Following instructions here: <https://cloud.ibm.com/docs/blockchain-sw?topic=blockchain-sw-deploy-ocp>

(Related links:

<https://cloud.ibm.com/docs/services/blockchain-sw?topic=blockchain-sw-deploy-k8-firewall>

<https://cloud.ibm.com/docs/blockchain-sw?topic=blockchain-sw-deploy-k8>

)

<https://c100-e.us-south.containers.cloud.ibm.com:31143/console/catalog>

Steps:

Login..

oc project visa-demo

The local docker repo isn’t enabled, so I am attempting to login into the external docker repo and run it

IBP-OP git:(master) ✗ oc project visa-demo

Now using project "visa-demo" on server "https://c100-e.us-south.containers.cloud.ibm.com:31143".

➜ IBP-OP git:(master) ✗ oc apply -f ibp-scc.yaml

securitycontextconstraints.security.openshift.io/visa-demo created

➜ IBP-OP git:(master) ✗ oc adm policy add-scc-to-user visa-demo

system:serviceaccounts:visa-demo

scc " visa-demo " added to: ["system:serviceaccounts:visa-demo"]

➜ IBP-OP git:(master) ✗ oc apply -f ibp-clusterrole.yaml

clusterrole.rbac.authorization.k8s.io/visa-demo created

➜ IBP-OP git:(master) ✗ oc adm policy add-scc-to-group visa-demo system:serviceaccounts:visa-demo

scc "visa-demo" added to groups: ["system:serviceaccounts:visa-demo"]

➜ IBP-OP git:(master) ✗ oc apply -f ibp-clusterrolebinding.yaml

clusterrolebinding.rbac.authorization.k8s.io/visa-demo created

➜ IBP-OP git:(master) ✗ oc adm policy add-cluster-role-to-user visa-demo system:serviceaccounts:visa-demo

cluster role "visa-demo" added: "system:serviceaccounts:visa-demo"

kubectl create secret docker-registry docker-key-secret --docker-server=cp.icr.io --docker-username=cp --docker-password=<KEY> --docker-email=<EMAIL> -n <PROJECT\_NAME>

kubectl create secret docker-registry docker-key-secret --docker-username=sumapnair@us.ibm.com --docker-password=AKCp5ejxmrfVEHpPeYL8oKYEukL1kHYrUh9DKt1bqzBCrC7v3Fn4cWHwy4itXUY9n2Ldu342J --docker-email=sumapnair@us.ibm.com --docker-server=ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp

secret/docker-key-secret created

kubectl apply -f ibp-operator.yaml -n visa-demo

deployment.apps/ibp-operator created

(Instead of Local repository, in the yaml file, I used

ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp

kubectl get deployment -n visa-demo

NAME DESIRED CURRENT UP-TO-DATE AVAILABLE AGE

ibp-operator 1 1 1 1 2m

Cluster Domain name

In web console, switch to Cluster Console.

<https://console.visa-openshift-ibp-e5043d1d2119a8ed9cd13e51c374e7f5-0001.us-south.containers.appdomain.cloud/k8s/cluster/projects>

You can find this value by using the OpenShift web console. Use the dropdown menu next to **OpenShift Container Platform** at the top of the page to switch from **Service Catalog** to **Cluster Console**. Examine the url for that page. It will be similar to console.xyz.abc.com/k8s/cluster/projects. The value of the domain then would be xyz.abc.com, after removing console and /k8s/cluster/projects.

So,

[visa-openshift-ibp-e5043d1d2119a8ed9cd13e51c374e7f5-0001.us-south.containers.appdomain.cloud](https://console.visa-openshift-ibp-e5043d1d2119a8ed9cd13e51c374e7f5-0001.us-south.containers.appdomain.cloud/k8s/cluster/projects)

kubectl apply -f ibp-console.yaml -n visa-demo

ibpconsole.ibp.com/ibpconsole created

Accessing the UI

[https://visa-demo-ibpconsole-console.visa-openshift-ibp-e5043d1d2119a8ed9cd13e51c374e7f5-0001.us-south.containers.appdomain.cloud:443](https://visa-ibp2-operator-demo-ibpconsole-console.visa-openshift-ibp-e5043d1d2119a8ed9cd13e51c374e7f5-0001.us-south.containers.appdomain.cloud:443)

Creating CA

<https://cloud.ibm.com/docs/blockchain-sw?topic=blockchain-sw-ibp-console-identities>

“When you create a CA by using the IBM Blockchain Platform console, two CAs are created with the same endpoint url: a root CA and a TLS CA. The root CA provides keys to your nodes and applications. The TLS CA provides certificates that are used to protect the communication within your network.”

Join the network

OCP – Everywhere

<https://c100-e.us-east.containers.cloud.ibm.com:31066/console/catalog>

visa-ibp-join-demo

pocaustintx-1579052793275-f72ef11f3ab089a8c677044eb28292cd-0001.us-east.containers.appdomain.cloud

[sumapnair@us.ibm.com](mailto:sumapnair@us.ibm.com) / ibp24visa

Build Network

<https://cloud.ibm.com/docs/blockchain-sw?topic=blockchain-sw-ibp-console-build-network#ibp-console-build-network>

API Key: <https://cloud.ibm.com/docs/blockchain-sw?topic=blockchain-sw-ibp-v2-apis>

curl -k -X POST \

> https://visa-ibp2-operator-ibpconsole-console.visa-openshift-ibp-e5043d1d2119a8ed9cd13e51c374e7f5-0001.us-south.containers.appdomain.cloud:443/ak/api/v1/permissions/keys \

> -u sumapnair@us.ibm.com:ibp24visa \

> -H 'Content-Type: application/json' \

> -d '{

quote> "roles": ["writer", "manager"],

quote> "description": "newkey"

quote> }'

{"api\_key":"kuUlhSYt12VneS4a","api\_secret":"3XGw9T64ViNlmltn7B430pPZFIOX61tP","roles":["writer","manager"],"message":"ok"}%

Join a network

<https://cloud.ibm.com/docs/blockchain-sw?topic=blockchain-sw-ibp-console-join-network>

[https://visa-ibp-join-ibpconsole-console.visa-openshift-ibp-e5043d1d2119a8ed9cd13e51c374e7f5-0001.us-south.containers.appdomain.cloud:443](https://visa-ibp2-operator-ibpconsole-console.visa-openshift-ibp-e5043d1d2119a8ed9cd13e51c374e7f5-0001.us-south.containers.appdomain.cloud:443)

[sumapnair@us.ibm.com](mailto:sumapnair@us.ibm.com) / ibp24visa

DigiBankCA

DigiBankMSP

DigiBank Peer1

Working behind firewall

<https://cloud.ibm.com/docs/services/blockchain-sw?topic=blockchain-sw-deploy-k8-firewall>

Pulling Docker Images

External : docker login --username cp --password <KEY> [cp.icr.io](http://cp.icr.io)

Internal:

docker login —username <[ibm](mailto:sumapnair@us.ibm.com) id> —password <artifactory api key> [ip-ibp-images-team-docker-remote.artifactory.swg-devops.com](http://ip-ibp-images-team-docker-remote.artifactory.swg-devops.com)

docker pull ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-operator:2.1.2-20191217-amd64

docker pull ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-init:2.1.2-20191217-amd64

docker pull ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-peer:1.4.4-20191217-amd64

docker pull ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-orderer:1.4.4-20191217-amd64

docker pull ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-ca:1.4.4-20191217-amd64

docker pull ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-dind:1.4.4-20191217-amd64

docker pull ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-console:2.1.2-20191217-amd64

docker pull ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-grpcweb:2.1.2-20191217-amd64

docker pull ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-utilities:1.4.4-20191217-amd64

docker pull ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-couchdb:2.3.1-20191217-amd64

docker pull ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-deployer:2.1.2-20191217-amd64

docker pull ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-fluentd:2.1.2-20191217-amd64

docker tag ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-operator:2.1.2-20191217-amd64 172.30.43.173:5000/ibp-operator:2.1.2-20191217-amd64

docker tag ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-init:2.1.2-20191217-amd64 172.30.43.173:5000/ibp-init:2.1.2-20191217-amd64

docker tag ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-peer:1.4.4-20191217-amd64 172.30.43.173:5000/ibp-peer:1.4.4-20191217-amd64

docker tag ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-orderer:1.4.4-20191217-amd64 172.30.43.173:5000/ibp-orderer:1.4.4-20191217-amd64

docker tag ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-ca:1.4.4-20191217-amd64 172.30.43.173:5000/ibp-ca:1.4.4-20191217-amd64

docker tag ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-dind:1.4.4-20191217-amd64 172.30.43.173:5000/ibp-dind:1.4.4-20191217-amd64

docker tag ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-console:2.1.2-20191217-amd64 172.30.43.173:5000/ibp-console:2.1.2-20191217-amd64

docker tag ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-grpcweb:2.1.2-20191217-amd64 172.30.43.173:5000/ibp-grpcweb:2.1.2-20191217-amd64

docker tag ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-utilities:1.4.4-20191217-amd64 172.30.43.173:5000/ibp-utilities:1.4.4-20191217-amd64

docker tag ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-couchdb:2.3.1-20191217-amd64 172.30.43.173:5000/ibp-couchdb:2.3.1-20191217-amd64

docker tag ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-deployer:2.1.2-20191217-amd64 172.30.43.173:5000/ibp-deployer:2.1.2-20191217-amd64

docker tag ip-ibp-images-team-docker-remote.artifactory.swg-devops.com/cp/ibp-fluentd:2.1.2-20191217-amd64 172.30.43.173:5000/ibp-fluentd:2.1.2-20191217-amd64

Useful Links:

<https://www.redhat.com/en/about/videos/red-hat-openshift-operators-framework>

Helm and Operator

<https://medium.com/@cloudark/kubernetes-operators-and-helm-it-takes-two-to-tango-3ff6dcf65619>

Helm to Operator

<https://blog.openshift.com/build-kubernetes-operators-from-helm-charts-in-5-steps/>