

# Cloud Pak for DBA – ODM

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## References :

```
https://github.ibm.com/dba/cert-kubernetes/blob/master/ODM/platform/README_Openshift.md  
https://github.ibm.com/dba/cert-kubernetes/blob/master/scripts/loadimages.sh
```

## Prerequisites

Download DBA chart archive from PPA. (CC223ML)

Setup OpenShift Container Platform user on OCP master

```
touch /etc/origin/master/htpasswd  
htpasswd -b /etc/origin/master/htpasswd admin passw0rd  
master-restart api  
master-restart controllers  
oc login -u system:admin  
oc adm policy add-cluster-role-to-user cluster-admin admin  
oc login -u admin
```

```
Create new project for odm deployment on OCP master  
oc new-project odmproject
```

Change name space to created project on OCP master

```
oc project odmproject
```

Add required security constraint context on OCP master

```
oc adm policy add-scc-to-user privileged -z default
```

Check cluster info to verify there are no setup problem on OCP master

```
kubectl cluster-info
```

Required default ports 9453 and 5432 on all OCP nodes, using following commands.

```
iptables -I INPUT -p tcp -m tcp --dport 9453 -j ACCEPT
iptables -I INPUT -p tcp -m tcp --sport 9453 -j ACCEPT
iptables -I OUTPUT -p tcp -m tcp --dport 9453 -j ACCEPT
iptables -I OUTPUT -p tcp -m tcp --sport 9453 -j ACCEPT
iptables -I INPUT -p tcp -m tcp --dport 5432 -j ACCEPT
iptables -I INPUT -p tcp -m tcp --sport 5432 -j ACCEPT
iptables -I OUTPUT -p tcp -m tcp --dport 5432 -j ACCEPT
iptables -I OUTPUT -p tcp -m tcp --sport 5432 -j ACCEPT
```

Set glusterfs-storage as default storage class on OCP master

```
oc patch storageclass glusterfs-storage -p '{"metadata": {"annotations": {"storageclass.kubernetes.io/is-default-class": "true"}}}'
```

Download ( <https://get.helm.sh/helm-v2.14.1-linux-amd64.tar.gz>) and install helm on OCP master

```
tar -zxvf helm-v2.14.1-linux-amd64.tar.gz
linux-amd64/
linux-amd64/LICENSE
linux-amd64/helm
linux-amd64/README.md
linux-amd64/tiller
cp linux-amd64/helm /usr/local/bin/helm
cp linux-amd64/tiller /usr/local/bin/tiller
nohup tiller &
export HELM_HOST=<OCP Master Host Name>:44134
```

## Upload ODM Chart to Catalog

Query admin user token and make a note on OCP master

```
oc whoami -t
GEbiQ3EAgHBEzryz3AYH_ZIH1-Pedo_IsoDpQWyZnCs
```

Login to docker using admin user and generated token on OCP master

```
docker login docker-registry.default.svc:5000 -u admin -p GEbiQ3EAgHBEzryz3AYH_ZIH1-Pedo_IsoDpQWyZnCs
```

Use script loadimages.sh (See references for obtaining script) to upload ODM chart to OCP catalog on OCP master

```
./loadimages.sh -p CC223ML.tgz -r docker-registry.default.svc:5000/odmproject
```

## Deploy Chart

```
helm install --name icp4a-odm-prod-release /charts/ibm-odm-prod-2.2.0.tgz --set image.repository=docker-registry.default.svc:5000/odmproject/
```

output:

```
NAME:      icp4a-odm-prod-release
LAST DEPLOYED: Sat Jul 6 11:32:52 2019
NAMESPACE: odmproject
STATUS:    DEPLOYED

RESOURCES:
==> v1/ConfigMap
NAME                                                    DATA  AGE
icp4a-odm-prod-release-odm-dc-logging-configmap      1      1s
icp4a-odm-prod-release-odm-dr-logging-configmap      1      1s
icp4a-odm-prod-release-odm-ds-console-logging-configmap 1      1s
icp4a-odm-prod-release-odm-ds-runtime-logging-configmap 1      1s
icp4a-odm-prod-release-odm-test-configmap            2      1s

==> v1/PersistentVolumeClaim
NAME                                                    STATUS  VOLUME  CAPACITY  ACCESS MODES
STORAGECLASS  AGE
icp4a-odm-prod-release-odm-pvclaim  Pending  1s

==> v1/Pod(related)
NAME                                                    READY  STATUS
RESTARTS  AGE
icp4a-odm-prod-release-dbserver-7d777c5b6-bbwz      0/1    Pending  0
0s
icp4a-odm-prod-release-odm-decisioncenter-77455f85d4-4bxnn 0/1    Init:0/1  0
0s
icp4a-odm-prod-release-odm-decisionrunner-7fffc49c47-zzj4l 0/1    Init:0/1  0
0s
icp4a-odm-prod-release-odm-decisionserverconsole-5fbdfbb95mwdjs 0/1    Init:0/1  0
0s
icp4a-odm-prod-release-odm-decisionserverruntime-565d779ddsbrhn 0/1    Init:0/1  0
0s

==> v1/Secret
NAME                                                    TYPE  DATA  AGE
icp4a-odm-prod-release-odm-secret  Opaque  1      1s

==> v1/Service
NAME                                                    TYPE  CLUSTER-IP
EXTERNAL-IP  PORT(S)  AGE
icp4a-odm-prod-release-dbserver  ClusterIP  172.30.206.135
<none>      5432/TCP  1s
icp4a-odm-prod-release-odm-decisioncenter  NodePort  172.30.32.184
<none>      9453:30070/TCP  1s
icp4a-odm-prod-release-odm-decisionrunner  NodePort  172.30.81.175
<none>      9443:30865/TCP  1s
icp4a-odm-prod-release-odm-decisionserverconsole  NodePort  172.30.213.221
<none>      9443:32091/TCP  0s
```

```

icp4a-odm-prod-release-odm-decisionserverconsole NodePort 172.30.229.101
<none> 1883/TCP 0s
icp4a-odm-prod-release-odm-decisionserverruntime NodePort 172.30.133.108
<none> 9443:30098/TCP 0s

```

==> v1beta2/Deployment

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
icp4a-odm-prod-release-dbserver	0/1	1	0	0s
icp4a-odm-prod-release-odm-decisioncenter	0/1	1	0	0s
icp4a-odm-prod-release-odm-decisionrunner	0/1	1	0	0s
icp4a-odm-prod-release-odm-decisionserverconsole	0/1	1	0	0s
icp4a-odm-prod-release-odm-decisionserverruntime	0/1	1	0	0s

NOTES:  
icp4a-odm-prod-release is ready to use. icp4a-odm-prod-release is an instance of the ibm-odm-prod chart.

icp4a-odm-prod-release uses version 8.10.2.0 of the IBM® Operational Decision Manager (ODM) components.

#### ODM Information

```

-----
Username/Password :
- For Decision Center: odmAdmin/odmAdmin
- For Decision Server Console: odmAdmin/odmAdmin
- For Decision Server Runtime: odmAdmin/odmAdmin
- For Decision Runner: odmAdmin/odmAdmin

Get the application URLs by running these commands:
export SCHEME=https

-- Decision Center Business Console
export NODE_PORT_DC=$(kubectl get --namespace odmproject -o
jsonpath="{.spec.ports[0].nodePort}" services icp4a-odm-prod-release-odm-decisioncenter)
export NODE_IP=$(kubectl get nodes --namespace odmproject -o
jsonpath="{.items[0].status.addresses[0].address}")
echo $SCHEME://$NODE_IP:$NODE_PORT_DC/decisioncenter

-- Decision Center Enterprise Console
export NODE_PORT_DC=$(kubectl get --namespace odmproject -o
jsonpath="{.spec.ports[0].nodePort}" services icp4a-odm-prod-release-odm-decisioncenter)
export NODE_IP=$(kubectl get nodes --namespace odmproject -o
jsonpath="{.items[0].status.addresses[0].address}")
echo $SCHEME://$NODE_IP:$NODE_PORT_DC/teamserver

-- Decision Runner
export NODE_PORT_DR=$(kubectl get --namespace odmproject -o
jsonpath="{.spec.ports[0].nodePort}" services icp4a-odm-prod-release-odm-decisionrunner)
export NODE_IP=$(kubectl get nodes --namespace odmproject -o
jsonpath="{.items[0].status.addresses[0].address}")
echo $SCHEME://$NODE_IP:$NODE_PORT_DR/DecisionRunner

-- Decision Server Console
export NODE_PORT_DSC=$(kubectl get --namespace odmproject -o
jsonpath="{.spec.ports[0].nodePort}" services icp4a-odm-prod-release-odm-
decisionserverconsole)
export NODE_IP=$(kubectl get nodes --namespace odmproject -o
jsonpath="{.items[0].status.addresses[0].address}")
echo $SCHEME://$NODE_IP:$NODE_PORT_DSC/res

-- Decision Server Runtime
export NODE_PORT_DSR=$(kubectl get --namespace odmproject -o
jsonpath="{.spec.ports[0].nodePort}" services icp4a-odm-prod-release-odm-
decisionserverruntime)
export NODE_IP=$(kubectl get nodes --namespace odmproject -o
jsonpath="{.items[0].status.addresses[0].address}")
echo $SCHEME://$NODE_IP:$NODE_PORT_DSR/DecisionService

```

```
$ helm status icp4a-odm-prod-release
$ helm get icp4a-odm-prod-release
```

## Verification

Get pod status to check all are in available state

```
kubect1 get deployments -n odmproject =====> all pods should be in
available state
```

NAME	DESIRED	CURRENT	UP-TO-DATE
AVAILABLE AGE			
icp4a-odm-prod-release-dbserver 20m	1	1	1
icp4a-odm-prod-release-odm-decisioncenter 20m	1	1	1
icp4a-odm-prod-release-odm-decisionrunner 20m	1	1	1
icp4a-odm-prod-release-odm-decisionserverconsole 20m	1	1	1
icp4a-odm-prod-release-odm-decisionserverruntime 20m	1	1	1

To access consoles make these entries in hosts file where you are accessing it in browser

```
<OCP Master IP><OCP Master HostName>
<OCP Infra IP>      heketi-storage-app-storage.apps<OCP Master HostName>
<OCP Infra IP>      docker-registry-default.apps<OCP Master HostName>
<OCP Infra IP>      registry-console-default.apps<OCP Master HostName>
<OCP Infra IP>      console.apps<OCP Master HostName>
<OCP Infra IP>      alertmanager-main-openshift-monitoring.<OCP Master HostName>
```

Access consoles at

```
Decision Center Business Console: https://<OCP Master HostName>:30070/teamserver
(rtsAdmin/rtsAdmin)
Decision Center Enterprise Console : https://<OCP Master HostName>:30070/decisioncenter
(rtsAdmin/rtsAdmin)
Decision Runner : https://<OCP Master HostName>:30865/DecisionRunner
Decision Server Console : https://<OCP Master HostName>:32091/res (odmAdmin/odmAdmin)
Decision Server Runtime : https://<OCP Master HostName>:30098/DecisionService
(odmAdmin/odmAdmin)
```

Note : All links should work with odmAdmin/odmAdmin