Overview

- SOP – Scale up OpenShift cluster- 3.11

Version History

VERSION	Created By	Date	What Was Updated	Reviewed by	Reviewed Date
1.0	Zafer Ahmed	10/22/2019	Initialrelease		

Objective:

This document explains how to scale up OpenShift cluster 3.11 (capacity increase/add additional node)

Procedure:

1. Ensure and update OpenShift-ansible package to the latest on ansible server.

#yum update openshift-ansible

2. Enable root passwordless authentication on new nodes and disable boks temporarily.

#ls -l /usr/boksm/etc/ssh/sshd_config

lrwxrwxrwx 1 root root 19 Aug 8 18:52 /usr/boksm/etc/ssh/sshd_config ->sshd_config..active

#/usr/boksm/lib/sysreplace restore

3. Enable repository.

#subscription-manager repos --list

#subscription-manager repos --enable=rhel-7-server-ansible-2.6-rpms

#subscription-manager repos --enable=rhel-7-server-ose-3.11-rpms

4. Enable selinux & NetworkMananger if not already enabled.

#sed -i 's/SELINUX=disabled/SELINUX=enforcing/g' /etc/sysconfig/selinux

#systemctl enable NetworkManager --now

5. Exclude critical atomic package installation from yum list.

#atomic-openshift-docker-excluder exclude

#atomic-openshift-excluder exclude

6. Install selinux boks packages.Package can be download from any boks master/replica in folder /security/BOKS_CLIENT/PACKAGED_CLIENTS/cust_config.

#yum install boks-selinux-1.4-1.el7.noarch.rpm -y

7. Install require packages.

#yum install wget git net-tools bind-utils yum-utils iptables-services bridge-utils bash-completion kexec-tools sos psacct

8. Install docker package and verify version.

#yum install -y docker-1.13.1

#rpm -V docker-1.13.1

#docker version

9. Update all OS patches.

#yum update -y

10. Reboot node and verify selinux is in enforcing mode.

#init 6

#sestatus

11. Configuring Docker Storage. Note: docker-vg must available on new nodes.

cat <<EOF > /etc/sysconfig/docker-storage-setup

VG=docker-vg

EOF

12. Run docker-storage-setup and review the output to ensure the docker-pool volume was created.

docker-storage-setup

Rounding up size to full physical extent 16.00 MiB

Logical volume "docker-poolmeta" created.

Logical volume "docker-pool" created.

WARNING: Converting logical volume docker-vg/docker-pool and docker-vg/docker-poolmeta to pool's data and metadata volumes.

THIS WILL DESTROY CONTENT OF LOGICAL VOLUME (filesystem etc.)

Converted docker-vg/docker-pool to thin pool.

Logical volume "docker-pool" changed.

13. Verify your configuration. Confirm that the /etc/sysconfig/docker-storage file has dm.thinpooldev and docker-pool logical volume values.

cat /etc/sysconfig/docker-storage

DOCKER_STORAGE_OPTIONS="--storage-driver devicemapper --storage-opt dm.fs=xfs --storage-opt dm.thinpooldev=/dev/mapper/rhel-docker--pool --storage-opt dm.use_deferred_removal=true --storage-opt dm.use_deferred_deletion=true "

lvs docker-vg

LV	VG	Attr	LSize	Pool	Origin	Data%	Meta%	Move	Log	Cpy%Sync	Convert
docker-pool	docker-vg	twi-a-t---	9.29g			0.00	0.12				

14. Enable and start the service, then verify that it is running.

systemctl enable docker --now

systemctl is-active docker

15. Edit inventory file and add new_<host_type> to the [OSEv3:children] section:

For example, to add a new node host, add new_nodes:

[OSEv3:children]

masters

nodes

new_nodes

16. Create a [new_<host_type>] section to specify host information for the new hosts. Format this section like an existing section, as shown in the following example of adding a new node:

[nodes]

master[1:3].example.com

node1.example.com openshift_node_group_name='node-config-compute'

node2.example.com openshift_node_group_name='node-config-compute'

infra-node1.example.com openshift_node_group_name='node-config-infra'

infra-node2.example.com openshift_node_group_name='node-config-infra'

[new_nodes]

node3.example.com openshift_node_group_name='node-config-infra'

17. Add new node entry in no_poxy on all three master nodes. Update below two files.

#vi /etc/origin/master/master.env

Example **lrk2rfisosaap04** is new node, add node saparate with comma.

NO_PROXY=.cluster.local,.fnfis.com,.svc,10.135.122.72,10.237.248.38,10.237.248.39,10.237.248.40,10.33.0.0/16,10.45.0.0/16,10.45.0.1,bitbucket.fnis.com,docker.fnis.com,jenkins.fnis.com,lrk2rfisosaap01,lrk2rfisosaap02,lrk2rfisosaap03,**lrk2rfisosaap04**,lrk2rfisosiap01,lrk2rfisosiap02,lrk2rfisosiap03,lrk2rfisosmap01,lrk2rfisosmap02,lrk2rfisosmap03,10.45.0.0/16,10.33.0.0/16

#vi /etc/origin/master/master-config.yaml

- name: NO_PROXY

value: .cluster.local,.fnfis.com,.svc,10.237.248.38,10.237.248.39,10.237.248.40,10.45.0.1,lrk2rfisosaap01,lrk2rfisosaap02,lrk2rfisosaap03,**lrk2rfisosaap04**,lrk2rfisosiap01,lrk2rfisosiap02,lrk2rfisosiap03,lrk2rfisosmap01,lrk2rfisosmap02,lrk2rfisosmap03

- name: no_proxy

value: .cluster.local,.fnfis.com,.svc,10.237.248.38,10.237.248.39,10.237.248.40,10.45.0.1,lrk2rfisosaap01,lrk2rfisosaap02,lrk2rfisosaap03,**lrk2rfisosaap04**,lrk2rfisosiap01,lrk2rfisosiap02,lrk2rfisosiap03,lrk2rfisosmap01,lrk2rfisosmap02,lrk2rfisosmap03

gitNoProxy: .cluster.local,.fnfis.com,.svc,10.237.248.38,10.237.248.39,10.237.248.40,10.45.0.1,lrk2rfisosaap01,lrk2rfisosaap02,lrk2rfisosaap03,**lrk2rfisosaap04**,lrk2rfisosiap01,lrk2rfisosiap02,lrk2rfisosiap03,lrk2rfisosmap01,lrk2rfisosmap02,lrk2rfisosmap03

18. Restart master API and Controllers service.

#/usr/local/bin/master-restart api

#/usr/local/bin/master-restart controllers

19. Run scale up playbook.

#ansible-playbook -i /root/git/ih-ocp/rh-openshift/inventory/<inventoryfile_name> /usr/share/ansible/openshift-ansible/ansible-playbook/playbooks/openshift-node/scaleup.yml

20. Watch for error in playbook and watch new nodes are being add.

#watch oc get node

21. Once new compute node are added, enable fluentd, splunk and default labels for new nodes.

#oc get node --show-labels

#oc label node <newnodename> logging-infra-fluentd=true

#oc label node <newnodename> region=primary

#oc label node <newnodename> splunk-logging=true

#oc label node <newnodename> zone=default

22. Verify fluentd and splunk pod spun up on new nodes.

#oc get pod -n logging -owide

#oc get pod -n splunkforwarder -owide

23. Activate boKs service on new nodes.

#/usr/boksm/lib/sysreplace replace

******End of Document *****