

Guided Exercise: Navigate the OpenShift Web Console

Access an OpenShift cluster by using its web console and review pages to identify key OpenShift cluster services.

Outcomes

- Explore the features and components of Red Hat OpenShift by using the web console.
- Create a sample application by using the Developer perspective in the web console.
- Switch to the Administrator perspective and examine the resources that are created for the sample application.
- Use the web console to describe the cluster nodes, networking, storage, and authentication.
- View the default cluster operators, pods, deployments, and services.

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

This command ensures that the cluster is validated for the exercise.

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

Instructions

1. As the developer user, locate and go to the Red Hat OpenShift web console.

Use the terminal to log in to the OpenShift cluster as the developer user with the developer password.

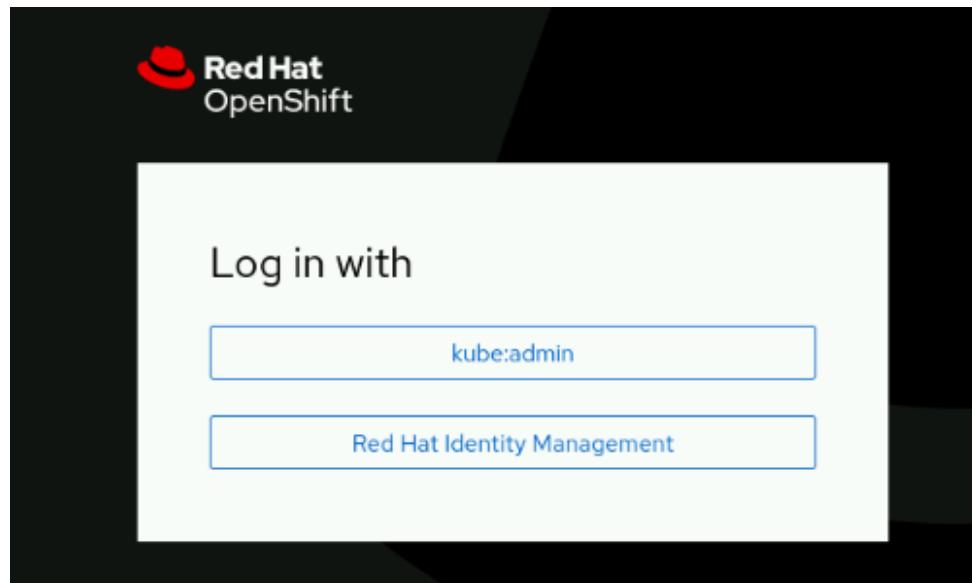
```
[student@workstation ~]$ oc login -u developer -p developer \
https://api.ocp4.example.com:6443

...output omitted...
```

Identify the URL for the OpenShift web console.

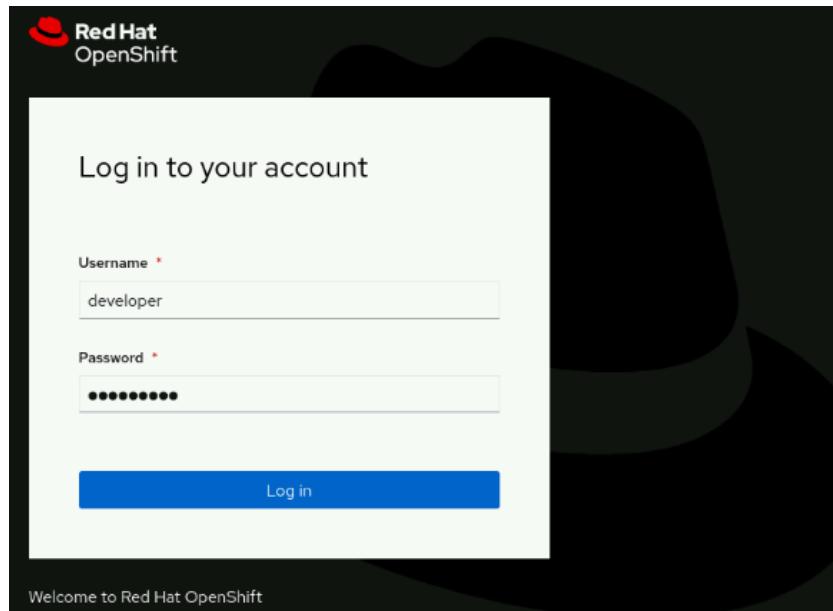
```
[student@workstation ~]$ oc whoami --show-console
https://console-openshift-console.apps.ocp4.example.com
```

Open a web browser and go to <https://console-openshift-console.apps.ocp4.example.com>.



2. Log in to the OpenShift web console as the developer user.

Click **Red Hat Identity Management** and log in as the developer user with the developer password.

**NOTE**

Click **Skip Tour** to dismiss the option to view a short tour on the first visit.

A screenshot of the Red Hat OpenShift developer perspective. The top navigation bar shows the Red Hat OpenShift logo and a dropdown menu. Below the header, a sub-header says "Project: All Projects". The main area has a heading "Add" and a sub-instruction "Select a Project to start adding...". A modal window titled "Welcome to the Developer Perspective!" is displayed. The modal contains the text: "Get started with a tour of some of the key areas in OpenShift 4.x's Developer perspective that can help you complete workflows and be more productive." It features two buttons: "Skip tour" and "Get started". In the background, there is a list of projects. One project is highlighted: "cli-health" (PR), "No display name", "Active", "system:admin", and "Created Dec 19, 2023, 3:10 PM".

3. Use the Developer perspective of the web console to create your first project.

From the **Getting Started** section in the **+Add** page, click **Create a new project** to open the **Create Project** wizard.

The screenshot shows the Red Hat OpenShift web interface. On the left, a sidebar titled 'Developer' contains links for '+Add', 'Topology', 'Observe', 'Search', 'Builds', 'Helm', and 'Project'. The main area is titled 'Project: All Projects' and has a 'Getting Started' section with instructions to create a project. Below it is an 'Add' section with a placeholder 'Select a Project to start adding to it or [create a Project](#)'. A blue box highlights the '+Add' link in the sidebar.

Create a project named `intro-navigate` by using the wizard. Use `intro-navigate` for the display name, and add a brief description of the project.

Create Project

An OpenShift project is an alternative representation of a Kubernetes namespace.

[Learn more about working with projects](#)

Name * [?](#)

Display name

Description

[Cancel](#)

[Create](#)

Click **Create** to create the project.

Click **Topology** to view the project.

- Deploy a sample application in the project.

Select the **+Add** page. Select the **Import from Git** panel.

Enter <https://git.ocp4.example.com/developer/intro-navigate.git> into the **Git Repo URL** field and select **GitLab** for the **Git Type** field. Click **Create** to start the deployment.

The Topology page opens and displays the `intro-navigate-git-app` application deployment.

5. View the deployment details for the `intro-navigate-git-app` application.

Click **D** to display the deployment in the right panel. Click **Details** in the panel. Wait, for several minutes if needed, for the Details page to show one pod deployed.

The screenshot shows the Red Hat OpenShift web interface. On the left, there's a list of applications under 'Project: intro-navigate'. One application, 'intro-navigate-git-app', is highlighted with a green circle icon. On the right, a detailed view of the deployment 'intro-navigate-git' is shown. The deployment name is at the top, followed by tabs for 'Details' (which is selected and highlighted with a red box), 'Resources', and 'Observe'. Below the tabs, it shows '1 Pod'. The deployment name 'intro-navigate-git' is also listed under 'Name'. At the bottom of the deployment card, there's a section for 'Actions'.

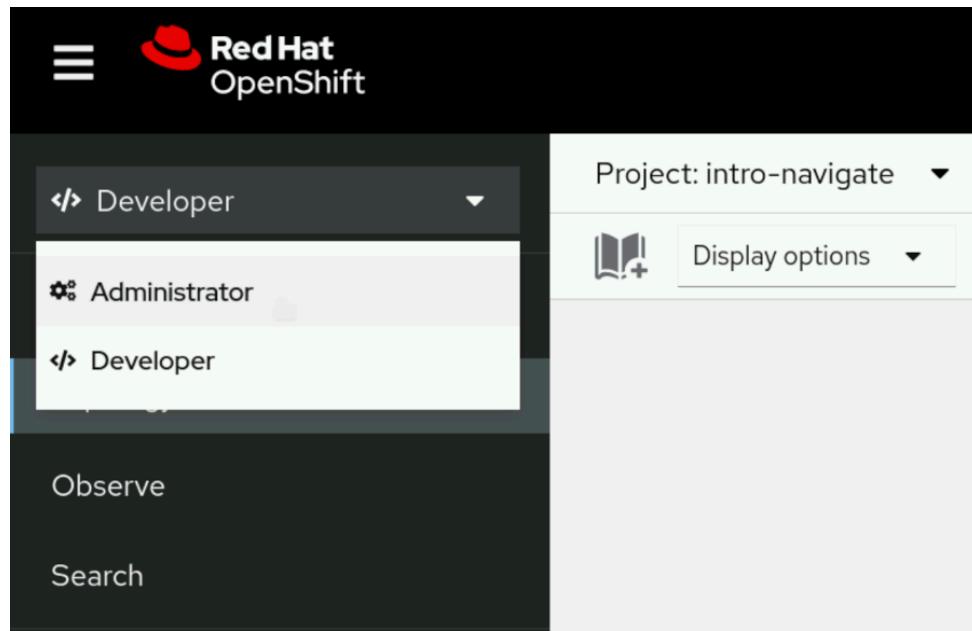
Select the Actions list to view the available controls for the deployment.

This screenshot shows the same Red Hat OpenShift interface as above, but the 'Actions' list has been expanded. The 'Actions' button at the bottom of the deployment card is highlighted with a red box. A large list of actions is displayed on the right side of the screen, each preceded by a small icon. The actions include:

- Edit application grouping
- Edit Pod count
- Add HorizontalPodAutoscaler
- Add PodDisruptionBudget
- Pause rollouts
- Restart rollout
- Add Health Checks
- Add storage
- Edit update strategy
- Edit resource limits
- Edit labels
- Edit annotations

6. Switch into the Administrator perspective and inspect the deployment.

From the OpenShift web console, locate the left panel. If you do not see the left panel, then click the main menu icon at the upper left of the web console. Click **Developer** and then click **Administrator** to change to the Administrator perspective. The web console changes to the new perspective and exposes additional information through the sidebar.



Select the Home → Projects page from the left panel. Select the **intro-navigate** project to open the Project Details page.

Name	Display name	Status	Requester
PR intro-navigate	intro-navigate	Active	developer

This page includes a general overview of the project, such as the project status and resource usage details.

NOTE

You can ignore image stream import warnings because the image streams are not available in the classroom cluster.

7. View the **intro-navigate** pods and deployment.

From the OpenShift web console menu, go to **Workloads** → **Pods** to view the **intro-navigate** pods.

The screenshot shows the Red Hat OpenShift web interface. At the top, there's a navigation bar with the Red Hat OpenShift logo and a dropdown menu for the user 'developer'. Below the navigation bar, the project 'intro-navigate' is selected. On the left, there's a sidebar with a 'Filter' dropdown and a search bar. The main area is titled 'Pods' with a 'Create Pod' button. A table lists two pods:

Name	Status	Ready	Restarts
P intro-navigate-git-1-build	Completed	0/1	0
P intro-navigate-git-5b9f95f4f4-92gq5	Running	1/1	0

Go to **Workloads → Deployments** to view the list of deployments in the project.

The screenshot shows the Red Hat OpenShift web interface. At the top, there's a navigation bar with the Red Hat OpenShift logo and a dropdown menu for the user 'developer'. Below the navigation bar, the project 'intro-navigate' is selected. On the left, there's a sidebar with a search bar. The main area is titled 'Deployments' with a 'Create Deployment' button. A table lists one deployment:

Name	Status
D intro-navigate-git	1 of 1 pods

Click the [intro-navigate-git](#) link to view the deployment details.

The screenshot shows the Red Hat OpenShift interface. At the top, there's a navigation bar with the Red Hat OpenShift logo and a 'developer' dropdown. Below it, a project dropdown shows 'Project: intro-navigate'. The main content area is titled 'Deployment details' for a deployment named 'intro-navigate-git'. A large blue circle icon indicates '1 Pod'. Below this, deployment details are listed: Name (intro-navigate-git), Namespace (NS intro-navigate), Update strategy (RollingUpdate), and Max unavailable (25% of 1 pod). Navigation tabs at the bottom include Details, Metrics, YAML, ReplicaSets, Pods, Environment, and Events.

Deployment details



Name
intro-navigate-git

Update strategy
RollingUpdate

Namespace
NS intro-navigate

Max unavailable
25% of 1 pod

8. View the `intro-navigate` service and route.

Go to **Networking** → **Services** and click `intro-navigate-git` to view the details of the `intro-navigate` service.

The screenshot shows the Red Hat OpenShift Services page. At the top, there's a navigation bar with the Red Hat OpenShift logo and a 'developer' dropdown. Below it, a project dropdown shows 'Project: intro-navigate'. The main content area is titled 'Services' and shows a single service entry: 'intro-navigate-git'. To the right of the service name is a 'Create Service' button. Below the service list, there are search and sort filters: 'Name' dropdown, 'Search by name...', and a 'Name ↑' sort button.

Go to **Networking** → **Routes** and click `intro-navigate-git` to view the details of the `intro-navigate` route.

Project: intro-navigate ▾

Routes

[Create Route](#)

[Filter](#) ▾ [Name](#) ▾ Search by name... /

Name	Display name	Status	Requester	Created
RT intro-navigate-git	No display name	Active	developer	Jan 3, 2024, 9:39 PM

- Delete the project and log out of the web console.

From the OpenShift web console menu, go to **Home** → **Projects**. Select **Delete Project** from the context menu for the **intro-navigate** project.

Name	Display name	Status	Requester	Created
PR intro-navigate	No display name	Active	developer	Jan 3, 2024, 9:39 PM

Enter the project name in the text field and then select **Delete**.

⚠ Delete Project?

This action cannot be undone. It will destroy all pods, services and other objects in the namespace **intro-navigate**.

Confirm deletion by typing **intro-navigate** below:

[Cancel](#) [Delete](#)

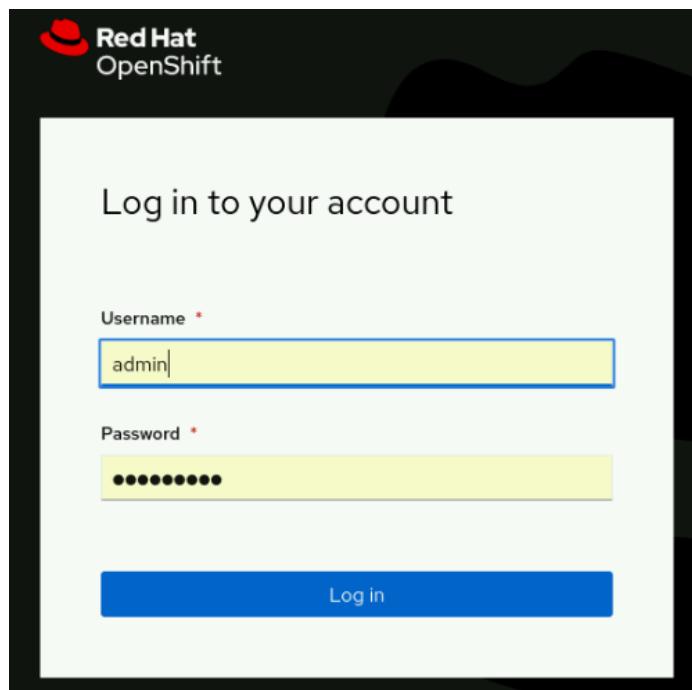
Log out of the web console. From the OpenShift web console right panel, click **developer** and then select **Log out** from the account menu.

10. Log in to the OpenShift web console as the admin user to inspect additional cluster details.

NOTE

When you use a cluster administrator account, you can browse the cluster components, but do not alter or remove any components.

Log in to the web console. Select **Red Hat Identity Management** and then enter the admin username and the redhatocp password.



From the OpenShift web console menu, go to **Operators** → **Installed Operators**. Each operator provides a specific function for the cluster. Select an individual operator to display its details.

Go to **Workloads** → **Pods** to view the list of all pods in the cluster. The search bar at the top can narrow down the list of pods. Select an individual pod to display its details.

Administrator		Project: All Projects								
Home		Pods								
Operators		Filter Name Search by name... /								
Workloads		Name	Names...	Status	Ready	Restarts	Owner	Memory	CPU	
Pods		P 8f0613a2 dlaf29fb aaee524 5b9316cc 5db08e8 a5c06519 5008eb3 16e63pr2 vp	NS openshift-marketplace	✓ Completed	0/1	0	J 8f0613a2d1 af29fbaeee 5245b9316c c5db08e8a 5c0651950 08eb316e6 3b6c02	-	-	-

Go to **Workloads** → **Deployments** to view the list of all deployments in the cluster. Select an individual deployment to display its details.

The screenshot shows the OpenShift web console interface. The left sidebar is titled "Administrator" and contains navigation links for Home, Operators, Workloads (with sub-links for Pods, Deployments, DeploymentConfigs, StatefulSets, Secrets, ConfigMaps, CronJobs, and Jobs), and a "Create Deployment" button. The main content area is titled "Deployments" and displays a list of three deployments:

Name	Namespace	Status	Labels	Pod selector
apiserver	openshift-oauth-apiserver	1 of 1 pods	apiserver=true a... "openshift-oauth-ap... revision=1	q apiserver=true, app=openshift-oauth- apiserver
apiserver	openshift-apiserver	1 of 1 pods	apiserver=true app=openshift-apiserver revision=1	q apiserver=true, app=openshift- apiserver-a
authentication-operator	openshift-authentication-operator	1 of 1 pods	a... =authentication-ope... app=authentication- operator	q app=authentication- operator

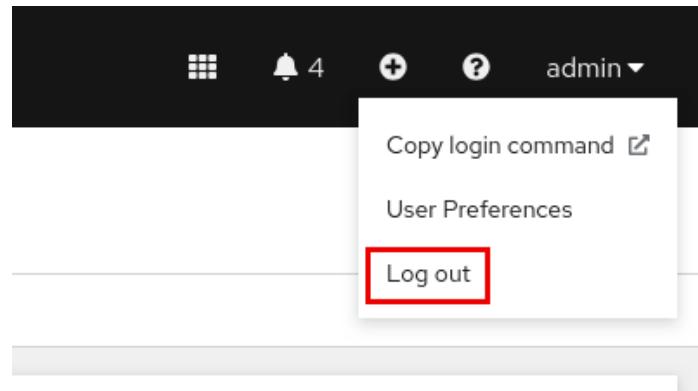
Go to **Networking** → **Services** to view the list of all services in the cluster. Select an individual service to display its details.

The screenshot shows the OpenShift web interface. The left sidebar has a dark theme with white text and icons. It includes links for Home, Operators, Workloads, Networking (with a dropdown menu for Services, Routes, Ingresses, and NetworkPolicies), and a Services link which is currently selected and highlighted in blue. The main content area has a light gray background. At the top, there's a header bar with the text "Project: All Projects" and a "Create Service" button. Below the header is a search bar with the placeholder "Search by name...". The main table lists services with columns for Name, Namespace, Labels, Pod selector, and Location. One service, "alertmanager-main" in the "openshift-monitoring" namespace, is expanded to show its labels: app.kubernetes.io/component=alert-router, app.kubernetes.io/instance=main, app.kubernetes.io/name=alertmanager, and app.kubernetes.io/part-of=openshift-monitoring.

Name	Namespace	Labels	Pod selector	Location
alertmanager-main	openshift-monitoring	app.kubernetes.io/component=alert-router, app.kubernetes.io/instance=main, app.kubernetes.io/name=alertmanager, app.kubernetes.io/part-of=openshift-monitoring	app.kubernetes.io/component=alert-router, app.kubernetes.io/instance=main, app.kubernetes.io/name=alertmanager, app.kubernetes.io/part-of=openshift-monitoring	172.30.124.93:9094 172.30.124.93:9092 172.30.124.93:9097

11. Log out of the web console.

Log out of the web console. From the OpenShift web console right panel, click **admin** and select **Log out** from the account menu.



Finish

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-navigate
```