Overview

SOP – Migrate Docker Storage Driver from devicemapper to Overlay2

Version History

VERSION	Created By	Date	What Was Updated	Reviewed by	Reviewed Date
1.0	Jagadeesh.K	18-Feb-2020	Initial release	Mayer, Robert	

Contents

1) Procedure to drain a Node

i. Drain (cordon) the desired node using below command

#oc adm drain bdc8rfisosaap03 --ignore-daemonsets

```
root@bdc8rfisosaap02 [/root]
# oc adm drain bdc8rfisosaap02 --ignore-daemonsets
node/bdc8rfisosaap02 cordoned
WARNING: Ignoring DaemonSet-managed pods: datadog-agent-wvzdt, logging-fluentd-5tdsh, sync-g
j8cw, ovs-9xz69, sdn-fzmdf, sck-alpha-okd-splunk-kubernetes-logging-cb2wk
pod/fluentd-reaper-1580922000-dmd9k evicted
pod/dynatrace-oneagent-operator-b87645447-f6mzq evicted
pod/epo-dashboard-app-1-wdsk5 evicted
pod/registry-console-4-q5mr6 evicted

root@bdc8rfisosaap02 [/root]
```

ii. Check the node status once its drained and make sure its "Scheduling Disabled"

```
root@bdc8rfisosaap02 [/root]
# oc get nodes
NAME              STATUS                     ROLES          AGE       VERSION
bdc8rfisosaap01   Ready                      compute,infra  1y        v1.11.0+d4cacc0
bdc8rfisosaap02   Ready,SchedulingDisabled   compute        1y        v1.11.0+d4cacc0
bdc8rfisosaap03   Ready                      compute        1y        v1.11.0+d4cacc0
bdc8rfisosiap01   Ready                      infra          1y        v1.11.0+d4cacc0
```

iii. Un-label the any other PODs which are releated to monitoring & logging, If any running on the desired node Eg: splunk, fluentd, dynatrace ..etc

oc label node bdc8rfisosaap03 app- && oc label node bdc8rfisosaap03 splunk-logging- && oc label node bdc8rfisosaap03 logging-infra-fluentd-

```
root@bdc8rfisosaap02 [/root]
# oc label node bdc8rfisosaap02 app- && oc label node bdc8rfisosaap02 splunk-logging- && o
label node bdc8rfisosaap02 logging-infra-fluentd-
node/bdc8rfisosaap02 labeled
node/bdc8rfisosaap02 labeled
node/bdc8rfisosaap02 labeled
```

iv. Disable and Stop the atomic-openshift-node and docker services

systemctl disable atomic-openshift-node.service && systemctl disable docker
systemctl stop atomic-openshift-node.service && systemctl stop docker

```
root@bdc8rfisosaap02 [/root]
# systemctl disable atomic-openshift-node.service && systemctl disable docker
Removed symlink /etc/systemd/system/multi-user.target.wants/atomic-openshift-node.service.
Removed symlink /etc/systemd/system/multi-user.target.wants/docker.service.

root@bdc8rfisosaap02 [/root]
# systemctl stop atomic-openshift-node.service && systemctl stop docker

root@bdc8rfisosaap02 [/root]
# systemctl stop docker-storage-setup
```

v. Check the node & docker service status and make sure the services are stopped

systemctl status docker && systemctl status atomic-openshift-node.service

vi. Comment the '/var/lib/docker' filesystem line in `/etc/fstab' file

```
root@bdc8rfisosaap02 [/root]
# vi /etc/fstab

root@bdc8rfisosaap02 [/root]
# cat /etc/fstab | grep docker
#/dev/mapper/appVG-varlibdockerLV /var/lib/docker xfs defaults,nodev  0 0
```

vii. Reboot the node gracefully

NOTE: Please keep the ROOT password and VC console details in handy to troubleshoot in case of any booting issue.

2) Enabling Overlay

i. Post reboot, verify and make sure "/var/lib/docker" filesystem not mounted and not using/accessing by any process .

```
root@bdc8rfisosaap02 [/root]
# df -h | grep docker
```

ii. Check the docker service status and make sure **docker** service stopped

systemctl stop docker && systemctl status docker

iii. Execute command # container-storage-setup –reset to remove the current storage

```
root@bdc8rfisosaap02 [/root]
# container-storage-setup --reset
INFO: Found an already configured thin pool /dev/mapper/docker--vg-docker--po
ol in /etc/sysconfig/docker-storage
  Logical volume "docker-pool" successfully removed
```

iv. Take the backup of */etc/sysconfig/docker-storage-setup* file and edit the file, specify the following directives:

STORAGE_DRIVER=overlay2

CONTAINER_ROOT_LV_NAME=varlibdockerLV

CONTAINER_ROOT_LV_SIZE=100%FREE

CONTAINER_ROOT_LV_MOUNT_PATH=/var/lib/docker

VG=docker-vg

```
root@bdc8rfisosaap02 [/etc/sysconfig]
# vi docker-storage-setup

root@bdc8rfisosaap02 [/etc/sysconfig]
# cat docker-storage-setup
STORAGE_DRIVER=overlay2
CONTAINER_ROOT_LV_NAME=varlibdockerLV
CONTAINER_ROOT_LV_SIZE=100%FREE
CONTAINER_ROOT_LV_MOUNT_PATH=/var/lib/docker
VG=docker-vg
EXTRA_STORAGE_OPTIONS="--storage-opt overlay2.size=10G"
```

v. Enable atomic-Openshift-node & docker services and Start docker service

```
root@bdc8rfisosaap02 [/etc/sysconfig]
# systemctl enable atomic-openshift-node.service && systemctl enable docker && systemctl start docker && systemctl start atomic-o
penshift-node.service
Created symlink from /etc/systemd/system/multi-user.target.wants/atomic-openshift-node.service to /etc/systemd/system/atomic-open
shift-node.service.
Created symlink from /etc/systemd/system/multi-user.target.wants/docker.service to /usr/lib/systemd/system/docker.service.

root@bdc8rfisosaap02 [/etc/sysconfig]
#
```

3) Verification

I. Check the docker service status and make sure it's UP & Running

II. Check the driver using docker now using command # docker info | grep -i driver
you will see now the docker Storage Driver: overlay2

```
root@bdc8rfisosaap02 [/etc/sysconfig]
# docker info | grep -i driver
  WARNING: You're not using the default seccomp profile
Storage Driver: overlay2
Logging Driver: json-file
Cgroup Driver: systemd
```

III. Start the atomic-node service and do the Openshift regular health checks and make sure all POD's are UP & Running.

IV. Once done, repeat the same procedure for all nodes one after one basis; the order would be first MASTER node 1-3 ;then INFRA 1-3 and then Compute all nodes.

4) Refence URL

https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux_atomic_host/7/html/managing_containers/managing_storage_with_docker_formatted_containers#using_the_overlay_graph_driver

THE - END