Standard Operating Procedure

*Taking Java Thread Dump of Process Running Inside Pods*

1. **PURPOSE**

The purpose of this standard operating procedure (SOP) is to provide a detailed step-by-step procedure to take Java thread dump of process running inside pods.

1. **PROCEDURE**
2. Locate which node the pod is running in:

oc describe pod <pod name>

i.e.

[svc-vxdl-ose@master01-prod-vxdlr ~]$ oc describe pod hotelinfo-app-38-r8cra Name: hotelinfo-app-38-r8cra

Namespace: ram-prod1

Security Policy: restricted

Node: node43-prod-vxdlr.cloud.marriott.com/172.23.79.210

Start Time: Wed, 17 Apr 2019 04:43:01 -0400

1. ssh into that node:

ssh <node name>

i.e.

[svc-vxdl-ose@master01-prod-vxdlr ~]$ ssh node43-prod-vxdlr.cloud.marriott.com

Last login: Thu Apr 4 21:47:59 2019 from master01-prod-vxdlr.marriott.com

1. Be in root user:

sudo su -

i.e.

[svc-vxdl-ose@node43-prod-vxdlr ~]$ sudo su -

Last login: Wed Nov 28 15:08:47 EST 2018 from 10.253.152.160 on pts/0

1. Locate the docker process (that is linked with DTR) running on that node for that pod

docker ps -a | grep <last 5 digits of pod name> | grep <pod app name?

i.e.

[root@node43-prod-vxdlr ~]# docker ps -a | grep r8cra | grep hotelinfo-app

0c520512c87c dtr-556876752.us-east-1.elb.amazonaws.com/ram\_ose\_prod/hotelinfo-app@sha256:d3e3ebb5bdf3d73d500221b9f68a99f16db5eca5757b3a716d8fb87a7705985b "/opt/play-app/bin/ar" 2 days ago Up 2 days k8s\_hotelinfo-app.81e53eb4\_hotelinfo-app-38-r8cra\_ram-prod1\_cf2873f8-60ec-11e9-b778-00505683eaf7\_c784ca65

51021ccc02ba openshift3/ose-pod:v3.3.1.46.11 "/pod" 2 days ago Up 2 days k8s\_POD.4facfea3\_hotelinfo-app-38-r8cra\_ram-prod1\_cf2873f8-60ec-11e9-b778-00505683eaf7\_afc7730e

1. Take dump:

Docker exec -it <container id> jmap -dump:format=b,file=/tmp/<container id>.hprof 1

i.e.

[root@node43-prod-vxdlr ~]# docker exec -it 0c520512c87c jmap -dump:format=b,file=/tmp/0c520512c87c.hprof 1

Dumping heap to /tmp/0c520512c87c.hprof ...

Heap dump file created

1. Copy the dump file to host from container:

docker cp <container id>:/tmp/<container id>.hprof /root/<container id>.hprof

i.e.

[root@node43-prod-vxdlr ~]# docker cp 0c520512c87c:/tmp/0c520512c87c.hprof /root/0c520512c87c.hprof

This jmap dump can be visualized by Java VisualVM app.

1. **VALIDATION**

Follow the validation steps in “Procedure”.

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**Document Version Control**

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