

# Navigate the OpenShift Web Console Objectives

- Navigate the OpenShift web console to identify running applications and cluster services.

## Overview of the Red Hat OpenShift Web Console

The Red Hat OpenShift Web Console provides a graphical user interface to perform many administrative tasks for managing a cluster. The web console uses the Kubernetes APIs and OpenShift extension APIs to deliver a robust graphical experience. The menus, tasks, and features within the web console are always available by using the CLI. The web console provides ease of access and management for the complex tasks that cluster administration requires.

Kubernetes provides a web-based dashboard, which is not deployed by default within a cluster. The Kubernetes dashboard provides minimal security permissions, and accepts only token-based authentication. This dashboard also requires a proxy setup that limits access to the web console from only the system terminal that creates the proxy. By contrast with the stated limitations of the Kubernetes web console, OpenShift includes a fuller-featured web console.

The OpenShift web console is not related to the Kubernetes dashboard, but is a separate tool for managing OpenShift clusters. Additionally, operators can extend the web console features and functions to include more menus, views, and forms to aid in cluster administration.

## Accessing the OpenShift Web Console

You access the web console by any modern web browser. The web console URL is generally configurable, and you can discover the address for your cluster web console by using the `oc` command-line interface (CLI). From a terminal, you must first authenticate to the cluster via the CLI by using the `oc login -u <USERNAME> -p <PASSWORD> <API_ENDPOINT>: <PORT>` command:

```
[user@host ~]$ oc login -u developer -p developer https://api.ocp4.example.com:6443
Login successful.

...output omitted...
```

Then, you execute the `oc whoami --show-console` command to retrieve the web console URL:

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

Lastly, use a web browser to go to the URL, which displays the authentication page:

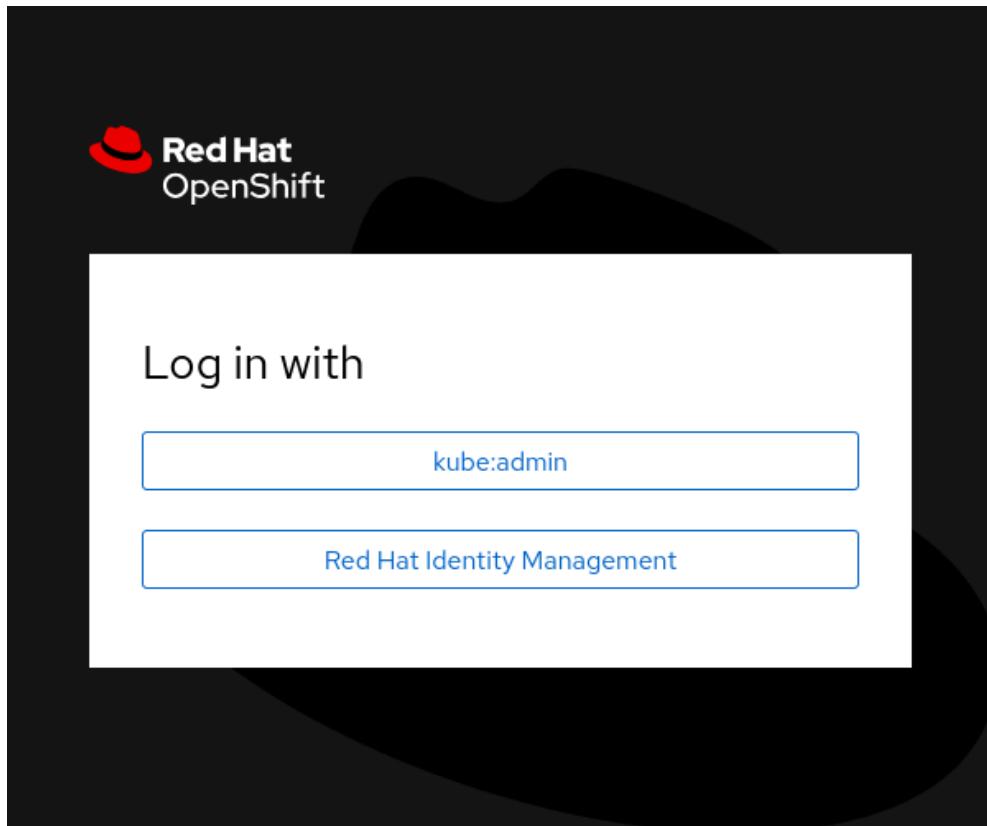


Figure 1.6: The OpenShift authentication page

Using the credentials for your cluster access brings you to the home page for the web console.

A screenshot of the Red Hat OpenShift web console home page in the Administrator perspective. The top navigation bar includes the Red Hat OpenShift logo, a menu icon, notification icons (2 notifications), and a user dropdown for "admin". The sidebar on the left has a "Administrator" heading and links for Home, Operators, Workloads, Networking, Storage, Builds, and Observe. The main content area is titled "Overview" under the "Cluster" tab. It features a "Getting started resources" section with "Set up your cluster" and "Build with guided documentation" options, along with links for impersonating the system:admin user and monitoring sample applications. To the right, there's a "Explore new features and capabilities" section about OpenShift AI, French and Spanish language support, and a link to see what's new in OpenShift 4.18.

Figure 1.7: The OpenShift home page

## Web Console Perspectives

The OpenShift web console provides the Administrator and Developer console perspectives. The sidebar menu layout and the features that it displays differ between using the two console perspectives. The first item on the console sidebar menu is the perspective switcher, to switch between the Administrator and the Developer perspectives.

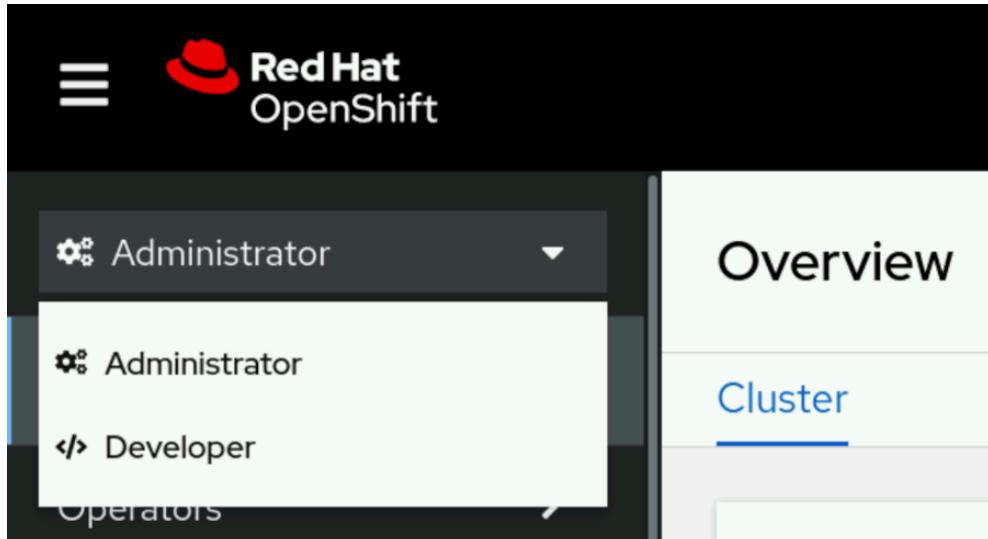


Figure 1.8: The OpenShift web console perspective switcher

Each perspective presents the user with different menu categories and pages that cater to the needs of the two separate personas. The Administrator perspective focuses on cluster configuration, deployments, and operations of the cluster and running workloads. The Developer perspective pages focus on creating and running applications.

#### NOTE

In clusters with the Red Hat OpenShift Virtualization operator deployed, a virtualization perspective is available. The virtualization perspective pages focus on creating and managing virtual machines.

## OpenShift Web Console Layout

From the web console home page, the primary navigation method is through the sidebar. The sidebar organizes cluster functions and administration into several major categories. By selecting a category from the sidebar, the category expands to reveal the various areas that each provide specific cluster information, configuration, or functionality.

#### NOTE

An initial log in to the web console presents the option for a short informational tour. Click **Skip Tour** if you prefer to dismiss the tour option at this time.

The screenshot shows the Red Hat OpenShift console interface. At the top, there's a navigation bar with the Red Hat OpenShift logo, a menu icon, notification icons (bell with 2), and a user dropdown for 'admin'. Below the header, a modal window titled 'Welcome to the Developer Perspective!' is displayed. It contains a message encouraging users to get started with a tour of key areas in OpenShift 4.18's Developer perspective. Two buttons are at the bottom of the modal: 'Skip tour' and 'Get started' (which is highlighted in blue). The main content area shows a table of projects. The first project listed is 'PR default' with a status of 'Active'. A search bar is visible above the table.

By default, the console displays the **Home** → **Overview** page, which provides a quick glimpse of initial cluster configurations, documentation, and general cluster status. Go to **Home** → **Projects** to list all projects in the cluster that are available to the credentials in use.

You might initially peruse the **Operators** → **OperatorHub** page, which provides access to the collection of operators that are available for your cluster.

The screenshot shows the Red Hat OpenShift OperatorHub page. The header is identical to the previous screenshot, featuring the Red Hat OpenShift logo, a menu icon, notification icons (bell with 3), and a user dropdown for 'admin'. The main title is 'OperatorHub'. Below the title, a sub-header reads: 'Discover Operators from the Kubernetes community and Red Hat partners, curated by Red Hat. You can purchase commercial software through Red Hat Marketplace'. A note states: 'You can install Operators on your clusters to provide optional add-ons and shared services to your developers. After installation, the Operator capabilities will appear in the Developer Catalog providing a self-service experience.' On the left, a sidebar lists categories: 'All Items' (selected), 'Monitoring', 'Networking', 'OpenShift Optional', 'Security', 'Storage', 'Source' (with a sub-item 'GLS Operator Catalog Cs (5)'), and 'Provider'. The main content area shows a table of operators. Two operators are visible: 'Compliance Operator' and 'File Integrity Operator'. Both are provided by Red Hat Inc. and Red Hat respectively. A search bar with the placeholder 'Filter by keyword...' is located above the operator cards.

Figure 1.10: The OpenShift OperatorHub

By adding operators to the cluster, you can extend the features and functions that your OpenShift cluster provides. Use the search filter to find the available operators to enhance the cluster and to supply the OpenShift aspects that you require.

By clicking the link on the Operator Hub page, you can peruse the Developer Catalog.

The screenshot shows the Red Hat OpenShift OperatorHub interface. At the top, there is a navigation bar with the Red Hat logo, the text "Red Hat OpenShift", and user account information ("admin"). Below the navigation bar, a dropdown menu says "Project: All Projects". The main title "OperatorHub" is displayed prominently. A descriptive text block explains that users can discover Operators from the Kubernetes community and Red Hat partners, purchase commercial software through the Red Hat Marketplace, and install Operators to provide optional add-ons and shared services. It mentions that after installation, the Operator capabilities will appear in the "Developer Catalog", which is highlighted with a red box. On the left side, there is a sidebar with categories: "All Items" (selected), "Monitoring", "Networking", "OpenShift Optional", "Security", "Storage", "Source" (with a checkbox for "GLS Operator Catalog Cs (5)"), and "Provider". The main content area shows a list of operators under "All Items", with a search bar labeled "Filter by keyword...". There are five items listed: "Compliance Operator" (provided by Red Hat Inc.) and "File Integrity Operator" (provided by Red Hat). Both descriptions mention they are operators that manage file integrity checks on nodes.

Select any project, or use the search filter to find a specific project, to visit the Developer Catalog for that project, where shared applications, services, event sources, or source-to-image builders are available.

The screenshot shows the Red Hat OpenShift Developer Catalog. On the left, there's a sidebar with a navigation menu and a search bar. The main content area has a header 'All items' and a search bar. Below that, there are two card-like components. The first card is for '.NET Application' (Helm Charts), provided by Red Hat, with a description: 'A Helm chart to build and deploy .NET applications'. The second card is for 'A10' (Helm Charts), provided by a10networks-a10tkc, with a description: 'A Helm chart for A10 Thunder Kubernetes Connector'.

Figure 1.12: The Developer Catalog

After finding the preferred additions for a project, a cluster administrator can further customize the content that the catalog provides. By adding the necessary features to a project from this approach, developers can customize features to provide an ideal application deployment.

## Red Hat OpenShift Key Concepts

When you navigate the OpenShift web console, it is useful to know some introductory OpenShift, Kubernetes, and container terminology. The following list includes some basic concepts that can help you to navigate the OpenShift web console.

- **Pods:** The smallest unit of a Kubernetes-managed containerized application. A pod consists of one or more containers.
- **Deployments:** The operational unit that provides granular management of a running application.
- **Projects:** A Kubernetes namespace with additional annotations that provide multitenancy scoping for applications.
- **Routes:** Networking configuration to expose your applications and services to resources outside the cluster.
- **Operators:** Packaged Kubernetes applications that extend cluster functions.

These concepts are covered in more detail throughout the course. You can find these concepts throughout the web console as you explore the features of an OpenShift cluster from the graphical environment.

## REFERENCES

For more information about the OpenShift web console, refer to Red Hat OpenShift Container Platform *Web Console* documentation at [https://docs.redhat.com/en/documentation/openshift\\_container\\_platform/4.18/html-single/web\\_console/index](https://docs.redhat.com/en/documentation/openshift_container_platform/4.18/html-single/web_console/index)