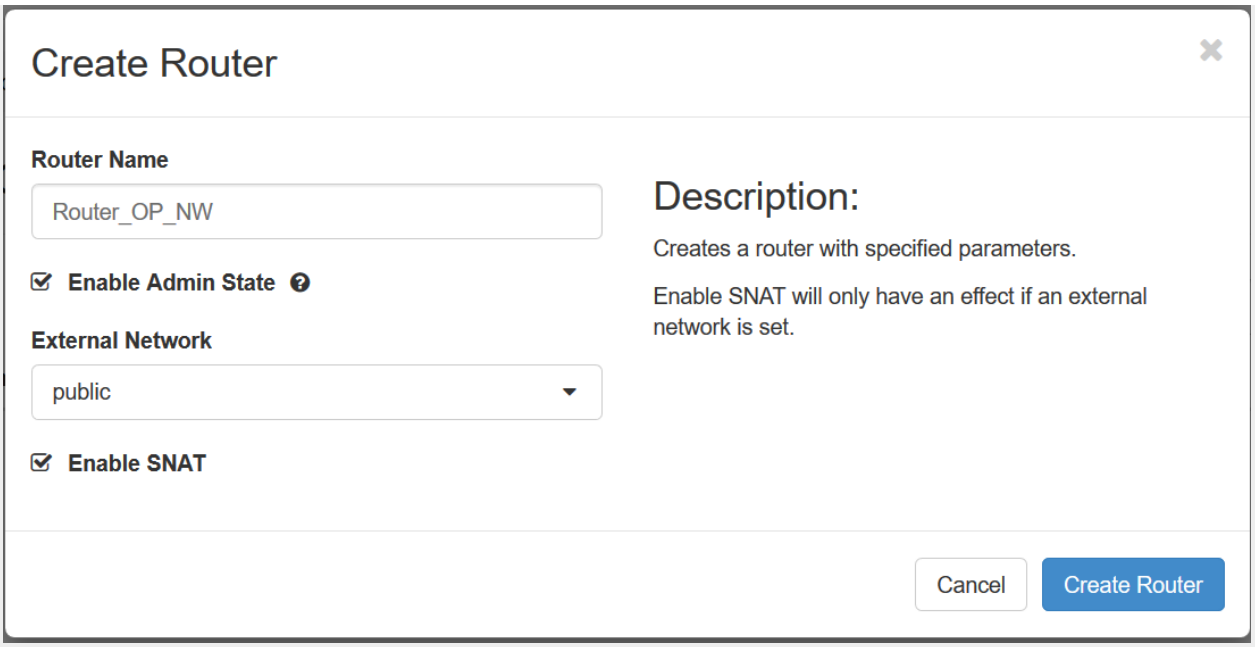
```
* A new answerfile was created in: /root/packstack-answers-20200204-002413.txt
* Time synchronization installation was skipped. Please note that unsynchronized time on server instances might be problem for some OpenStack components.
* Warning: NetworkManager is active on 10.0.2.15. OpenStack networking currently does not work on systems that have the Network Manager service enabled.
* File /root/keystonerc_admin has been created on OpenStack client host 10.0.2.15. To use the command line tools you need to source the file.
* To access the OpenStack Dashboard browse to http://10.0.2.15/dashboard .
Please, find your login credentials stored in the keystonerc_admin in your home directory.
[root@localhost ~]#
```

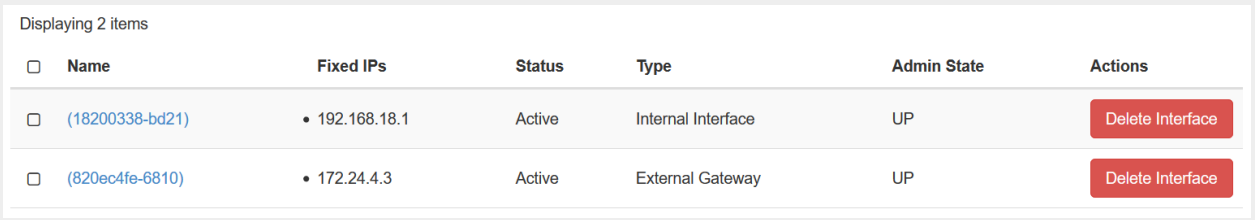
VM Installation on OpenStack

1 . Create Network instances for VM connectivity using OpenStack dashboard:

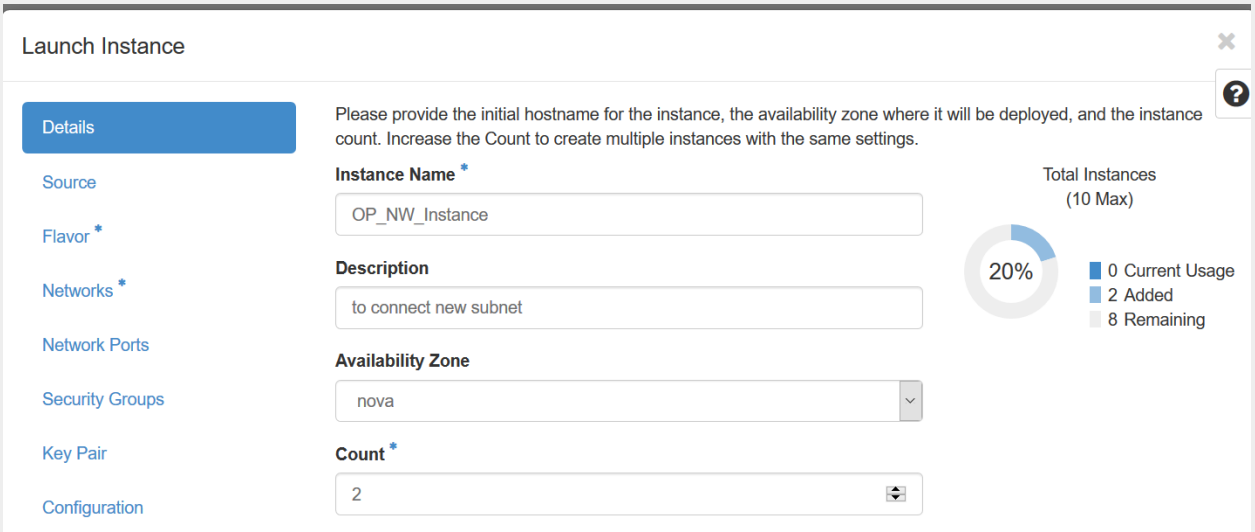
Name	OP_NW1_SN
ID	9c0899bc-bd11-4a1d-8224-64a047d644bb
Project ID	0a364f8faedd44afa51f2c52d7a10663
Network Name	OP_NW1
Network ID	d71a9a93-5913-4206-81c0-4d8f6d236f0f
Subnet Pool	None
IP Version	IPv4
CIDR	192.168.18.0/26
IP Allocation Pools	Start 192.168.18.2 - End 192.168.18.32
Gateway IP	192.168.18.1
DHCP Enabled	Yes
Additional Routes	None
DNS Name Servers	8.8.8.8

2. Create a router instance and connect the created networks to the router interface for intra-domain and internet connectivity

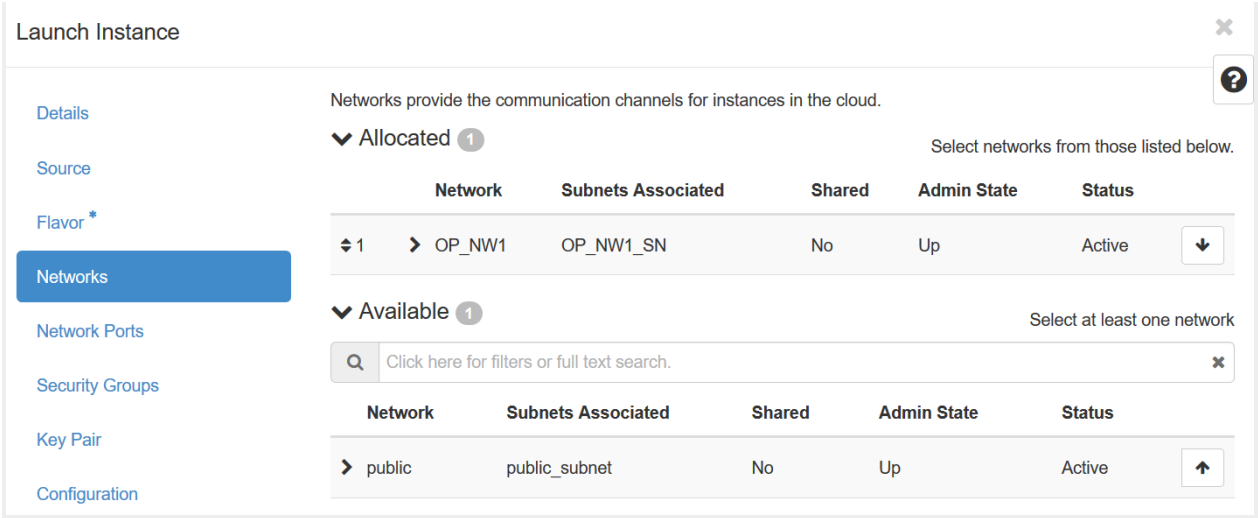




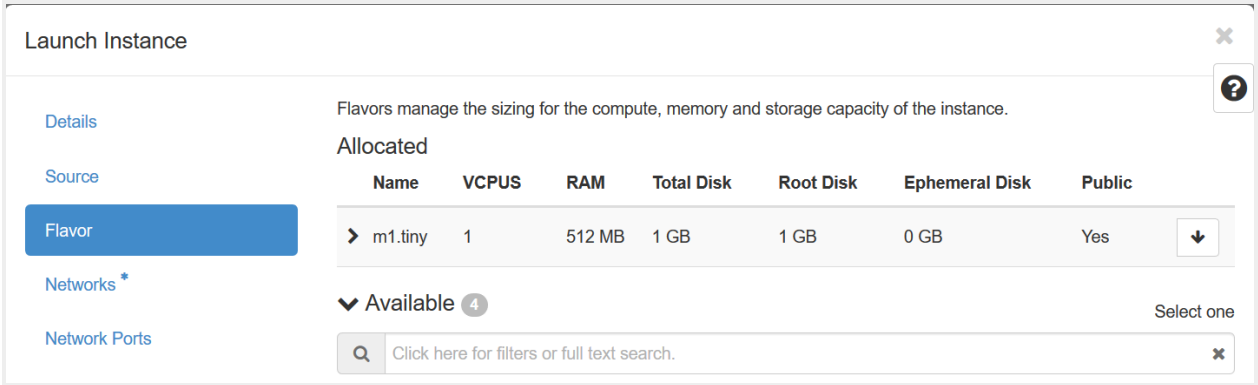
3. Using instance tab, create 5 VM instances with the image of your choice



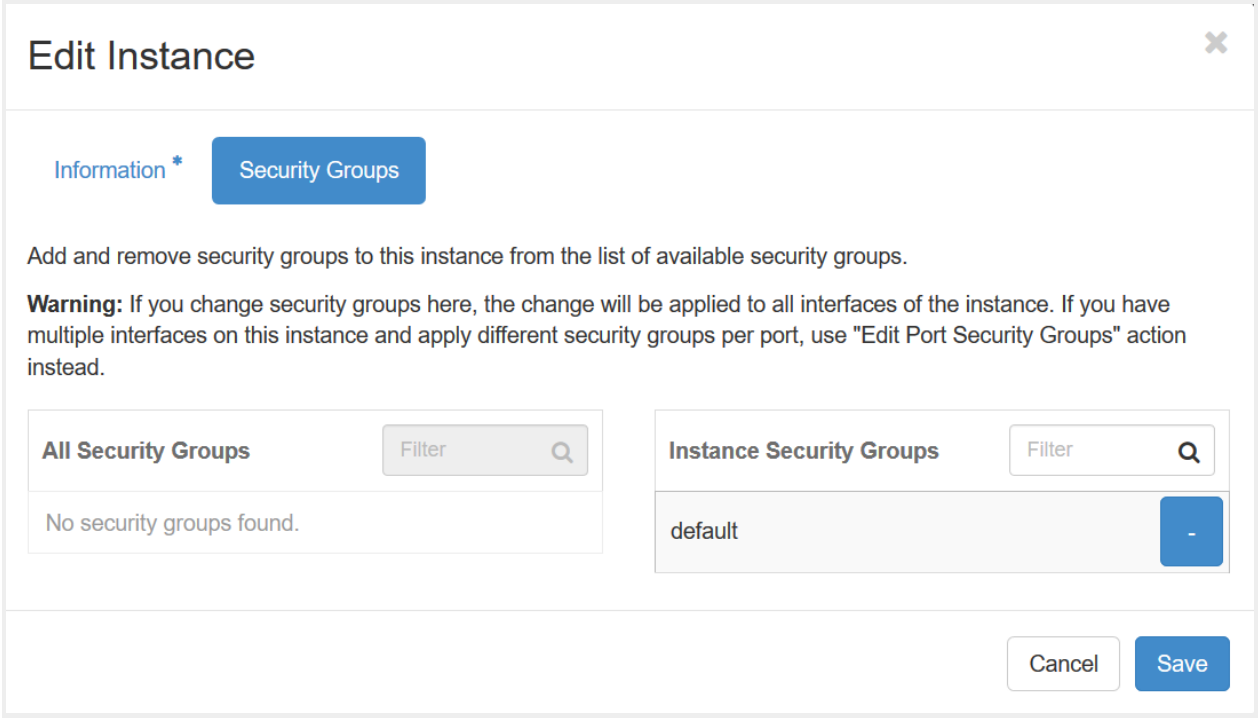
Add the network to the instances



Assign the flavor and memory requirements for the instances



Add the other security domains



Launch the instances, VMs are ready for the project

Displaying 2 items

Instance Name	Image Name	IP Address	Flavor	Key Pair	Status	Availability Zone	Task	Power State	Age	Actions
TestVM-2	cirros	192.168.18.28	m1.tiny	manesh	Active	nova	None	Running	1 minute	Create Snapshot
TestVM-1	cirros	192.168.18.29	m1.tiny	manesh	Active	nova	None	Running	1 minute	Create Snapshot

Displaying 2 items