**Installation document of Openshift in AWS EC2 instance**

1. Instantiate four AWS RHEL 7.3 ec2 instances with attached subnet to open all the port.
2. Attached uniq key-value pair to that all four AWS RHEL 7.3 ec2 instances.
3. Login into all ec2 instances and change the hostname of all the instances with logical hostname. Eg. ansible.host.net, master.host.net, slave1.host.net,slave2.host.net
4. Hostname can be modify using command **hostnamectl set-hostname ansible.host.net.**
5. ssh into Ansible instance and install ansible into it using below command

**sudo su**

**cd /root**

**yum install wget -y**

**wget http://dl.fedoraproject.org/pub/epel/7/x86\_64/e/epel-release-7-8.noarch.rpm**

**rpm -ivh epel-release-7-8.noarch.rpm**

**yum install ansible -y**

1. you can check ansible installation using command **ansible –version.**
2. Open the /etc/hosts file of all ec2 instances and put the entry for all hosts inside hosts file of all ec2 instances.

Eg. Sudo su

Vi /etc/hosts

172.0.0.1 ansible.host.net

172.0.0.2 master.host.net

172.0.0.3 slave1.host.net

172.0.0.4 slave2.host.net

1. Create keygen.pem file at /root location of ansible host instance and paste the .pem file contain in newly created file. (.pem file used for login into ec2 instance.)
2. Create .pub and .pem file in ansible ec2 instance using below command

**Ssh-keygen**

Press enter till prompt bash.

1. Ssh into master.host.net eg. Ssh -i key.pem ecc2-user@ master.host.net
2. Login as root into master.host.net using command sudo su.
3. Open file vi /etc/ssh/sshd\_config
4. Add below parameters into sshd\_config file or comments out those parameters from file

PermitRootLogin no

PasswordAuthentication yes

PermitEmptyPasswords yes

1. Restart service “service sshd restart”
2. Change the root password using command “passwd root”
3. Enter correct password twice.
4. Exit from master.host.net node and login into ansible.host.net host.
5. Repeat the process from point no 10 to 17 for other hosts as well.
6. Download .sh script from below url.

Wget https://raw.githubusercontent.com/IshentRas/cookbook-openshift3/master/scripts/origin\_deploy.sh

1. Open above script in vi editor and edit run list of chef. Replace openshift-origitn with cookbook yum.
2. Get the fqdn of vm using command hostname -a.
3. Chang the chmod of file origin\_deploy.sh to 755.
4. Run command ./origin\_deploy.sh and pass argument fqdn and select option r(rpm). Repeat point number 19 to 23 for all hosts.
5. Now repeat process from point 25 to 30 for below hosts.

master.host.net, slave1.host.net, slave2.host.net

1. Run command yum install createrepo -y
2. Create directory "/data/rpmreg " **using command mkdir -p /data/rpmreg**
3. Downlowad below .rpm file into "/data/rpmreg " directory

Wget <ftp://rpmfind.net/linux/fedora/linux/development/rawhide/Everything/x86_64/os/Packages/e/etcd-3.0.15-2.fc26.x86_64.rpm>

1. Creater local.repo file in directory /etc/yum.repo.d using below command

touch /etc/yum.repo.d/local.repo

1. Paste below contain in the repo.

[local]

name=CentOS OpenShift Origin

baseurl=file:///data/rpmreg

enabled=1

gpgcheck=0

1. Now install etcd package in the host where we want opeshift to be install.

**Yum install etcd -y**

1. Login into host where ansible is installed and download git repo of openshift playbook using below command.

git clone <https://github.com/openshift/openshift-ansible.git>

1. Edit the ansible hosts file using below command

Vi /etc/ansible/hosts

1. Put below contain inside /etc/ansible/hosts file

# Create an OSEv3 group that contains the masters and nodes groups

[OSEv3:children]

masters

nodes

# Set variables common for all OSEv3 hosts

[OSEv3:vars]

# SSH user, this user should allow ssh based auth without requiring a password

ansible\_ssh\_user=root

# If ansible\_ssh\_user is not root, ansible\_become must be set to true

#ansible\_become=true

deployment\_type=openshift-enterprise

# uncomment the following to enable htpasswd authentication; defaults to DenyAllPasswordIdentityProvider

#openshift\_master\_identity\_providers=[{'name': 'htpasswd\_auth', 'login': 'true', 'challenge': 'true', 'kind': 'HTPasswdPasswordIdentityProvider', 'filename': '/etc/origin/master/htpasswd'}]

# host group for masters

[masters]

master.host.net

# host group for nodes, includes region info

[nodes]

master.host.net openshift\_node\_labels="{'region': 'infra', 'zone': 'default'}"

slave1.host.net openshift\_node\_labels="{'region': 'primary', 'zone': 'east'}"

slave2.host.net openshift\_node\_labels="{'region': 'primary', 'zone': 'west'}"

1. Run below ansible playbook command from ansible installed host machine.

ansible-playbook openshift-ansible/playbooks/byo/config.yml

above command will install openshift into hosts configure in ansible hosts file.

1. After installation of opeshift login openshift master using below command

https://<host\_name\_or\_ip\_address\_of\_master\_node>:8443/console

1. Put username and password “ system” and “admin” respectively.