

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.

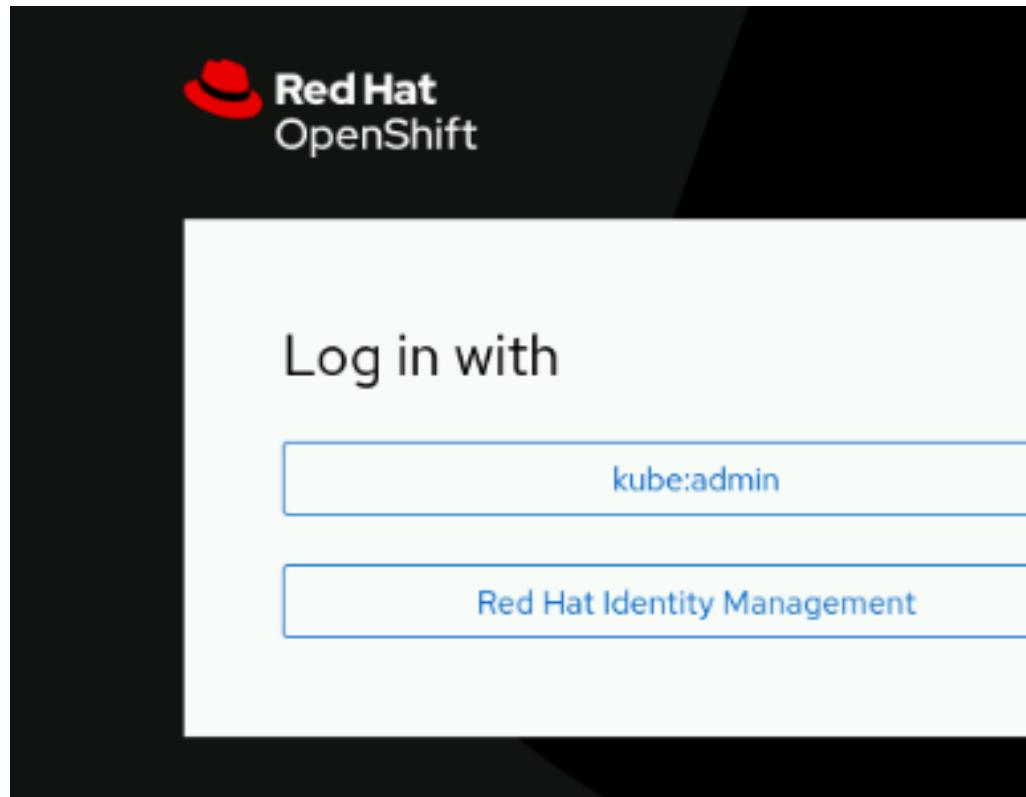
This command ensures that the Red Hat OpenShift Container Platform is deployed and ready for the lab.

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

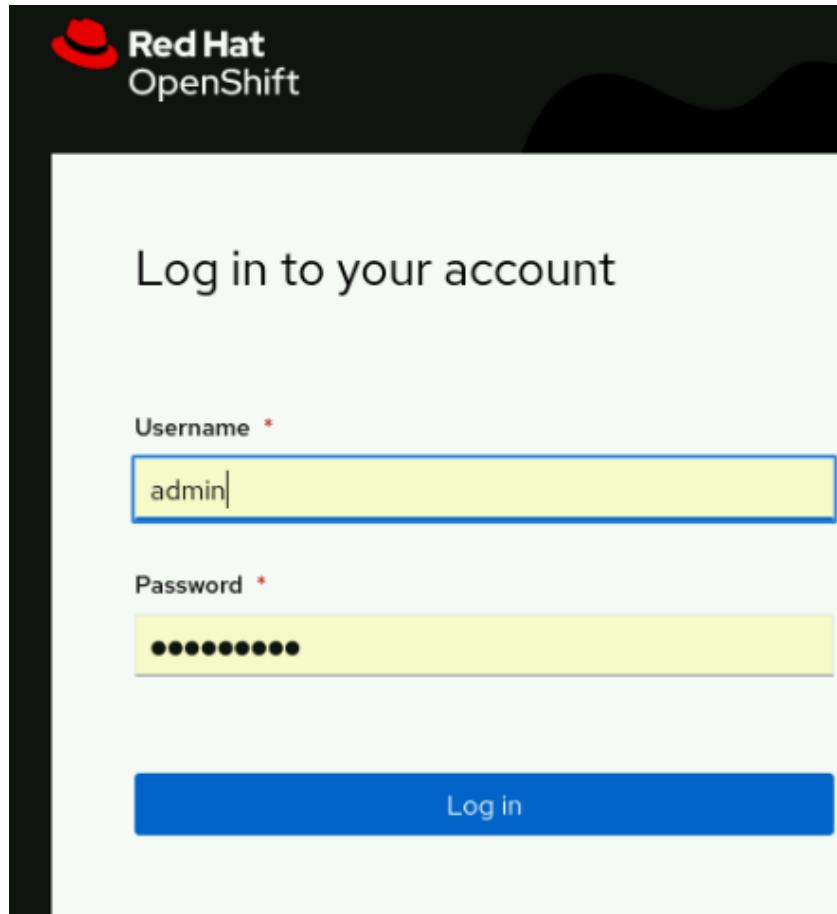
Instructions

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.



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 screenshot shows the Red Hat OpenShift web interface. At the top, there's a navigation bar with a menu icon, the Red Hat OpenShift logo, and a search bar. Below the header, the word "Overview" is prominently displayed. A horizontal navigation bar below "Overview" has "Cluster" selected, indicated by a blue underline. The main content area is titled "Getting started resources". It contains two main sections: "Set up your cluster" and "Build with guided documentation". Each section includes a brief description and a "View all steps in documentation" link.

Section	Description	Link
Set up your cluster	Finish setting up your cluster with recommended configurations.	View all steps in documentation
Build with guided documentation	Follow guided documentation to build applications and familiarize yourself with key features.	View all quick starts

Locate the OpenShift version in the Details section.

The screenshot shows the Red Hat OpenShift web interface with the "Overview" section selected in the sidebar. The main content area is titled "Details". It displays several configuration parameters:

Parameter	Value
Cluster API address	https://api.ocp4.example.com:6443
Cluster ID	6c8c6eed-26ed-4911-9df9-b081404842c8
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.

The screenshot shows the Red Hat OpenShift Alerting interface. At the top, there's a navigation bar with a menu icon, the Red Hat OpenShift logo, and a grid icon. Below the header, the word "Alerting" is displayed in large letters. Underneath, there are three tabs: "Alerts" (which is underlined), "Silences", and "Alerting rules".

Below the tabs, there are search and filter controls: a "Filter" dropdown, a "Name" dropdown, a search input field "Search by name...", and a date range selector with a forward slash between the start and end dates.

A blue button labeled "Export as CSV" is located below the search controls.

The main content area displays a table of alerts:

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

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

The screenshot shows the Red Hat OpenShift Alerting interface. At the top, there are navigation tabs: 'Alerts' (which is underlined), 'Silences', and 'Alerting rules'. Below the tabs is a search bar with a 'Filter' dropdown, a 'Name' dropdown, and a search input field. To the right of the search bar is a '/' icon.

On the left side, there is a sidebar with filtering options:

- Alert State:**
 - Firing (4)
 - Pending (1)
 - Silenced (0)
- Severity:** (This section is highlighted with a red box)
 - Critical (1)
 - Warning (2)
 - Info (1)
 - None (1)

The main table lists alerts:

	Severity	State	Plat
receiversNotConfigure	⚠ Warning	🔔 Firing	Plat
red to be sent to a meaning that you ma...		Since ⌚ Jun 16, 2025, 1:42 PM	
rolPlaneMemory	⚠ Warning	🔔 Pending	Plat
lane nodes, the ition may only be...		Since ⌚ Jun 16, 2025, 1:53 PM	
	ℹ Info	🔔 Firing	Plat

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

Go to the Networking → Routes page.

The screenshot shows the Red Hat OpenShift web interface. On the left, a sidebar menu is open under the 'Administrator' section, with 'Routes' selected. The main content area is titled 'Routes' and shows a list of routes. There are two routes listed:

Name	Namespace	Status	Location
RT alertmanager-main	openshift-monitoring	Accepted	https://alertmanager-main.openshift-ingress-monitoring.svc.cluster.local/api
RT canary	openshift-ingress-canary	Accepted	https://canary.openshift-ingress-canary.svc.cluster.local

Type the thanos keyword in the text search field.

The screenshot shows the Red Hat OpenShift web interface with a search filter applied. The search field in the top navigation bar contains the word 'thanos', which is highlighted with a red box. Below the search bar, a filter panel is visible with the text 'Name thanos X'. The main content area is titled 'Routes' and shows a list of routes. One route is listed:

Name	Namespace	Status	Location
RT thanos-querier	openshift-monitoring	Accepted	https://thanos-querier.openshift-monitoring.apps.OpenshiftMonitoring.svc.cluster.local/api

Select the thanos-querier route in the Name column.

Routes

Name	Namespace	Status	Location
RT thanos-querier	NS openshift-monitoring	✓ Accepted	https://thanos-querier.openshift-monitoring.apps.ocp4.example.com/api 

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

Red Hat OpenShift

Project: openshift-monitoring

Route details

Name	Location
thanos-querier	https://thanos-querier.openshift-monitoring.apps.ocp4.example.com
Namespace	Status
NS openshift-monitoring	✓ Accepted
Labels	Edit
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	
Annotations	Router canonical hostname
	router-default.apps.ocp4.example.com

5. View the available storage classes in the cluster.

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

The screenshot shows the Red Hat OpenShift web interface. The top navigation bar has the Red Hat logo and the text "Red Hat OpenShift". On the left, there is a sidebar with the following menu items:

- Administrator
- Home
- Operators
- Workloads
- Networking
- Storage
 - PersistentVolumes
 - PersistentVolumeClaims
 - StorageClasses** (this item is highlighted with a blue background)
 - VolumeSnapshots
 - VolumeSnapshotClasses

The main content area is titled "StorageClasses". It features a search bar with "Name" dropdown and a "Search by name..." input field. Below the search bar is a table with two columns: "Name" and "Provisioner". The table contains two rows of data:

Name	Provisioner
SC lvms-vg1	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 StorageClasses page. At the top, there is a navigation bar with a menu icon, the Red Hat logo, and the text "Red Hat OpenShift". On the right side of the header is a grid icon. Below the header, the title "StorageClasses" is displayed in a large, bold font. Underneath the title is a search bar with the placeholder "Search by name... /". A dropdown menu labeled "Name" is open, showing the current selection "SC". The main content area displays a table of storage classes:

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

The first two rows of the table are highlighted with a red box.

6. View the installed operators for the cluster.

Go to the Operators → Installed Operators page.

The screenshot shows the Red Hat OpenShift web interface. On the left, a sidebar menu is visible with the following items:

- Administrator
- Home
- Operators
 - OperatorHub
 - Installed Operators
- Workloads
- Networking
- Storage
- Builds
- Observe

The "Installed Operators" item is currently selected, indicated by a blue bar at the bottom of the list.

The main content area is titled "Installed Operators". It displays two operators:

Name	Namespace	Managed Namespaces	Status
LVM Storage	openshift-storage	openshift-storage	Up-to-date
MetalLB Operator	metallb-system	All Namespaces	Up-to-date

Each operator entry includes a small icon, the operator name, its namespace, the managed namespaces, and its status (Up-to-date). Below each entry, there is a brief description: "4.18.1 provided by Red Hat" for LVM Storage and "4.18.0-202505081435 provided by Red Hat" for MetalLB Operator.

View the list of installed operators in the cluster.

The screenshot shows the Red Hat OpenShift web interface. At the top, there is a navigation bar with a menu icon, the Red Hat logo, and the text "Red Hat OpenShift". On the far right of the navigation bar is a grid icon. Below the navigation bar, a dropdown menu is open with the text "Project: All Projects". The main content area has a title "Installed Operators". A sub-instruction below the title reads: "Installed Operators are represented by ClusterServiceVersions within this Namespace. For more information see the [Understanding Operators documentation](#). Or create an Operator and ClusterServiceVersion using the OperatorHub." Below this, there is a search bar with the placeholder "Search by name..." and a dropdown menu set to "Name".

The main table displays three installed operators:

Name	Namespace	Managed Namespaces
LVM Storage 4.18.1 provided by Red Hat	openshift-storage	openshift-storage
MetalLB Operator 4.18.0-202505081435 provided by Red Hat	metallb-system	All Namespaces
Package Server 0.0.1-snapshot provided by Red Hat	openshift-operator-lifecycle- manager	openshift-operator-lifecycle- manager

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
```