Quick Start guide to ICP4i

ACE on RHOS 4.2

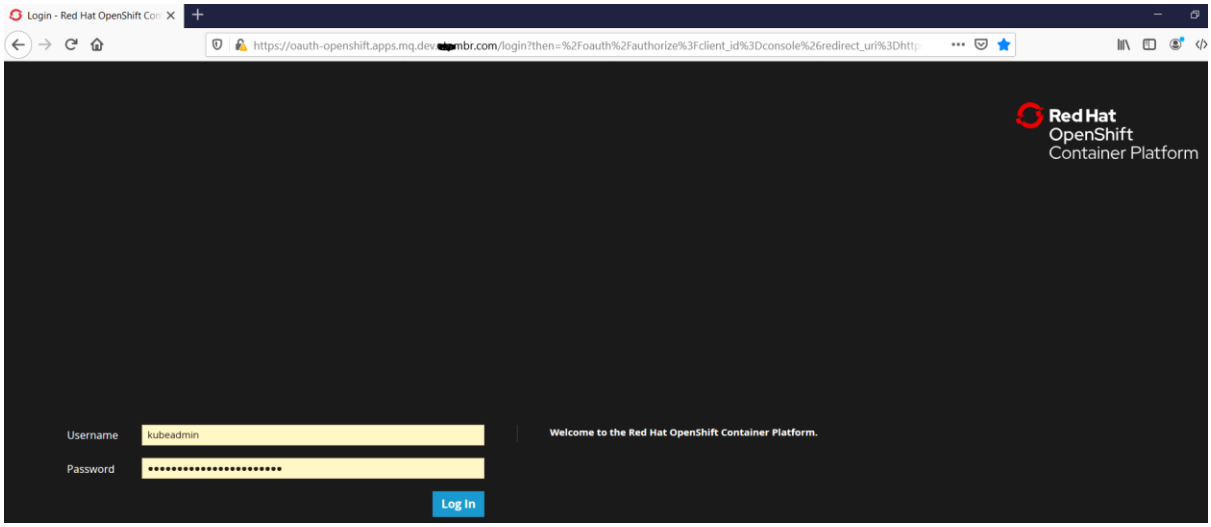
MQ on RHOS 4.2

Contents

IBM Cloud Pak for Integration – RHOS 4.2

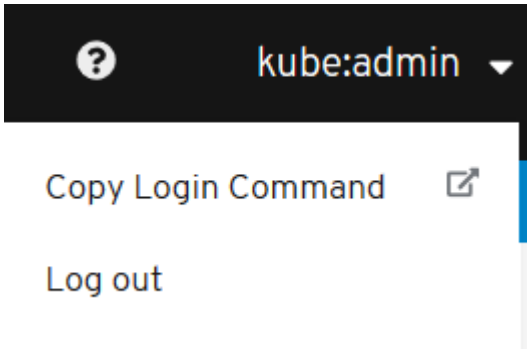
RHOS ICP Access point and navigation

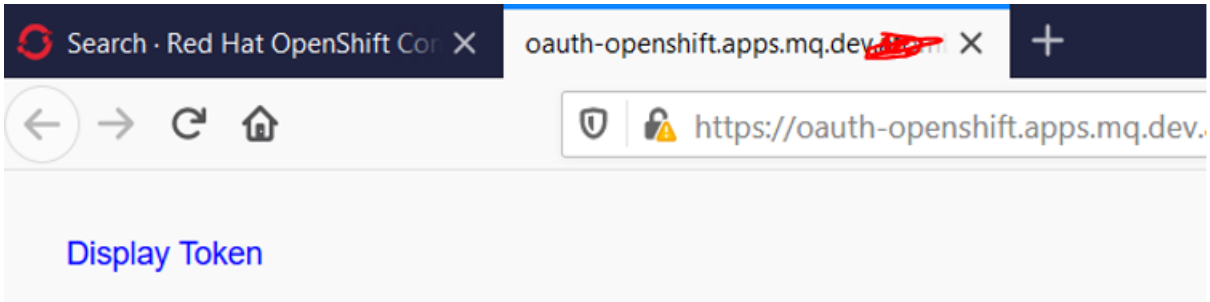
Openshift: https://oauth-openshift.apps.mq.dev.###mbr.com/login?



Getting key information from RHOS 4.2

Command line log in





Your API token is

x7HVSb2v-D3-Wp0i1Z9o7X0sDO-WZVOvz-d2KObVzOY

Log in with this token

```
oc login --token=x7HVSb2v-D3-Wp0i1Z9o7X0sDO-WZVOvz-d2KObVzOY --server=https://api.mq.dev.[redacted]mbr.com:6443
```

Use this token directly against the API

```
curl -H "Authorization: Bearer x7HVSb2v-D3-Wp0i1Z9o7X0sDO-WZVOvz-d2KObVzOY" "https://api.mq.dev.[redacted]mbr.com:6443/apis/user.openshift.io/v1/users/~"
```

```
C:\openshift>oc login --token=x7HVSb2v-D3-Wp0i1Z9o7X0sDO-WZVOvz-d2KObVzOY --server=https://api.mq.dev.[redacted]mbr.com:6443
Logged into "https://api.mq.dev.[redacted]mbr.com:6443" as "kube:admin" using the token provided.

You have access to 59 projects, the list has been suppressed. You can list all projects with 'oc projects'

Using project "tracing".

C:\openshift>
```

Get the onboard docker image registry

```
C:\openshift>oc get route -n openshift-image-registry
NAME           HOST/PORT                                                PATH      SERVICES         PORT      TERMINATION   WILDCARD
default-route  default-route-openshift-image-registry.apps.mq.dev.[redacted]mbr.com            image-registry   <all>     reencrypt     None

C:\openshift>
```

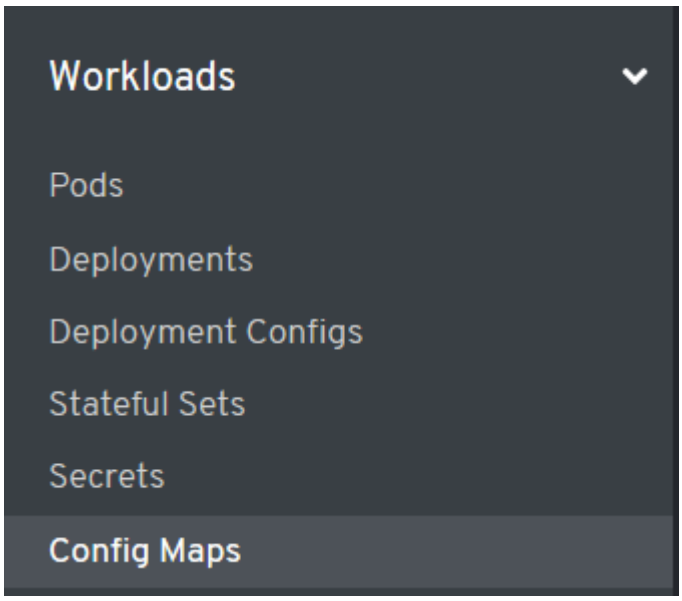
Get the pull secret

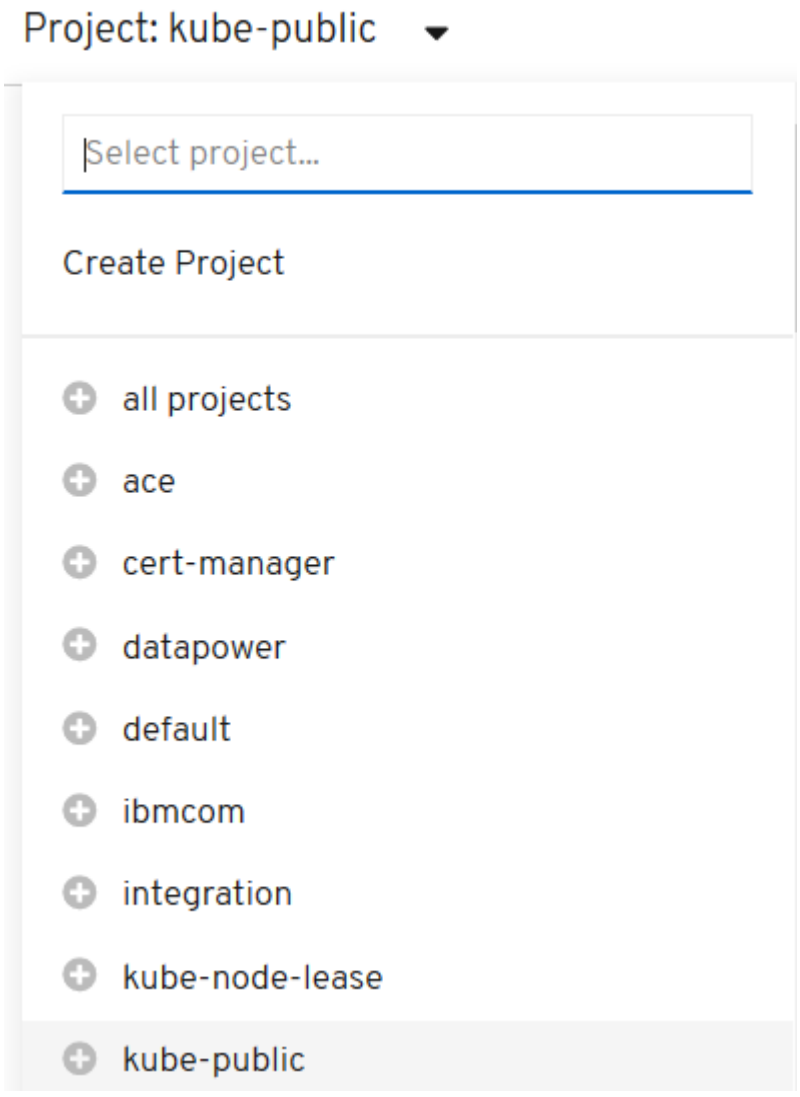
```
C:\openshift>oc get secrets
NAME                                TYPE                                  DATA      AGE
builder-dockercfg-rqtnk             kubernetes.io/dockercfg               1         58d
builder-token-4pms7                 kubernetes.io/service-account-token   4         58d
builder-token-q5zdl                 kubernetes.io/service-account-token   4         58d
default-dockercfg-dgzbh             kubernetes.io/dockercfg               1         58d
default-token-8blm6                 kubernetes.io/service-account-token   4         58d
default-token-8frfz                 kubernetes.io/service-account-token   4         58d
deployer-dockercfg-7tkh4            kubernetes.io/dockercfg               1         58d
deployer-token-cv8sw                kubernetes.io/service-account-token   4         58d
deployer-token-t2h8x                kubernetes.io/service-account-token   4         58d
image-bot-dockercfg-hqdjc           kubernetes.io/dockercfg               1         58d
image-bot-token-mf6hx               kubernetes.io/service-account-token   4         58d
image-bot-token-trslc               kubernetes.io/service-account-token   4         58d
od-sec-tracing-dockercfg-h9crx      kubernetes.io/dockercfg               1         48d
od-sec-tracing-token-bqhsk          kubernetes.io/service-account-token   4         48d
od-sec-tracing-token-jxtkx          kubernetes.io/service-account-token   4         48d

C:\openshift>
```

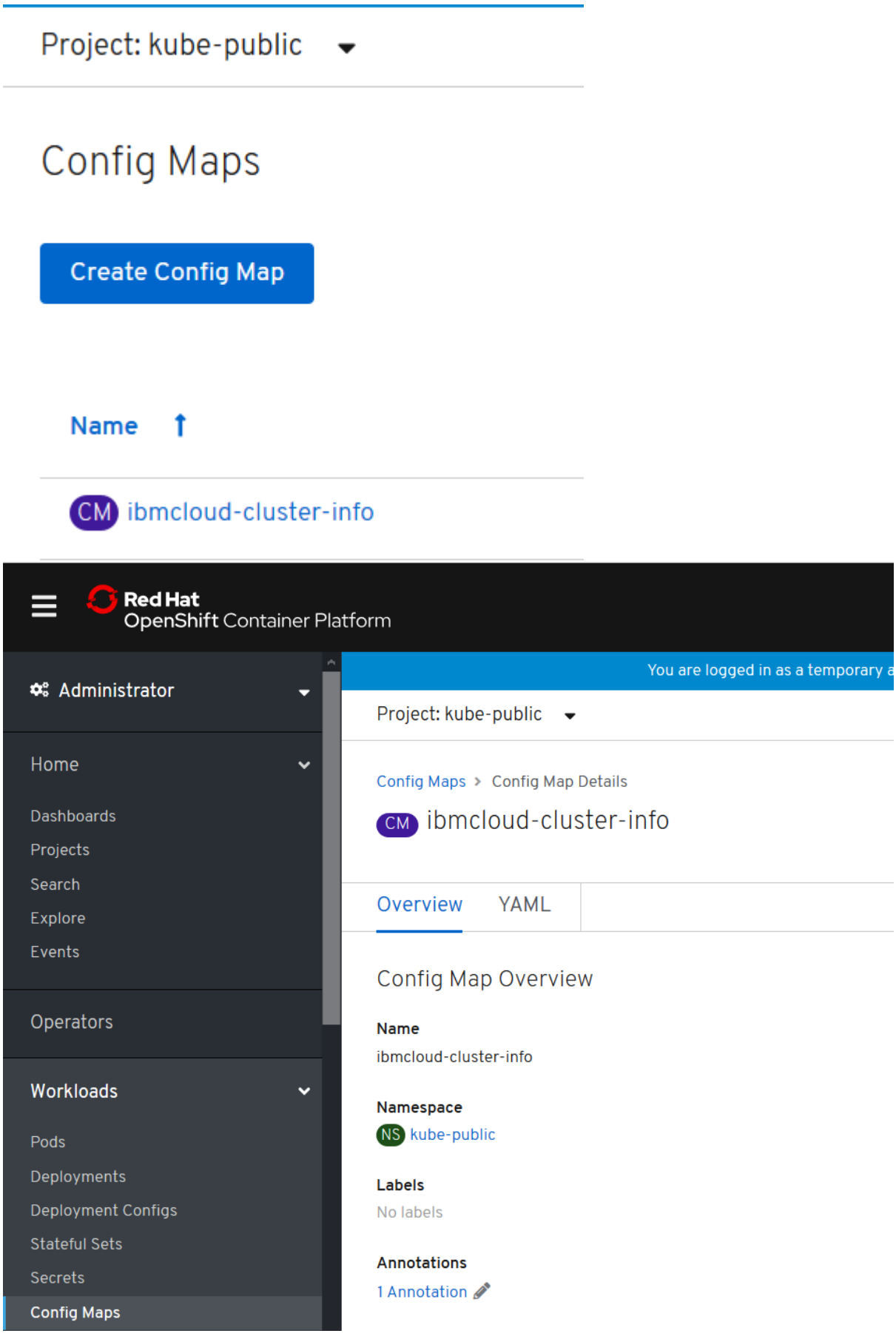
Get the Network file system

```
C:\openshift>oc get sc
NAME            PROVISIONER             AGE
aws-efs         openshift.org/aws-efs   51d
gp2 (default)   kubernetes.io/aws-ebs   59d
```

ICP Proxy Address





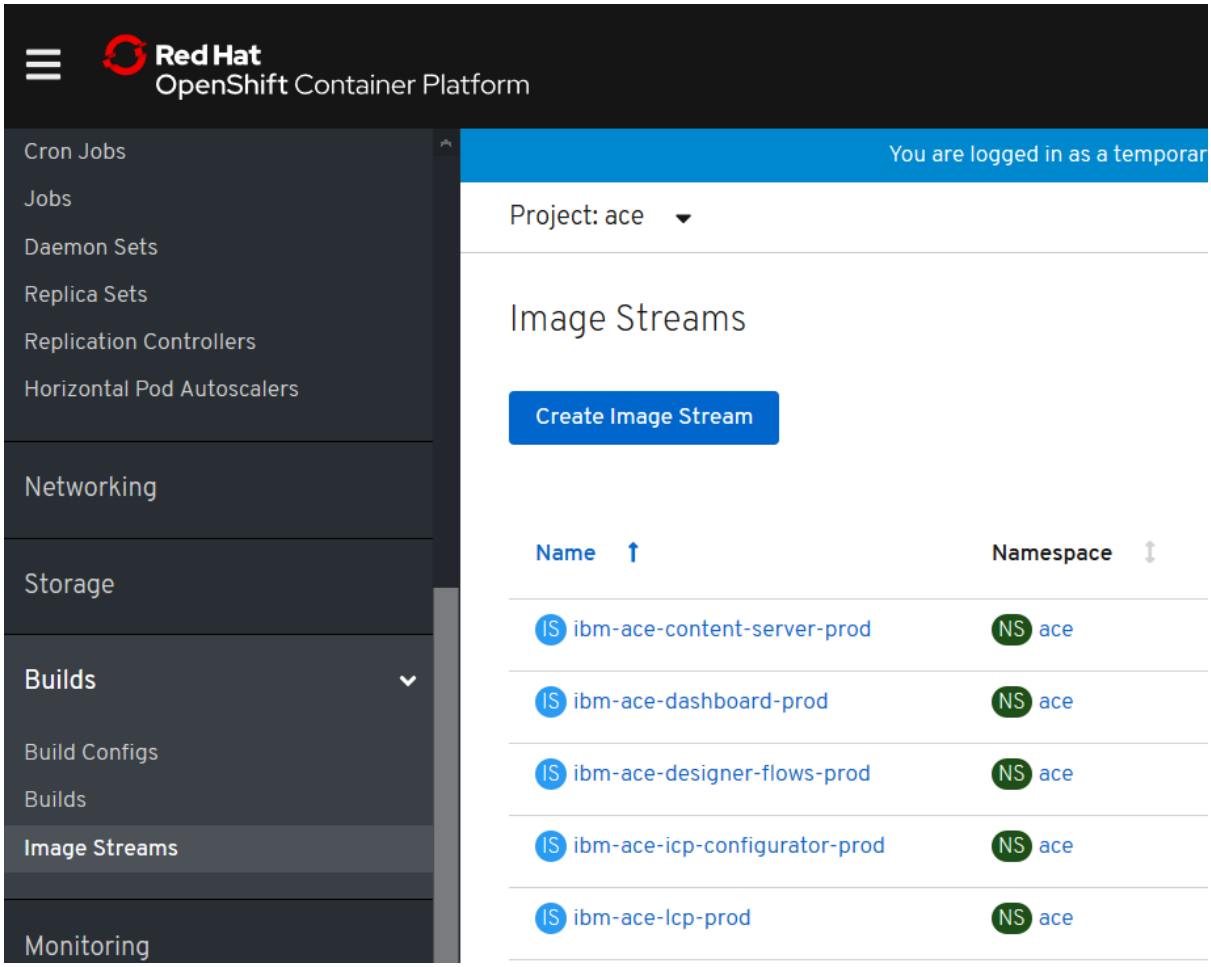

Project: kube-public
Config Maps
Create Config Map
Name
CM ibmcloud-cluster-info
Red Hat
OpenShift Container Platform
Administrator
Home
Dashboards
Projects
Search
Explore
Events
Operators
Workloads
Pods
Deployments
Deployment Configs
Stateful Sets
Secrets
Config Maps
You are logged in as a temporary a
Project: kube-public
Config Maps > Config Map Details
CM ibmcloud-cluster-info
Overview
YAML
Config Map Overview
Name
ibmcloud-cluster-info
Namespace
NS kube-public
Labels
No labels
Annotations
1 Annotation

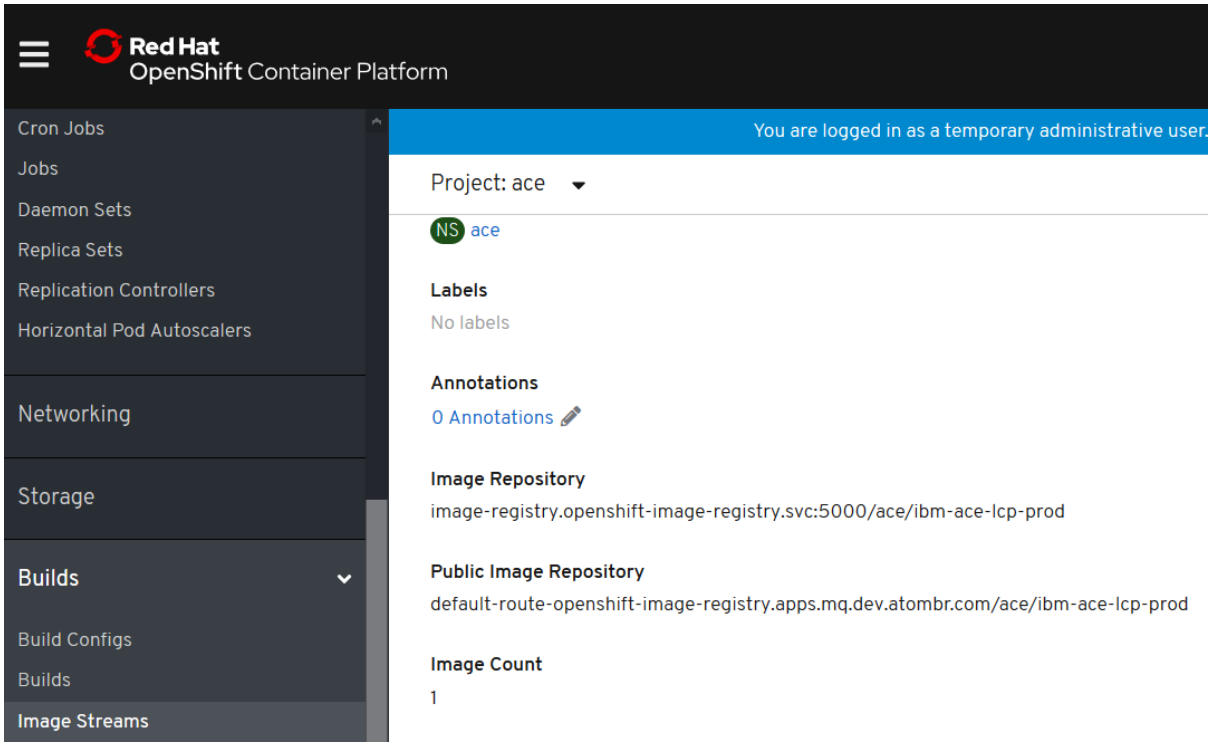
Data

proxy_address

```
icp-proxy.apps.mq.dev[redacted]mbr.com
```

Images, Image Streams and Image Repository





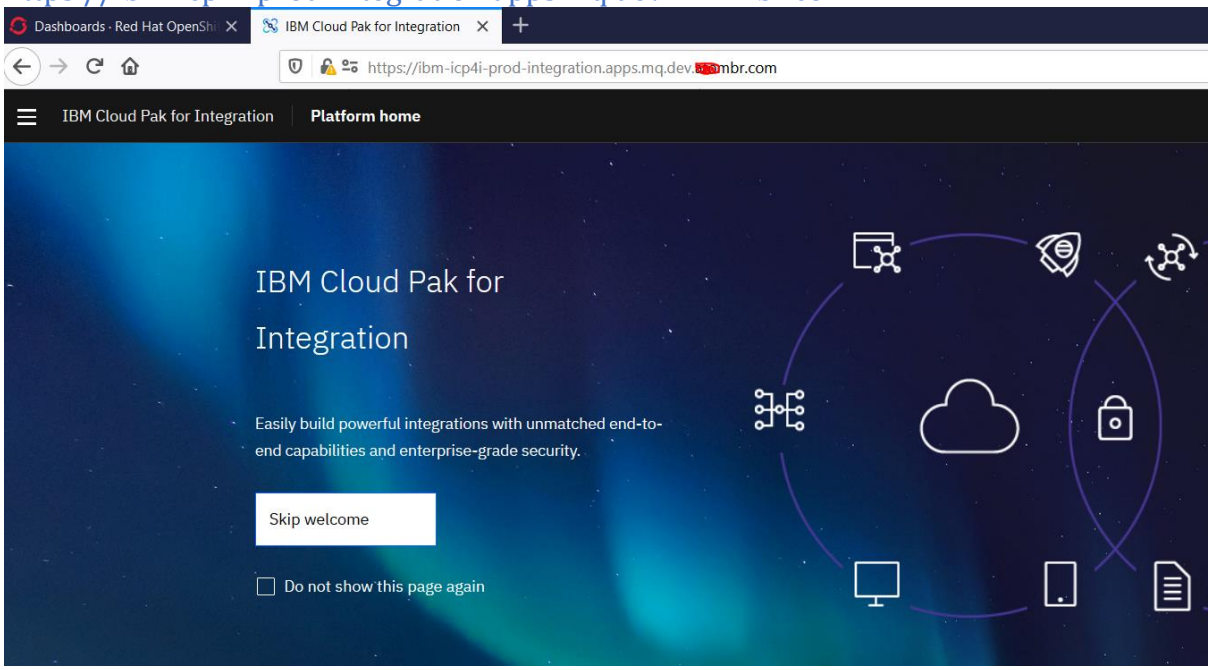
Example image for ace standalone: image-registry.openshift-image-registry.svc:5000/ace/ibm-ace-lcp-prod

ICP4i via ICP Access point and navigation

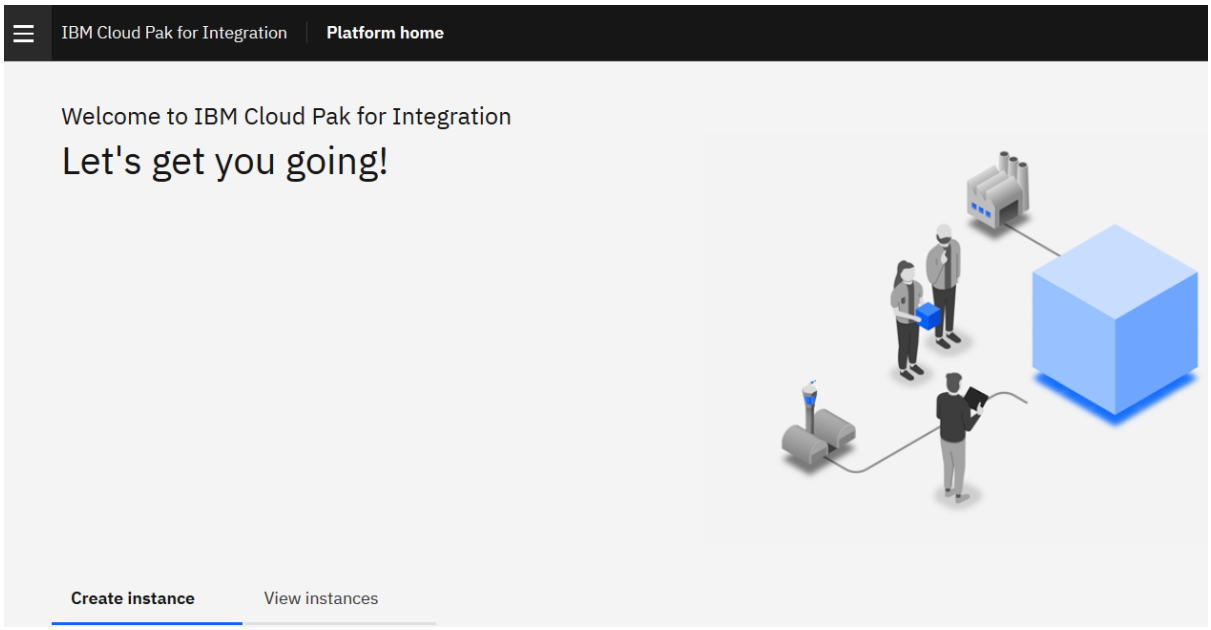
Add https://ibm-icp4i-prod-integration

To the head of the base Openshift cluster URL apps.mq.dev.###mbr.com

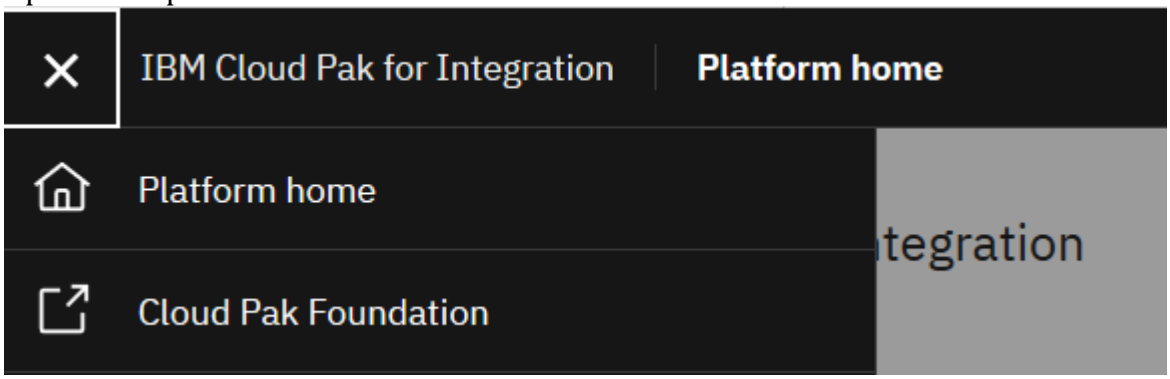
https://ibm-icp4i-prod-integration.apps.mq.dev.###mbr.com

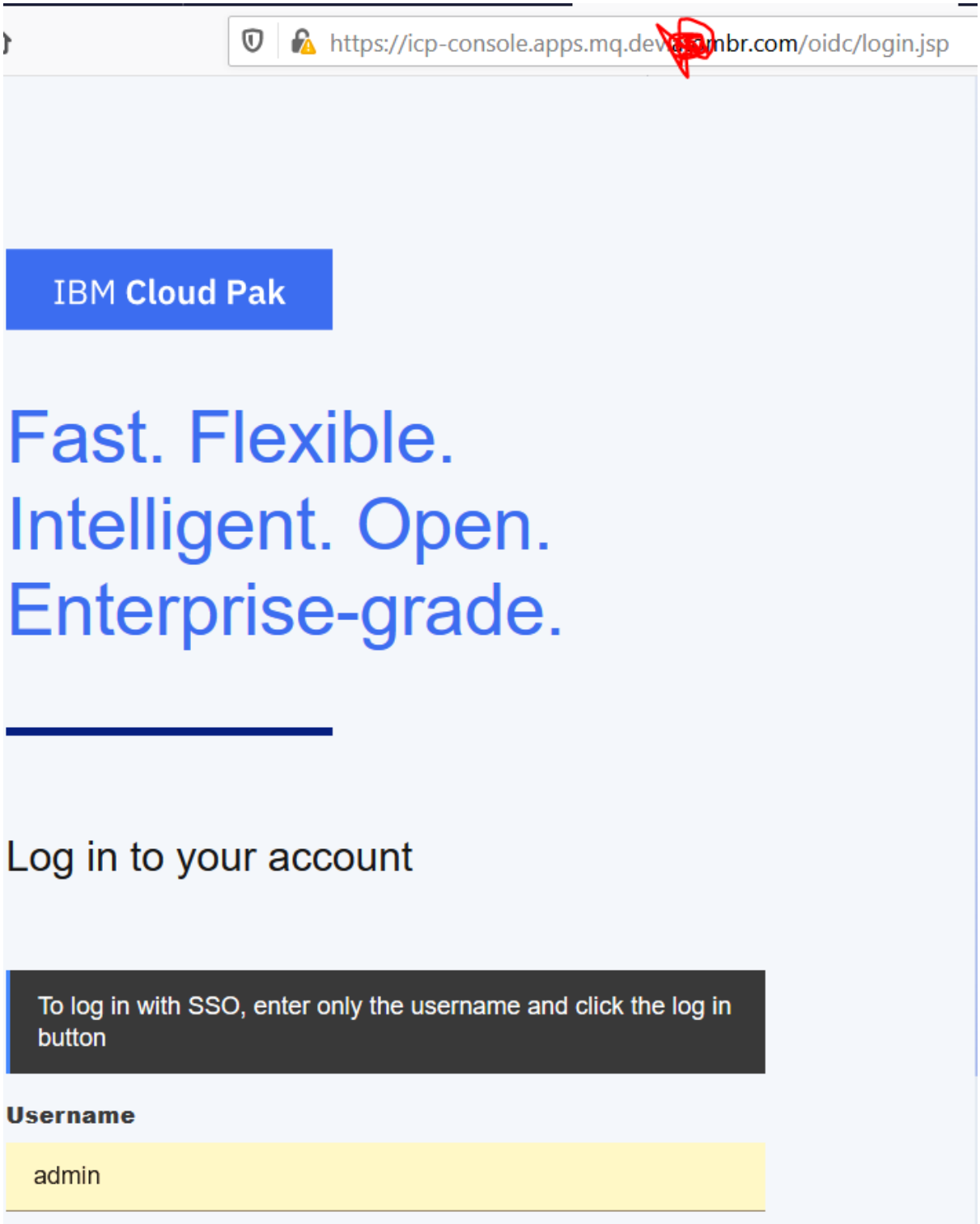


Skip Welcome



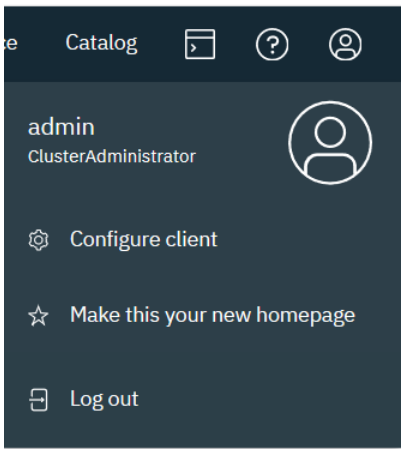
Open cloud pak foundation home





Key Information from ICP

ICP login information for kubectl commands



Configure client

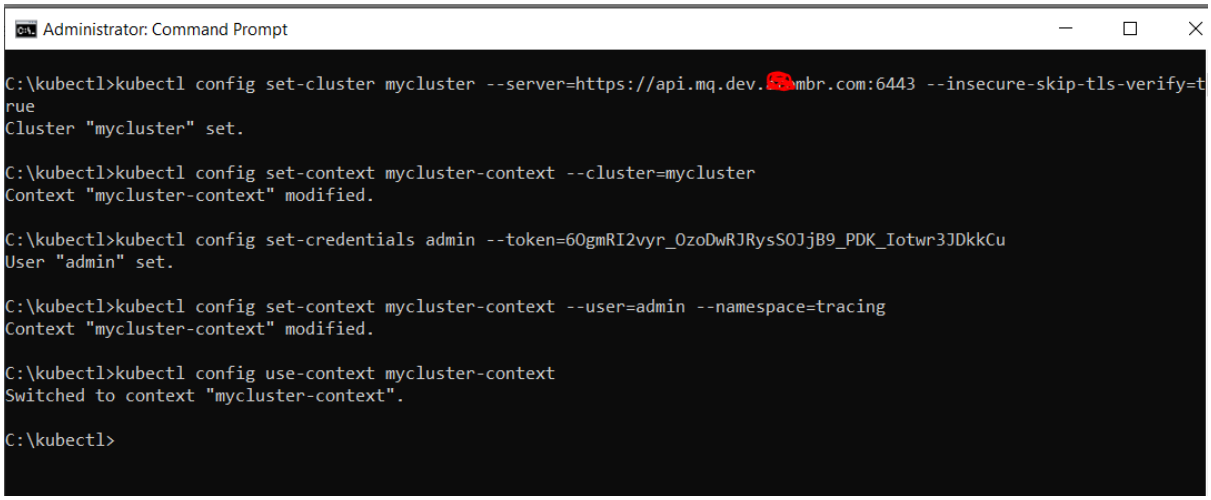
Before you run commands in the kubectl command line interface for this cluster, you must configure the client.

Prerequisites:

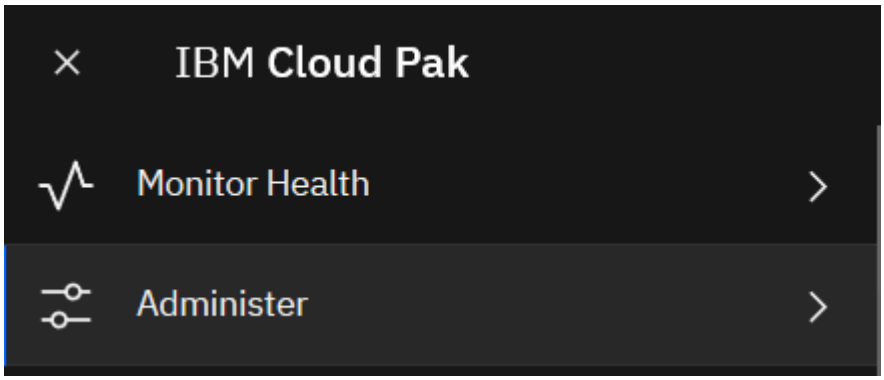
Install CLI tools

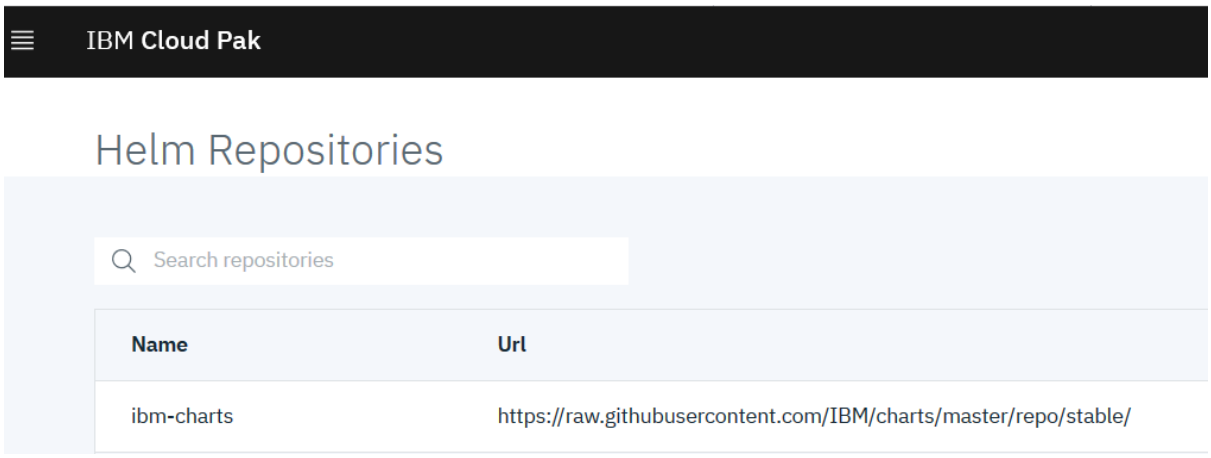
To configure the CLI, paste the displayed configuration commands into your terminal window and run them:

```
kubectl config set-cluster mycluster --server=https://api.mq.dev.ator
kubectl config set-context mycluster-context --cluster=mycluster
kubectl config set-credentials admin --token=6OgmRI2vyr_OzoDwRJRysSO
kubectl config set-context mycluster-context --user=admin --namespace
kubectl config use-context mycluster-context
```

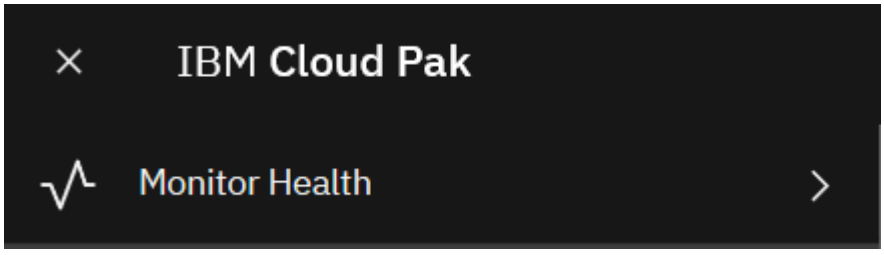


ICP Helm Releases

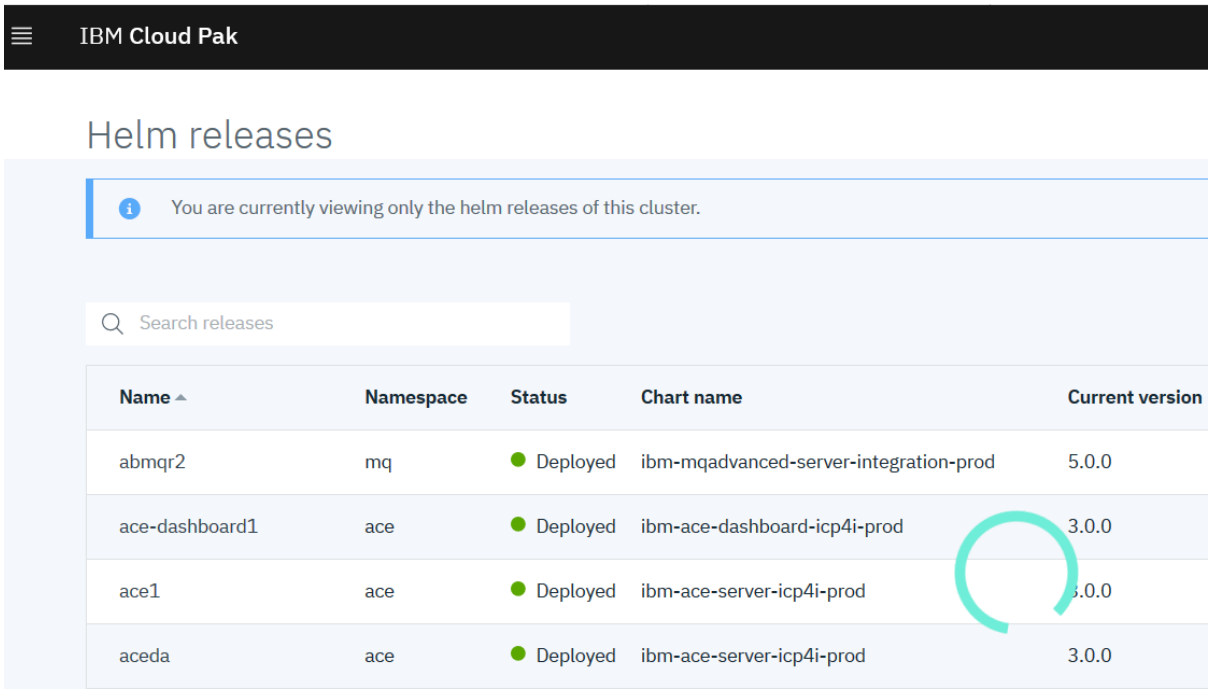




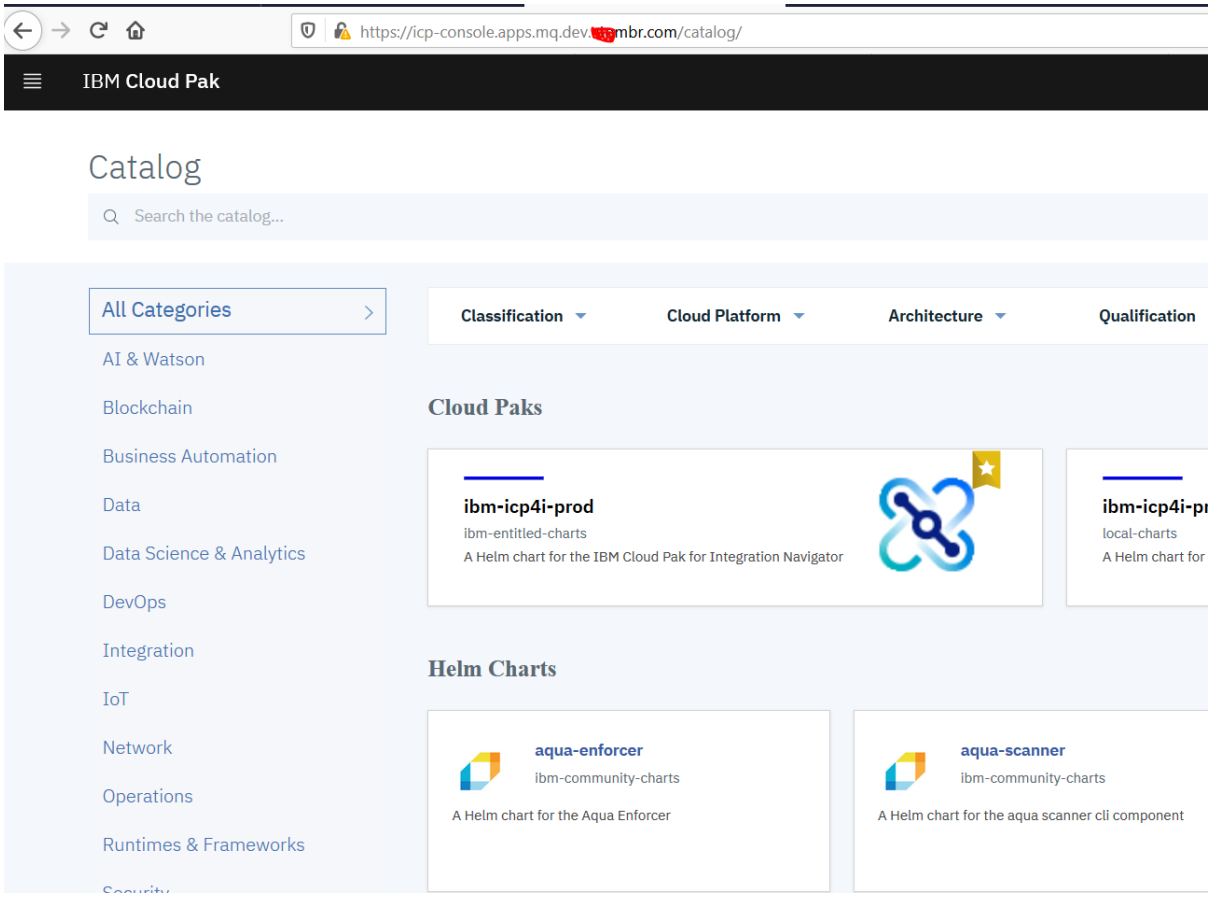
Helm releases



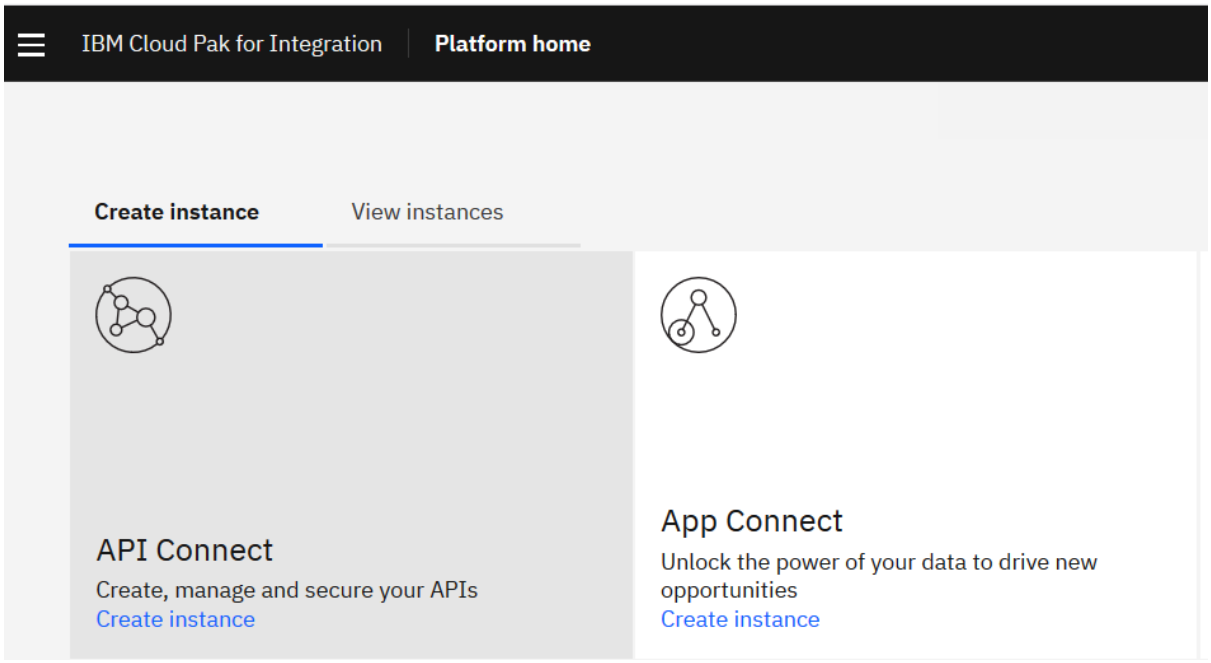
Select Helm releases


IBM Cloud Pak
Helm releases
You are currently viewing only the helm releases of this cluster.
Search releases
Name
Namespace
Status
Chart name
Current version
abmqr2
mq
Deployed
ibm-mqadvanced-server-integration-prod
5.0.0
ace-dashboard1
ace
Deployed
ibm-ace-dashboard-icp4i-prod
3.0.0
ace1
ace
Deployed
ibm-ace-server-icp4i-prod
aceda
ace
Deployed
ibm-ace-server-icp4i-prod
3.0.0

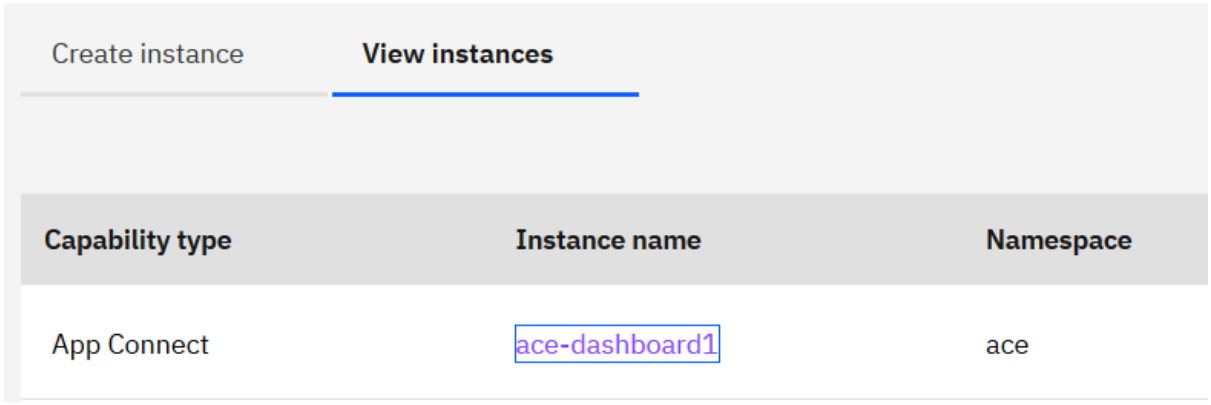
ICP Catalog


https://icp-console.apps.mq.dev
mbr.com/catalog/
IBM Cloud Pak
Catalog
Search the catalog...
All Categories
AI & Watson
Blockchain
Business Automation
Data
Data Science & Analytics
DevOps
Integration
IoT
Network
Operations
Runtimes & Frameworks
Classification
Cloud Platform
Architecture
Qualification
Cloud Paks
ibm-icp4i-prod
ibm-entitled-charts
A Helm chart for the IBM Cloud Pak for Integration Navigator
local-charts
A Helm chart for
Helm Charts
aqua-enforcer
ibm-community-charts
A Helm chart for the Aqua Enforcer
aqua-scanner
ibm-community-charts
A Helm chart for the aqua scanner cli component

ICP4i console (Platform home)

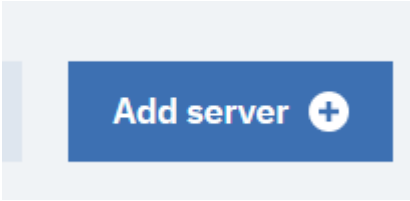


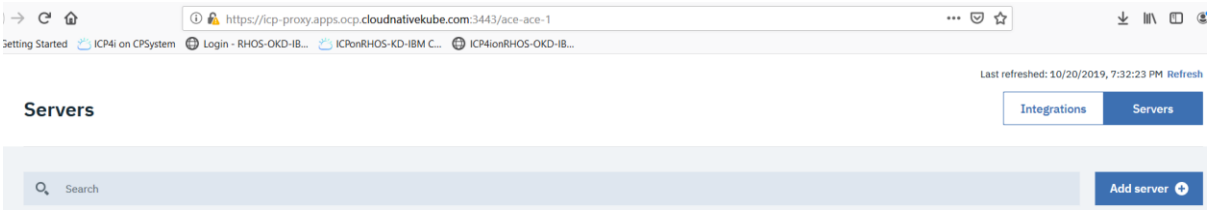
View instances and select the ace-dashboard



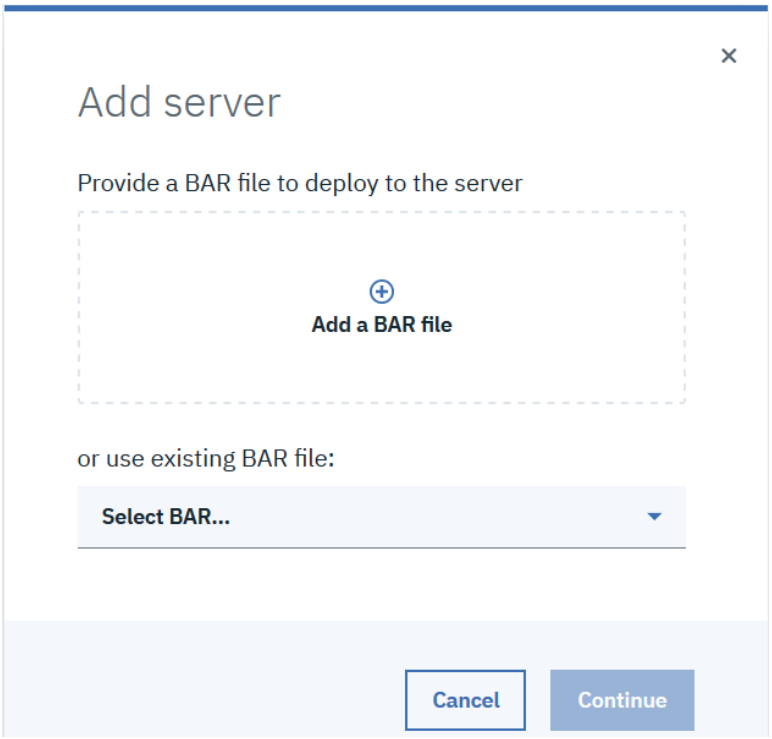
Running up an ACE instance on ICP4i on RHOS 4.2

Add a new ace server and associate a BAR



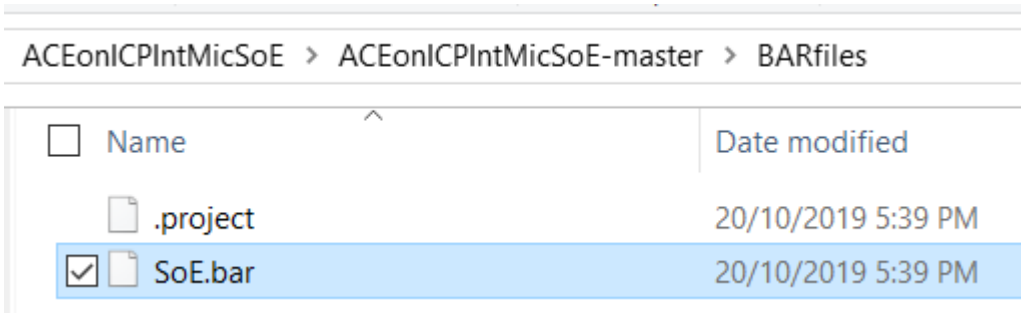


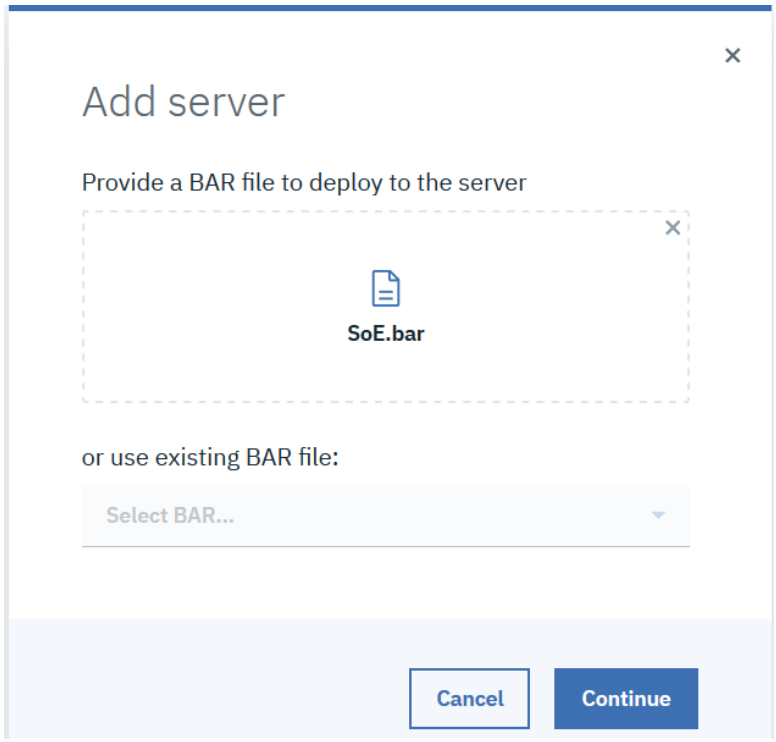
Add a server

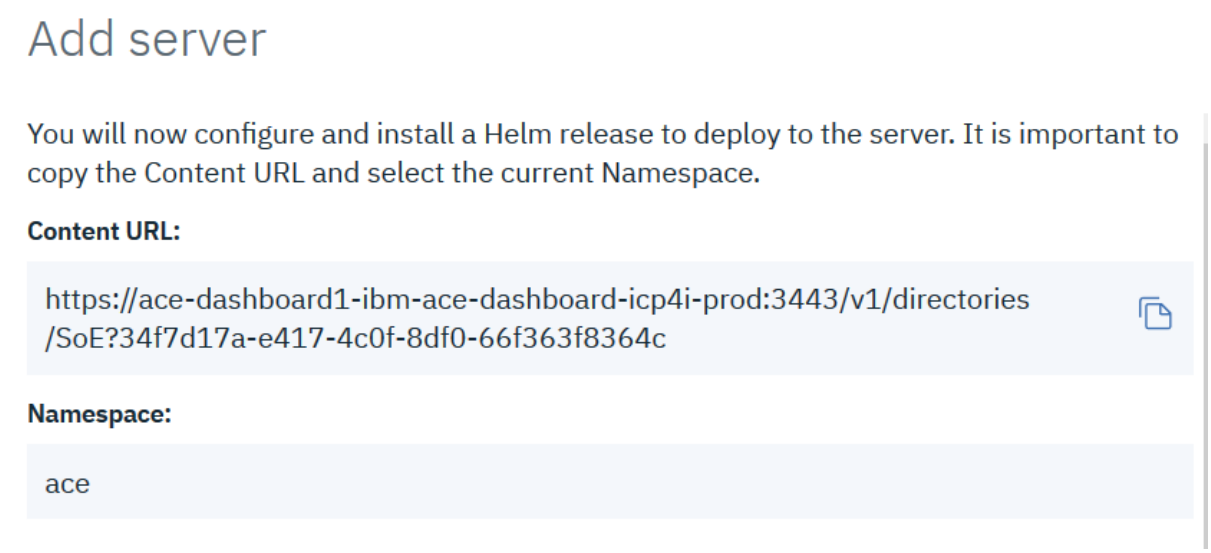


Navigate to a bar

https://github.com/DAVEXACOM/ACEonICPIntSupportingMaterial/tree/master/ace-livelinessProbe

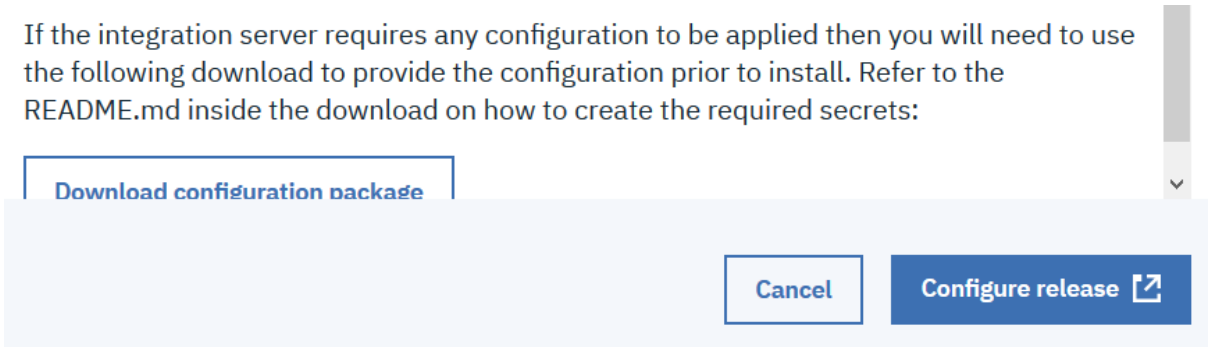




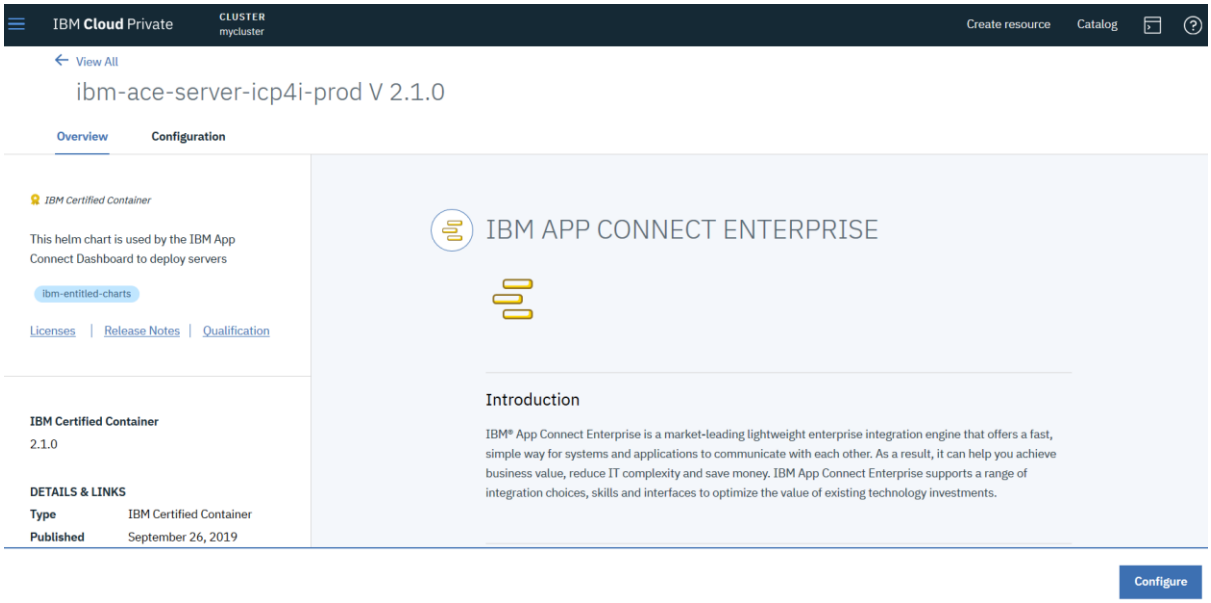


Take a copy of the url to the BAR (content) file

https://ace-dashboard1-ibm-ace-dashboard-icp4i-prod:3443/v1/directories/SoE?34f7d17a-e417-4c0f-8df0-66f363f8364c



Overview of Helm Chart. Switch to configuration



Information you'll need to configure the release

Collect information you need to configure the release.

ICP4i Proxy address (from RHOS UI -> configMaps): icp-proxy.apps.ocp.cloudnativekube.com

Content URL (from ICP4i): https://ace-1-ibm-ace-dashboard-icp4i-prod:3443/v1/directories/SoE?23e24c6c-c709-4b5e-a7ec-0dd05b96394f

Images – default in chart is cp.icr.io/ibm-ace-server-prod:11.0.0.6.1 needs to be changed

Get the images from RHOS UI

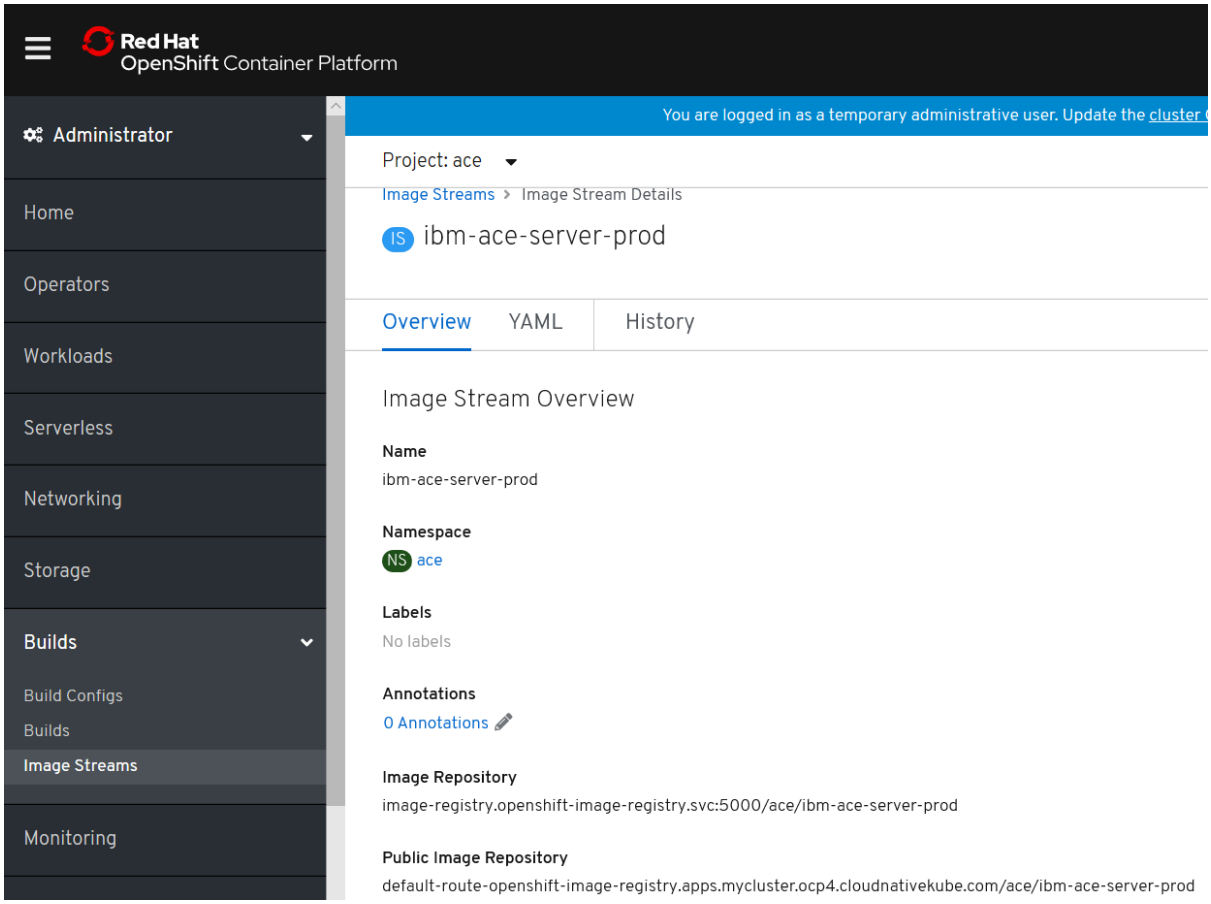


image-registry.openshift-image-registry.svc:5000/ace/ibm-ace-server-prod:11.0.0.6.1

image-registry.openshift-image-registry.svc:5000/ace/ibm-ace-mqclient-server-prod:11.0.0.6.1

image-registry.openshift-image-registry.svc:5000/ace/ibm-ace-mq-server-prod:11.0.0.6.1

image-registry.openshift-image-registry.svc:5000/ace/ibm-ace-icp-configurator-prod:11.0.0.6.1

image-registry.openshift-image-registry.svc:5000/ace/ibm-ace-designer-flows-prod:11.0.0.6.1

image-registry.openshift-image-registry.svc:5000/ace/ibm-ace-lcp-prod:11.0.0.6.1

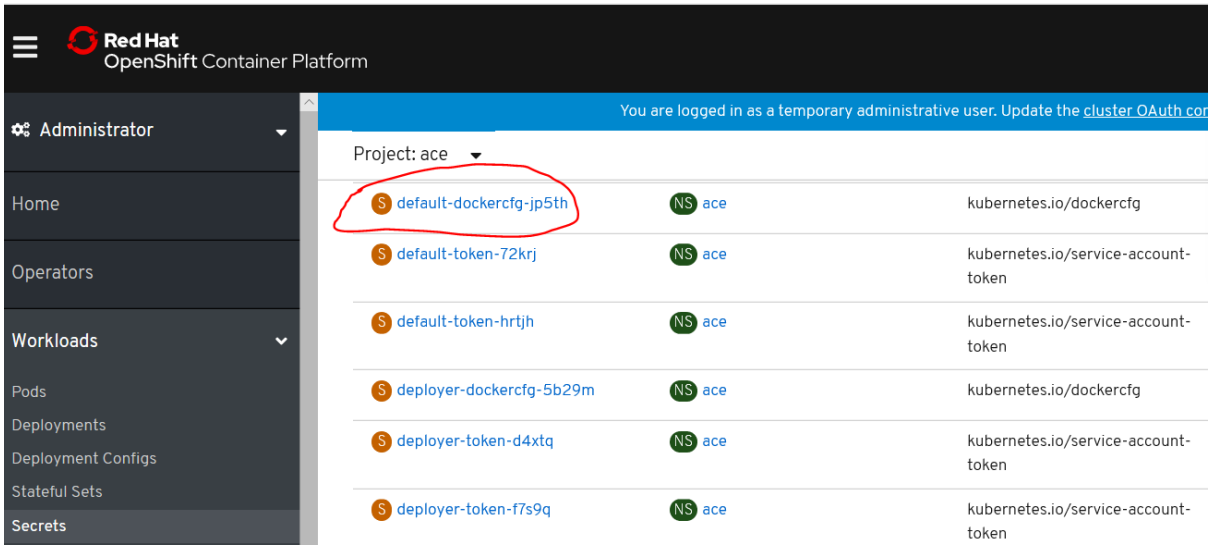
image-registry.openshift-image-registry.svc:5000/ace/icp4i-od-agent

image-registry.openshift-image-registry.svc:5000/ace/icp4i-od-collector

replace cp.icr.io with image-registry.openshift-image-registry.svc:5000/ace in the configuration

pull secret(from oc command oc get secrets):

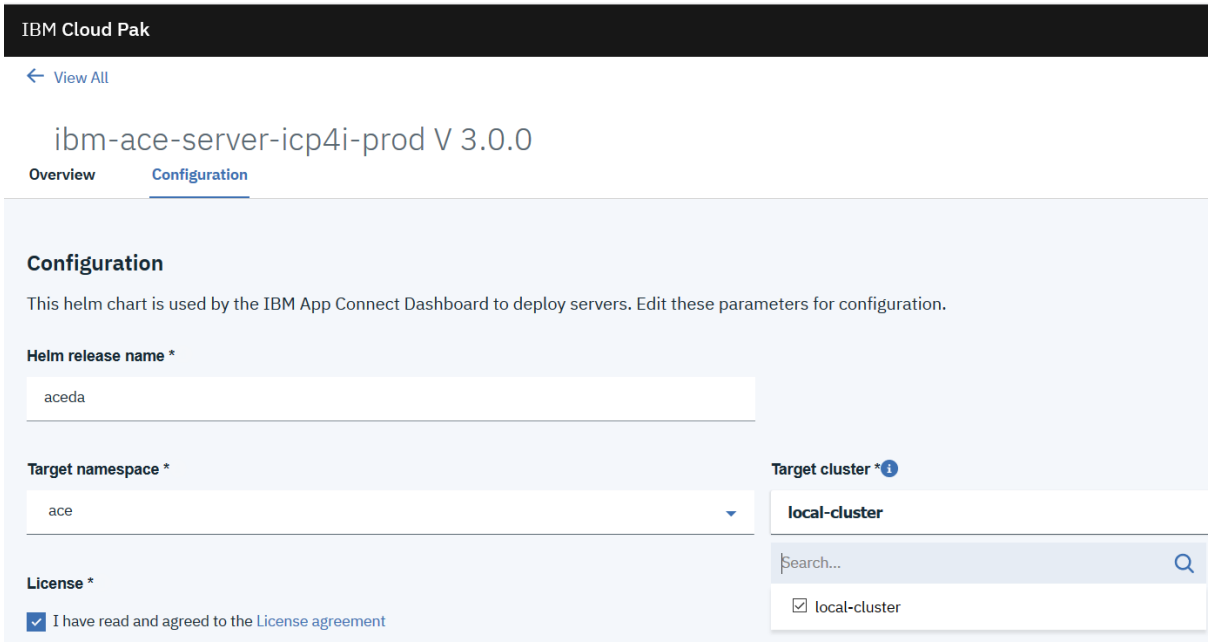
default-dockercfg-jp5th

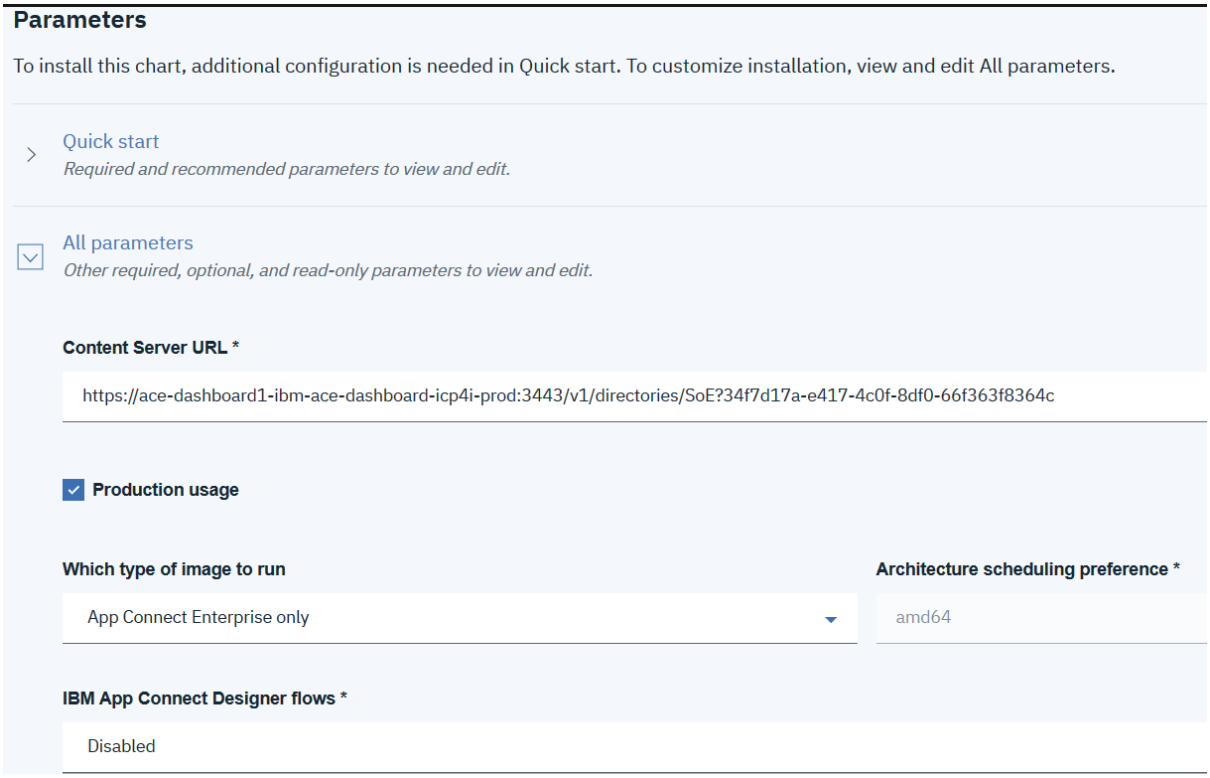


Managed NFS name (from oc command oc get sc):

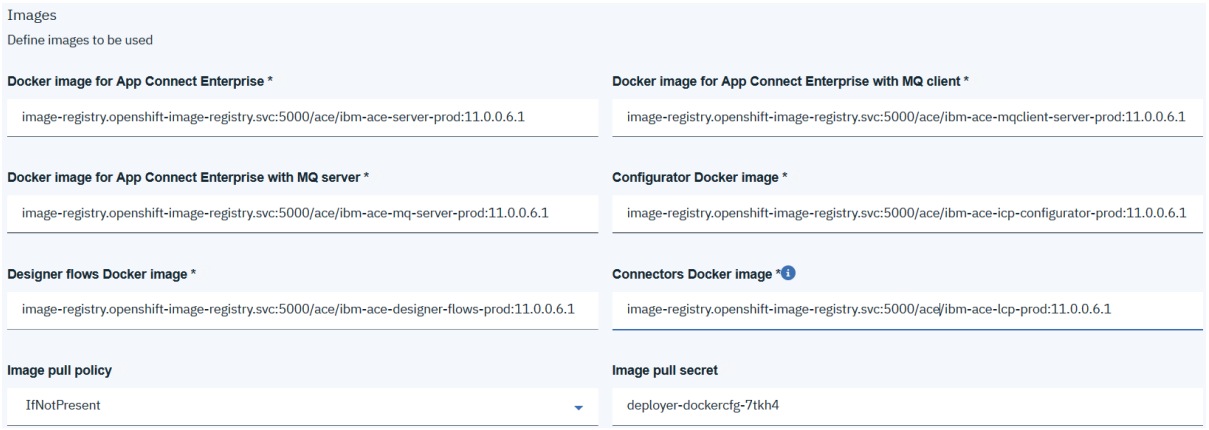
gp2 or managed-nfs-storage

Configuration parameters





Set the pull secret (default-dockercfg-jp5th) and the image locations and names correctly



Leave service as default

Service

Service settings

Service type *

ClusterIP

Endpoint type *

HTTP

Web UI Port *

7600

HTTP port *

7800

HTTPS port *

7843

Switch AgentC Port

Enter value

Switch AgentP Port

Enter value

Switch Admin Port

Enter value

Integration Server

Define configuration for the Integration Server

Integration server name

myIntSRV

List of key aliases for the keystore

Enter value

List of certificate aliases for the truststore

Enter value

Name of the default application

Enter value

The name of the secret to create or to use that contains the server configuration

Enter value

File system group ID

Enter value

Reduce replicas to 1

Configuration for App Connect Enterprise (without MQ) deployments

Configuration settings for specifying required resources when running App Connect Enterprise without MQ

CPU request *

200m

Memory request *

256Mi

CPU limit *

1

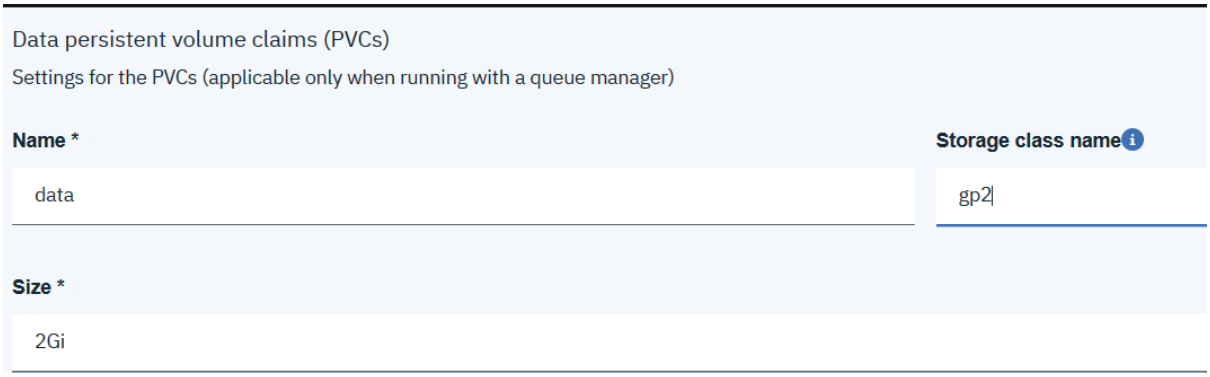
Memory limit *

1024Mi

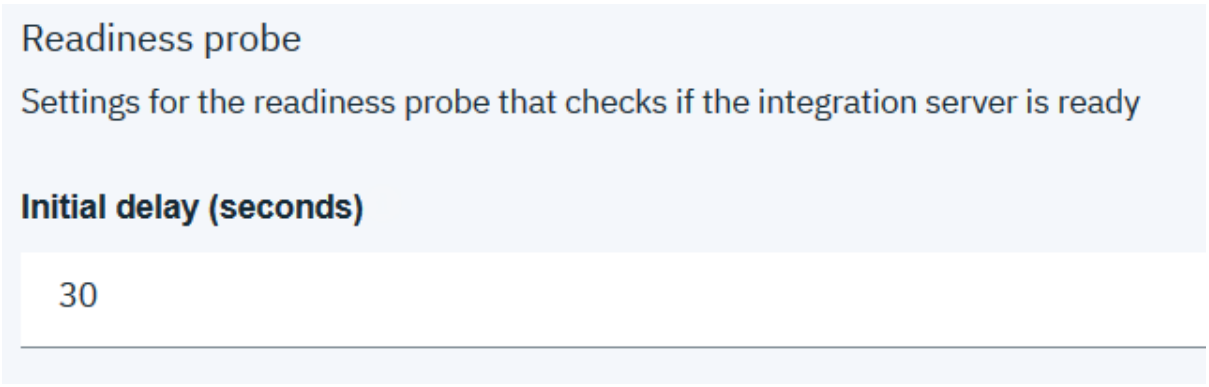
Replica count

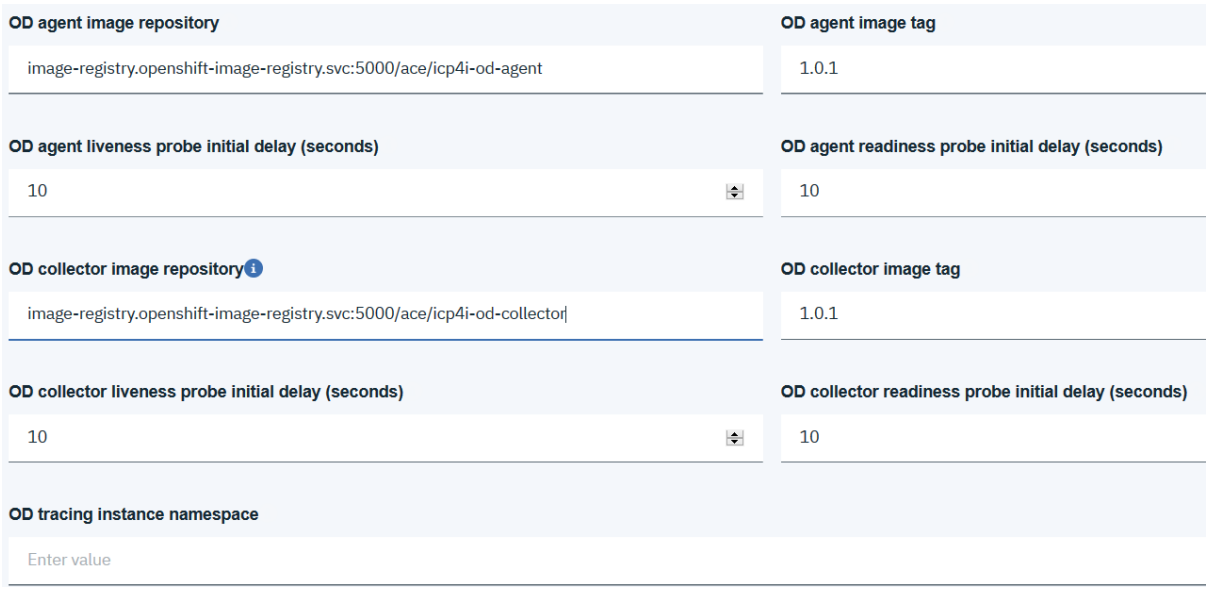
1

Set gp2 or managed-nfs-storage

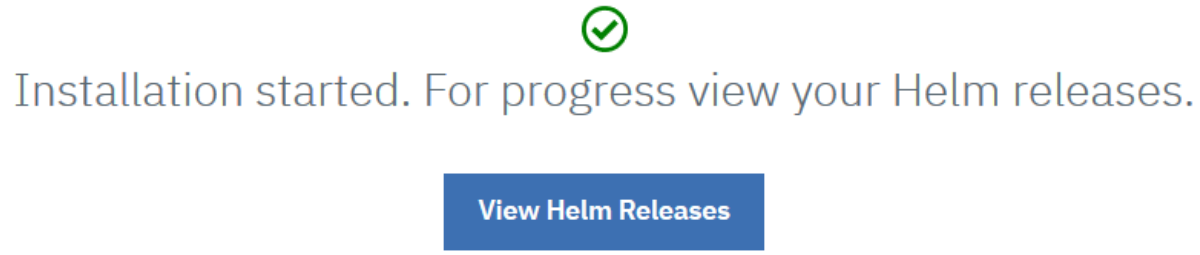


Increase initial delay





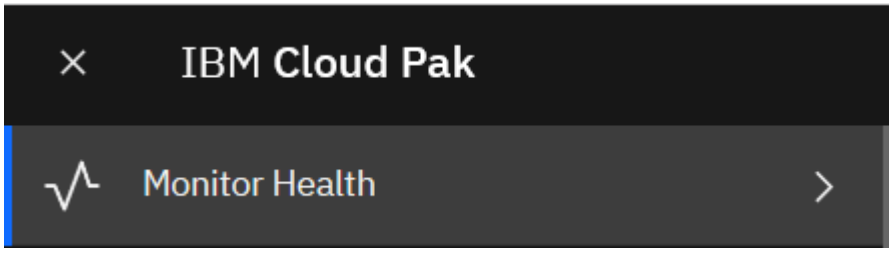
Might have to wait a little while – then RIGHT Click on View helm releases and open in a new tab



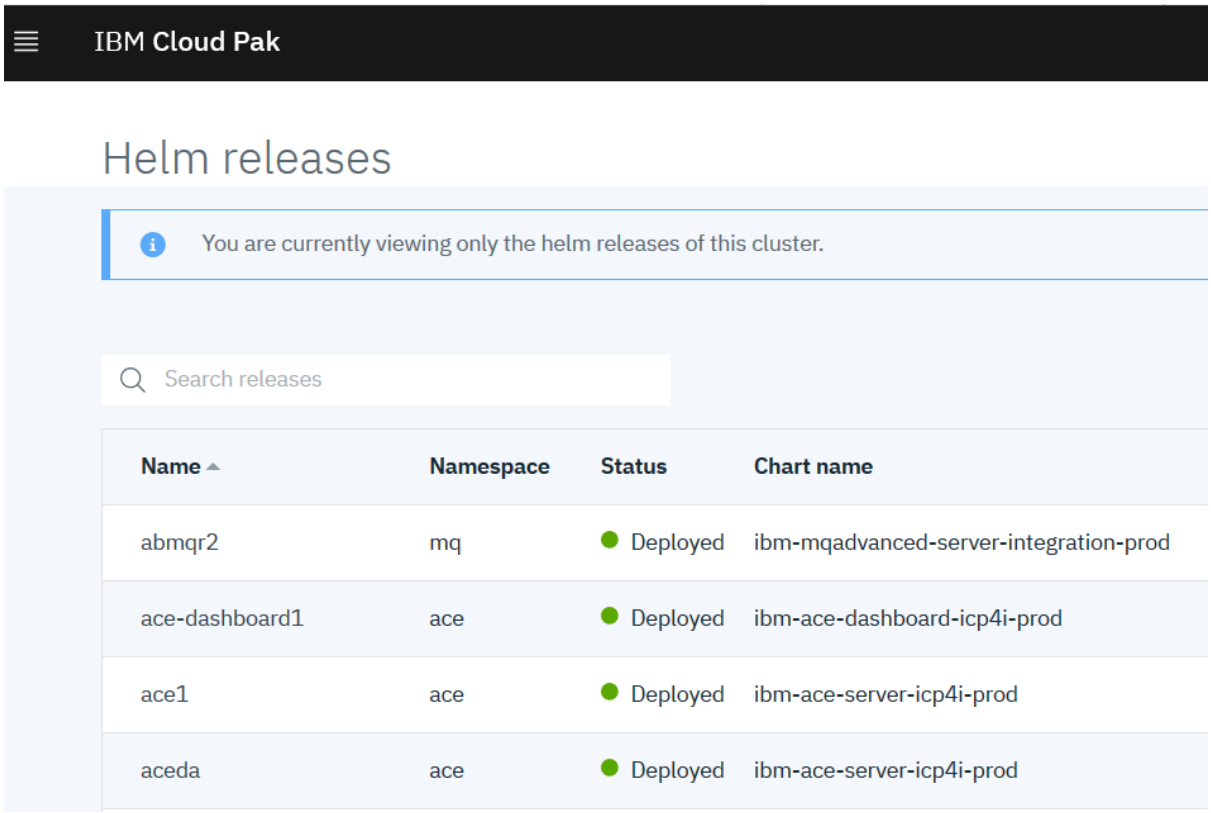
Then click the X to dismiss the dialog.

This way you can leave the parameters in the chart and try again if your Helm release fails without having to enter all parms again.

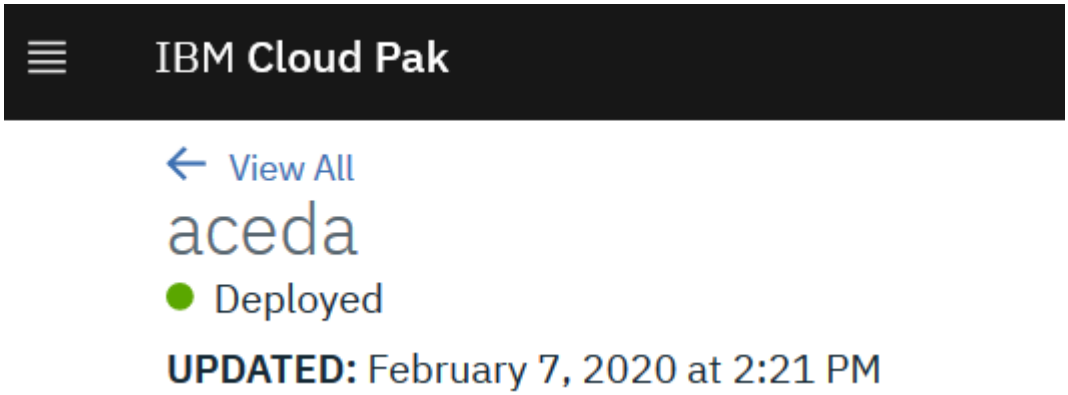
Observing the ACE deployment via ICP4i



Then select helm releases

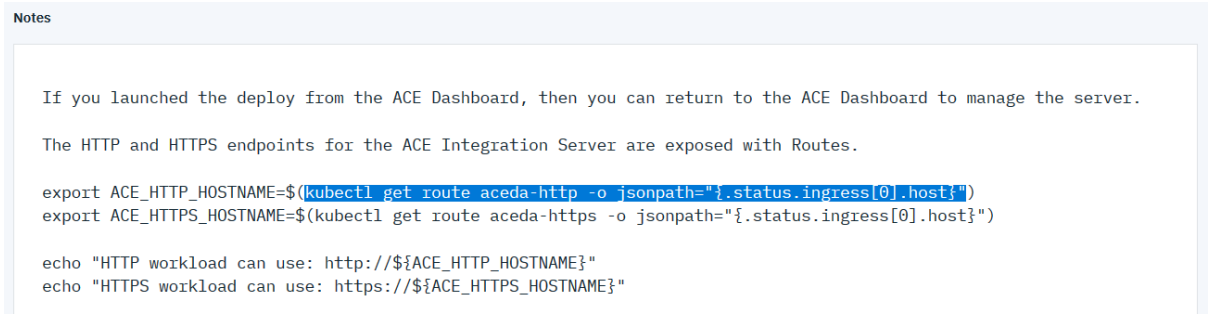


Select aceda

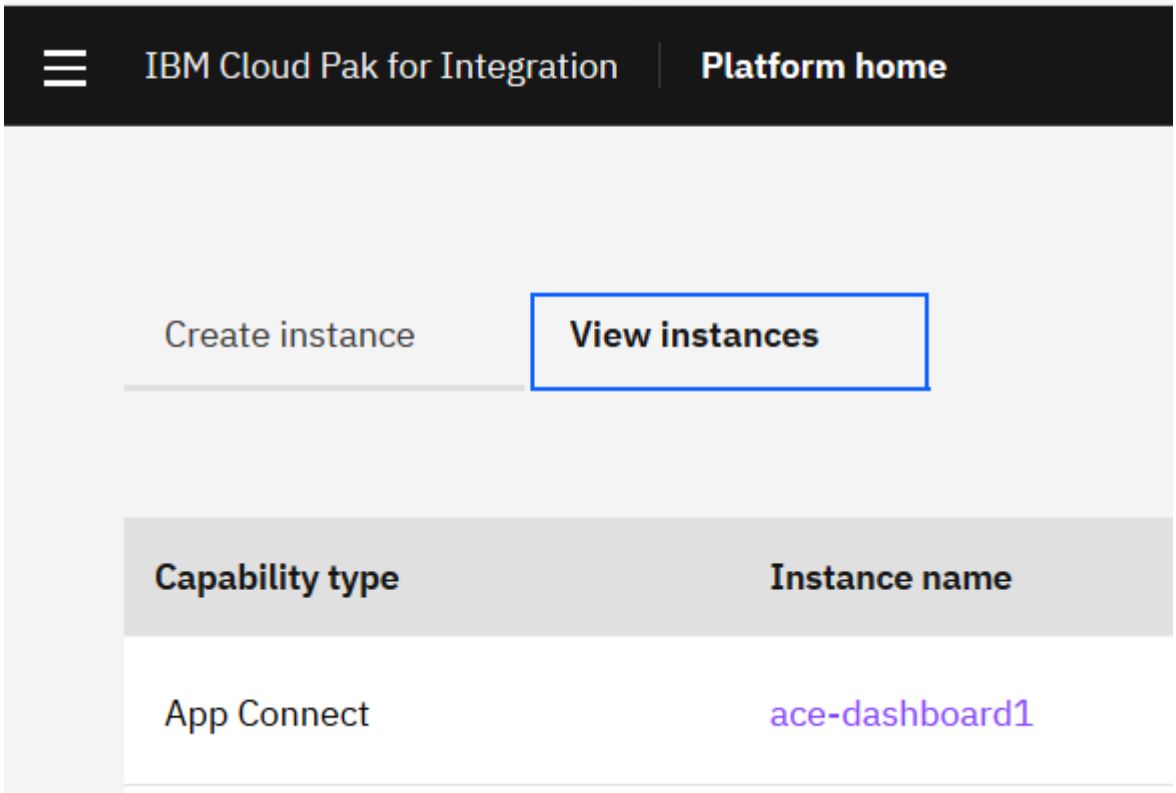


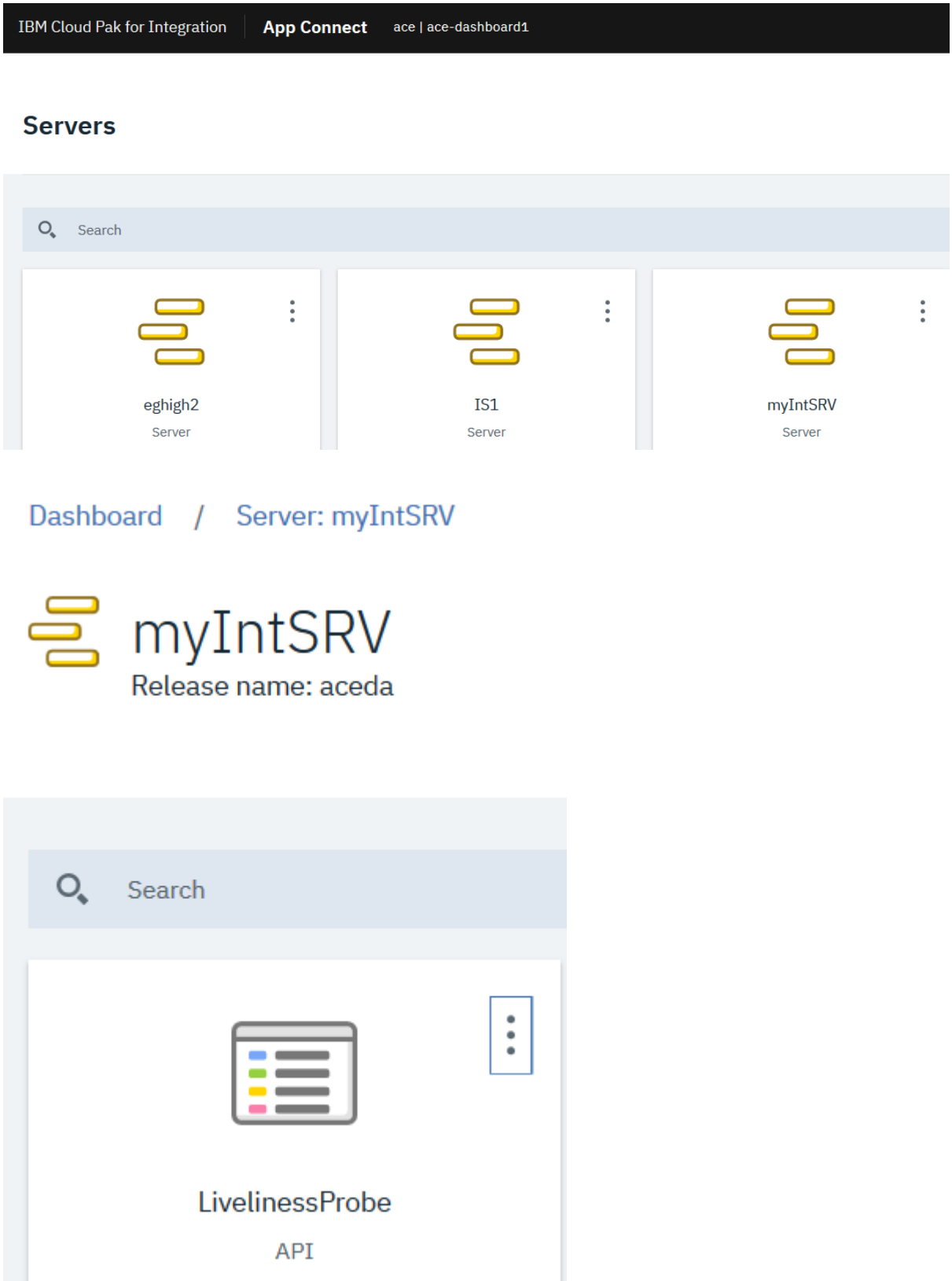
Page down

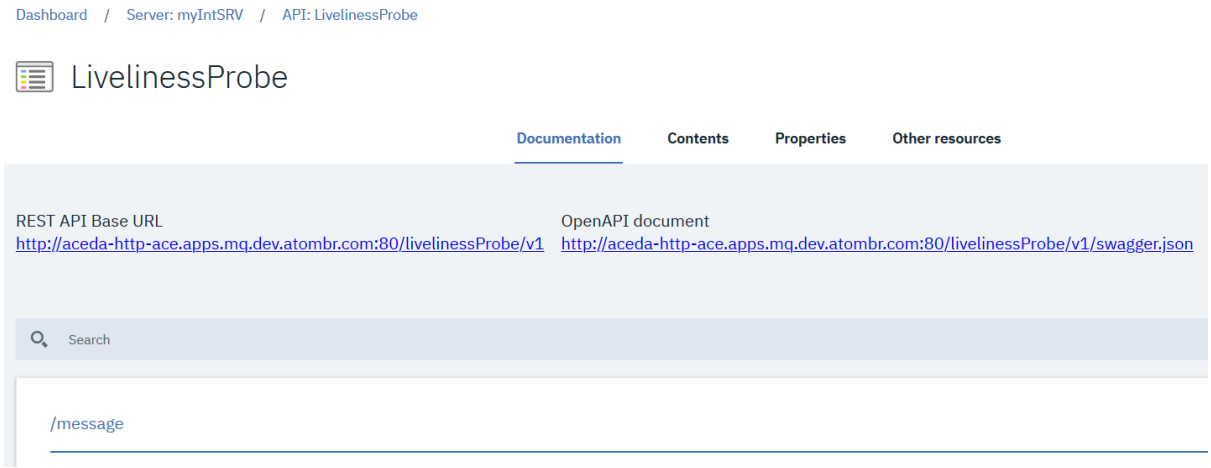
Note the instructions for managing and connecting to the integration server



Manage the ACE server




IBM Cloud Pak for Integration
App Connect
ace | ace-dashboard1
Servers
Search
eghigh2
Server
IS1
Server
myIntSRV
Server
Dashboard / Server: myIntSRV
myIntSRV
Release name: aceda
Search
LivelinessProbe
API



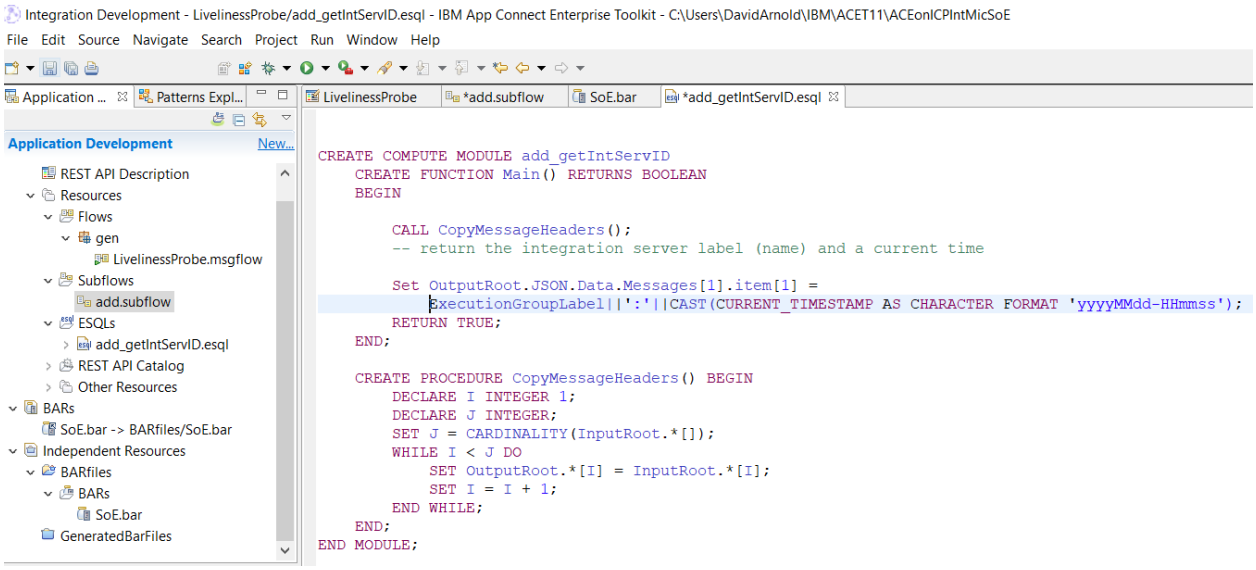
Call Test LiveLiness Probe

Github Source Repos for ACE Liveliness Probe (The SoE ACE project)

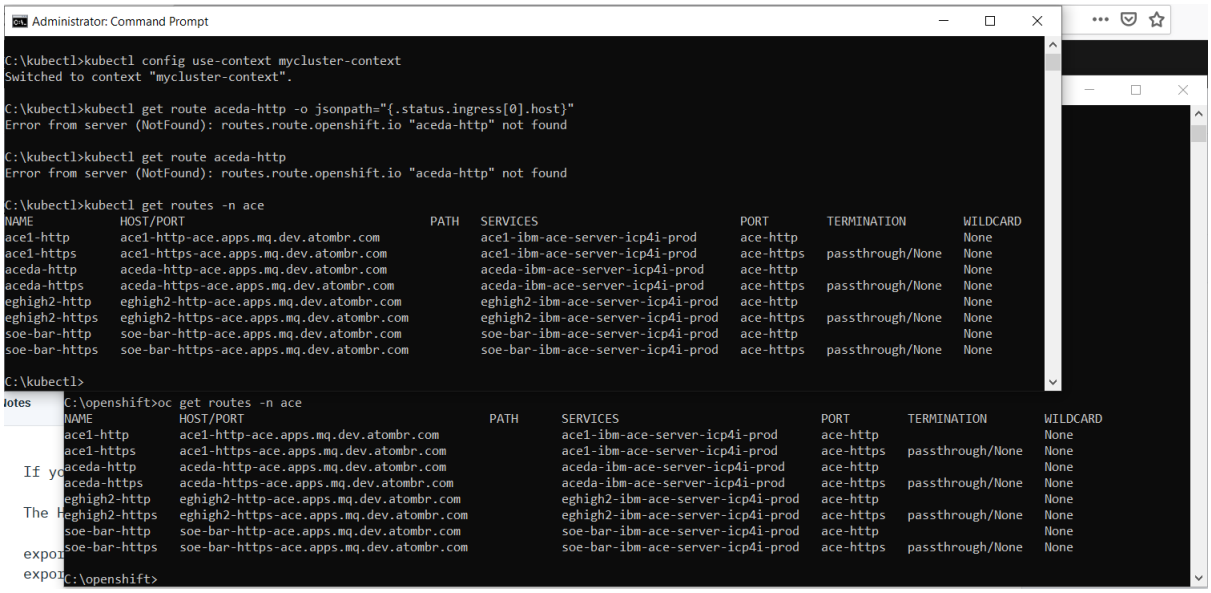
https://github.com/DAVEXACOM/ACEonICPIntMicSoE

Description

The Liveliness Probe Service is an other restful service (this is not the service baked into the cloud pak images). Its just a user echo test service



You can use oc get routes or kubectl get routes



aceda-http-ace.apps.mq.dev.###mbr.com

daace1-http-ace.apps.mycluster.ocp4.cloudnativekube.com

Testing Liveliness Probe

Using RESTED rest client for firefox I this example

Base URI

http://aceda-http-ace.apps.mq.dev.###mbr.com/livelinessProbe/v1

http://daace1-http-ace.apps.mycluster.ocp4.cloudnativekube.com/liveinessProbe/v1

input data:

{“Messages”:[“test”]}

Return data

returns the integration server name plus a current timestamp for

Post

http://aceda-http-ace.apps.mq.dev.###mbr.com/livelinessProbe/v1/message

http://daace1-http-ace.apps.mycluster.ocp4.cloudnativekube.com/livelinessProbe/v1/message

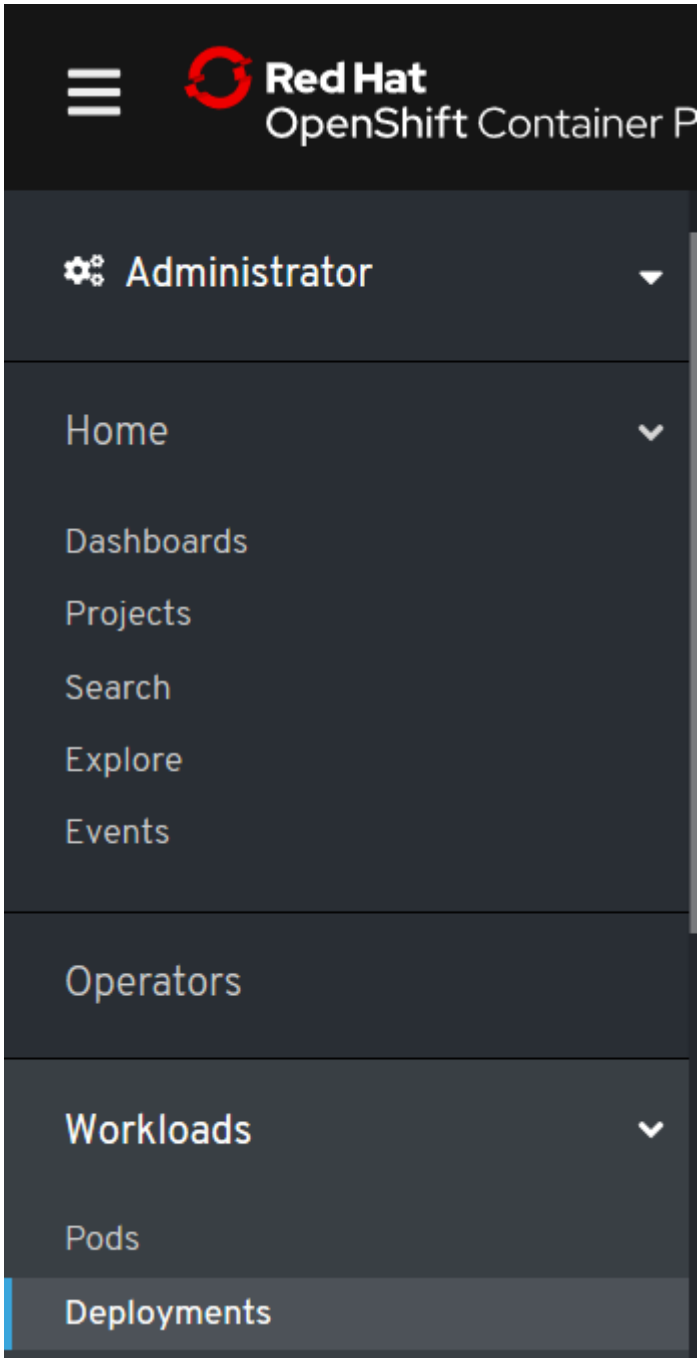
Response (0.09s) - http://aceda-http-ace.apps.mq.dev.[redacted]mbr.com/livelinessProbe/v1/message

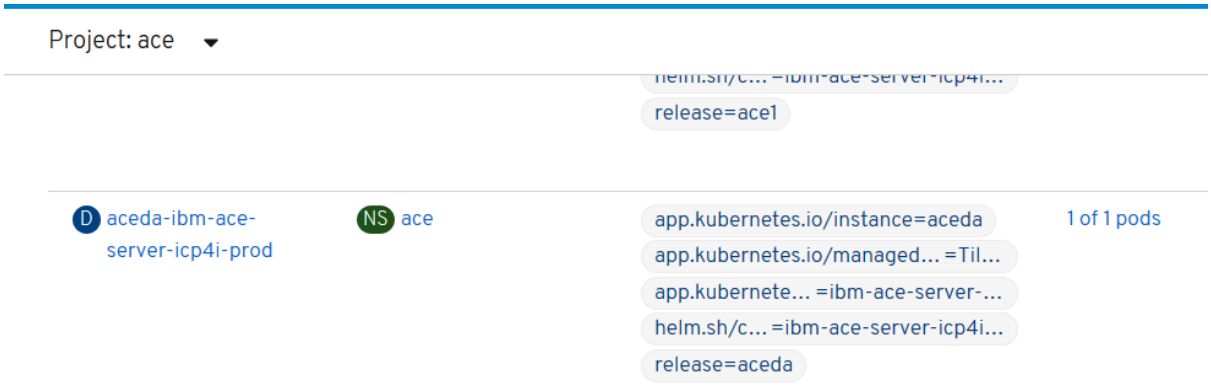
200 OK

Headers >

{"Messages":{"item":"myIntSRV:20200207-035732"}}

Observing the ACE deployment via RHOS





Project: ace

Deployments > Deployment Details

D aceda-ibm-ace-server-icp4i-prod

Overview | YAML | Pods | Environment | Events

Deployment Overview

1
pod

Name
aceda-ibm-ace-server-icp4i-prod

Namespace
NS ace

Labels
app.kubernetes.io/instance=aceda
app.kubernetes.io/managed-by=Tiller
app.kubernetes.io/name=ibm-ace-server-icp4i-prod
helm.sh/chart=ibm-ace-server-icp4i-prod
release=aceda

Update Strategy
RollingUpdate

Max Unavailable
1 of 1 pod

Max Surge
1 greater than 1 pod

Progress Deadline
10m 0s

Project: ace

Containers

Name	Image	Resource Limits	Ports
aceda-ibm-ace-server-icp4i-prod	image-registry.openshift-image-registry.svc:5000/ace/ibm-ace-server-prod:11.0.0.6.1-amd64	cpu: 1, memory: 1Gi	7600/TCP, 7800/TCP, 7843/TCP

Volumes

Name	Mount Path	SubPath	Type	Permissions	Utilized By
webusers	/home/aceuser/initial-config/webusers		S aceda-ibm-ace-server-icp4i-prod	Read/Write	aceda-ibm-ace-server-icp4i-prod

Overview YAML | Pods Environment Events

Filter by name... /

1 Running | 0 Pending | 0 Terminating | 0 CrashLoopBackOff | 0 Completed | 0 Failed | 0 Unknown | Select All Filters

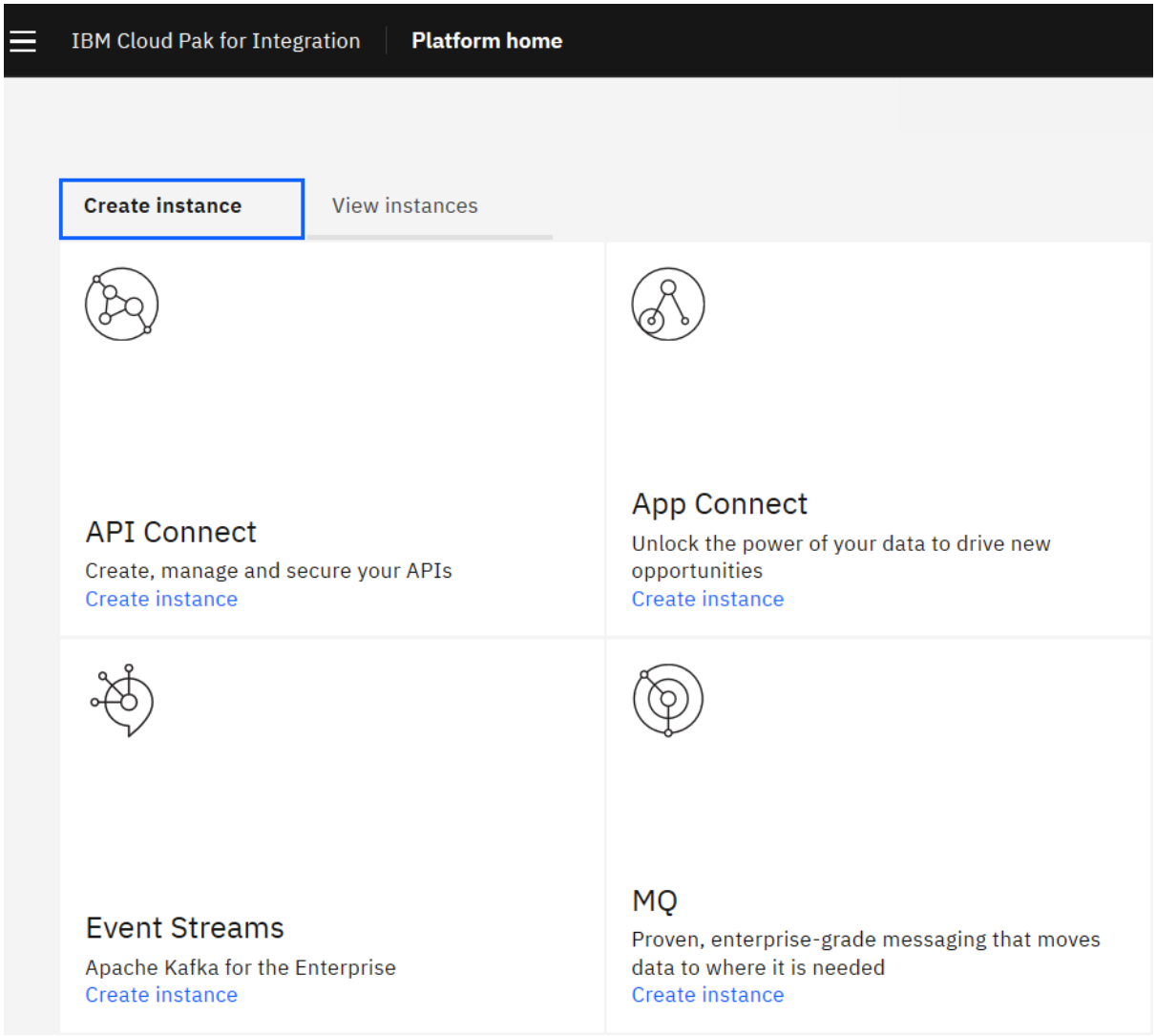
1 Item

Name	Namespace	Pod Labels	Node	Status	Readiness
P aceda-ibm-ace-server-icp4i-prod-7b86fb56f5-mff8h	NS ace	app.kubernete... =a... app.kubernetes... =Till app.ku... =ibm-ace... helm...=ibm-ace-se... pod-templ...=7b86f... release=aceda	N ip-10-0-136-189.ap-southeast-2.compute.internal	Running	Ready

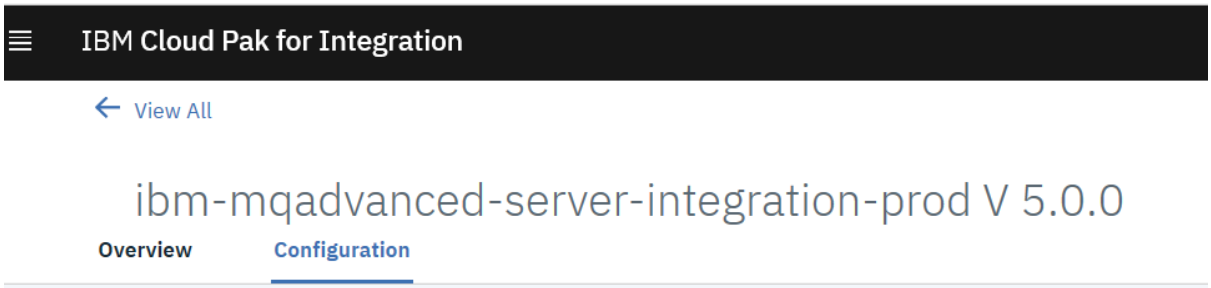
MQ on ICP4i on RHOS 4.2 – Intra-Cluster connectivity only

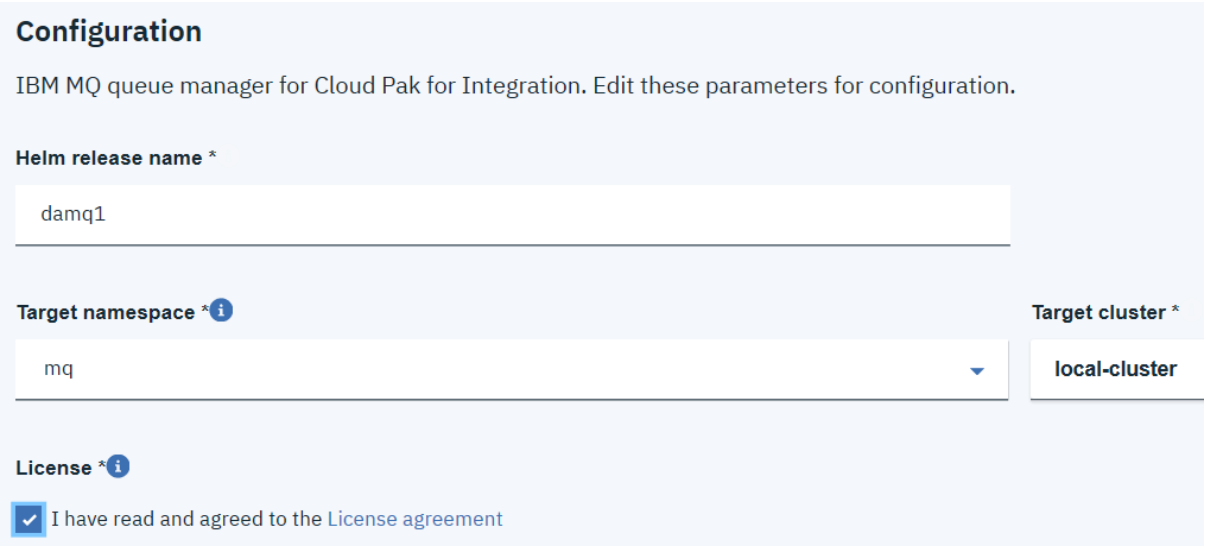
Intra-cluster connectivity means that no applications or administrative tools that exist outside of the RHOS Cluster can connect to the queue manager.

Create MQ Instance from ICP4i Platform Home



Configure Helm chart





icp-proxy.apps.mycluster.ocp4.cloudnativekube.com

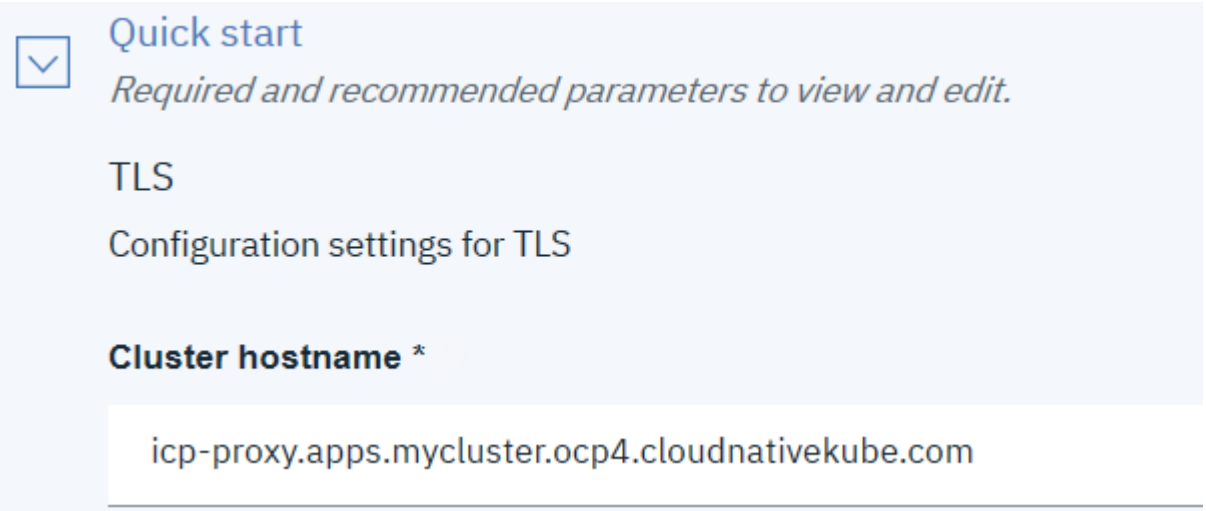
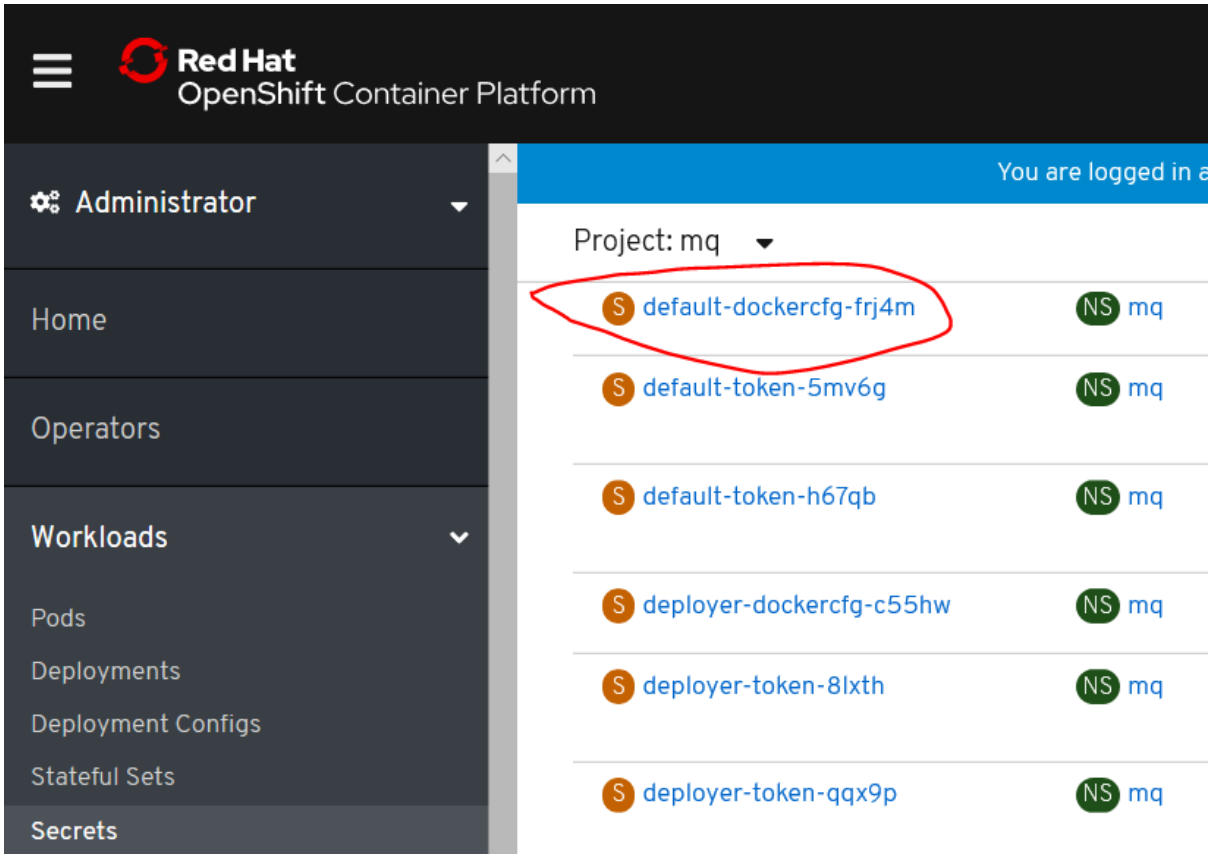


image-registry.openshift-image-registry.svc:5000/mq/ibm-mqadvanced-server-integration

9.1.3.0-r4

Image Pull secret for MQ project

default-dockercfg-frj4m



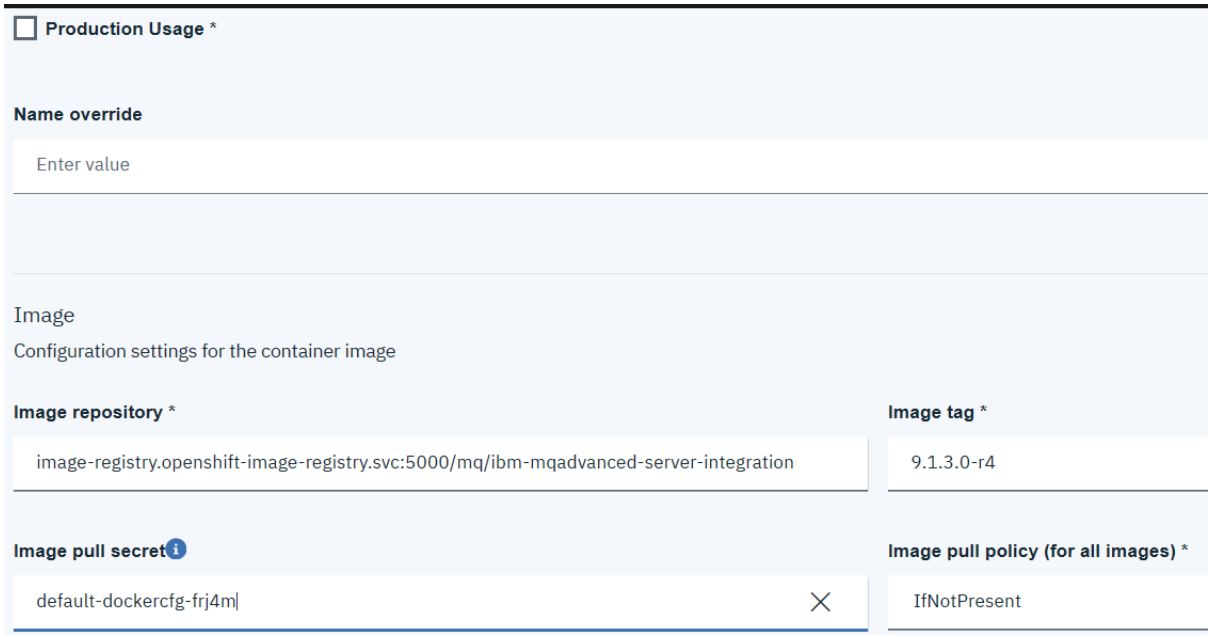


image-registry.openshift-image-registry.svc:5000/mq/ibm-mq-oidc-registration

2.2.0

IBM Cloud Pak for Integration

Configuration settings for IBM Cloud Pak for Integration

Namespace where the platform navigator is installed *

integration

Single sign-on

Configuration settings for single sign-on

Registration image repository *

image-registry.openshift-image-registry.svc:5000/mq/ibm-mq-oidc-registration

Registration image tag *

2.2.0

Web admin users *

admin

ibm-mq-tls-secret

Unique user identifier *

sub

TLS

Configuration settings for TLS

Generate Certificate

Cluster hostname *

icp-proxy.apps.mycluster.ocp4.cloudnativekube.com

Secret name

ibm-mq-tls-secret

Disable Metrics

Metrics

Configuration settings for Prometheus metrics

Enable metrics *

managed-nfs-storage

Persistence

Configuration settings for Persistent Volumes

☑ **Enable persistence** *

☑ **Use dynamic provisioning** *

Data PVC

Configuration settings for the main Persistent Volume Claim

Name *

data

Storage Class name

managed-nfs-storage

Size *

2Gi

Queue manager

Configuration settings for the Queue Manager

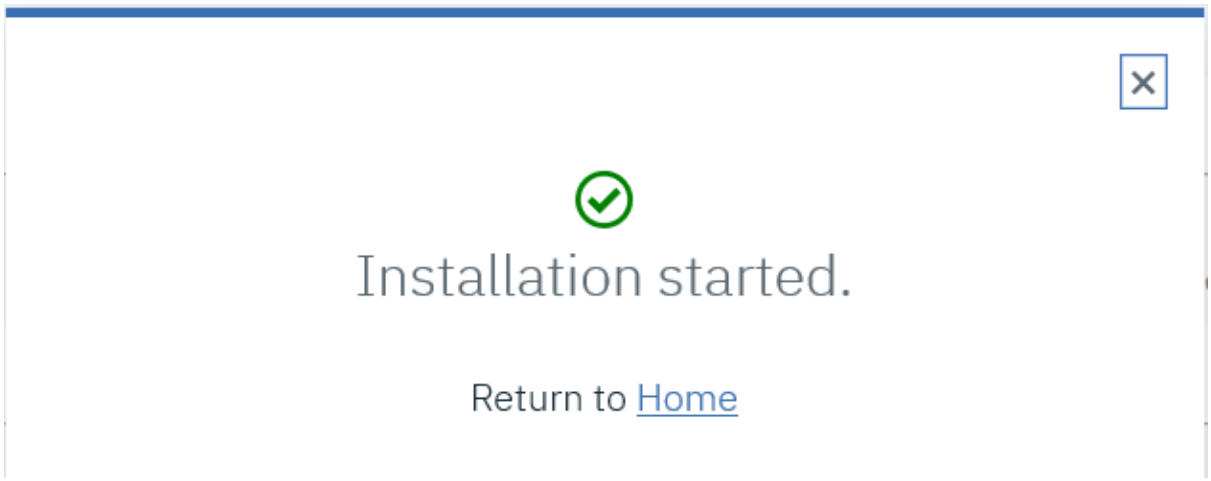
Queue manager name

DAQM1

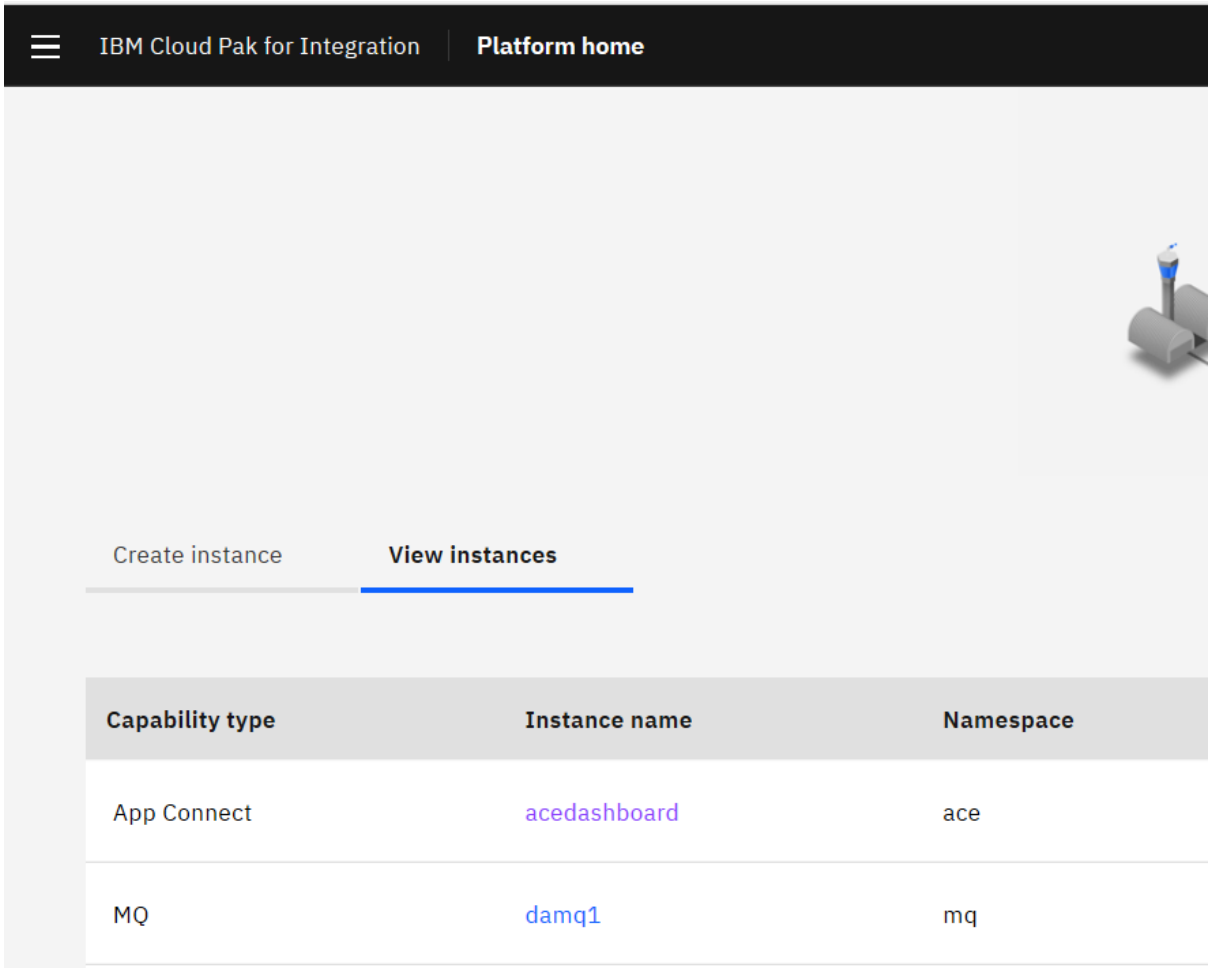
☐ **Enable multi-instance queue manager** *

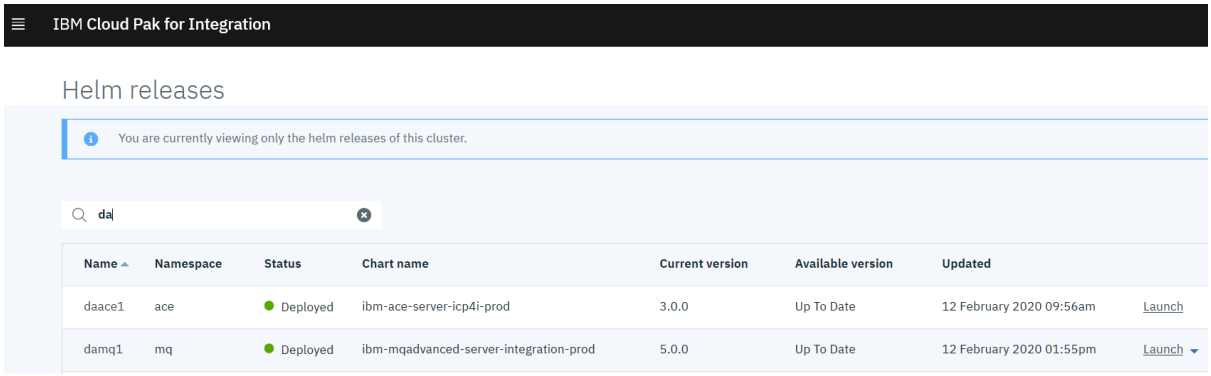
Cancel

Install

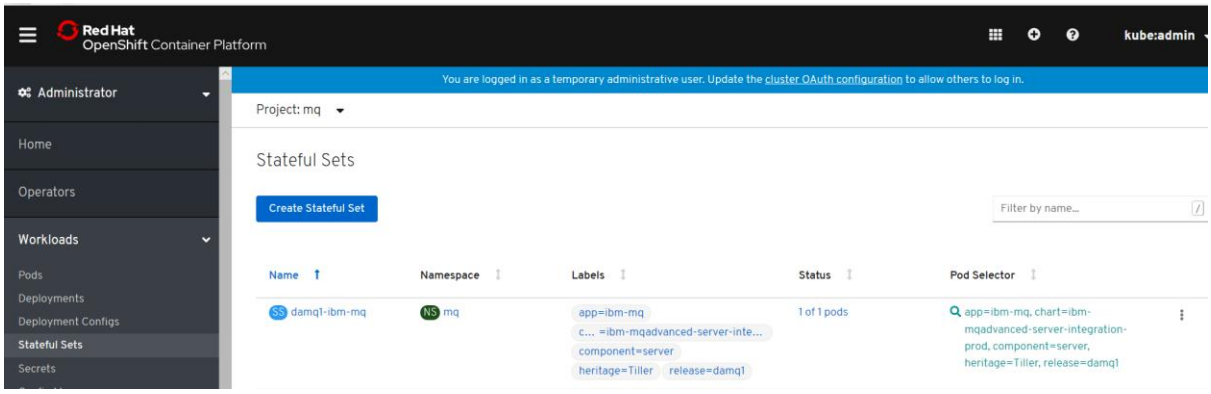


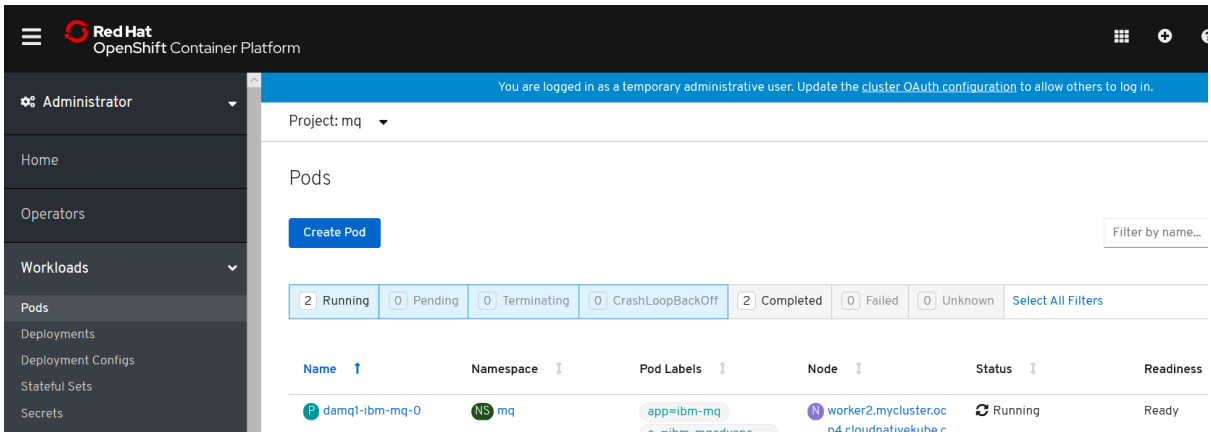
Explore Helm Install/RHOS Deployment





RHOS Workloads->Stateful Sets Project:mq





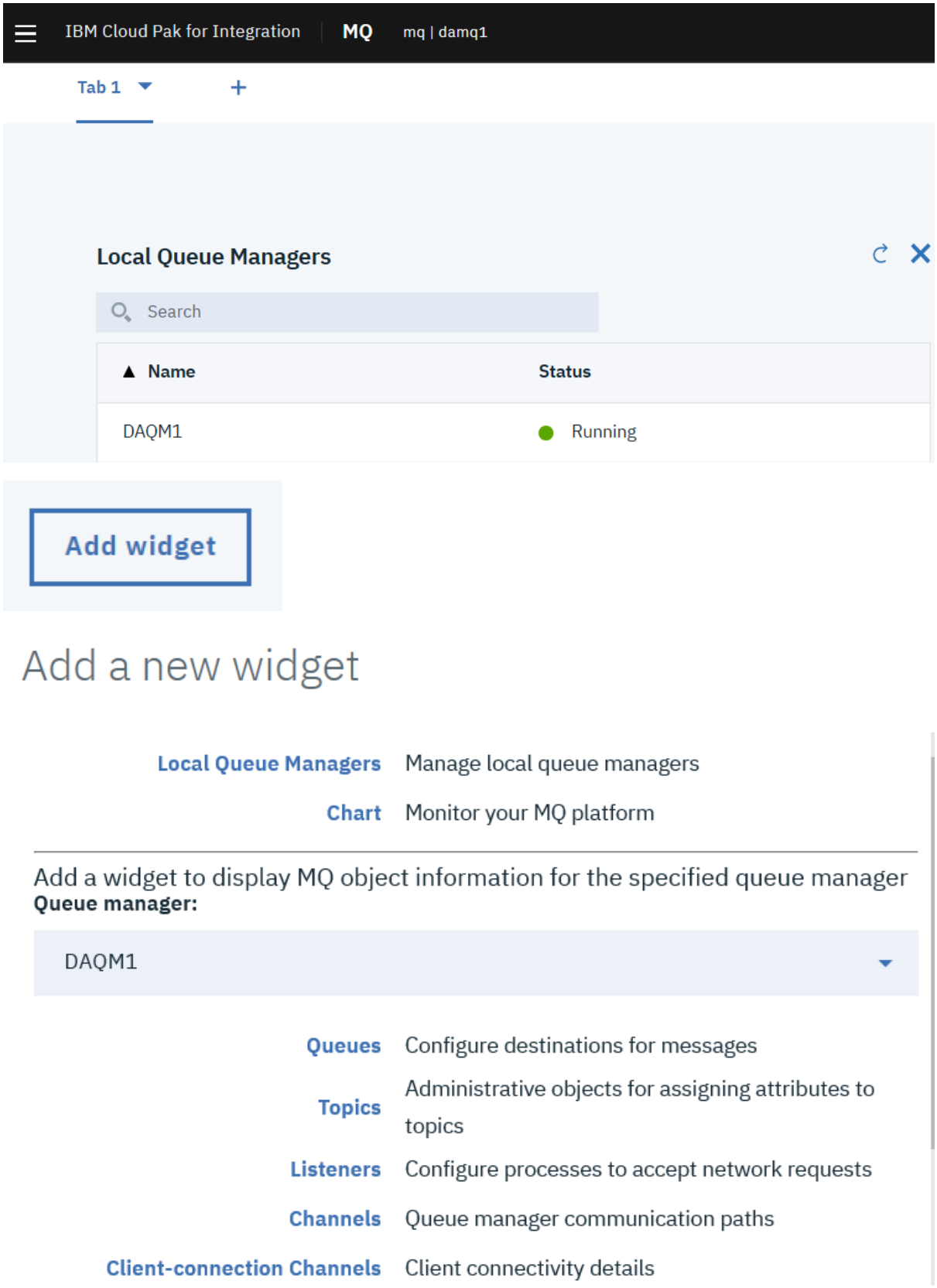
ICP4i view instance on MQ

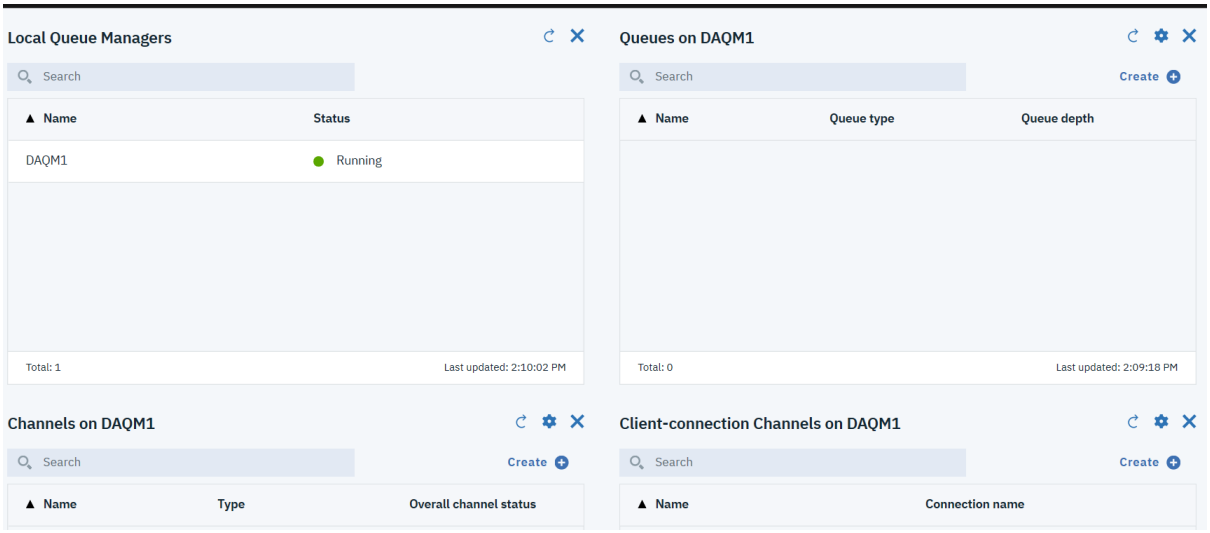
MQ	damq1	mq	25 minutes ago	Running

Connect to MQ Admin console

Click on the damq1 link to be take to the console

https://damq1-ibm-mq-web-mq.apps.mycluster.ocp4.cloudnativekube.com/ibmmq/console/


IBM Cloud Pak for Integration
MQ
mq | damq1
Tab 1
Local Queue Managers
Search
Name
Status
DAQM1
Running
Add widget
Add a new widget
Local Queue Managers
Manage local queue managers
Chart
Monitor your MQ platform
Add a widget to display MQ object information for the specified queue manager
Queue manager:
DAQM1
Queues
Configure destinations for messages
Topics
Administrative objects for assigning attributes to topics
Listeners
Configure processes to accept network requests
Channels
Queue manager communication paths
Client-connection Channels
Client connectivity details



Create a queue