

# Lab: Introduction to Kubernetes and OpenShift

Find essential information about your OpenShift cluster by navigating its web console.

## Outcomes

Navigate the Red Hat OpenShift Container Platform web console to find various information items and configuration details.

As the student user on the workstation machine, use the `lab` command to prepare your system for this exercise.

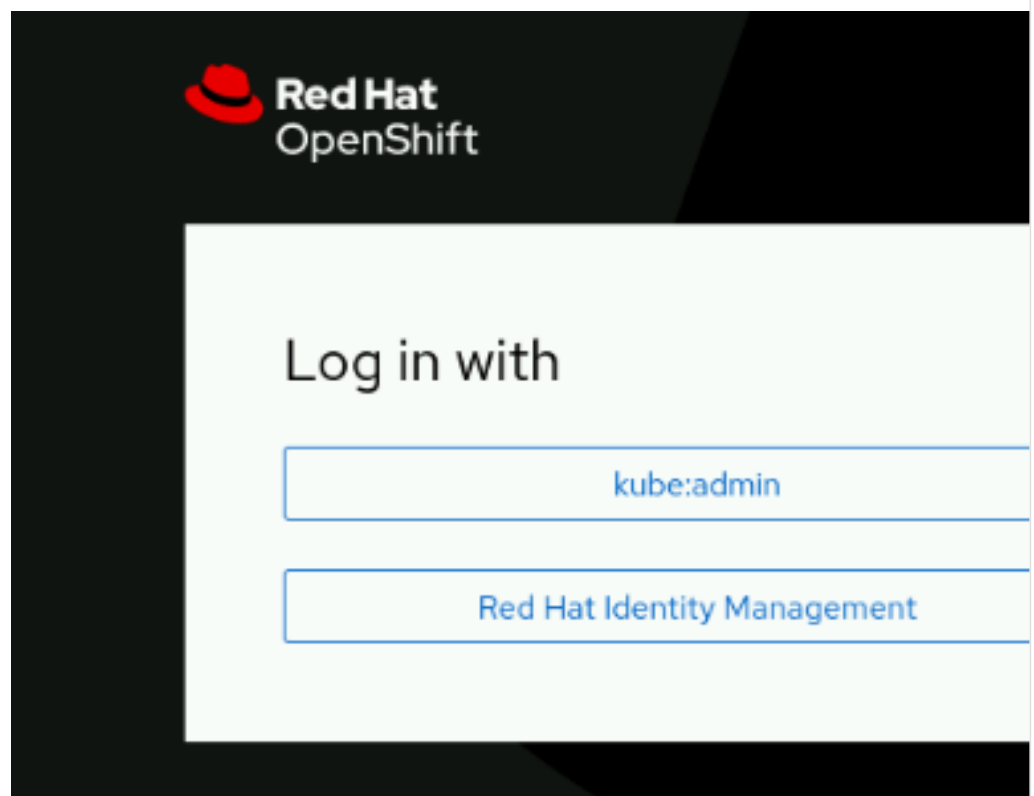
This command ensures that the Red Hat OpenShift Container Platform is deployed and ready for the lab.

```
[student@workstation ~]$ lab start intro-review
```

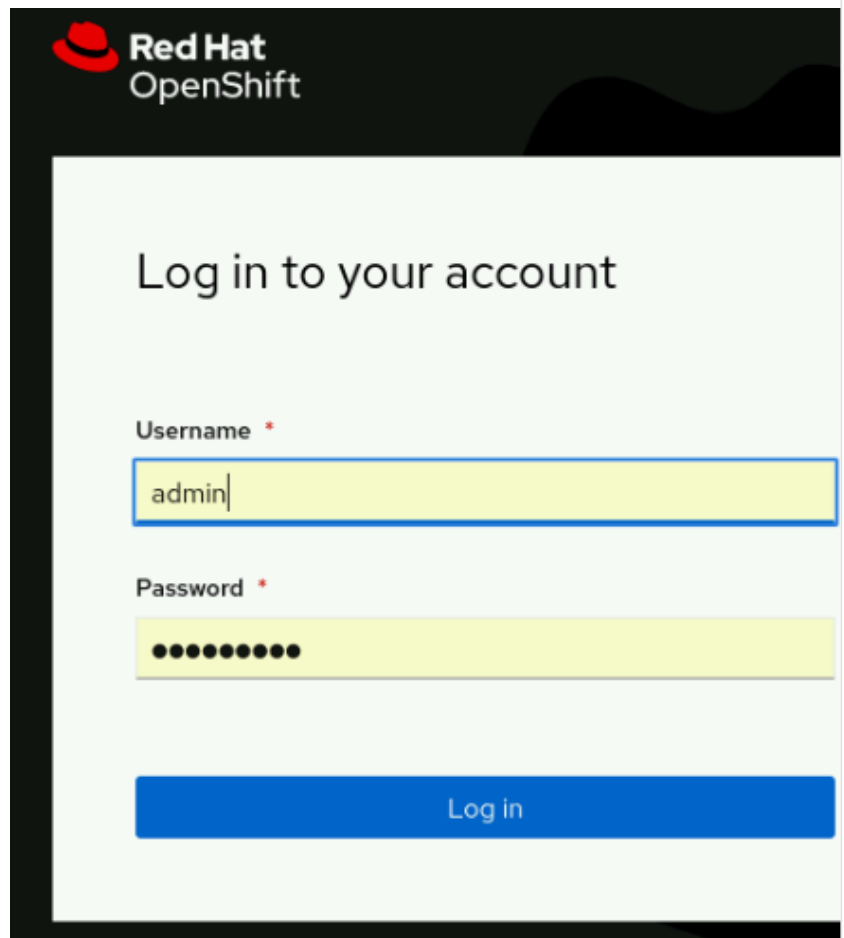
## Instructions

1. Log in to the Red Hat OpenShift Container Platform web console, with Red Hat Identity Management as the admin user with the `redhatocp` password, and review the answers for the quiz in the section that follows.

Use a browser to view the login page at the `https://console-openshift-console.apps.`



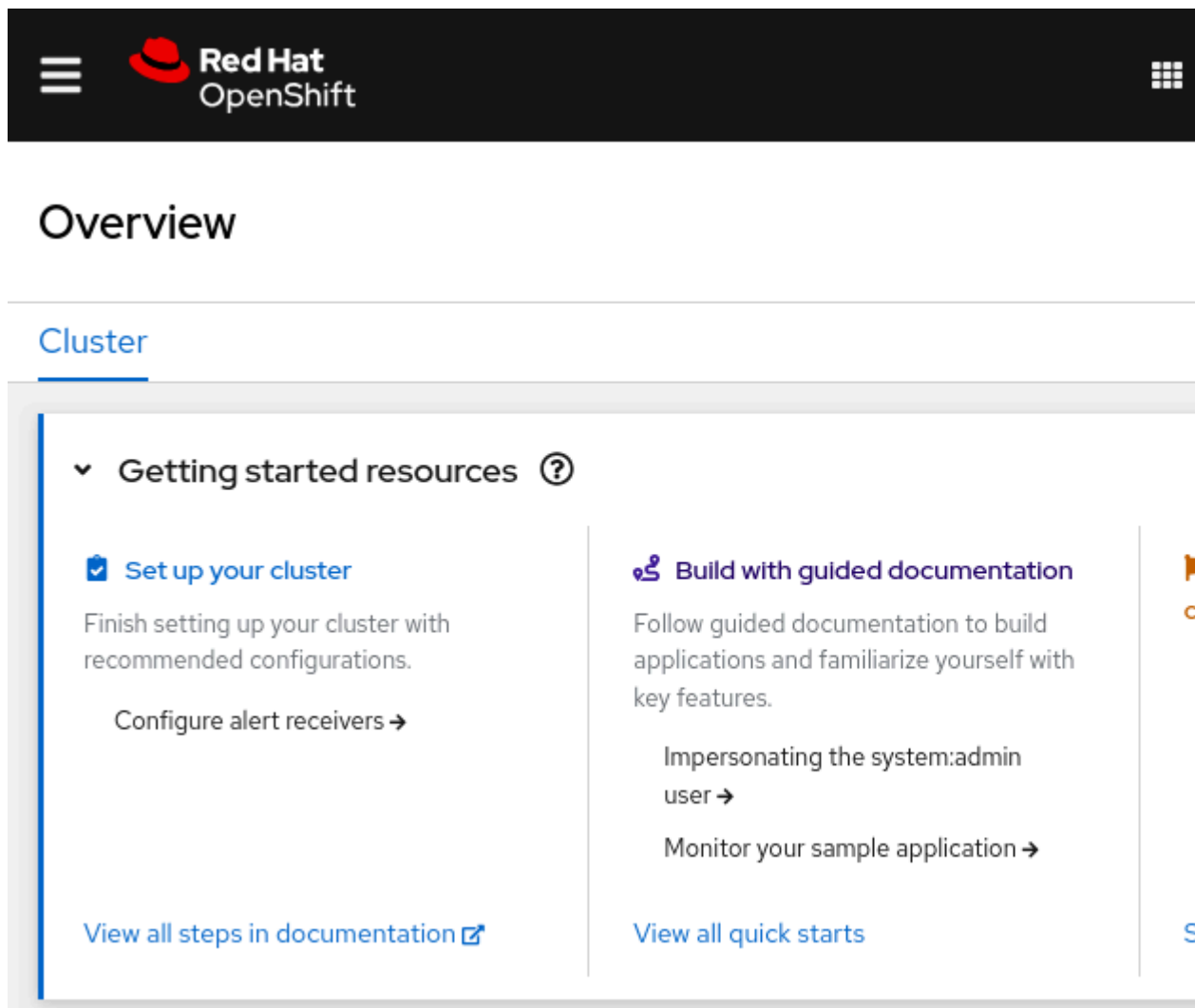
Click Red Hat Identity Management, and supply the admin username and the redhatocp access the home page.



The image shows the Red Hat OpenShift login interface. At the top left is the Red Hat logo and the text "Red Hat OpenShift". Below this is a light green box with the heading "Log in to your account". Inside this box, there are two input fields. The first is labeled "Username \*" and contains the text "admin". The second is labeled "Password \*" and contains a series of dots. Below these fields is a blue button labeled "Log in".

2. View the cluster version on the Overview page for the cluster.

From the **Home** → **Overview** page, scroll down to view the cluster details.



The image shows the Red Hat OpenShift Overview page. At the top is a dark header with the Red Hat logo and 'OpenShift' text. Below the header is a large 'Overview' section. Underneath, there's a 'Cluster' section with a blue underline. The main content area is titled 'Getting started resources' with a question mark icon. It contains two columns of cards. The left column has a card titled 'Set up your cluster' with a checkmark icon, describing finishing cluster setup and linking to 'Configure alert receivers'. The right column has a card titled 'Build with guided documentation' with a person icon, describing following documentation to build applications and linking to 'Monitor your sample application'. Both columns have links at the bottom to 'View all steps in documentation' and 'View all quick starts' respectively.

## Overview

### Cluster

#### Getting started resources ?

#### Set up your cluster

Finish setting up your cluster with recommended configurations.

[Configure alert receivers →](#)

[View all steps in documentation](#)

#### Build with guided documentation

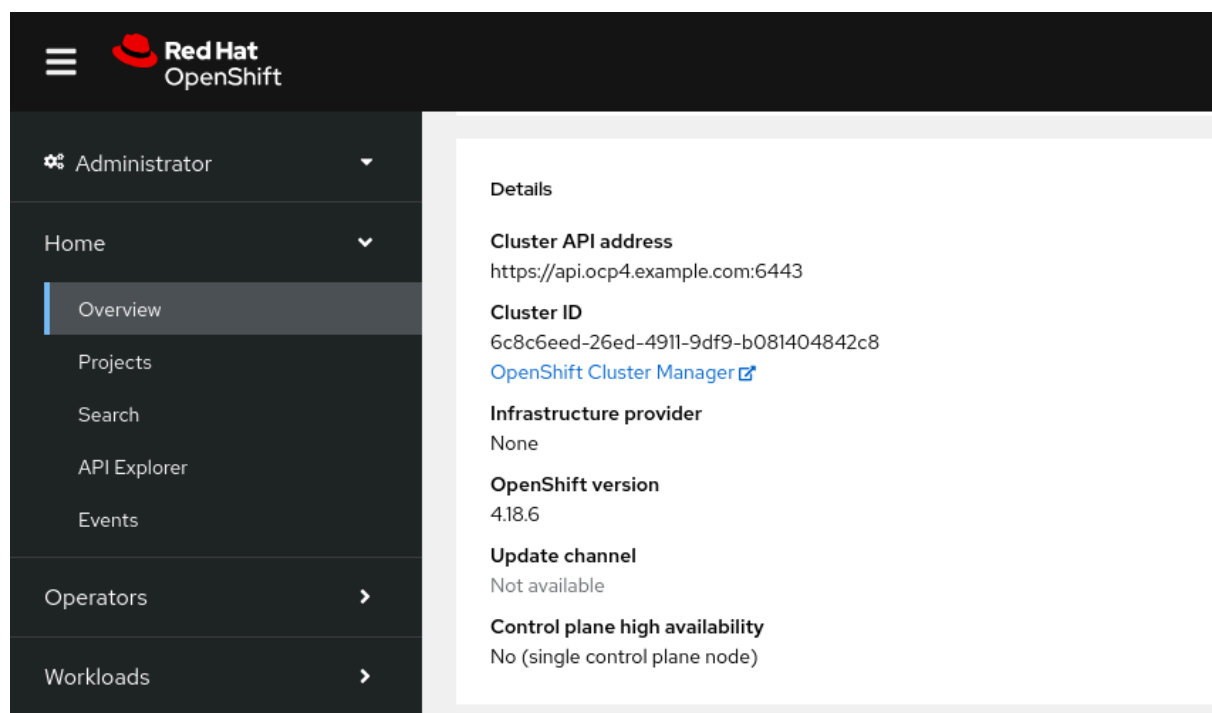
Follow guided documentation to build applications and familiarize yourself with key features.

[Impersonating the system:admin user →](#)

[Monitor your sample application →](#)

[View all quick starts](#)

Locate the OpenShift version in the Details section.



The image shows the Red Hat OpenShift Details page. On the left is a dark sidebar with a menu: 'Administrator', 'Home', 'Overview' (highlighted), 'Projects', 'Search', 'API Explorer', 'Events', 'Operators', and 'Workloads'. The main content area is titled 'Details' and lists several cluster properties: 'Cluster API address' (https://api.ocp4.example.com:6443), 'Cluster ID' (6c8c6eed-26ed-4911-9df9-b081404842c8) with a link to 'OpenShift Cluster Manager', 'Infrastructure provider' (None), 'OpenShift version' (4.18.6), 'Update channel' (Not available), and 'Control plane high availability' (No (single control plane node)).

## Red Hat OpenShift

⚙️ Administrator

Home

**Overview**

Projects

Search

API Explorer

Events

Operators

Workloads

### Details

**Cluster API address**  
https://api.ocp4.example.com:6443

**Cluster ID**  
6c8c6eed-26ed-4911-9df9-b081404842c8  
[OpenShift Cluster Manager](#)

**Infrastructure provider**  
None



**OpenShift version**  
4.18.6

**Update channel**  
Not available

**Control plane high availability**  
No (single control plane node)


### 3. View the available alert severity types within the filters on the Alerting page.

Go to the **Observe** → **Alerting** page.



## Alerting

[Alerts](#) [Silences](#) [Alerting rules](#)







 Filter

Name

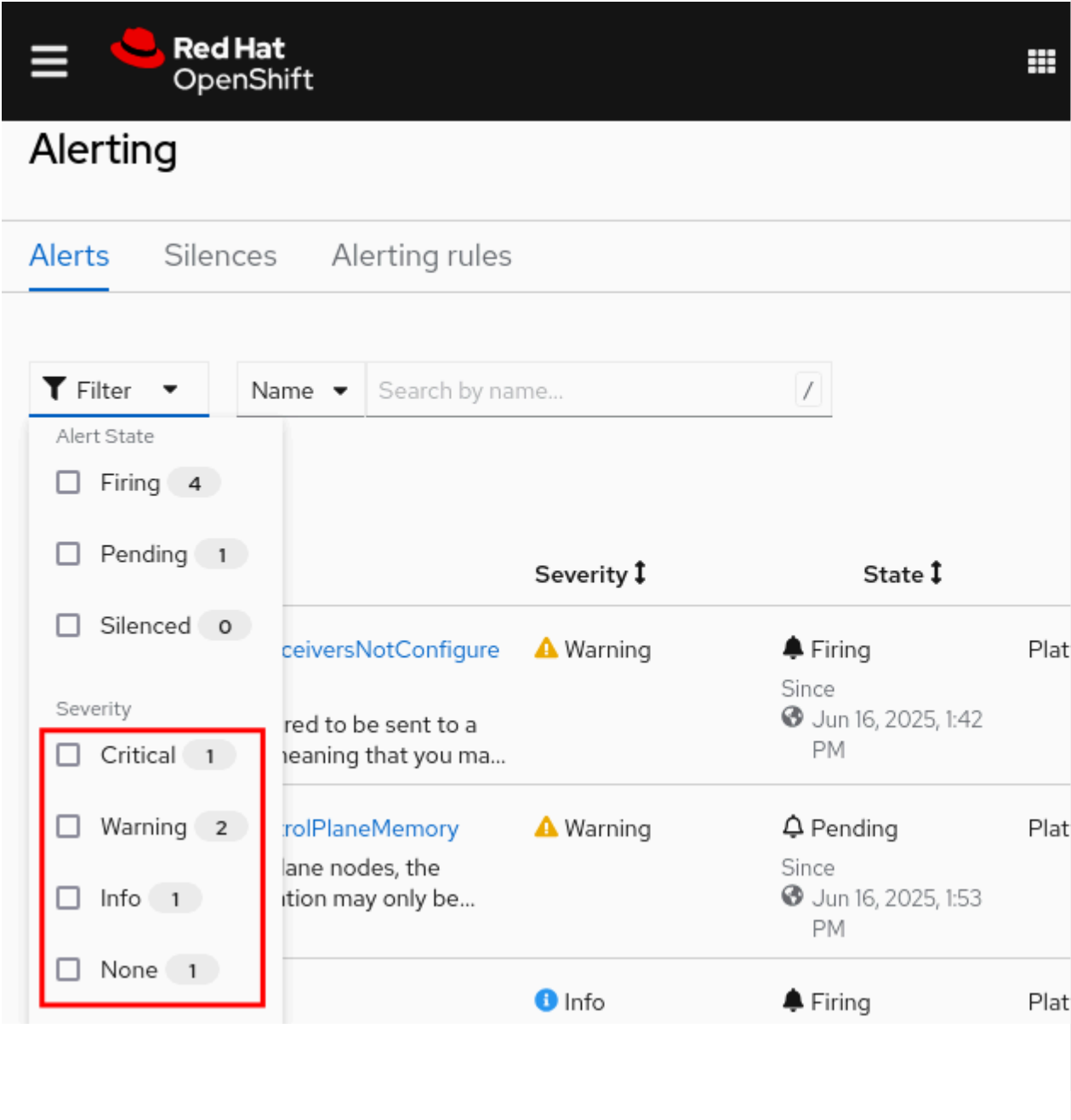
Search by name...

/

Export as CSV

Name ↑	Severity ↓	State ↓	
<div><div>AL</div><div>AlertmanagerReceiversNotConfigured</div></div> <div>Alerts are not configured to be sent to a notification system, meaning that you ma...</div>	<div> Warning</div>	<div> Firing</div> <div>Since</div> <div> Jun 16, 2025, 1:42 PM</div>	Plat
<div><div>AL</div><div>HighOverallControlPlaneMemory</div></div> <div>Given three control plane nodes, the overall memory utilization may only be...</div>	<div> Warning</div>	<div> Pending</div> <div>Since</div> <div> Jun 16, 2025, 1:53 PM</div>	Plat

Click the Filter drop-down to view the available severity options.



The screenshot shows the Red Hat OpenShift Alerting interface. The top navigation bar includes the Red Hat OpenShift logo and a hamburger menu. Below the navigation bar, the 'Alerting' section is active, with tabs for 'Alerts', 'Silences', and 'Alerting rules'. The 'Alerts' tab is selected, showing a list of alerts. A 'Filter' dropdown is open, displaying options for 'Alert State' (Firing: 4, Pending: 1, Silenced: 0) and 'Severity' (Critical: 1, Warning: 2, Info: 1, None: 1). The 'Severity' section is highlighted with a red box. The main table displays alerts with columns for Name, Severity, State, and State details. The first alert is 'ceiversNotConfigure' with a 'Warning' severity and 'Firing' state, triggered on Jun 16, 2025, at 1:42 PM. The second alert is 'rolPlaneMemory' with a 'Warning' severity and 'Pending' state, triggered on Jun 16, 2025, at 1:53 PM. The third alert is partially visible with an 'Info' severity and 'Firing' state.

4. View the labels for the thanos-querier route.

Go to the **Networking** → **Routes** page.

Red Hat OpenShift

Project: All Projects

## Routes

Filter Name Search by name... /

Name ↑	Namespa...	Status ↑	Loca
<span>RT</span> alertmanager-main	<span>NS</span> openshift-monitoring	✓ Accepted	<a href="https://alertmanager-main.monitoring.openshift.com/api">https://alertmanager-main.monitoring.openshift.com/api</a>
<span>RT</span> canary	<span>NS</span> openshift-ingress-canary	✓ Accepted	<a href="https://openshift-ingress-canary.example.com/api">https://openshift-ingress-canary.example.com/api</a>

Type the thanos keyword in the text search field.

## Routes

Filter Name thanos Clear all filters

Name ↑	Namespace ↑	Status	Location ↑
<span>RT</span> thanos-querier	<span>NS</span> openshift-monitoring	✓ Accepted	<a href="https://thanos-querier.openshift-monitoring.apps.ocp4.example.com/api">https://thanos-querier.openshift-monitoring.apps.ocp4.example.com/api</a>

Select the thanos-querier route in the Name column.

## Routes

Filter

Name

thanos

Name

thanos

×

Clear all filters

Name	Namespace	Status	Location
<div>RT</div> thanos-querier	<div>NS</div> openshift-monitoring	Accepted	<a href="https://thanos-querier-openshift-monitoring.apps.ocp4.example.com/api">https://thanos-querier-openshift-monitoring.apps.ocp4.example.com/api</a>

Scroll down on the thanos-querier route details page to view the labels.

Red Hat OpenShift

Project: openshift-monitoring

## Route details

**Name**

thanos-querier

**Namespace**

NS

 openshift-monitoring

**Labels**

app.kubernetes.io/component=query-layer

app.kubernetes.io/instance=thanos-querier

app.kubernetes.io/managed-by=cluster-monitoring-operator

app.kubernetes.io/name=thanos-query

app.kubernetes.io/part-of=openshift-monitoring

app.kubernetes.io/version=0.36.1

Edit

**Location**

<https://thanos-querier-openshift-monitoring.apps.ocp4.example.com/api>

**Status**

Accepted

**Host**

thanos-querier-openshift-monitoring.apps.ocp4.example.com

**Path**

/api

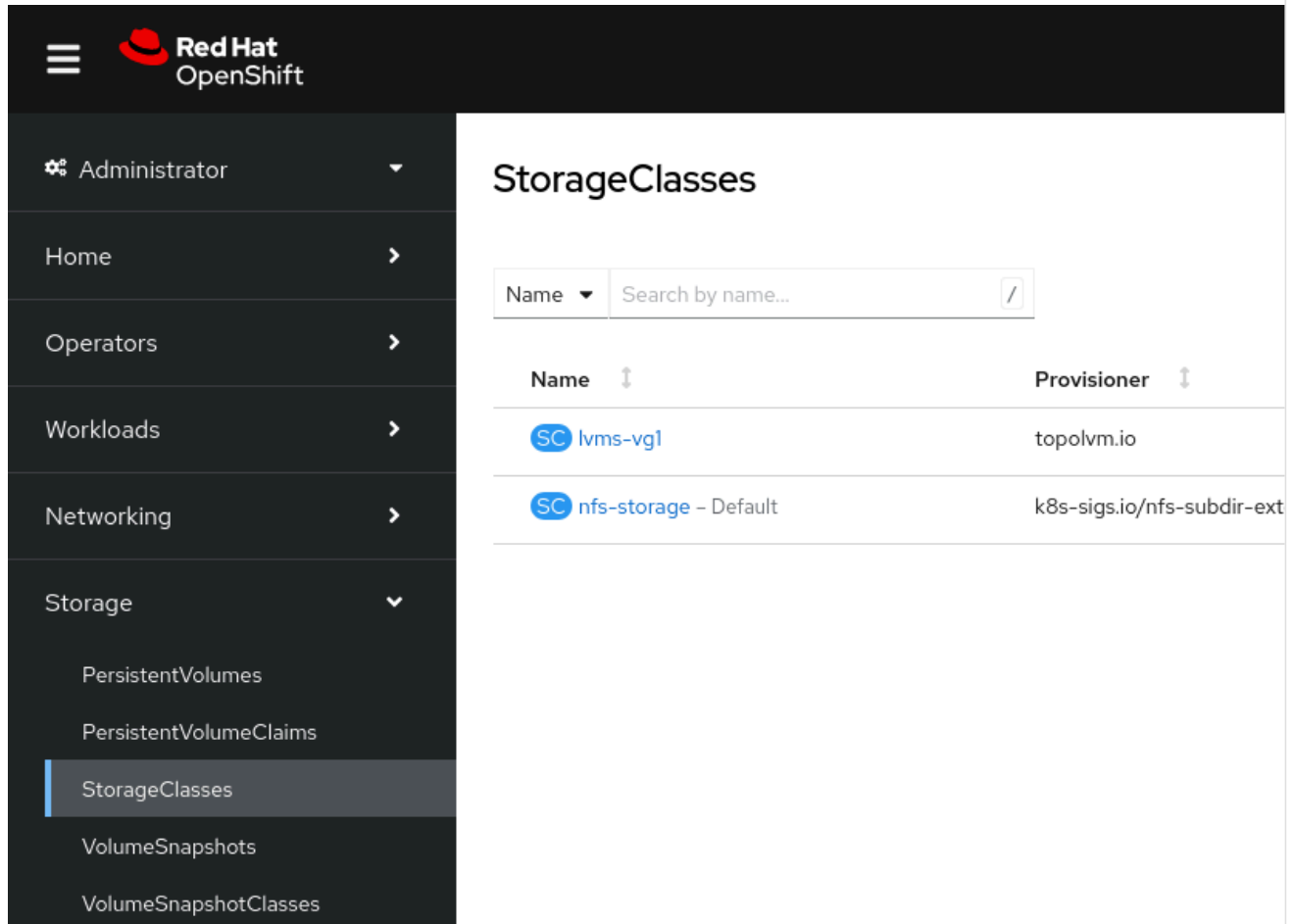
**Router canonical hostname**

router-default.apps.ocp4.example.com

**Annotations**

5. View the available storage classes in the cluster.

Go to the **Storage** → **StorageClasses** page.

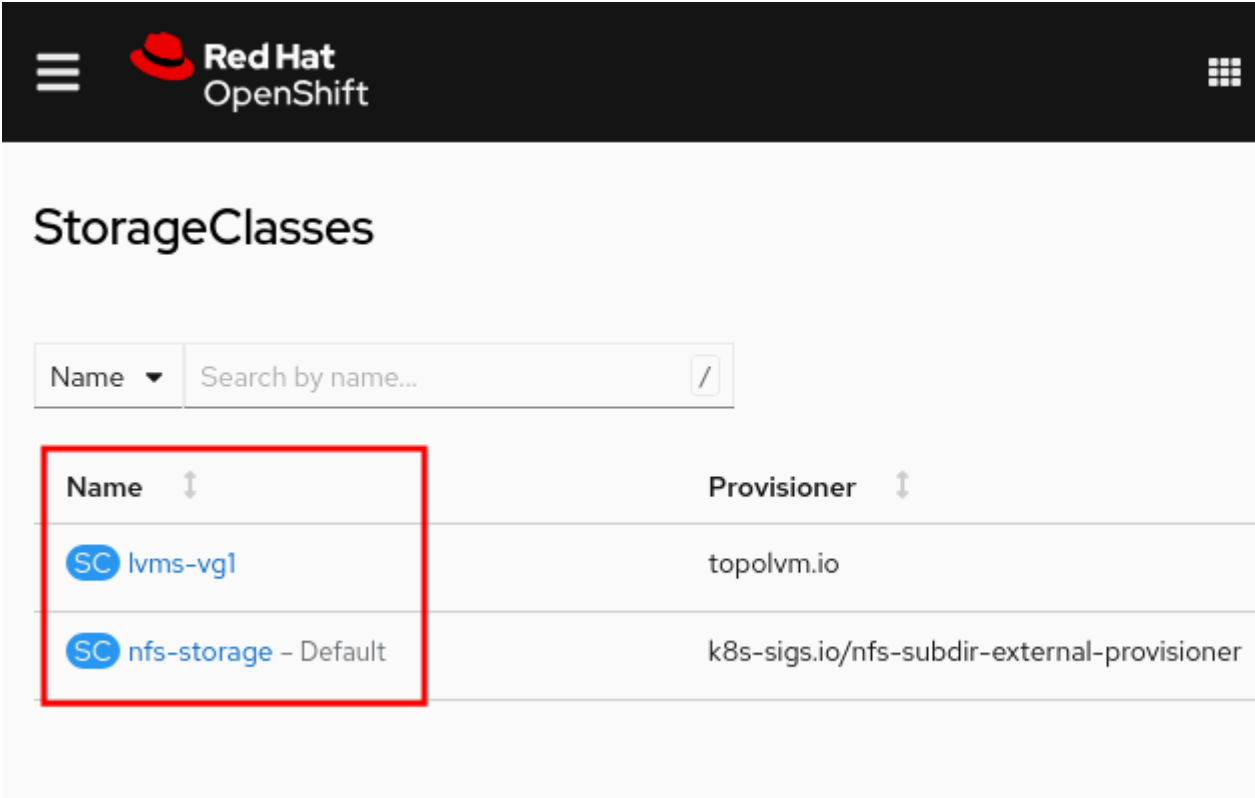


The screenshot shows the Red Hat OpenShift console interface. The left sidebar contains a navigation menu with the following items: Administrator, Home, Operators, Workloads, Networking, Storage (expanded), PersistentVolumes, PersistentVolumeClaims, StorageClasses (selected), VolumeSnapshots, and VolumeSnapshotClasses. The main content area is titled 'StorageClasses' and features a search bar with the text 'Search by name...'. Below the search bar is a table with two columns: 'Name' and 'Provisioner'. The table lists two storage classes: 'lvms-vgl' with provisioner 'topolvm.io' and 'nfs-storage - Default' with provisioner 'k8s-sigs.io/nfs-subdir-ext'.

Name	Provisioner
SC lvms-vgl	topolvm.io
SC nfs-storage - Default	k8s-sigs.io/nfs-subdir-ext

View the available storage classes in the cluster.






The screenshot shows the Red Hat OpenShift console interface. At the top is a dark header with the Red Hat logo and 'OpenShift' text. Below the header, the page title 'StorageClasses' is displayed. A search bar with a dropdown menu labeled 'Name' and a search input field 'Search by name...' is present. Below the search bar is a table of StorageClasses. The table has two columns: 'Name' and 'Provisioner'. The first row is 'lvms-vg1' with provisioner 'topolvm.io'. The second row is 'nfs-storage - Default' with provisioner 'k8s-sigs.io/nfs-subdir-external-provisioner'. A red rectangle highlights the first two rows of the table.

Name	Provisioner
lvms-vg1	topolvm.io
nfs-storage - Default	k8s-sigs.io/nfs-subdir-external-provisioner

6. View the installed operators for the cluster.

Go to the **Operators** → **Installed Operators** page.



Administrator

Home

Operators

OperatorHub

Installed Operators

Workloads

Networking

Storage

Builds

Observe








Project: All Projects

Installed Operators



Installed Operators are represented by ClusterServiceVersions within this Namespace. [Understanding Operators documentation](#). Or create an Operator and ClusterServiceVersion.

Name

Search by name...

Name	Namespace	Managed Namespaces	Status
 <b>LVM Storage</b> 4.18.1 provided by Red Hat	 <b>openshift-storage</b>	 <b>openshift-storage</b>	 Up
 <b>MetalLB Operator</b> 4.18.0-202505081435 provided by Red Hat	 <b>metallb-system</b>	All Namespaces	 Up

View the list of installed operators in the cluster.











Project: All Projects ▼

## Installed Operators

Installed Operators are represented by ClusterServiceVersions within this Namespace. For more in [Understanding Operators documentation](#). Or create an Operator and ClusterServiceVersion using

Name ▼

Search by name... /

Name ↕	Namespace ↕	Managed Na
 <b>LVM Storage</b> 4.18.1 provided by Red Hat	 <a href="#">openshift-storage</a>	 <a href="#">openshift</a>
 <b>MetalLB Operator</b> 4.18.0-202505081435 provided by Red Hat	 <a href="#">metallb-system</a>	All Namespac
 <b>Package Server</b> 0.0.1-snapshot provided by Red Hat	 <a href="#">openshift-operator-lifecycle- manager</a>	 <a href="#">openshift manager</a>

## Finish

As the student user on the workstation machine, use the `lab` command to complete this exercise. This step is important to ensure that resources from previous exercises do not impact upcoming exercises.

```
[student@workstation ~]$ lab finish intro-review
```