**Install and Configure MySQL**

**Step 1: Install, Enable and Start Mariadb Service**

# yum install mariadb mariadb-server python2-PyMySQL -y

# systemctl enable mariadb.service

systemctl start mariadb.service

**Step 2: Set the DB password**

# mysql\_secure\_installation -press y all

**Step 3: Create and edit the /etc/my.cnf.d/openstack.cnf**

# vim /etc/my.cnf.d/openstack.cnf

[mysqld]

bind-address = 0.0.0.0

default-storage-engine = innodb

innodb\_file\_per\_table = on

max\_connections = 4096

collation-server = utf8\_general\_ci

character-set-server = utf8

**Step 4: Restart Mariadb server**

# systemctl restart mariadb.service

**Step 5: Install, Enable and Start RabbitMQ (Message Queue) enable and start service**

# yum -y install rabbitmq-server

# systemctl enable rabbitmq-server.service

systemctl start rabbitmq-server.service

**Step 6: Add the openstack user for rabbitmq server**

# rabbitmqctl add\_user openstack rabbit

**Step 7: Permit configuration, write, and read access for the openstack user:**

# rabbitmqctl set\_permissions openstack ".\*" ".\*" ".\*"

**Step 8: Install Memcached packages**

# yum install memcached python-memcached python-openstackclient -y

**Step 9: Edit the config of memecached file**

# vim /etc/sysconfig/memcached

-l 0.0.0.0

**Step 10: Enable and start the memcached service**

# systemctl enable memcached.service

systemctl start memcached.service