

Install OpenStack Ussuri on RHEL 8

Precondition

1. Minimum dual core processor that supports hardware virtualization
2. Minimum RAM 8GB
3. Minimum 40GB disk
4. Stable internet connection
5. At least one network adapter
6. RHEL 8 Operating System
7. Red Hat Developer Subscription

1. Set Hostname

```
# hostnamectl set-hostname cloud.local  
# exec bash
```

2. Subscribe

```
# subscription-manager register  
# subscription-manager attach --auto  
# yum repolist
```

3. Install Network Scripts

```
dnf install -y network-scripts
```

```
root@localhost:~
File Edit View Search Terminal Help
[root@cloud ~]# subscription-manager register
Registering to: subscription.rhsm.redhat.com:443/subscription
Username: achikam2
Password:
The system has been registered with ID: 921e61d9-379a-4902-b629-c5b209b41f8d
The registered system name is: cloud
[root@cloud ~]#
[root@cloud ~]# subscription-manager attach --auto
Installed Product Current Status:
Product Name: Red Hat Enterprise Linux for x86_64
Status:      Subscribed

[root@cloud ~]# yum repolist
Updating Subscription Management repositories.
Red Hat Enterprise Linux 8 for x86_64 - AppStream (RPMs)          1.3 MB/s | 19 MB    00:14
Red Hat Enterprise Linux 8 for x86_64 - BaseOS (RPMs)           1.6 MB/s | 19 MB    00:12
Last metadata expiration check: 0:00:03 ago on Thu 23 Jul 2020 01:31:32 PM WIB.
repo id                repo name                status
rhel-8-for-x86_64-appstream-rpms  Red Hat Enterprise Linux 8 for x86_64 - AppStream (RPMs)  10,925
rhel-8-for-x86_64-baseos-rpms    Red Hat Enterprise Linux 8 for x86_64 - BaseOS (RPMs)     4,938
[root@cloud ~]#
[root@cloud ~]# dnf install -y network-scripts
Updating Subscription Management repositories.
Last metadata expiration check: 0:00:55 ago on Thu 23 Jul 2020 01:31:32 PM WIB.
Dependencies resolved.
=====
Package                Arch      Version                Repository              Size
=====
Installing:
network-scripts        x86_64    10.00.6-1.el8_2.1      rhel-8-for-x86_64-baseos-rpms 195 k
Upgrading:
initscripts            x86_64    10.00.6-1.el8_2.1      rhel-8-for-x86_64-baseos-rpms 338 k
Installing weak dependencies:
network-scripts-team    x86_64    1.29-1.el8             rhel-8-for-x86_64-baseos-rpms 26 k
=====
Transaction Summary
=====
```

```
# systemctl disable firewalld NetworkManager
# systemctl stop firewalld NetworkManager
# systemctl enable network
# systemctl start network
```

```
root@localhost:~
File Edit View Search Terminal Help
[root@cloud ~]# systemctl disable firewalld NetworkManager
Removed /etc/systemd/system/multi-user.target.wants/NetworkManager.service.
Removed /etc/systemd/system/multi-user.target.wants/firewalld.service.
Removed /etc/systemd/system/dbus-org.freedesktop.NetworkManager.service.
Removed /etc/systemd/system/dbus-org.freedesktop.nm-dispatcher.service.
Removed /etc/systemd/system/network-online.target.wants/NetworkManager-wait-online.service.
Removed /etc/systemd/system/dbus-org.fedoraproject.FirewallD1.service.
[root@cloud ~]#
[root@cloud ~]# systemctl stop firewalld NetworkManager
[root@cloud ~]#
[root@cloud ~]# systemctl enable network
network.service is not a native service, redirecting to systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable network
[root@cloud ~]#
[root@cloud ~]# systemctl start network
[root@cloud ~]#
[root@cloud ~]#
```

```
# dnf install -y dnf-utils
```

4. Update Grub

```
# vi /etc/default/grub
```

```
GRUB_CMDLINE_LINUX="crashkernel=auto resume=/dev/mapper/rhel-swap
rd.lvm.lv=rhel/root rd.lvm.lv=rhel/swap rhgb quiet intel_iommu=on"
```

```
root@localhost:~
File Edit View Search Terminal Help
[root@cloud ~]# vi /etc/default/grub
[root@cloud ~]# grep GRUB_CMDLINE_LINUX /etc/default/grub
GRUB_CMDLINE_LINUX="crashkernel=auto resume=/dev/mapper/rhel-swap rd.lvm.lv=rhel/root rd.lvm.lv=rhel/swap
rhgb quiet intel_iommu=on"
[root@cloud ~]#
[root@cloud ~]# grub2-mkconfig -o /boot/grub2/grub.cfg
Generating grub configuration file ...
done
[root@cloud ~]#
[root@cloud ~]#
```

```
# grub2-mkconfig -o /boot/grub2/grub.cfg
```

5. Set selinux permissive

```
# setenforce 0
```

```
# vi /etc/selinux/config
```

```
....
```

```
SELINUX=permissive
```

```
root@localhost:~  
File Edit View Search Terminal Help  
[root@cloud ~]# setenforce 0  
[root@cloud ~]# vi /etc/selinux/config  
[root@cloud ~]# grep ^SELINUX= /etc/selinux/config  
SELINUX=permissive  
[root@cloud ~]#  
[root@cloud ~]#
```

6. Install RDO Repository by OpenStack Project

```
# systemc
```

```
# subscription-manager repos --enable codeready-builder-for-rhel-8-  
x86_64-rpms
```

```
# dnf update -y
```

7. Installing Packstack Installer

```
dnf install -y openstack-packstack
```

8. Run Packstack to deploy OpenStack

1. There are two ways to deploy OpenStack on RHEL 8 using packstack:

Deploy using the default configuration. The command:

```
# packstack --allinone
```

2. Deploy using a customized configuration, meaning that changes have been made to the configuration file. The configuration file that will be used to install OpenStack can be generated by:

```
# packstack --gen-answer-file /root/packstack-answers.txt
```

9. Review the resulting file to ensure that the values set are appropriate for use. This file has information such as services to be installed, storage configuration, networking, etc. Furthermore, after changing the contents of the configuration file according to usage requirements, do the installation by:

```
# packstack --answer-file /root/packstack-answers.txt
```

Check Openstack Packages and Services

Open the file /root/keystone_admin to get the information containing the openstack credentials then run the following command to see the installed packages and services from openstack:

```
# cat keystone_admin
```

```
# yum list installed | grep ^openstack-*
```

```
(keystone_admin)
```

```
# openstack service list
```

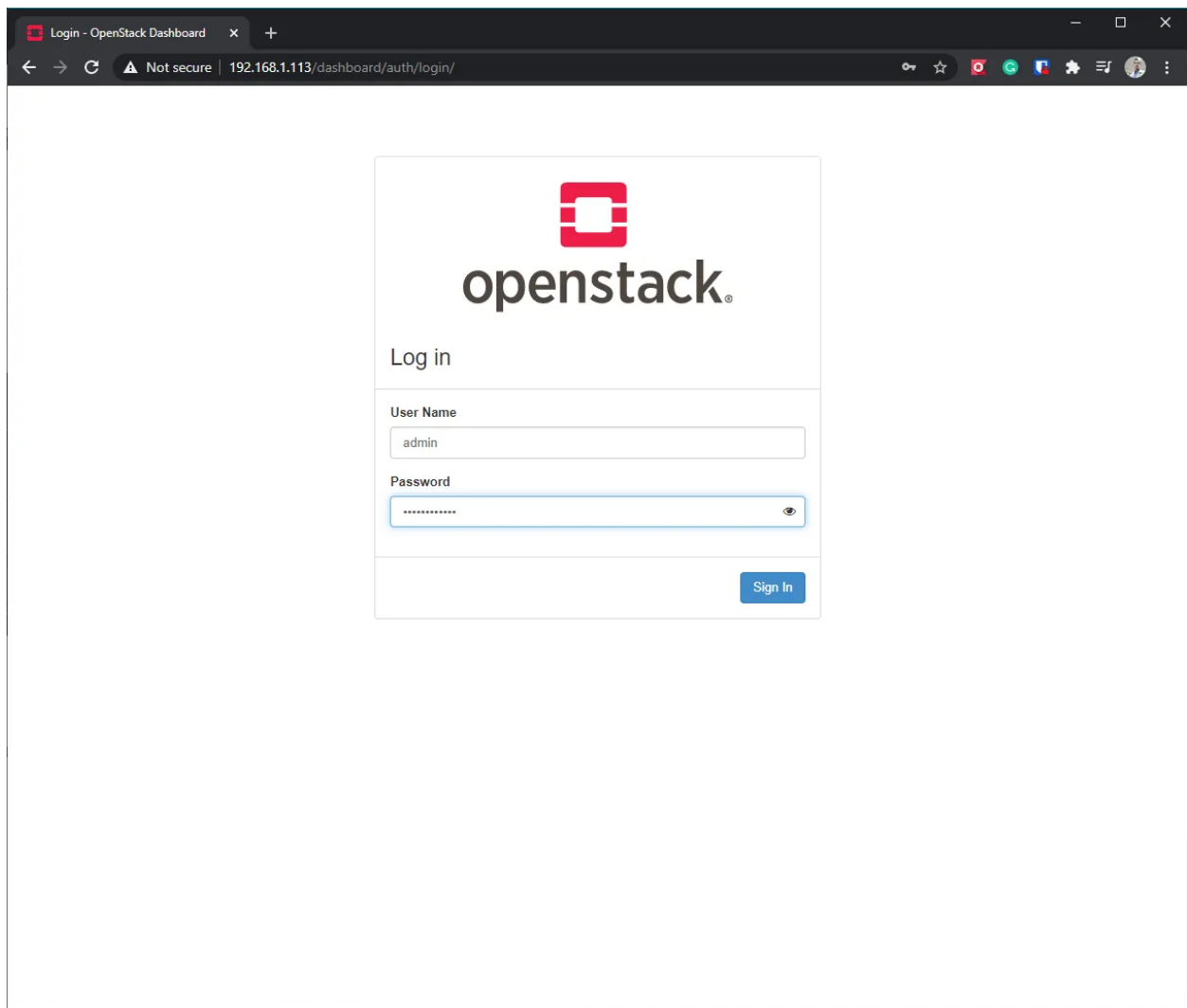
```
root@localhost:~  
File Edit View Search Terminal Help  
[root@cloud ~]# cat keystone_admin  
unset OS_SERVICE_TOKEN  
export OS_USERNAME=admin  
export OS_PASSWORD='b0ssd75sgD689se'  
export OS_REGION_NAME=RegionOne  
export OS_AUTH_URL=http://192.168.1.113:5000/v3  
export PS1='\u@\h \W(keystone_admin)]\$ '  
  
export OS_PROJECT_NAME=admin  
export OS_USER_DOMAIN_NAME=Default  
export OS_PROJECT_DOMAIN_NAME=Default  
export OS_IDENTITY_API_VERSION=3  
  
[root@cloud ~]#  
[root@cloud ~]#
```

```
root@cloud:~  
File Edit View Search Terminal Help  
[root@cloud ~(keystone_admin)]# yum list installed | grep ^openstack-*  
openstack-aodh-api.noarch 10.0.0-1.el8 @openstack-ussuri  
openstack-aodh-common.noarch 10.0.0-1.el8 @openstack-ussuri  
openstack-aodh-evaluator.noarch 10.0.0-1.el8 @openstack-ussuri  
openstack-aodh-listener.noarch 10.0.0-1.el8 @openstack-ussuri  
openstack-aodh-notifier.noarch 10.0.0-1.el8 @openstack-ussuri  
openstack-ceilometer-common.noarch 1:14.0.0-1.el8 @openstack-ussuri  
openstack-ceilometer-ipmi.noarch 1:14.0.0-1.el8 @openstack-ussuri  
openstack-ceilometer-notification.noarch 1:14.0.0-1.el8 @openstack-ussuri  
openstack-ceilometer-polling.noarch 1:14.0.0-1.el8 @openstack-ussuri  
openstack-cinder.noarch 1:16.1.0-1.el8 @openstack-ussuri  
openstack-dashboard.noarch 1:18.3.2-1.el8 @openstack-ussuri  
openstack-dashboard-theme.noarch 1:18.3.2-1.el8 @openstack-ussuri  
openstack-glance.noarch 1:20.0.0-1.el8 @openstack-ussuri  
openstack-keystone.noarch 1:17.0.0-1.el8 @openstack-ussuri  
openstack-neutron.noarch 1:16.0.0-1.el8 @openstack-ussuri  
openstack-neutron-common.noarch 1:16.0.0-1.el8 @openstack-ussuri  
openstack-neutron-ml2.noarch 1:16.0.0-1.el8 @openstack-ussuri  
openstack-neutron-ovn-metadata-agent.noarch 1:16.0.0-1.el8 @openstack-ussuri  
openstack-nova-api.noarch 1:21.0.0-1.el8 @openstack-ussuri  
openstack-nova-common.noarch 1:21.0.0-1.el8 @openstack-ussuri  
openstack-nova-compute.noarch 1:21.0.0-1.el8 @openstack-ussuri  
openstack-nova-conductor.noarch 1:21.0.0-1.el8 @openstack-ussuri  
openstack-nova-migration.noarch 1:21.0.0-1.el8 @openstack-ussuri  
openstack-nova-novncproxy.noarch 1:21.0.0-1.el8 @openstack-ussuri  
openstack-nova-scheduler.noarch 1:21.0.0-1.el8 @openstack-ussuri  
openstack-packstack.noarch 1:16.0.0-1.el8 @openstack-ussuri  
openstack-packstack-puppet.noarch 1:16.0.0-1.el8 @openstack-ussuri  
openstack-placement-api.noarch 3.0.0-1.el8 @openstack-ussuri  
openstack-placement-common.noarch 3.0.0-1.el8 @openstack-ussuri  
openstack-selinux.noarch 0.8.23-1.el8 @openstack-ussuri  
openstack-swift-account.noarch 2.25.0-1.el8 @openstack-ussuri  
openstack-swift-container.noarch 2.25.0-1.el8 @openstack-ussuri  
openstack-swift-object.noarch 2.25.0-1.el8 @openstack-ussuri  
openstack-swift-proxy.noarch 2.25.0-1.el8 @openstack-ussuri  
[root@cloud ~(keystone_admin)]#  
[root@cloud ~(keystone_admin)]#
```

```
root@cloud:~  
File Edit View Search Terminal Help  
[root@cloud ~]# . keystone_admin  
[root@cloud ~(keystone_admin)]# openstack service list  
+-----+-----+-----+  
| ID | Name | Type |  
+-----+-----+-----+  
| 153bc375853649b68939d198b477aadb | keystone | identity |  
| 24eb69a43bc544558c72e67e8d3c306e | cinderv3 | volumev3 |  
| 40d3845469354d8db571b4bf2cec108e | ceilometer | metering |  
| 58b4cdefd3c74a58bacf51e7a83ddf18 | gnocchi | metric |  
| 6fca13e56bec465c9b0473b5f30e3c02 | aodh | alarming |  
| a1d361f1f36f43feb27d0bea00a3b9bd | nova | compute |  
| ad7eeef4a7074e3fb2e0075c574910cd | neutron | network |  
| b38f12a3731747fda6246e014e954dad | cinderv2 | volumev2 |  
| b4bd70776db34a4f842c7e29ea7d0402 | placement | placement |  
| b74e3a06729b4a1dbf433d6ecd3a53fb | glance | image |  
| b8009a8cf4b046aea4f3e7fe651b596f | swift | object-store |  
+-----+-----+-----+  
[root@cloud ~(keystone_admin)]#  
[root@cloud ~(keystone_admin)]# curl http://192.168.1.113:5000/v3  
{"version": {"id": "v3.14", "status": "stable", "updated": "2020-04-07T00:00:00Z", "links": [{"rel": "self", "href": "http://127.0.0.1:5000/v3/"}], "media-types": [{"base": "application/json", "type": "application/vnd.openstack.identity-v3+json"}]}}[root@cloud ~(keystone_admin)]#  
[root@cloud ~(keystone_admin)]#  
[root@cloud ~(keystone_admin)]# openstack --version  
openstack 5.2.0  
[root@cloud ~(keystone_admin)]# nova-manage --version  
21.0.0  
[root@cloud ~(keystone_admin)]#  
[root@cloud ~(keystone_admin)]#  
[root@cloud ~(keystone_admin)]#
```


Access Horizon Dashboard

Access the openstack dashboard by opening the URL link `http://192.168.1.113/` . Fill in the username and password using the credentials in the `/root/keystone_admin` file.



Log in - OpenStack Dashboard

Not secure | 192.168.1.113/dashboard/auth/login/

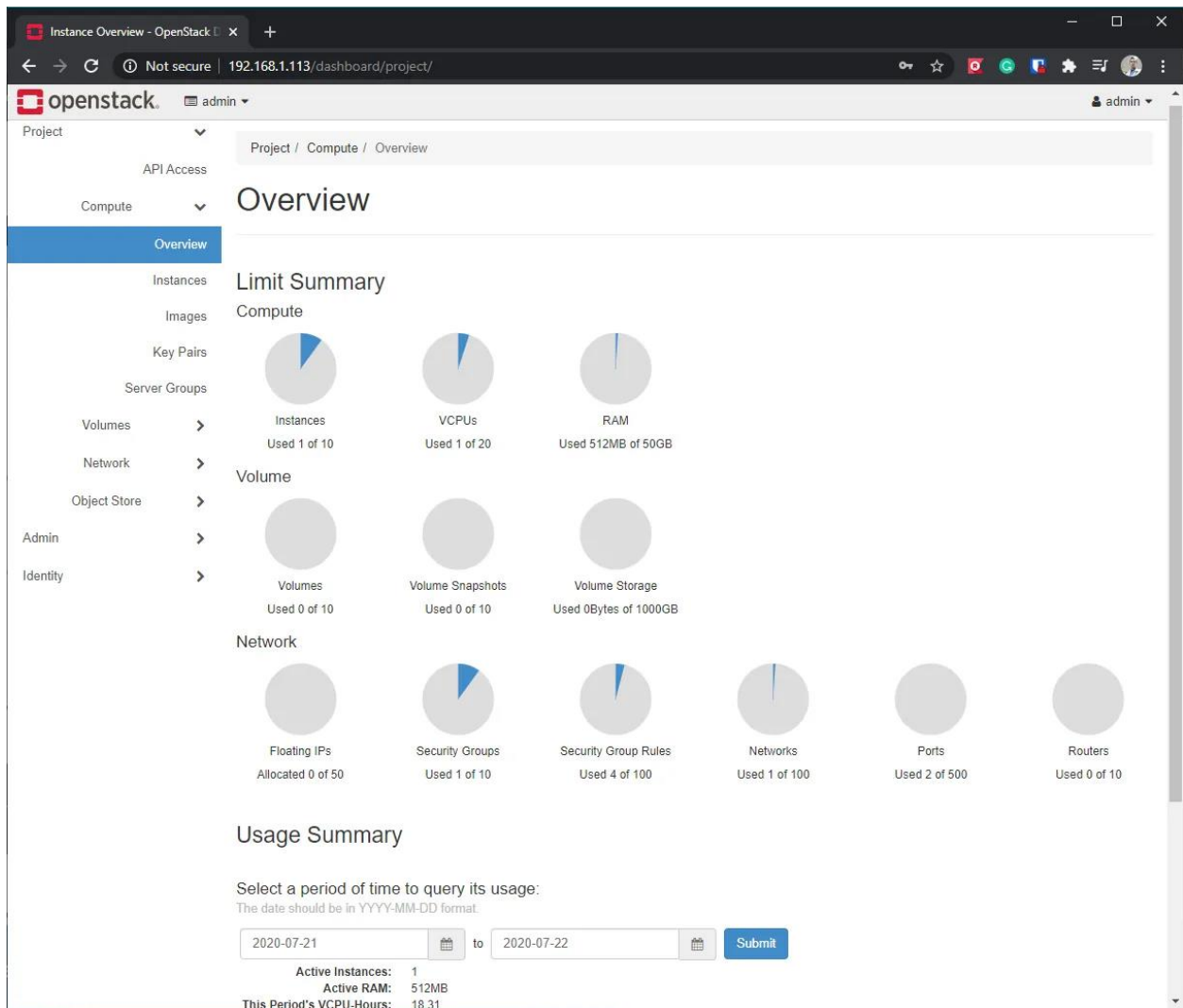

openstack®

Log in

User Name

Password

Sign In



That's all the Ussuri openstack installation guide on RHEL 8 using packstack. Good luck. Good Luck! :)

References :

- <https://www.rdoproject.org/install/packstack/>
- <https://www.linuxtechi.com/install-openstack-centos-8-with-packstack/>

- <https://computingforgeeks.com/install-and-configure-openstack-on-centos/>
- <https://keithtenzer.com/2020/02/27/openstack-16-train-lab-installation-and-configuration-guide-for-hetzner-root-servers/>

<https://achchusnulchikam.medium.com/how-to-install-openstack-ussuri-on-rhel-8-cara-instalasi-openstack-ussuri-pada-rhel-8-9b4dda28610d>