

Mirror OCP images

Mirror release image

Tải `mirror-registry.tar.gz` và giải nén vào thư mục `/root/mirror-images/`

<https://console.redhat.com/openshift/downloads>

Start registry

Set host trên VM muốn cài registry

```
# vi /etc/hosts
127.0.0.1    ac-quay.apps.staging.xplat.online
```

Có thể cấp TLS cert cho registry trong quá trình khi tạo

```
mkdir -p /root/mirror-images/quay-content/

./mirror-registry install \\\
--quayHostname ac-quay.apps.staging.xplat.online \\\
--quayRoot /root/mirror-images/quay-content/ \\\
--sslCert tls.crt \\\
--sslKey tls.key \\\
--initUser ac-admin \\\
--initPassword password
```

Set ENV to mirror

OCP 4.18.11

```
OCP_RELEASE="4.18.11"
LOCAL_REGISTRY="ac-quay.apps.staging.xplat.online:8443"
LOCAL_REPOSITORY="ocp4/openshift4"
PRODUCT_REPO="openshift-release-dev" # For production
LOCAL_SECRET_JSON="/root/mirror-images/pull-secret.json" # Pull secret
RELEASE_NAME="ocp-release" # For production
ARCHITECTURE="x86_64"
```

OKD 4.18.0-okd-scos.9

```
OCP_RELEASE="4.18.0-okd-scos.9"
LOCAL_REGISTRY="ac-quay.apps.staging.xplat.online:8443"
LOCAL_REPOSITORY="ocp4/openshift4"
PRODUCT_REPO="okd" # For production
LOCAL_SECRET_JSON="/root/mirror-images/pull-secret.json" # Pull secret
RELEASE_NAME="scos-release" # For production
```

Get mirror plan

OCP 4.18.11

```
oc adm release mirror -a ${LOCAL_SECRET_JSON} \\\
--from=quay.io/${PRODUCT_REPO}/${RELEASE_NAME}:${OCP_RELEASE}-${ARCHITECTURE} \\\
--to=${LOCAL_REGISTRY}/${LOCAL_REPOSITORY} \\\
--to-release-image=${LOCAL_REGISTRY}/${LOCAL_REPOSITORY}:${OCP_RELEASE}-${ARCHITECTURE} --dry-run
```

OKD 4.18.0-okd-scos.9

```
oc adm release mirror -a ${LOCAL_SECRET_JSON} \\  
--from=quay.io/${PRODUCT_REPO}/${RELEASE_NAME}:${OCP_RELEASE} \\  
--to=${LOCAL_REGISTRY}/${LOCAL_REPOSITORY} \\  
--to-release-image=${LOCAL_REGISTRY}/${LOCAL_REPOSITORY}:${OCP_RELEASE} --dry-run
```

Lu kt qu ca plan in vào file install-config.yaml

```
# To use the new mirrored repository to install, add the following section to the install-config.yaml:  
imageContentSources:  
- mirrors:  
  - ac-quay.apps.staging.xplat.online:8443/ocp4/openshift4  
    source: quay.io/openshift-release-dev/ocp-release  
- mirrors:  
  - ac-quay.apps.staging.xplat.online:8443/ocp4/openshift4  
    source: quay.io/openshift-release-dev/ocp-v4.0-art-dev  
  
# To use the new mirrored repository for upgrades, use the following to create an ImageContentSourcePolicy:  
apiVersion: operator.openshift.io/v1alpha1  
kind: ImageContentSourcePolicy  
metadata:  
  name: example  
spec:  
  repositoryDigestMirrors:  
  - mirrors:  
    - ac-quay.apps.staging.xplat.online:8443/ocp4/openshift4  
      source: quay.io/openshift-release-dev/ocp-release  
  - mirrors:  
    - ac-quay.apps.staging.xplat.online:8443/ocp4/openshift4  
      source: quay.io/openshift-release-dev/ocp-v4.0-art-dev
```

The hin mirror images

OCP 4.18.11

```
oc adm release mirror -a ${LOCAL_SECRET_JSON} \\  
--from=quay.io/${PRODUCT_REPO}/${RELEASE_NAME}:${OCP_RELEASE}-${ARCHITECTURE} \\  
--to=${LOCAL_REGISTRY}/${LOCAL_REPOSITORY} \\  
--to-release-image=${LOCAL_REGISTRY}/${LOCAL_REPOSITORY}:${OCP_RELEASE}-${ARCHITECTURE}  
--keep-manifest-list=true
```

OKD 4.18.0-okd-scos

```
oc adm release mirror -a ${LOCAL_SECRET_JSON} \\  
--from=quay.io/${PRODUCT_REPO}/${RELEASE_NAME}:${OCP_RELEASE} \\  
--to=${LOCAL_REGISTRY}/${LOCAL_REPOSITORY} \\  
--to-release-image=${LOCAL_REGISTRY}/${LOCAL_REPOSITORY}:${OCP_RELEASE}  
--keep-manifest-list=true
```

The hin mirror chn lc Operator

Install oc mirror CLI

<https://console.redhat.com/openshift/downloads#tool-oc-mirror-plugin>

```
tar -xf oc-mirror.rhel9.tar.gz  
chmod +x oc-mirror  
mv oc-mirror /usr/local/bin/  
oc mirror --help
```

S dng ImageSetConfiguration lit kê các Operator cn mirror

To file imageset-config.yaml, lit kê các Operator cn mirror

```
kind: ImageSetConfiguration
apiVersion: mirror.openshift.io/v2alpha1
mirror:
  operators:
    - catalog: registry.vpb.appcarrier.cloud:8443/redhat/redhat-operator-index:v4.18
      packages:
        - name: advanced-cluster-management
        - name: multicluster-engine
  additionalImages: []
```

To pull secret

```
mkdir -p $XDG_RUNTIME_DIR/containers
cp pull-secret.json $XDG_RUNTIME_DIR/containers/auth.json
```

Chy lnh bên di thc hin mirror image

```
oc mirror -c imageset-config.yaml --workspace file:///mirror-manifests docker://registry.vpb.appcarrier.cloud:8443 --v2
```

Genarate Cluster manifests (2 cách)

Cách 1: Apply mirror manifest sinh ra bc 2 to mirror manifest cho các Operator ã mirror

```
oc apply -f mirror-manifests/working-dir/cluster-resources
```

Cách 2: Dùng oc adm catalog gen mirror manifest cho toàn b các Operator

```
oc adm catalog mirror \\  
  registry.vpb.appcarrier.cloud:8443/redhat/redhat-operator-index:v4.18 \\  
  registry.vpb.appcarrier.cloud:8443 \\  
  -a ${REG_CREDS} \\  
  --index-filter-by-os='linux/amd64' \\  
  --manifests-only
```

- --manifests-only: Ch to ra manifest (*catalogSource.yaml* + *imageContentSourcePolicy.yaml* + *mapping.txt*) mà không thc s mirror image

Sau khi chy xong câu lnh trên s sinh ra th mc manifest, có th s dng các manifests này to cluster resource cho cm (ảnh x image public thành image internal)