

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 package: 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-14.0.0-1.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/keystone_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 keystone_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

Create Router

Router Name

Router_OP_NW

☒ Enable Admin State ?

External Network

public

☒ Enable SNAT

Description:

Creates a router with specified parameters.

Enable SNAT will only have an effect if an external network is set.

Cancel

Create Router

Displaying 2 items

<input type="checkbox"/>	Name	Fixed IPs	Status	Type	Admin State	Actions
<input type="checkbox"/>	(18200338-bd21)	• 192.168.18.1	Active	Internal Interface	UP	Delete Interface
<input type="checkbox"/>	(820ec4fe-6810)	• 172.24.4.3	Active	External Gateway	UP	Delete Interface

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

Launch Instance

Details

Source

Flavor *

Networks *

Network Ports

Security Groups

Key Pair

Configuration

Please provide the initial hostname for the instance, the availability zone where it will be deployed, and the instance count. Increase the Count to create multiple instances with the same settings.

Instance Name *

OP_NW_Instance

Description

to connect new subnet

Availability Zone

nova

Count *

2

Total Instances (10 Max)

20%

0 Current Usage

2 Added

8 Remaining

Add the network to the instances

Launch Instance

Details

Source

Flavor *

Networks

Network Ports

Security Groups

Key Pair

Configuration

Networks provide the communication channels for instances in the cloud.

▼ Allocated 1

Select networks from those listed below.

	Network	Subnets Associated	Shared	Admin State	Status	
1	OP_NW1	OP_NW1_SN	No	Up	Active	↓

▼ Available 1

Select at least one network

Q	Click here for filters or full text search.					X
	Network	Subnets Associated	Shared	Admin State	Status	
	public	public_subnet	No	Up	Active	↑

Assign the flavor and memory requirements for the instances

Launch Instance

Details

Source

Flavor

Networks *

Network Ports

Flavors manage the sizing for the compute, memory and storage capacity of the instance.

Allocated

	Name	VCPUS	RAM	Total Disk	Root Disk	Ephemeral Disk	Public	
	m1.tiny	1	512 MB	1 GB	1 GB	0 GB	Yes	↓

▼ Available 4

Select one

Q	Click here for filters or full text search.					X
---	---	--	--	--	--	---

Add the other security domains

Edit Instance

Information *

Security Groups

Add and remove security groups to this instance from the list of available security groups.

Warning: If you change security groups here, the change will be applied to all interfaces of the instance. If you have multiple interfaces on this instance and apply different security groups per port, use "Edit Port Security Groups" action instead.

All Security Groups

Filter



No security groups found.

Instance Security Groups

Filter



default



Cancel

Save

Launch the instances, VMs are ready for the project

Displaying 2 items

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

Displaying 2 items