# **Configuring the OpenShift-samples Operator**

**INTRODUCTION:**

This is procedure is needed only when OCP 4.3 Cluster is deployed in disconnected mode.

The Samples Operator, which operates in the OpenShift namespace, installs and updates the Red Hat Enterprise Linux (RHEL)-based OpenShift Container Platform imagestreams and OpenShift Container Platform templates.

Most imagestreams in the OpenShift namespace managed by the Samples Operator point to images located in the Red Hat registry at [registry.redhat.io](https://docs.openshift.com/container-platform/4.3/installing/install_config/registry.redhat.io). Mirroring images while preparing local private registry will not apply to these imagestreams, hence this utility is created.

Note:-

In certain circumstances, management state of OpenShift-samples operator is “**Removed**” and not “**Managed**”. In the “**Managed**” state the Samples Operator is actively managing its resources and keeping the component active in order to pull sample imagestreams and images from the registry and ensure that the requisite sample templates are installed. When the suggested python script (described below) is executed, it checks and changes the management state to **Managed** state if not already and exits. The user needs to watch on **openshift-samples** operator and wait until it gets degraded. Once operator degrades, user needs to execute python script again.

**PRE-REQUISITES:**

* OCP 4.3 cluster on Bare-Metal in disconnected mode should be deployed.

Note:- After this process another 100Gb (approx..) of storage will be consumed from private local registry server, which was created for OpenShift deployment in disconnected mode.

**SOFTWARE-RQUIREMENTS:**

* python3 must be installed.
* jq must be installed.
* docker must be installed.

**EXECUTION PLATFORM:**

This utility can be executed from following nodes:

1. **Registry server**: When executed from registry server, additional step is needed to copy “kubeconfig” file from NPS node.
2. **NPS:** No additional step is needed.

**USAGE:**

* Inside software bits directory, navigate to **“nps-rhocp/registry-utils/standalone-scripts”** samples-operator.py arguments.json
* Files **“arguments.json”** and **“samples-operator.py”** must be present in same directory.

1. Fill arguments.json

Samples:

{

"registry\_hostname": "hostname.example.com", ====> FQDN of local registry server

"registry\_port": "<registry-port>", ====> User defined port name on which registry is published.

"registry\_username": "<registry-user>", ====> User name of registry server

"registry\_password": "<registry-password>", ====> Password of registry server

"rh\_account\_username": "<rh\_username>", ====> Username of RedHat customer portal

"rh\_account\_password": "<rh\_password>", ====> Password of RedHat customer portal

"exclude\_is": "['jenkins-agent-nodejs','jenkins','jenkins-agent-maven']", ====> Append this list any ImageStreams that are necessary to be skipped.

Jenkins related IS are mandatorily skipped.

"kubeconfig": "</path/to/auth/kubeconfig>", ====> Absolute path of kubeconfig file. Get this from NPS node.

"ca\_cert": "/etc/pki/ca-trust/source/anchors/domain.crt", ====> This is default location of domain.crt. Change it if its generated

somewhere else if not leave this field as it is.

"cleanup": "yes" ====> Whether to remove images downloaded on local server after pushing

them to registry server. Valid options are "yes" and "no". If "no" is

provided extra (~100Gb approx.) storage will be consumed from local

server from which this script is executed.

}

2. Execute samples-operator.py script:

#./samples-operator.py | tee -a samples-operator-$(date +%Y%m%d%H%M%S).logs

OR

# python3 samples-operator.py | tee -a samples-operator-$(date +%Y%m%d%H%M%S).logs

Note:- When above script is executed for the first time, most likely user will get following messages. User must wait until **openshift-samples** operator degrades. One degraded, execute script again without any modification.

*The current state of [openshift-samples] operator ==> 'Removed'*

*Successfully changed management state of openshift-samples from ==> [config.samples.operator.openshift.io/cluster patched] to ==> [Managed]*

*Please wait for 2-3 hours until operator* *[openshift-samples] gets degraded and then re-run this script again. hint: watch oc get co openshift-samples*

*This time is in addition to what the mirroring process will take.*

**Note: - One mirroring starts, it takes around 3-4 hours based on the internet speed.**

**TROUBLESHOOTING:**

If script exits with message "Timed out waiting for openshift-samples operator.”, This means one or more images were not mirrored to image registry. This may happen due to network glitches or some unknow reasons. The failed images are to be manually mirrored using procedure described below:

1. From the logs find the failed images:

# grep -i ‘Pulling failed’ samples-operator-$(date +%Y%m%d%H%M%S).logs

e.g

Pulling failed:===> docker pull registry.redhat.io/jboss-processserver-6/processserver64-openshift:1.3

Note:- log file samples-operator-xxxxx.log will be generated in the same directory from which it has been executed.

1. Log file also contains the complete command syntax. Copy and execute on the registry node:

e.g:

# docker pull registry.redhat.io/jboss-processserver-6/processserver64-openshift:1.3

1. Once successfully pulled, obtain the image id

e.g:

# docker images

Note the image id of the image pulled above.

1. Tag the image with registry fqdn and port:

Syntax:

# docker tag <image id> <registry-fqdn>:<registry-port>/<image-name-with-tag>

e.g:

# docker tag 218cc04063df foxfur.qa.com:50000/jboss-processserver-6/processserver64-openshift:1.3

1. Push the image to registry server:

Syntax:

# docker push <registry-fqdn>:<registry-port>/<image-name-with-tag>

e.g:

# docker push foxfur.qa.com:50000/jboss-processserver-6/processserver64-openshift:1.3