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:

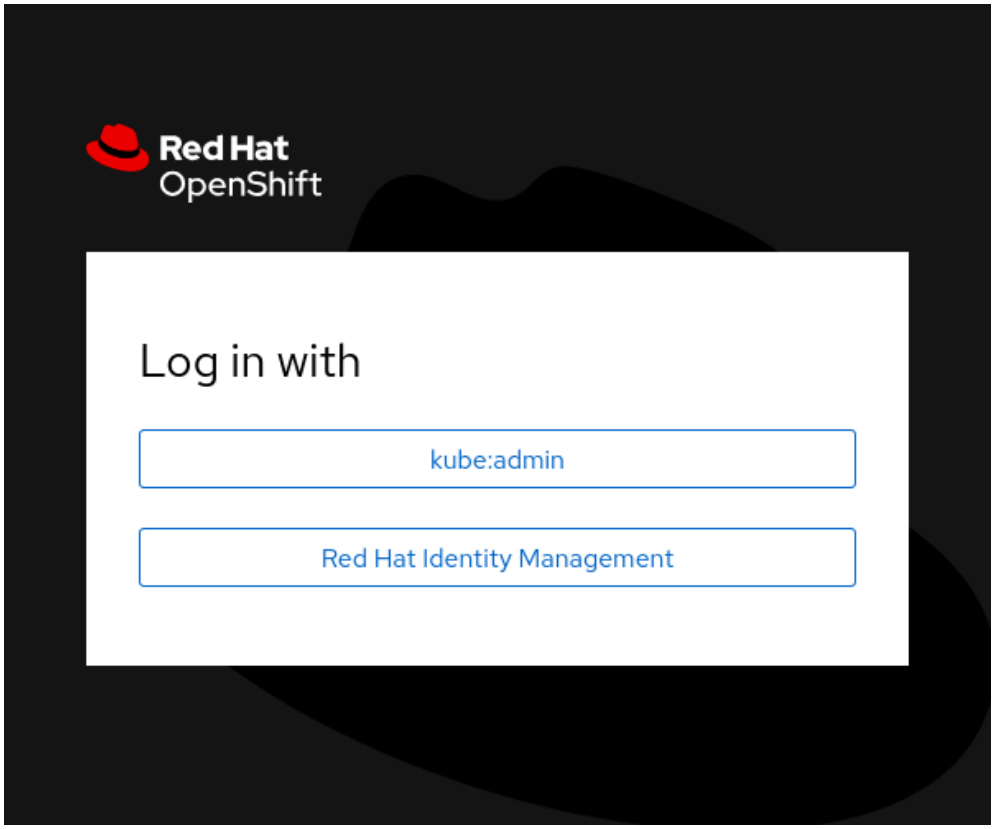


Figure 1.6: The OpenShift authentication page

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

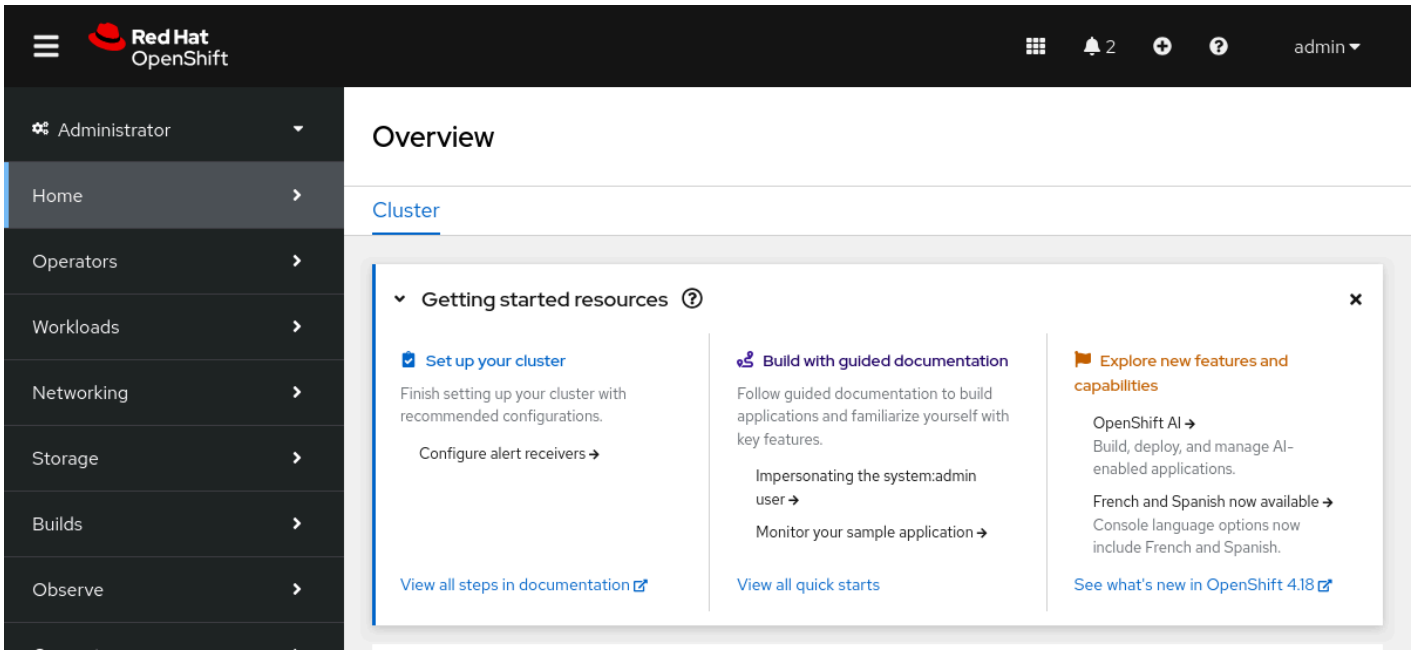


Figure 1.7: The OpenShift home page

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.

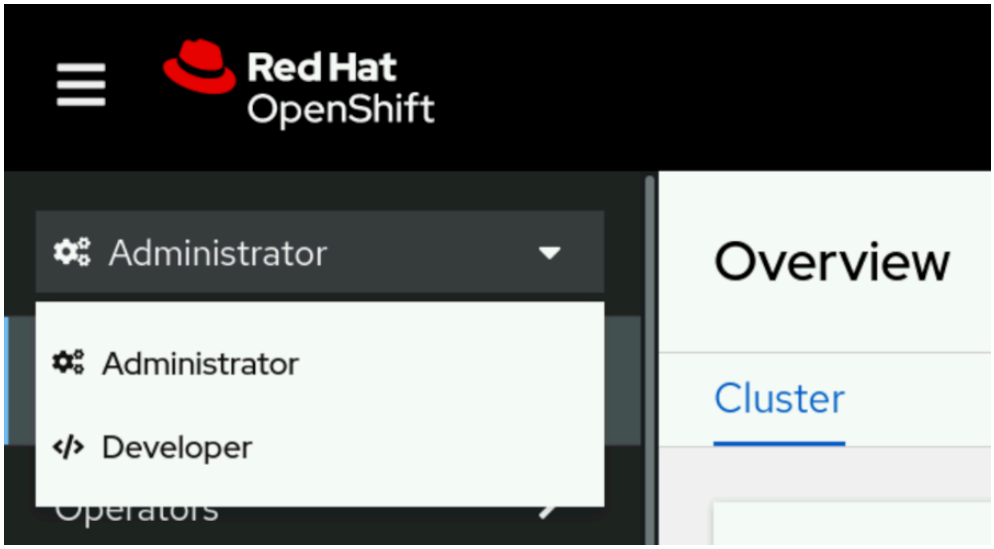


Figure 1.8: The OpenShift web console perspective switcher

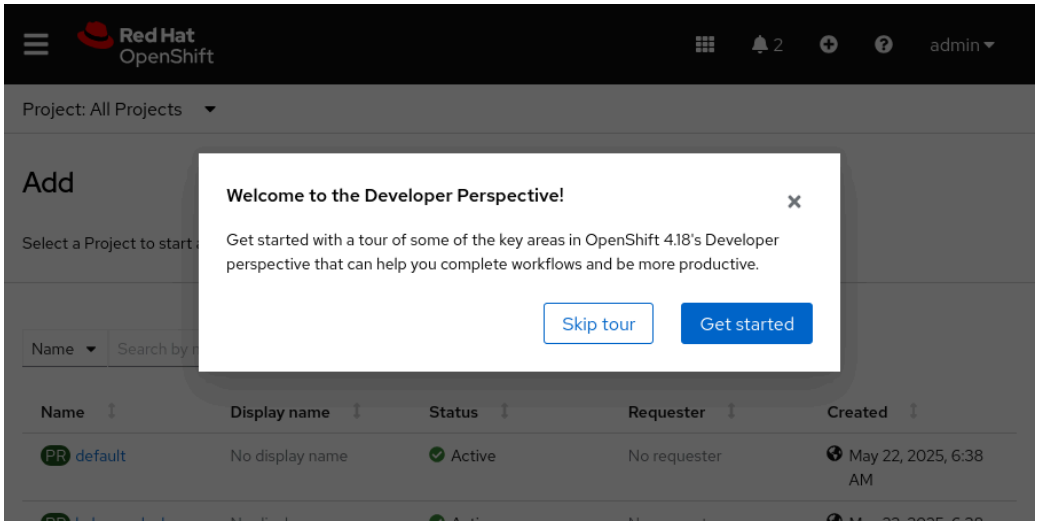
Each perspective presents the user with different menu categories and pages that cater to the needs of the two separate personas. The `Administrator` perspective focuses on cluster configuration, deployments, and operations of the cluster and running workloads.
The `Developer` perspective pages focus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



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.

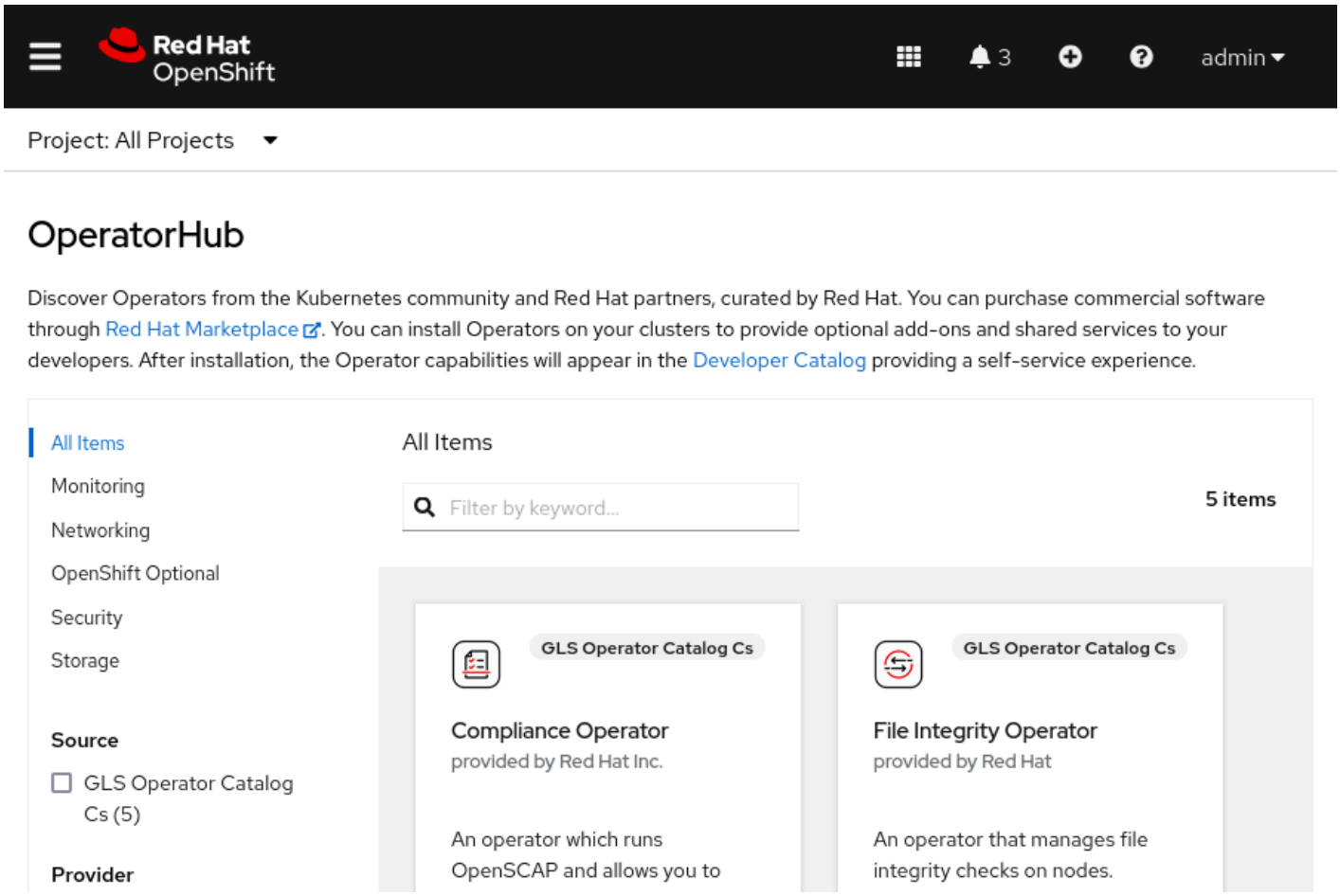
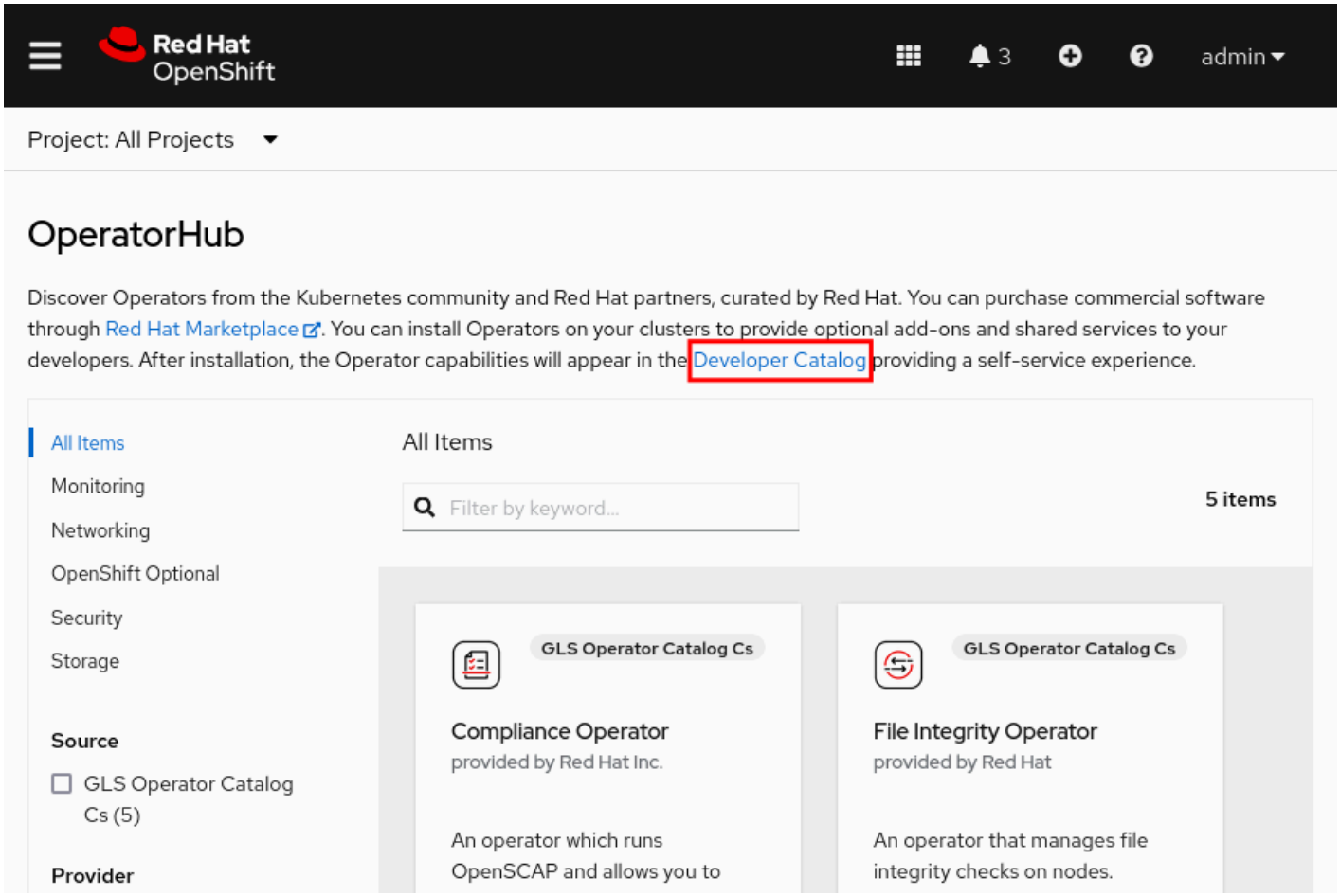


Figure 1.10: The OpenShift OperatorHub

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.



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.

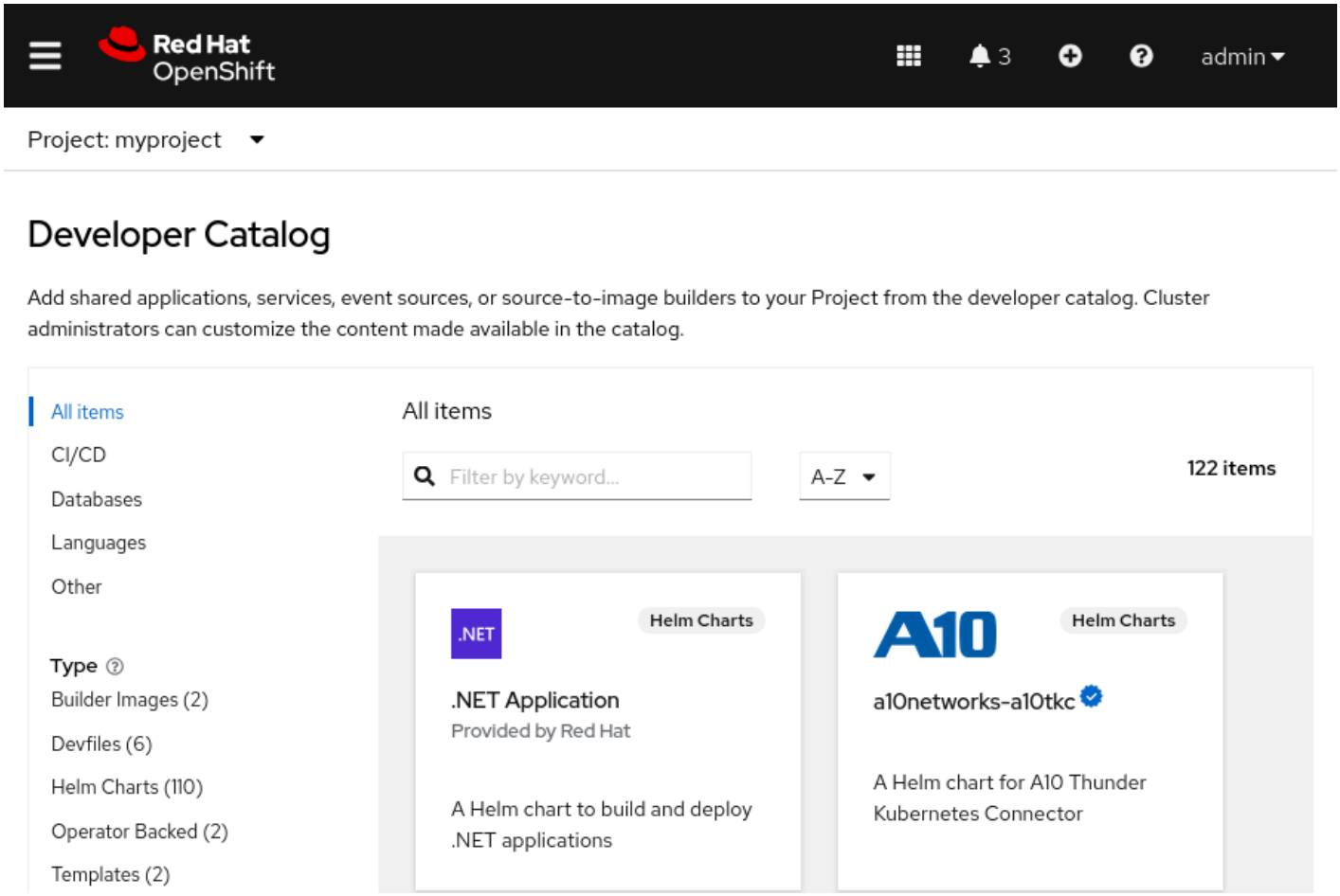


Figure 1.12: The Developer Catalog

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