Infra-Manager redeployment with hub/cwl cluster Post Installation

Venkatapathiraj

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# Infra-manager node redeployment after hub and cwl clusters are deployed.

## Issue description:

* someone accidentally formatted and reinstalled the OS on the infra-manager host at the Eastlink PP site. This impacted the hub cluster’s lifecycle management capabilities. The infra-Quay registry was lost, along with all hub cluster installation files and manifests previously stored on the infra-manager. Most critically, we also lost the SSH private key that was stored on this host

## Impact Analysis:

### what are all the impact from operational point of view?

* Hub Cluster LCM is non-functional due to infra-quay is lost.
* Infra Quay registry is completely lost and must be redeployed.
* SSH private key used for access to hub and CWL cluster nodes is lost. So, we can’t troubleshoot anything at the host level on both clusters.
* No SSH access to hub or CWL nodes, blocking all remote administration and recovery tasks.
* Hub installation files and other critical configurations are permanently lost.

## Restore plan (Highlevel)

* [Access Reinstalled Infra-Manager Node](#access-reinstalled-infra-manager-node)
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## Implementation

### Access Reinstalled Infra-Manager Node

1. Login to Customer VPN, followed by ssh to infra-manager node using username ncpuser with given password.

┌──────────────────────────────────────────────────────────────────────┐  
 │ • MobaXterm Personal Edition v25.1 • │  
 │ (SSH client, X server and network tools) │  
 │ │  
 │ ⮞ SSH session to ncpuser@10.236.6.230 │  
 │ • Direct SSH : ✓ │  
 │ • SSH compression : ✓ │  
 │ • SSH-browser : ✓ │  
 │ • X11-forwarding : ✓ (remote display is forwarded through SSH) │  
 │ │  
 │ ⮞ For more info, ctrl+click on help or visit our website. │  
 └──────────────────────────────────────────────────────────────────────┘  
  
Activate the web console with: systemctl enable --now cockpit.socket  
  
Register this system with Red Hat Insights: insights-client --register  
Create an account or view all your systems at https://red.ht/insights-dashboard  
Last login: Fri Jun 27 15:36:03 2025 from 10.192.52.140  
[ncpuser@ncputility ~]$  
[ncpuser@ncputility ~]$ sudo su -  
[sudo] password for ncpuser:  
[root@ncputility ~]# cat /etc/redhat-release  
Red Hat Enterprise Linux release 9.4 (Plow)  
[root@ncputility ~]#

### Installing the necessary packages for the Hub Cluster

1. Login to the node via SSH, using the user created with Administrator privileges. Root user is not needed. For higher security, key based authentication can be used for SSH and the password authentication may be disabled.
2. Verify the hostname of the node using hostname -f command
3. Copy the rhel\_rhcos.tar.gz to the node. Uncompress it using the command tar rhel\_rhcos.tar.gz.-zxvf
4. Create a directory to mount the ISO file

sudo cp rhel-9.4-x86\_64-dvd.iso /mnt  
sudo mkdir -p /mnt/rhel9.4  
echo '/mnt/rhel-9.4-x86\_64-dvd.iso /mnt/rhel9.4/ iso9660 loop 0 0' | sudo  
tee -a /etc/fstab  
sudo mount -a

1. Create a local repo from the ISO which is mounted:

cat << 'EOF' | sudo tee -a /etc/yum.repos.d/rhel9.4dvd.repo  
[BaseOS]  
name=BaseOS Packages Red Hat Enterprise Linux 9  
metadata\_expire=-1  
gpgcheck=1  
enabled=1  
baseurl=file:///mnt/rhel9.4/BaseOS/  
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-redhat-release  
[AppStream]  
name=AppStream Packages Red Hat Enterprise Linux 9  
metadata\_expire=-1  
gpgcheck=1  
enabled=1  
baseurl=file:///mnt/rhel9.4/AppStream/  
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-redhat-release  
EOF

1. Install the necessary packages:

[root@ncputility ~]# sudo dnf clean all  
Updating Subscription Management repositories.  
Unable to read consumer identity  
  
This system is not registered with an entitlement server. You can use "rhc" or "subscription-manager" to register.  
  
13 files removed  
[root@ncputility ~]# sudo dnf repolist enabled  
Updating Subscription Management repositories.  
Unable to read consumer identity  
  
This system is not registered with an entitlement server. You can use "rhc" or "subscription-manager" to register.  
  
repo id repo name  
AppStream AppStream Packages Red Hat Enterprise Linux 9  
BaseOS BaseOS Packages Red Hat Enterprise Linux 9  
[root@ncputility ~]# sudo dnf install wget httpd mkpasswd nmstate podman tcpdump rsync tmux bind-utils chrony net-tools unzip bash-completion  
Updating Subscription Management repositories.  
Unable to read consumer identity  
  
This system is not registered with an entitlement server. You can use "rhc" or "subscription-manager" to register.  
  
BaseOS Packages Red Hat Enterprise Linux 9 136 MB/s | 2.1 MB 00:00   
AppStream Packages Red Hat Enterprise Linux 9 208 MB/s | 7.0 MB 00:00   
Package wget-1.21.1-7.el9.x86\_64 is already installed.  
Package podman-2:4.9.4-0.1.el9.x86\_64 is already installed.  
Package tcpdump-14:4.99.0-9.el9.x86\_64 is already installed.  
Package rsync-3.2.3-19.el9.x86\_64 is already installed.  
Package bind-utils-32:9.16.23-15.el9.x86\_64 is already installed.  
Package chrony-4.5-1.el9.x86\_64 is already installed.  
Package net-tools-2.0-0.62.20160912git.el9.x86\_64 is already installed.  
Package unzip-6.0-56.el9.x86\_64 is already installed.  
Package bash-completion-1:2.11-5.el9.noarch is already installed.  
Dependencies resolved.  
============================================================================================================================================================================================  
 Package Architecture Version Repository Size  
============================================================================================================================================================================================  
Installing:  
 httpd x86\_64 2.4.57-8.el9   
 \*\* output \*\*  
  
Installed:  
 apr-1.7.0-12.el9\_3.x86\_64 apr-util-1.6.1-23.el9.x86\_64 apr-util-bdb-1.6.1-23.el9.x86\_64 apr-util-openssl-1.6.1-23.el9.x86\_64 httpd-2.4.57-8.el9.x86\_64   
 httpd-core-2.4.57-8.el9.x86\_64 httpd-filesystem-2.4.57-8.el9.noarch httpd-tools-2.4.57-8.el9.x86\_64 mkpasswd-5.5.9-4.el9.x86\_64 mod\_http2-2.0.26-1.el9.x86\_64   
 mod\_lua-2.4.57-8.el9.x86\_64 nmstate-2.2.25-1.el9.x86\_64 redhat-logos-httpd-90.4-2.el9.noarch tmux-3.2a-5.el9.x86\_64 whois-nls-5.5.9-4.el9.noarch   
  
Complete!  
[root@ncputility ~]#

1. Start and enable HTTP server:

[root@ncputility ~]# sudo systemctl start httpd  
[root@ncputility ~]# sudo systemctl enable httpd  
Created symlink /etc/systemd/system/multi-user.target.wants/httpd.service → /usr/lib/systemd/system/httpd.service.  
[root@ncputility ~]#

1. Allow ports 80 for the webserver (later it will be used by the Hub Cluster for fetching CoreOS) and 8443 which will be the mirror-registry’s port.

[root@ncputility ~]# sudo firewall-cmd --zone=public --add-port=80/tcp --permanent  
success  
[root@ncputility ~]# sudo firewall-cmd --zone=public --add-port=8443/tcp --permanent  
success  
[root@ncputility ~]# sudo firewall-cmd –reload  
usage: 'firewall-cmd --help' for usage information or see firewall-cmd(1) man page  
firewall-cmd: error: unrecognized arguments: –reload  
[root@ncputility ~]# sudo firewall-cmd --reload  
success  
[root@ncputility ~]# sudo firewall-cmd --list-all  
public (active)  
 target: default  
 icmp-block-inversion: no  
 interfaces: 140  
 sources:   
 services: cockpit dhcpv6-client ssh vnc-server  
 ports: 5902/tcp 53/tcp 53/udp 80/tcp 8443/tcp  
 protocols:   
 forward: yes  
 masquerade: no  
 forward-ports:   
 source-ports:   
 icmp-blocks:   
 rich rules:   
[root@ncputility ~]#

1. Set NTP servers, Udate the correct ntp ip on the configuration file /etc/chrony.conf

[root@ncputility ~]# sudo vi /etc/chrony.conf^C  
[root@ncputility ~]# chronyc sources  
MS Name/IP address Stratum Poll Reach LastRx Last sample   
===============================================================================  
^\* 135.112.203.53 2 7 377 43 -221ns[ +11us] +/- 22ms  
[root@ncputility ~]# timedatectl   
 Local time: Wed 2025-03-26 17:19:06 EDT  
 Universal time: Wed 2025-03-26 21:19:06 UTC  
 RTC time: Wed 2025-03-26 21:19:06  
 Time zone: America/New\_York (EDT, -0400)  
System clock synchronized: yes  
 NTP service: active  
 RTC in local TZ: no  
[root@ncputility ~]#

1. Modify the chrony configuration according to the available NTP servers:

cat /etc/chrony.conf | grep -v '#'  
server 10.171.8.4 iburst  
server 10.171.8.5 iburst  
sourcedir /run/chrony-dhcp  
driftfile /var/lib/chrony/drift  
makestep 1.0 3  
rtcsync  
keyfile /etc/chrony.keys  
ntsdumpdir /var/lib/chrony  
leapsectz right/UTC  
logdir /var/log/chrony

1. Enable and restart chronyd

sudo systemctl enable chronyd  
sudo systemctl restart chronyd

1. Verify NTP sources:

[root@ncputility ~]# sudo vi /etc/chrony.conf^C  
[root@ncputility ~]# chronyc sources  
MS Name/IP address Stratum Poll Reach LastRx Last sample   
===============================================================================  
^\* 135.112.203.53 2 7 377 43 -221ns[ +11us] +/- 22ms  
[root@ncputility ~]#

### Installing the mirror-registry on the infrastructure manager node

1. Uncompress the mirror-registry, which can be found in the previously uncompressed ncp\_tools.tar.gz in compressed format. This will be a local registry from where the Hub Cluster can fetch its images.

[root@ncputility ncp]# tar -xvf ncp\_tools.tar.gz  
butane-amd64  
butane-amd64.sha256  
butane-windows-amd64.exe  
butane-windows-amd64.exe.sha256  
helm-linux-amd64  
helm-linux-amd64.sha256  
helm-windows-amd64.exe  
helm-windows-amd64.exe.sha256  
kustomize\_v5.4.3\_linux\_amd64.tar.gz  
kustomize\_v5.4.3\_linux\_amd64.tar.gz.sha256  
mirror-registry.tar.gz  
mirror-registry.tar.gz.sha256  
oc-mirror.tar.gz  
oc-mirror.tar.gz.sha256  
openshift-client-linux.tar.gz  
openshift-client-linux.tar.gz.sha256  
openshift-client-windows.zip  
openshift-client-windows.zip.sha256  
openshift-install-linux.tar.gz  
openshift-install-linux.tar.gz.sha256  
opm-linux.tar.gz  
opm-linux.tar.gz.sha256  
opm-windows.tar.gz  
opm-windows.tar.gz.sha256  
s3cmd-2.4.0.tar.gz  
s3cmd-2.4.0.tar.gz.sha256  
[root@ncputility ncp]#

1. Create a folder for the quay root:

[root@ncputility ~]# mkdir -p /opt/quayroot  
[root@ncputility ~]#

The owner shall be the Linux user who is installing it. For example: sudo chown /opt/quayroot/

a. extract the mirror-registry file.  
  
```  
[root@ncputility ncp]# tar -xvf mirror-registry.tar.gz  
image-archive.tar  
execution-environment.tar  
mirror-registry  
[root@ncputility ncp]#   
  
```

2.1) Quay installation

[root@ncputility ncp]# ./mirror-registry install --initUser infraquay --initPassword Nokia12234 --quayRoot /opt/quayroot  
  
 \_\_ \_\_  
 / \ / \ \_\_\_\_\_\_ \_ \_ \_\_ \_\_ \_\_  
 / /\ / /\ \ / \_\_ \ | | | | / \ \ \ / /  
/ / / / \ \ | | | | | | | | / /\ \ \ /  
\ \ \ \ / / | |\_\_| | | |\_\_| | / \_\_\_\_ \ | |  
 \ \/ \ \/ / \\_ \_\_\_/ \\_\_\_\_/ /\_/ \\_\ |\_|  
 \\_\_/ \\_\_/ \ \\_\_  
 \\_\_\_\ by Red Hat  
 Build, Store, and Distribute your Containers  
   
INFO[2025-03-26 17:25:38] Install has begun   
INFO[2025-03-26 17:25:38] Found execution environment at /root/ncp/execution-environment.tar   
INFO[2025-03-26 17:25:38] Loading execution environment from execution-environment.tar   
INFO[2025-03-26 17:25:49] Detected an installation to localhost   
INFO[2025-03-26 17:25:49] Did not find SSH key in default location. Attempting to set up SSH keys.   
INFO[2025-03-26 17:25:49] Generating SSH Key   
INFO[2025-03-26 17:25:50] Generated SSH Key at /root/.ssh/quay\_installer   
INFO[2025-03-26 17:25:50] Adding key to ~/.ssh/authorized\_keys   
INFO[2025-03-26 17:25:50] Successfully set up SSH keys   
INFO[2025-03-26 17:25:50] Attempting to set SELinux rules on /root/.ssh/quay\_installer   
INFO[2025-03-26 17:25:50] Found image archive at /root/ncp/image-archive.tar   
INFO[2025-03-26 17:25:50] Detected an installation to localhost   
INFO[2025-03-26 17:25:50] Unpacking image archive from /root/ncp/image-archive.tar   
INFO[2025-03-26 17:25:52] Loading pause image archive from pause.tar   
INFO[2025-03-26 17:25:58] Loading redis image archive from redis.tar   
INFO[2025-03-26 17:26:05] Loading postgres image archive from postgres.tar   
INFO[2025-03-26 17:26:17] Loading Quay image archive from quay.tar   
INFO[2025-03-26 17:26:45] Attempting to set SELinux rules on image archive   
INFO[2025-03-26 17:26:45] Running install playbook. This may take some time. To see playbook output run the installer with -v (verbose) flag.   
INFO[2025-03-26 17:26:45] Detected an installation to localhost   
  
PLAY [Install Mirror Appliance] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
  
TASK [Gathering Facts] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
ok: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Expand variables] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
included: /runner/project/roles/mirror\_appliance/tasks/expand-vars.yaml for root@ncputility.nokiptchub01.nokia.usa  
  
TASK [mirror\_appliance : Expand pg\_storage] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Expand quay\_root] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Expand quay\_storage] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Set expanded variables] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
ok: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Install Dependencies] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
included: /runner/project/roles/mirror\_appliance/tasks/install-deps.yaml for root@ncputility.nokiptchub01.nokia.usa  
  
TASK [mirror\_appliance : Create user service directory] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
ok: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Set SELinux Rules] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
included: /runner/project/roles/mirror\_appliance/tasks/set-selinux-rules.yaml for root@ncputility.nokiptchub01.nokia.usa  
  
TASK [mirror\_appliance : Set container\_manage\_cgroup flag on and keep it persistent across reboots] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Install Quay Pod Service] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
included: /runner/project/roles/mirror\_appliance/tasks/install-pod-service.yaml for root@ncputility.nokiptchub01.nokia.usa  
  
TASK [mirror\_appliance : Copy Quay Pod systemd service file] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Check if pod pause image is loaded] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Pull Infra image] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Start Quay Pod service] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Autodetect Image Archive] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
included: /runner/project/roles/mirror\_appliance/tasks/autodetect-image-archive.yaml for root@ncputility.nokiptchub01.nokia.usa  
  
TASK [mirror\_appliance : Checking for Image Archive] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
ok: [root@ncputility.nokiptchub01.nokia.usa -> localhost]  
  
TASK [mirror\_appliance : Create install directory for image-archive.tar dest] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
ok: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Copy Images if /runner/image-archive.tar exists] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Unpack Images if /runner/image-archive.tar exists] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Loading Redis if redis.tar exists] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Loading Quay if quay.tar exists] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Loading Postgres if postgres.tar exists] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Install Postgres Service] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
included: /runner/project/roles/mirror\_appliance/tasks/install-postgres-service.yaml for root@ncputility.nokiptchub01.nokia.usa  
  
TASK [mirror\_appliance : Create necessary directory for Postgres persistent data] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Set permissions on local storage directory] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Copy Postgres systemd service file] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Check if Postgres image is loaded] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Pull Postgres image] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Create Postgres Storage named volume] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Start Postgres service] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Wait for pg\_trgm to be installed] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
FAILED - RETRYING: [root@ncputility.nokiptchub01.nokia.usa]: Wait for pg\_trgm to be installed (20 retries left).  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Install Redis Service] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
included: /runner/project/roles/mirror\_appliance/tasks/install-redis-service.yaml for root@ncputility.nokiptchub01.nokia.usa  
  
TASK [mirror\_appliance : Copy Redis systemd service file] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Check if Redis image is loaded] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Pull Redis image] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Start Redis service] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Install Quay Service] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
included: /runner/project/roles/mirror\_appliance/tasks/install-quay-service.yaml for root@ncputility.nokiptchub01.nokia.usa  
  
TASK [mirror\_appliance : Create necessary directory for Quay local storage] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Set permissions on local storage directory] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Create necessary directory for Quay config bundle] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Copy Quay config.yaml file] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Check if SSL Cert exists] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
ok: [root@ncputility.nokiptchub01.nokia.usa -> localhost]  
  
TASK [mirror\_appliance : Check if SSL Key exists] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
ok: [root@ncputility.nokiptchub01.nokia.usa -> localhost]  
  
TASK [mirror\_appliance : Create necessary directory for Quay rootCA files] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Create OpenSSL Config] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Create root CA key] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Create root CA pem] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Create ssl key] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Create CSR] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Create self-signed cert] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Create chain cert] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Replace ssl cert with chain cert] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Copy SSL certificate] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Copy SSL key] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Set permissions for key] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Set permissions for cert] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
ok: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Copy Quay systemd service file] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Check if Quay image is loaded] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Pull Quay image] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Create Quay Storage named volume] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Start Quay service] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
changed: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Wait for Quay] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
included: /runner/project/roles/mirror\_appliance/tasks/wait-for-quay.yaml for root@ncputility.nokiptchub01.nokia.usa  
  
TASK [mirror\_appliance : Waiting up to 3 minutes for Quay to become alive at https://ncputility.nokiptchub01.nokia.usa:8443/health/instance] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
FAILED - RETRYING: [root@ncputility.nokiptchub01.nokia.usa]: Waiting up to 3 minutes for Quay to become alive at https://ncputility.nokiptchub01.nokia.usa:8443/health/instance (10 retries left).  
ok: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Create init user] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
included: /runner/project/roles/mirror\_appliance/tasks/create-init-user.yaml for root@ncputility.nokiptchub01.nokia.usa  
  
TASK [mirror\_appliance : Creating init user at endpoint https://ncputility.nokiptchub01.nokia.usa:8443/api/v1/user/initialize] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
ok: [root@ncputility.nokiptchub01.nokia.usa]  
  
TASK [mirror\_appliance : Enable lingering for systemd user processes] \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
skipping: [root@ncputility.nokiptchub01.nokia.usa]  
  
PLAY RECAP \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
root@ncputility.nokiptchub01.nokia.usa : ok=50 changed=30 unreachable=0 failed=0 skipped=17 rescued=0 ignored=0   
  
INFO[2025-03-26 17:28:27] Quay installed successfully, config data is stored in /opt/quayroot   
INFO[2025-03-26 17:28:27] Quay is available at https://ncputility.nokiptchub01.nokia.usa:8443 with credentials (infraquay, Nokia12234)   
[root@ncputility ncp]#

### Add the infra-quay registry to the trusted registries

Prerequisites Perform the following actions:

1. Make a dir first to copy the cert.

[root@ncputility ncp]# sudo mkdir -p /etc/containers/certs.d/ncputility.nokiptchub01.nokia.usa:8443/  
[root@ncputility ncp]#

1. Copy the certificate here Add to the systems trusted list

[root@ncputility ncp]# sudo cp /opt/quayroot/quay-rootCA/rootCA.pem /etc/containers/certs.d/ncputility.nokiptchub01.nokia.usa:8443/  
[root@ncputility ncp]# sudo cp /opt/quayroot/quay-rootCA/rootCA.pem /etc/pki/ca-trust/source/anchors/  
[root@ncputility ncp]# sudo update-ca-trust extract  
[root@ncputility ncp]#

1. Create the pullsecret to ~/.docker/config.json

[root@ncputility ncp]# mkdir -p ~/.docker  
[root@ncputility ncp]#

1. Create the base64 encoded username:password pair of the mirror-registry:

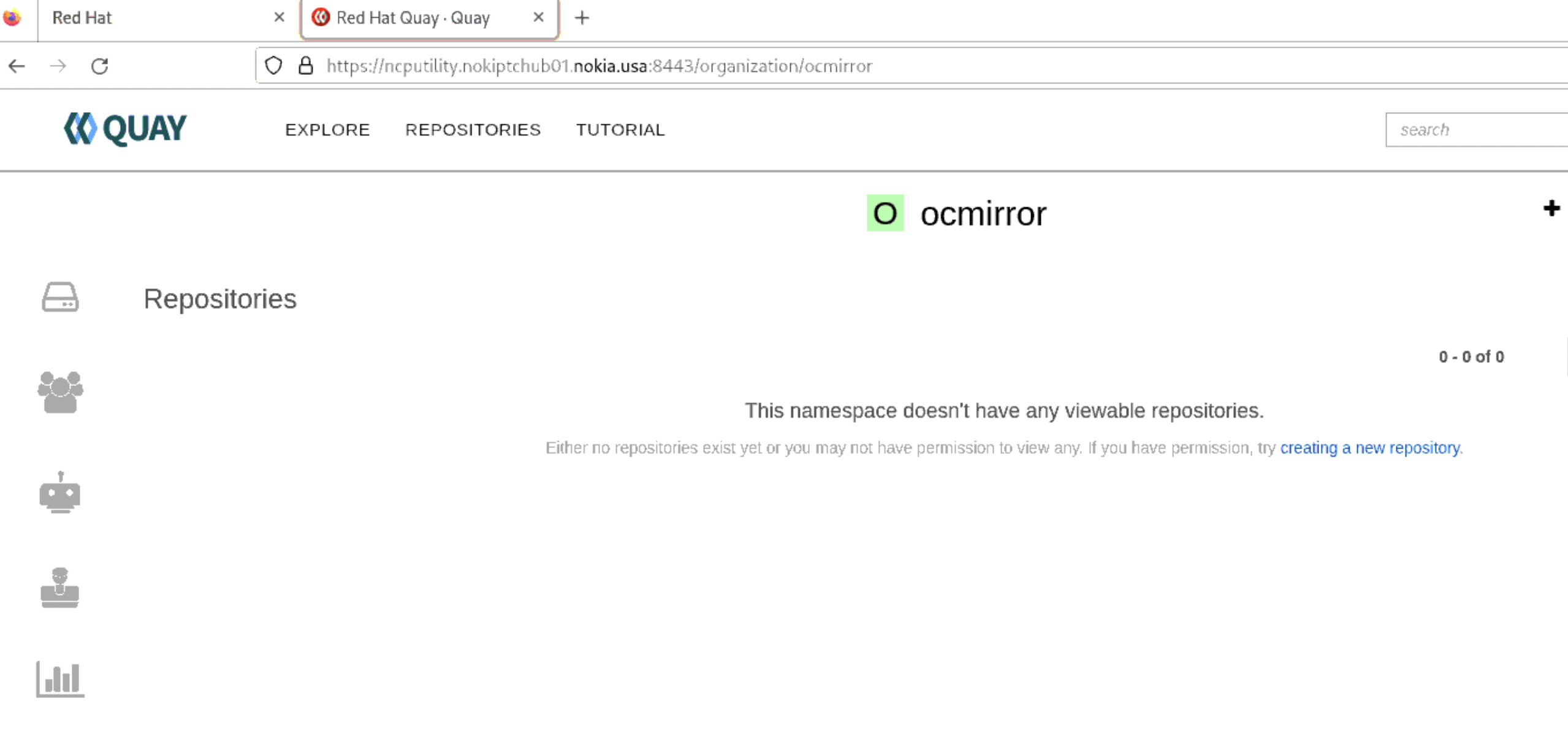
[root@ncputility ncp]# authpull=`echo -n 'infraquay:Nokia12234' | base64 -w0`  
[root@ncputility ncp]# echo '{"auths": {"ncputility.nokiptchub01.nokia.usa:8443": {"auth": "'"$authpull"'", "email": "raj@ncputility.ncputility.nokiptchub01.nokia.usa"}}}' | tee ~/.docker/config.json  
{"auths": {"ncputility.nokiptchub01.nokia.usa:8443": {"auth": "aW5mcmFxdWF5Ok5va2lhMTIyMzQ=", "email": "raj@ncputility.ncputility.nokiptchub01.nokia.usa"}}}  
[root@ncputility ncp]# cat ~/.docker/config.json  
{"auths": {"ncputility.nokiptchub01.nokia.usa:8443": {"auth": "aW5mcmFxdWF5Ok5va2lhMTIyMzQ=", "email": "raj@ncputility.ncputility.nokiptchub01.nokia.usa"}}}  
[root@ncputility ncp]# cat ~/.docker/config.json |jq .  
{  
 "auths": {  
 "ncputility.nokiptchub01.nokia.usa:8443": {  
 "auth": "aW5mcmFxdWF5Ok5va2lhMTIyMzQ=",  
 "email": "raj@ncputility.ncputility.nokiptchub01.nokia.usa"  
 }  
 }  
}  
[root@ncputility ncp]#

1. Validate the pull secret file here

[root@ncputility ncp]# podman login https://ncputility.nokiptchub01.nokia.usa:8443 --authfile .docker/config.json -u infraquay -p Nokia12234  
Login Succeeded!  
[root@ncputility ncp]#

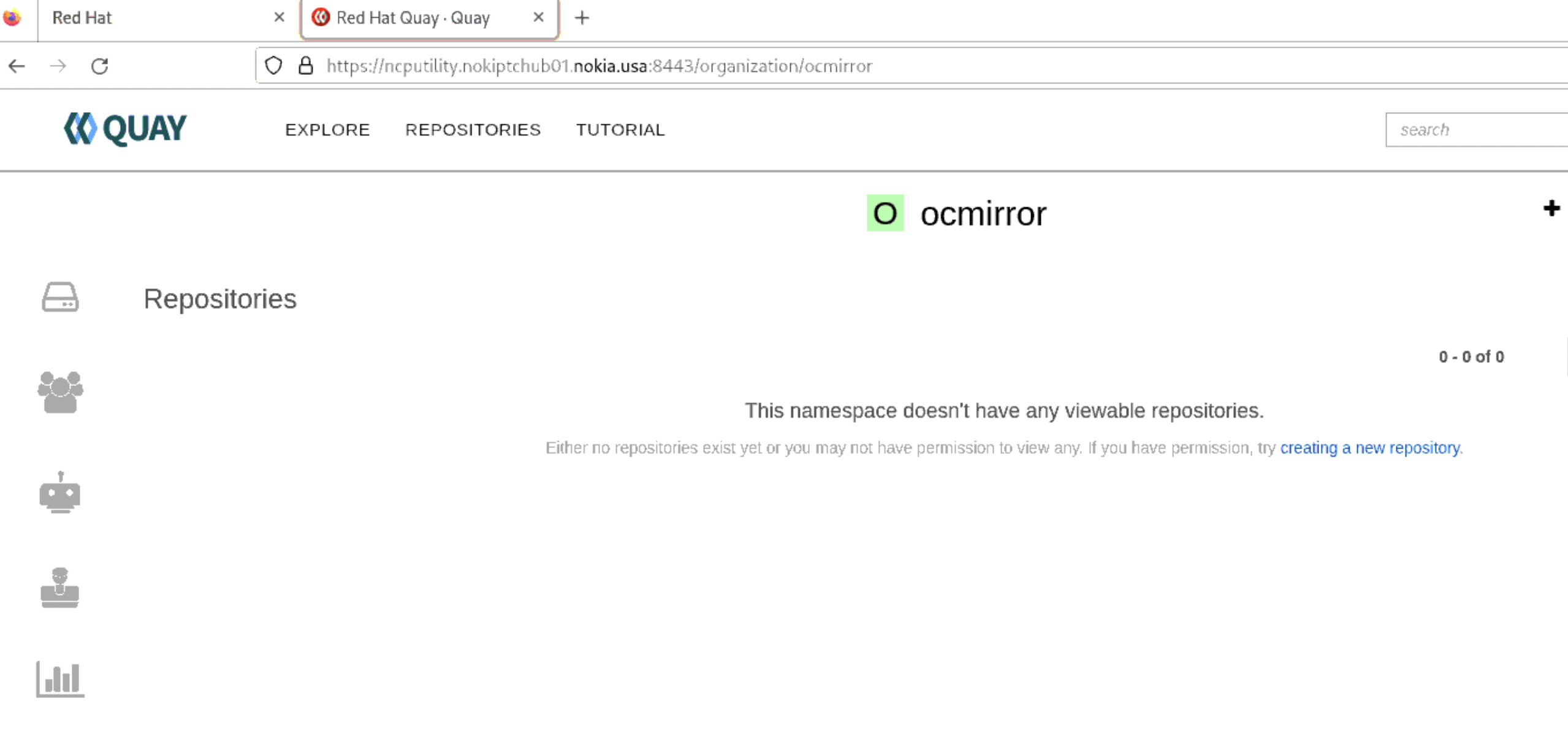
### Configuring an organization in Quay

1. Create an organization in Quay:



alt text

1. Click create New organization



alt text

1. In the example above the ocmirror organization was created.

### Copy OpenShift related binaries

1. From the uncompressed ncp\_tools.tar.gz copy (or move) the necessary binaries:

[root@ncputility ~]# cd ncp/  
[root@ncputility ncp]# sudo cp butane-amd64 /usr/local/bin/butane  
[root@ncputility ncp]# sudo chmod +x /usr/local/bin/butane  
[root@ncputility ncp]# sudo cp helm-linux-amd64 /usr/local/bin/helm  
[root@ncputility ncp]# sudo chmod +x /usr/local/bin/helm  
[root@ncputility ncp]# tar -zxvf openshift-client-linux.tar.gz  
README.md  
oc  
kubectl  
[root@ncputility ncp]# sudo cp kubectl /usr/local/bin/  
[root@ncputility ncp]# sudo cp oc /usr/local/bin/  
[root@ncputility ncp]# tar -zxvf openshift-install-linux.tar.gz  
README.md  
openshift-install  
[root@ncputility ncp]# sudo cp openshift-install /usr/local/bin/  
[root@ncputility ncp]# tar -xvf oc-mirror.tar.gz  
oc-mirror  
[root@ncputility ncp]# sudo cp oc-mirror /usr/local/bin/  
[root@ncputility ncp]# sudo chmod +x /usr/local/bin/oc-mirror  
[root@ncputility ncp]# cd /root/ncp  
[root@ncputility ncp]#

### Mirroring images to infra-quay mirror-registry

1. Copy the ncp-platform.partaa.tar ncp-platform.partab.tar and ncp-platform.partac.tar files to the infrastructure node.
2. Combine them to one: cat ncp-platform.parta\* > ncp-platform-parta.tar To avoid any connectivity issues to the infrastructure node and to avoid the mirroring process disturbance, tmux can be used and suggested.

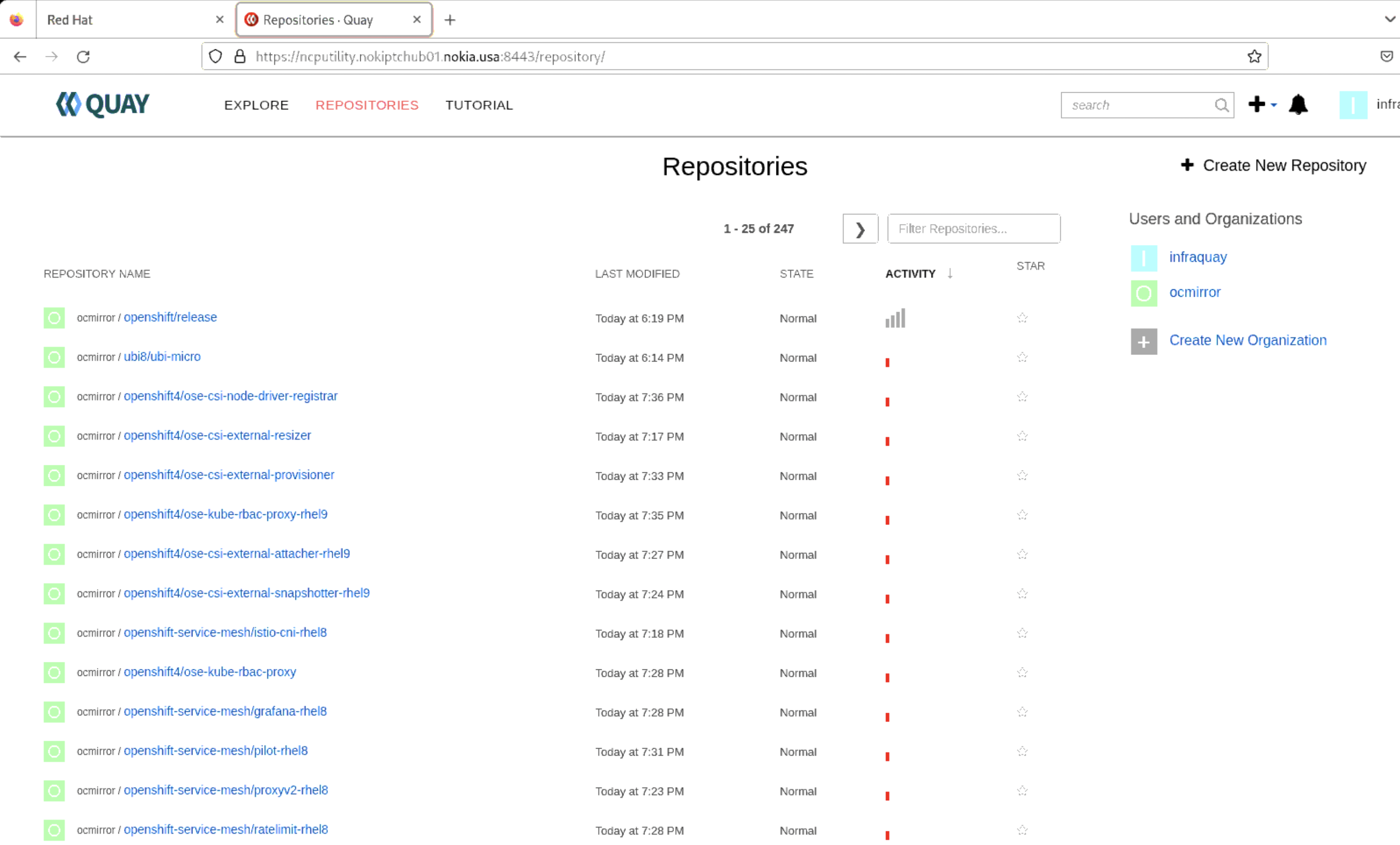
oc-mirror --from=./ncp-platform-parta.tar docker://ncputility.nokiptchub01.nokia.usa:8443/ocmirror

1. Copy ncp\_operators.partaa.tar, ncp\_operators.partab.tar, ncp\_operators.partac.tar, ncp\_operators.partad.tar, ncp\_operators.partae.tar, ncp\_operators.partaf.tar, ncp\_operators.partag.tar, ncp\_operators.partah.tar, ncp\_operators.partai.tar and ncp\_operators.partaj.tar files to the Infrastructure node.
2. Combine them together: cat ncp\_operators.part\* > ncp\_operators.tar

[root@ncputility ncp]# cat ncp-operators.part\* > ncp\_operators.tar

oc-mirror --from=./ncp\_operators.tar docker://ncputility.nokiptchub01.nokia.usa:8443/ocmirror  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:ba4c748f34a20478f7334a3e29888150985cd77bf5667cb28df709f8349e14fb 55.28MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:8bad510b7a13af38e38c6a4b66c8beaac49b44c2f1bac22068b1001bae266f3e 81.92MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:d074e0420aa5a047ac468c239178ef5f660b03920ad2f7f7e6a1d71530069db5 10.1MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:f26b1ec0865cd5bcc30994a1d00d16f6f1bad44dd538ee1df0e8840753595738 21.78KiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:70a5bdb4264951ee2dfdc73b51c3c8ab99a611d9ac3acaf4a81988a075b5b845 21.69MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:abb828c6dd68e53a22f7a11904b72f9d5a7802fb5e7c380b3a22b18a02e9a463 73.31MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:f44954f3b43a0b5ee76801b112b069aecdb6ce7b387ed3fb72bec893f848c89a 54.58MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:7be6430836eaa16b36440931da447277c710585b321a59f555d455e6b9f9689e 10.28MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:e892ff5d6fa3cef8357fcaa97f0f534e4f454439edadf9cbb820482420817585 21.91MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:4caf23c20c871ed5c847c163905c27ee724b9e10975f1711715589a52942b3d5 53.47MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:ca4e3da08236e2c5f895043898246830e8a394a483c5ba66aa25635ea19d4c69 21.78KiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:357d8d6388d50c5e60475784a9956fcff8a1e66f48ae978c0e691fd587b76248 10.25MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:bfdc7c9d33c28bd179f2b99aea50e8e86a372a209dfe272757d32965644f8c59 21.76KiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:89176521898ace7eab9ccf870f6e4e5e3a21c3688df09c9346a3cf6f909f1188 23.84MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:00f24979220b92c40dbe75e7f85475c5d14efe31c4b0f2c8c2ea50bf359986ec 10.97MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:96e84521ae3a855d5ef74239d41bdc2cd5c2d0db0fd71006823f9cab7b5ae5d6 21.76KiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:c7965aa7086045a59bdb113a1fb8a19d7ccf7af4133e59af8ecefd39cda8e0b1 75.31MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:5b92631cae6df8d9aef617e5a07532336e5c2a09d7c5418592ea6188a7e10a0c 72.73MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:5cac740fb8a68c72180f72cbe2227abcdb92f2acc1ee68141b720e2e16e3daed 23.64MiB  
sha256:a1395b66e122f878c6abdb229134d5150832e9f95b6278e823095bb66da7203d ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer  
sha256:a007417b5129999c3aa2391802b9d1131d67bd735acb0e4e83f2232da56b51a2 ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer  
sha256:69640e0eade25e28d6f08c98bed2a0a9e7120b4b6e5a3510ca3741681c79c096 ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer  
sha256:91b6872c930e6d846fb94eb314df9fa4e0f35a7a234462329ea1e0911ed98e00 ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer  
sha256:152e719fa5c0a8326fb845884a761c7976521201ac912932992df020bda77fae ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer:b068f7cc  
info: Mirroring completed in 5.52s (125MB/s)  
  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:ba4c748f34a20478f7334a3e29888150985cd77bf5667cb28df709f8349e14fb 55.28MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:8bad510b7a13af38e38c6a4b66c8beaac49b44c2f1bac22068b1001bae266f3e 81.92MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:d074e0420aa5a047ac468c239178ef5f660b03920ad2f7f7e6a1d71530069db5 10.1MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:f26b1ec0865cd5bcc30994a1d00d16f6f1bad44dd538ee1df0e8840753595738 21.78KiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:70a5bdb4264951ee2dfdc73b51c3c8ab99a611d9ac3acaf4a81988a075b5b845 21.69MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:abb828c6dd68e53a22f7a11904b72f9d5a7802fb5e7c380b3a22b18a02e9a463 73.31MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:f44954f3b43a0b5ee76801b112b069aecdb6ce7b387ed3fb72bec893f848c89a 54.58MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:7be6430836eaa16b36440931da447277c710585b321a59f555d455e6b9f9689e 10.28MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:e892ff5d6fa3cef8357fcaa97f0f534e4f454439edadf9cbb820482420817585 21.91MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:4caf23c20c871ed5c847c163905c27ee724b9e10975f1711715589a52942b3d5 53.47MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:ca4e3da08236e2c5f895043898246830e8a394a483c5ba66aa25635ea19d4c69 21.78KiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:357d8d6388d50c5e60475784a9956fcff8a1e66f48ae978c0e691fd587b76248 10.25MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:bfdc7c9d33c28bd179f2b99aea50e8e86a372a209dfe272757d32965644f8c59 21.76KiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:89176521898ace7eab9ccf870f6e4e5e3a21c3688df09c9346a3cf6f909f1188 23.84MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:00f24979220b92c40dbe75e7f85475c5d14efe31c4b0f2c8c2ea50bf359986ec 10.97MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:96e84521ae3a855d5ef74239d41bdc2cd5c2d0db0fd71006823f9cab7b5ae5d6 21.76KiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:c7965aa7086045a59bdb113a1fb8a19d7ccf7af4133e59af8ecefd39cda8e0b1 75.31MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:5b92631cae6df8d9aef617e5a07532336e5c2a09d7c5418592ea6188a7e10a0c 72.73MiB  
uploading: ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer sha256:5cac740fb8a68c72180f72cbe2227abcdb92f2acc1ee68141b720e2e16e3daed 23.64MiB  
sha256:a1395b66e122f878c6abdb229134d5150832e9f95b6278e823095bb66da7203d ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer  
sha256:a007417b5129999c3aa2391802b9d1131d67bd735acb0e4e83f2232da56b51a2 ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer  
sha256:69640e0eade25e28d6f08c98bed2a0a9e7120b4b6e5a3510ca3741681c79c096 ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer  
sha256:91b6872c930e6d846fb94eb314df9fa4e0f35a7a234462329ea1e0911ed98e00 ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer  
sha256:152e719fa5c0a8326fb845884a761c7976521201ac912932992df020bda77fae ncputility.nokiptchub01.nokia.usa:8443/ocmirror/openshift4/ose-csi-external-resizer:b068f7cc  
info: Mirroring completed in 5.52s (125MB/s)  
  
catalogs/registry.redhat.io/redhat/redhat-operator-index/v4.16/layout/blobs/sha256/d74e8b702f03952802c351c423f5a15bd670d0558f3f25e04d27bfc1964d68f6  
catalogs/registry.redhat.io/redhat/redhat-operator-index/v4.16/layout/blobs/sha256/d97215b78c445a91c5e9676d137c6c9fa1cbef72ce82425316432b221360f9a1  
catalogs/registry.redhat.io/redhat/redhat-operator-index/v4.16/layout/blobs/sha256/ed1748ba861420cf9f23989a033c63968dcb227442f5d70ff5088fc2f163b44b  
catalogs/registry.redhat.io/redhat/redhat-operator-index/v4.16/layout/blobs/sha256/f20db0aa394f8fd833f0f3d35bd505ecbddcc38d501afaea85ef28ac5c446ee9  
catalogs/registry.redhat.io/redhat/redhat-operator-index/v4.16/layout/blobs/sha256/f371e370ccf3b0b9ed6e19bf73c29f180e3e288bf25cea4df13d52c27f24ebff  
catalogs/registry.redhat.io/redhat/redhat-operator-index/v4.16/layout/blobs/sha256/f6eee3a6ec21314c3c091044142276b65fb7ae526e21cb2288af902735496b96  
catalogs/registry.redhat.io/redhat/redhat-operator-index/v4.16/layout/blobs/sha256/f85f9539a5bfe9b773c454c22e77875de533ce99aacf5f24efd6d159c06b0405  
catalogs/registry.redhat.io/redhat/redhat-operator-index/v4.16/layout/index.json  
catalogs/registry.redhat.io/redhat/redhat-operator-index/v4.16/layout/oci-layout  
Rendering catalog image "ncputility.nokiptchub01.nokia.usa:8443/ocmirror/redhat/certified-operator-index:v4.16" with file-based catalog   
Rendering catalog image "ncputility.nokiptchub01.nokia.usa:8443/ocmirror/redhat/redhat-operator-index:v4.16" with file-based catalog   
Writing image mapping to oc-mirror-workspace/results-1743029387/mapping.txt  
Writing CatalogSource manifests to oc-mirror-workspace/results-1743029387  
Writing ICSP manifests to oc-mirror-workspace/results-1743029387  
[root@ncputility ncp]#

1. When you reload your quay registry, you will be able to see the images uploaded.



alt text

### Generate the ssh key for authenticating with core OS.

1. Generate a keypair for ssh access of the HUB cluster nodes, using ssh-keygen. Preferred algorithm is ed25519. Use the command, It will keep pub in .ssh folder.

[root@ncputility ncp]# ssh-keygen -t ed25519  
Generating public/private ed25519 key pair.  
Enter file in which to save the key (/root/.ssh/id\_ed25519):   
Enter passphrase (empty for no passphrase):   
Enter same passphrase again:   
Your identification has been saved in /root/.ssh/id\_ed25519  
Your public key has been saved in /root/.ssh/id\_ed25519.pub  
The key fingerprint is:  
SHA256:cPryPsjzimE7ks5xceRKXYFr5QlpGk00t5q01qrYxJU root@ncputility.nokiptchub01.nokia.usa  
The key's randomart image is:  
+--[ED25519 256]--+  
| ++oo |  
| . \*o.o |  
| ++=+. |  
| .=o@o |  
| o.E S |  
| o \* o |  
| ..B.o.. |  
| .oB.=+o. |  
| .+.=..=+. |  
+----[SHA256]-----+  
[root@ncputility ncp]#

### Configure Quay SSL to Match Hub Cluster.

1. login to in the hub cluster using respective RC file.

[root@ncputility ~ cwl\_rc]$source hubrc  
WARNING: Using insecure TLS client config. Setting this option is not supported!  
  
Login successful.  
  
You have access to 105 projects, the list has been suppressed. You can list all projects with 'oc projects'  
  
Using project "default".  
[root@ncputility ~ hub\_rc]$ oc get nodes  
NAME STATUS ROLES AGE VERSION  
master-0.pphncp01.infra.mobi.eastlink.ca Ready control-plane,master,monitor,worker 30d v1.29.10+67d3387  
master-1.pphncp01.infra.mobi.eastlink.ca Ready control-plane,master,monitor,worker 30d v1.29.10+67d3387  
master-2.pphncp01.infra.mobi.eastlink.ca Ready control-plane,master,monitor,worker 30d v1.29.10+67d3387  
[root@ncputility ~ hub\_rc]$ oc get pods  
No resources found in default namespace.

1. now try to prepare file for new certificate with correct file content using –dry-run

oc create configmap user-ca-bundle \  
 --from-file=ncputility.pphncp01.infra.mobi.eastlink.ca:8443=/opt/root/ca.crt \  
 -n openshift-config --dry-run=client -o yaml

1. Now try to copy the ncputility and it’s certificate line’s and then add it as last list of the certificate on the edit then apply it.

oc edit configmap user-ca-bundle -n openshift-config

### Validate Operator Catalog, ITMS, and DTMS

1. login to in the hub cluster using respective RC file.

[root@ncputility ~ cwl\_rc]$source hubrc  
WARNING: Using insecure TLS client config. Setting this option is not supported!  
  
Login successful.  
  
You have access to 105 projects, the list has been suppressed. You can list all projects with 'oc projects'  
  
Using project "default".  
[root@ncputility ~ hub\_rc]$ oc get nodes  
NAME STATUS ROLES AGE VERSION  
master-0.pphncp01.infra.mobi.eastlink.ca Ready control-plane,master,monitor,worker 30d v1.29.10+67d3387  
master-1.pphncp01.infra.mobi.eastlink.ca Ready control-plane,master,monitor,worker 30d v1.29.10+67d3387  
master-2.pphncp01.infra.mobi.eastlink.ca Ready control-plane,master,monitor,worker 30d v1.29.10+67d3387  
[root@ncputility ~ hub\_rc]$ oc get pods  
No resources found in default namespace.

1. get the oc get idms, itms and catalogsource.

[root@ncputility ~ hub\_rc]$ oc get idms  
NAME AGE  
generic-0 29d  
generic-1 29d  
image-digest-mirror 30d  
operator-0 29d  
release-0 29d  
[root@ncputility ~ hub\_rc]$ oc get itms  
NAME AGE  
platform 29d  
[root@ncputility ~ hub\_rc]$ oc get catalogsource -A  
NAMESPACE NAME DISPLAY TYPE PUBLISHER AGE  
openshift-marketplace cs-redhat-operator-index Disconnected OperatorHub grpc Nokia 29d  
[root@ncputility ~ hub\_rc]$

1. check the status of catalogsource on marketplace.

[root@ncputility ~ hub\_rc]$ oc get catalogsource cs-redhat-operator-index -n openshift-marketplace -o yaml  
apiVersion: operators.coreos.com/v1alpha1  
kind: CatalogSource  
metadata:  
 annotations:  
 kubectl.kubernetes.io/last-applied-configuration: |  
 {"apiVersion":"operators.coreos.com/v1alpha1","kind":"CatalogSource","metadata":{"annotations":{},"name":"cs-redhat-operator-index","namespace":"openshift-marketplace"},"spec":{"displayName":"Disconnected OperatorHub","image":"ncputility.pphncp01.infra.mobi.eastlink.ca:8443/ocmirror-ncp-24-7-mp1/redhat/redhat-operator-index:v4.16","publisher":"Nokia","sourceType":"grpc"}}  
 creationTimestamp: "2025-05-29T11:56:32Z"  
 generation: 1  
 name: cs-redhat-operator-index  
 namespace: openshift-marketplace  
 resourceVersion: "42579673"  
 uid: 2415d59c-172d-42e9-af1c-067c966b5222  
spec:  
 displayName: Disconnected OperatorHub  
 image: ncputility.pphncp01.infra.mobi.eastlink.ca:8443/ocmirror-ncp-24-7-mp1/redhat/redhat-operator-index:v4.16  
 publisher: Nokia  
 sourceType: grpc  
status:  
 connectionState:  
 address: cs-redhat-operator-index.openshift-marketplace.svc:50051  
 lastConnect: "2025-06-22T21:19:42Z"  
 lastObservedState: READY  
 registryService:  
 createdAt: "2025-06-22T21:15:42Z"  
 port: "50051"  
 protocol: grpc  
 serviceName: cs-redhat-operator-index  
 serviceNamespace: openshift-marketplace  
[root@ncputility ~ hub\_rc]$

### Restore SSH Key for Hub Cluster

1. Login to hub cluster with kubeadmin or cluster-admin role.

[root@ncputility ~ hub\_rc]$ source hubrc  
WARNING: Using insecure TLS client config. Setting this option is not supported!  
  
Login successful.  
  
You have access to 105 projects, the list has been suppressed. You can list all projects with 'oc projects'  
  
Using project "default".  
[root@ncputility ~ hub\_rc]$

1. list the mc for ssh on this hold and take a backup of it.

[root@ncputility ~ hub\_rc]$ oc get mc 99-master-ssh 99-worker-ssh  
NAME GENERATEDBYCONTROLLER IGNITIONVERSION AGE  
99-master-ssh 3.2.0 29d  
99-worker-ssh 3.2.0 29d  
[root@ncputility ~ hub\_rc]$ oc get mc 99-master-ssh 99-worker-ssh -o yaml > 99-master-worker-ssh.yaml  
[root@ncputility ~ hub\_rc]$   
[root@ncputility ~ hub\_rc]$ oc get mc 99-master-ssh 99-worker-ssh -o yaml > 99-master-worker-ssh-back.yaml  
[root@ncputility ~ hub\_rc]$

1. update the sshAuthorizedKeys key with your latest key and then apply it.

[root@ncputility ~ hub\_rc]$ vi 99-master-worker-ssh-back.yaml

- name: core

sshAuthorizedKeys: - ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIGW2BXbCPiDgL3m4y8y3UYdehEmdUsrQBNLOR27waVBr root@ncputility.pphncp01.infra.mobi.eastlink.ca

this part need to updated.

1. apply the change

[root@ncputility ~ hub\_rc]$ oc apply -f 99-master-worker-ssh-back.yaml  
Warning: resource machineconfigs/99-master-ssh is missing the kubectl.kubernetes.io/last-applied-configuration annotation which is required by oc apply. oc apply should only be used on resources created declaratively by either oc create --save-config or oc apply. The missing annotation will be patched automatically.  
machineconfig.machineconfiguration.openshift.io/99-master-ssh configured  
Warning: resource machineconfigs/99-worker-ssh is missing the kubectl.kubernetes.io/last-applied-configuration annotation which is required by oc apply. oc apply should only be used on resources created declaratively by either oc create --save-config or oc apply. The missing annotation will be patched automatically.  
machineconfig.machineconfiguration.openshift.io/99-worker-ssh configured  
[root@ncputility ~ hub\_rc]$

1. Machine Config Operator should start applying the changes shortly. Observe which MachineConfigPools are being updated with oc get mcp and check more details on which node is being updated by following this solution.

[root@ncputility ~ hub\_rc]$ oc get mcp  
NAME CONFIG UPDATED UPDATING DEGRADED MACHINECOUNT READYMACHINECOUNT UPDATEDMACHINECOUNT DEGRADEDMACHINECOUNT AGE  
master rendered-master-adf9d3edadac5fe32aa27a42deeb773e True False False 3 3 3 0 29d  
worker rendered-worker-9ad974bc81cec3f37ff34bd866f0e906 True False False 0 0 0 0 29d  
[root@ncputility ~ hub\_rc]$

1. For more insights on how the change is being applied in a single node, then check the machine config daemon logs:

NODE='master-0.pphncp01.infra.mobi.eastlink.ca'  
oc -n openshift-machine-config-operator logs -c machine-config-daemon $(oc -n openshift-machine-config-operator get pod -l k8s-app=machine-config-daemon --field-selector spec.nodeName=${NODE} -o name) -f

Where ${NODE} must be replaced with the name of the node. Omit -f if logs are not required to be followed. If the update was successfully applied, then logs similar to below lines are expected:

I0111 19:59:07.360110 7993 update.go:258] SSH Keys reconcilable  
...  
I0111 19:59:07.371253 7993 update.go:569] Writing SSHKeys at "/home/core/.ssh"  
...  
I0111 19:59:07.372208 7993 update.go:613] machine-config-daemon initiating reboot: Node will reboot into config worker-96b48815fa067f651fa50541ea6a9b5d

### Restore SSH Key for CWL Cluster

1. login to infra-manager node and followed by navigate to git files location.

[root@ncputility ~ hub\_rc]$ pwd  
/root/ncp-pp/ppwncp01/site-config/ppwncp01  
[root@ncputility ~ hub\_rc]$ vi ppwncp01.yaml

1. update the site-config.yaml with recent ssh pub key directly.

vi to this file ppwncp01.yaml and update sshPublicKey

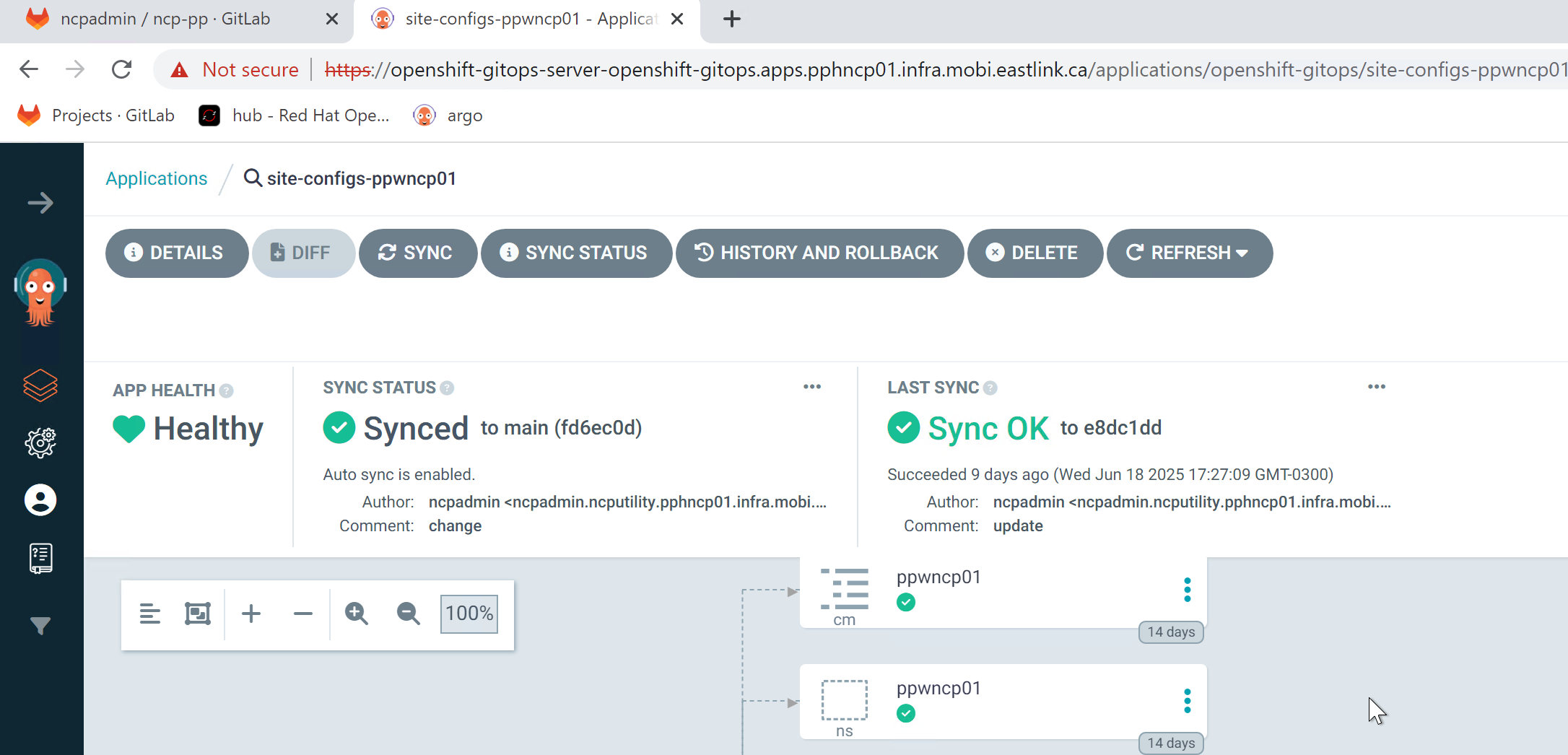
---  
apiVersion: ran.openshift.io/v1  
kind: SiteConfig  
metadata:  
 name: "ppwncp01"  
 namespace: "ppwncp01"  
spec:  
 # The base domain used by our SNOs  
 baseDomain: "infra.mobi.eastlink.ca"  
 # The secret name of the secret containing the pull secret for our disconnected registry  
 pullSecretRef:  
 name: "ppwncp01-disconnected-registry-pull-secret"  
 # The OCP release we will be deploying otherwise specified (this can be configured per cluster as well)  
 clusterImageSetNameRef: "ncp-24-7-mp1-release"  
 # The ssh public key that will be injected into our SNOs authorized\_keys  
 sshPublicKey: "ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIGW2BXbCPiDgL3m4y8y3UYdehEmdUsrQBNLOR27waVBr"  
 clusters:  
 - clusterName: "ppwncp01"  
 # The sdn plugin that will be used

1. Commit this change on the git server too

[root@ncputility ~ hub\_rc]$ git commit -m "update"  
Author identity unknown  
  
\*\*\* Please tell me who you are.  
  
Run  
  
 git config --global user.email "you@example.com"  
 git config --global user.name "Your Name"  
  
to set your account's default identity.  
Omit --global to set the identity only in this repository.  
  
fatal: unable to auto-detect email address (got 'root@ncputility.(none)')  
[root@ncputility ~ hub\_rc]$ git push  
Username for 'https://gitlab.apps.pphncp01.infra.mobi.eastlink.ca': ncpadmin  
Password for 'https://ncpadmin@gitlab.apps.pphncp01.infra.mobi.eastlink.ca':  
Everything up-to-date  
[root@ncputility ~ hub\_rc]$

1. Open up the Argocd web console and select sync for site-config application tiles. once sync completed, monitor the progress via mcp.

[ARGO-CD URL](#X70eea3d28b568db3309232a13ac0f8f82e0aa65)



alt text

4.1) Continue with step 5 to 7, if step 4 does not trigger the mcp update automatically.

1. list the mc for ssh on this hold and take a backup of it.

[root@ncputility ~ hub\_rc]$ oc get mc 99-master-ssh 99-worker-ssh  
NAME GENERATEDBYCONTROLLER IGNITIONVERSION AGE  
99-master-ssh 3.2.0 29d  
99-worker-ssh 3.2.0 29d  
[root@ncputility ~ hub\_rc]$ oc get mc 99-master-ssh 99-worker-ssh -o yaml > 99-master-worker-ssh.yaml  
[root@ncputility ~ hub\_rc]$   
[root@ncputility ~ hub\_rc]$ oc get mc 99-master-ssh 99-worker-ssh -o yaml > 99-master-worker-ssh-back.yaml  
[root@ncputility ~ hub\_rc]$

1. update the sshAuthorizedKeys key with your latest key and then apply it.

[root@ncputility ~ hub\_rc]$ vi 99-master-worker-ssh-back.yaml

- name: core

sshAuthorizedKeys: - ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIGW2BXbCPiDgL3m4y8y3UYdehEmdUsrQBNLOR27waVBr root@ncputility.pphncp01.infra.mobi.eastlink.ca

this part need to updated.

1. apply the change

[root@ncputility ~ hub\_rc]$ oc apply -f 99-master-worker-ssh-back.yaml  
Warning: resource machineconfigs/99-master-ssh is missing the kubectl.kubernetes.io/last-applied-configuration annotation which is required by oc apply. oc apply should only be used on resources created declaratively by either oc create --save-config or oc apply. The missing annotation will be patched automatically.  
machineconfig.machineconfiguration.openshift.io/99-master-ssh configured  
Warning: resource machineconfigs/99-worker-ssh is missing the kubectl.kubernetes.io/last-applied-configuration annotation which is required by oc apply. oc apply should only be used on resources created declaratively by either oc create --save-config or oc apply. The missing annotation will be patched automatically.  
machineconfig.machineconfiguration.openshift.io/99-worker-ssh configured  
[root@ncputility ~ hub\_rc]$

1. Machine Config Operator should start applying the changes shortly. Observe which MachineConfigPools are being updated with oc get mcp and check more details on which node is being updated by following this solution.

[root@ncputility ~ hub\_rc]$ oc get mcp  
NAME CONFIG UPDATED UPDATING DEGRADED MACHINECOUNT READYMACHINECOUNT UPDATEDMACHINECOUNT DEGRADEDMACHINECOUNT AGE  
master rendered-master-adf9d3edadac5fe32aa27a42deeb773e True False False 3 3 3 0 29d  
worker rendered-worker-9ad974bc81cec3f37ff34bd866f0e906 True False False 0 0 0 0 29d  
[root@ncputility ~ hub\_rc]$

1. For more insights on how the change is being applied in a single node, then check the machine config daemon logs:

NODE='master-0.pphncp01.infra.mobi.eastlink.ca'  
oc -n openshift-machine-config-operator logs -c machine-config-daemon $(oc -n openshift-machine-config-operator get pod -l k8s-app=machine-config-daemon --field-selector spec.nodeName=${NODE} -o name) -f

Where ${NODE} must be replaced with the name of the node. Omit -f if logs are not required to be followed. If the update was successfully applied, then logs similar to below lines are expected:

I0111 19:59:07.360110 7993 update.go:258] SSH Keys reconcilable  
...  
I0111 19:59:07.371253 7993 update.go:569] Writing SSHKeys at "/home/core/.ssh"  
...  
I0111 19:59:07.372208 7993 update.go:613] machine-config-daemon initiating reboot: Node will reboot into config worker-96b48815fa067f651fa50541ea6a9b5d

## Verification

### Verification for new infra quay TLS on the hub cluster registry.

1. Login to Customer VPN, followed by ssh to infra-manager node using username ncpuser with given password.

┌──────────────────────────────────────────────────────────────────────┐  
 │ • MobaXterm Personal Edition v25.1 • │  
 │ (SSH client, X server and network tools) │  
 │ │  
 │ ⮞ SSH session to ncpuser@10.236.6.230 │  
 │ • Direct SSH : ✓ │  
 │ • SSH compression : ✓ │  
 │ • SSH-browser : ✓ │  
 │ • X11-forwarding : ✓ (remote display is forwarded through SSH) │  
 │ │  
 │ ⮞ For more info, ctrl+click on help or visit our website. │  
 └──────────────────────────────────────────────────────────────────────┘  
  
Activate the web console with: systemctl enable --now cockpit.socket  
  
Register this system with Red Hat Insights: insights-client --register  
Create an account or view all your systems at https://red.ht/insights-dashboard  
Last login: Fri Jun 27 15:36:03 2025 from 10.192.52.140  
[ncpuser@ncputility ~]$  
[ncpuser@ncputility ~]$ sudo su -  
[sudo] password for ncpuser:  
[root@ncputility ~]#

1. login to hub cluster using oc login or rc file.

[root@ncputility ~ cwl\_rc]$source hubrc  
WARNING: Using insecure TLS client config. Setting this option is not supported!  
  
Login successful.  
  
You have access to 105 projects, the list has been suppressed. You can list all projects with 'oc projects'  
  
Using project "default".  
[root@ncputility ~ hub\_rc]$ oc get pods -n openshift-nmstate  
NAME STATUS ROLES AGE VERSION  
  
[root@ncputility ~ hub\_rc]$

1. now try deleting some low profile pods. l

oc get pods -A -o wide |grep -i controller   
  
# when you delete it you should be seeing pod recreated without any issue.

or

oc debug -t node/node.name  
  
chroot /root  
  
podman pull any/image/from/infra/quay.  
  
it should not through any TLS error.

### Verification for new ssh key testing on hub clusters.

1. Login to Customer VPN, followed by ssh to infra-manager node using username ncpuser with given password.

┌──────────────────────────────────────────────────────────────────────┐  
 │ • MobaXterm Personal Edition v25.1 • │  
 │ (SSH client, X server and network tools) │  
 │ │  
 │ ⮞ SSH session to ncpuser@10.236.6.230 │  
 │ • Direct SSH : ✓ │  
 │ • SSH compression : ✓ │  
 │ • SSH-browser : ✓ │  
 │ • X11-forwarding : ✓ (remote display is forwarded through SSH) │  
 │ │  
 │ ⮞ For more info, ctrl+click on help or visit our website. │  
 └──────────────────────────────────────────────────────────────────────┘  
  
Activate the web console with: systemctl enable --now cockpit.socket  
  
Register this system with Red Hat Insights: insights-client --register  
Create an account or view all your systems at https://red.ht/insights-dashboard  
Last login: Fri Jun 27 15:36:03 2025 from 10.192.52.140  
[ncpuser@ncputility ~]$  
[ncpuser@ncputility ~]$ sudo su -  
[sudo] password for ncpuser:  
[root@ncputility ~]#

1. login to hub cluster using oc login or rc file.

login to in the hub cluster using respective RC file.

[root@ncputility ~ cwl\_rc]$source hubrc  
WARNING: Using insecure TLS client config. Setting this option is not supported!  
  
Login successful.  
  
You have access to 105 projects, the list has been suppressed. You can list all projects with 'oc projects'  
  
Using project "default".  
[root@ncputility ~ hub\_rc]$ oc get nodes  
NAME STATUS ROLES AGE VERSION  
master-0.pphncp01.infra.mobi.eastlink.ca Ready control-plane,master,monitor,worker 30d v1.29.10+67d3387  
master-1.pphncp01.infra.mobi.eastlink.ca Ready control-plane,master,monitor,worker 30d v1.29.10+67d3387  
master-2.pphncp01.infra.mobi.eastlink.ca Ready control-plane,master,monitor,worker 30d v1.29.10+67d3387  
[root@ncputility ~ hub\_rc]$

1. now try ssh for each and every node in the list.

do proper ssh test for all the nodes.

ssh core@master-0.pphncp01.infra.mobi.eastlink.ca

### Verification for new ssh key testing on cwl clusters.

1. Login to Customer VPN, followed by ssh to infra-manager node using username ncpuser with given password.

┌──────────────────────────────────────────────────────────────────────┐  
 │ • MobaXterm Personal Edition v25.1 • │  
 │ (SSH client, X server and network tools) │  
 │ │  
 │ ⮞ SSH session to ncpuser@10.236.6.230 │  
 │ • Direct SSH : ✓ │  
 │ • SSH compression : ✓ │  
 │ • SSH-browser : ✓ │  
 │ • X11-forwarding : ✓ (remote display is forwarded through SSH) │  
 │ │  
 │ ⮞ For more info, ctrl+click on help or visit our website. │  
 └──────────────────────────────────────────────────────────────────────┘  
  
Activate the web console with: systemctl enable --now cockpit.socket  
  
Register this system with Red Hat Insights: insights-client --register  
Create an account or view all your systems at https://red.ht/insights-dashboard  
Last login: Fri Jun 27 15:36:03 2025 from 10.192.52.140  
[ncpuser@ncputility ~]$  
[ncpuser@ncputility ~]$ sudo su -  
[sudo] password for ncpuser:  
[root@ncputility ~]#

1. login to hub cluster using oc login or rc file.

login to in the hub cluster using respective RC file.

[root@ncputility ~ cwl\_rc]$source cwlrc  
WARNING: Using insecure TLS client config. Setting this option is not supported!  
  
Login successful.  
  
You have access to 105 projects, the list has been suppressed. You can list all projects with 'oc projects'  
  
Using project "default".  
[root@ncputility ~ cwl\_rc]$ oc get nodes # this list sample, you will get big list of nodes.  
NAME STATUS ROLES AGE VERSION  
master-0.pphncp01.infra.mobi.eastlink.ca Ready control-plane,master,monitor,worker 30d v1.29.10+67d3387  
master-1.pphncp01.infra.mobi.eastlink.ca Ready control-plane,master,monitor,worker 30d v1.29.10+67d3387  
master-2.pphncp01.infra.mobi.eastlink.ca Ready control-plane,master,monitor,worker 30d v1.29.10+67d3387  
  
\*\*output omitted\*\*  
[root@ncputility ~ cwl\_rc]$

1. now try ssh for each and every node in the list.

do proper ssh test for all the nodes.

ssh core@master-0.pphncp01.infra.mobi.eastlink.ca