



# Red Hat Advanced Cluster Management for Kubernetes 2.4

Web console





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## Abstract

Read more to learn how to use console components.

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# CHAPTER 1. WEB CONSOLE

Learn how to access the console for your Red Hat Advanced Cluster Management console and learn how to use console components.

- [Accessing the console](#)
- [Console overview](#)
- [Search in the console](#)

## 1.1. ACCESSING YOUR CONSOLE

From the Red Hat OpenShift Container Platform web console, you can access the Red Hat Advanced Cluster Management for Kubernetes console. You can also access the console from your terminal after installation. See all the options for accessing your console.

### 1.1.1. From the OpenShift Container Platform web console

- For OpenShift Container Platform 4.8 and later, you can launch Red Hat Advanced Cluster Management from the perspective switcher near the navigation menu.
- For earlier versions of OpenShift Container Platform, you can click the **Application launcher** in the header and choose the *Red Hat Advanced Cluster Management for Kubernetes* option.
- You can also access the console from the left-hand navigation.
  - Click **Networking > Routes**
  - From the *Project* menu, select the namespace where Red Hat Advanced Cluster Management for Kubernetes is installed.
  - Find **open-cluster-management** and click the URL from the **Location** column.

### 1.1.2. From the Red Hat OpenShift CLI:

1. While logged in to Red Hat OpenShift Container Platform and after you install Red Hat Advanced Cluster Management for Kubernetes, run the following command to find the route. Here, **<namespace-from-install>** is the namespace where you installed the product:

```
oc get routes -n <namespace-from-install>
```

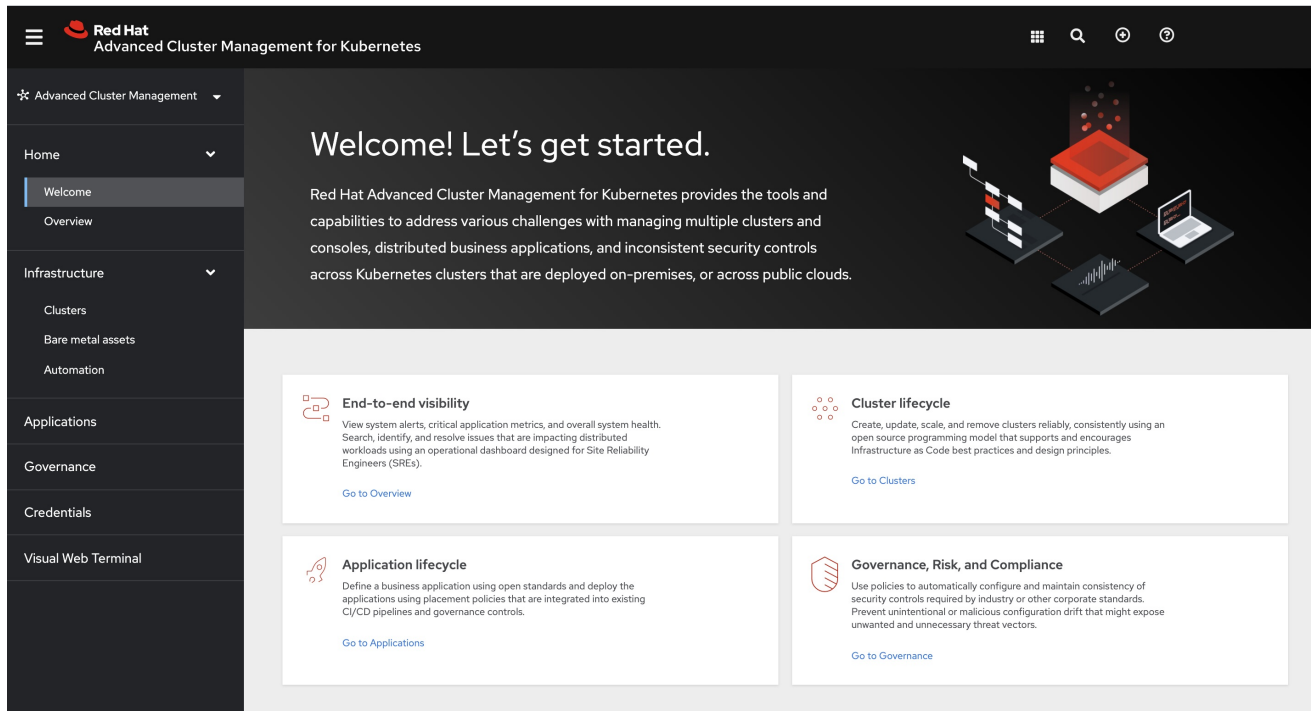
1. Find the **open-cluster-management** name and the **Host/Port** columns to get your URL.

Learn more about the Red Hat Advanced Cluster Management for Kubernetes console, see [Web console](#).

## 1.2. CONSOLE OVERVIEW

Learn more about console components that you can use to view, manage, or customize your console.

See the following image of the *Navigation* from the Red Hat Advanced Cluster Management for Kubernetes console, which is described in more detail later in each section. See that the navigation represents major production function.



### 1.2.1. Console components

- [Home](#)
- [Infrastructure](#)
- [Applications](#)
- [Governance](#)
- [Credentials](#)

To learn about Search, see [Search in the console](#)

### 1.2.2. Home

From the Red Hat Advanced Cluster Management for Kubernetes *Home* page, you get more information about the product and you can access header features, as well as the pages for the major components of the product.

- Access the *Welcome* page and the *Overview*, which gives you visibility into your clusters. You can view the following information about your clusters on the *Overview* dashboard:
  - Metric data from your managed clusters by selecting the Grafana link
  - Cluster, node, and pod counts across all clusters and for each provider
  - Cluster status
  - Cluster compliance
  - Pod status

Additionally, you can view many clickable elements on the dashboard open a search for related resources. Click on a provider card to view information for clusters from a single provider.



- Select **Grafana** to access the Grafana dashboard.
- Click **Add provider connections** to access the *Clusters* page.

### 1.2.3. Infrastructure

- From *Clusters*, you can create new clusters or import existing clusters. For more information, see [Managing your clusters with Red Hat Advanced Cluster Management for Kubernetes](#) .
- From *Bare metal assets*, you can create and import assets.
- From *Automation*, you can create an Ansible template.

### 1.2.4. Applications

Click **Create application** to edit a **.yaml** file and create your application. Click **Overview** and **Advanced configuration** to view the information of each application. For more information about application resources, see [Managing applications](#).

### 1.2.5. Governance

Use the *Governance* dashboard to create and manage policies and policy controllers. Click **Create policy** to edit a **.yaml** file and create your application. For more information, see [Governance](#).

### 1.2.6. Credentials

View your credentials and click **Add credential** to select and add new cloud provider credentials.

## 1.3. SEARCH IN THE CONSOLE

For Red Hat Advanced Cluster Management for Kubernetes, search provides visibility into your Kubernetes resources across all of your clusters. Search indexes the Kubernetes resources and the relationships to other resources. You can create a **searchcustomization** custom resource (CR) to define the storage settings for search persistence if you want to change the storage class and storage size.

- [Search components](#)
- [Search customization](#)
  - [Options to increase the redisgraph memory](#)
- [Queries in the console](#)
  - [Query ArgoCD applications](#)

### 1.3.1. Search components

The search architecture is composed of the following components:

- **Collector**: Watches the Kubernetes resources and creates an index. The **search-collector** computes relationships for resources within the managed cluster.

- **Aggregator:** Receives data from the collector and writes to a database. The **search-aggregator** watches resources in the hub cluster, computes multicluster relationships, and tracks the activity from connected collectors.
- **Search API:** Provides access to the data in the search index and enforces role-based access control.

Search is enabled by default. Search is also enabled when you provision or manually import a managed cluster. If you want to disable search on your managed cluster, see [Modifying the klusterlet add-ons settings of your cluster](#) for more information.

### 1.3.2. Search customization

When you install Red Hat Advanced Cluster Management, the product is configured to persist the data in-memory to a file system. The StatefulSet **search-redisgraph** deploys the Redisgraph pod, which mounts the persistent volume named **persist**. If your cluster has a defined default storage class, the search component creates a Persistent Volume Claim (PVC) of 10Gi on the default storage class. If a default storage class does not exist in your cluster, search saves the index in an empty directory (**emptyDir**).

You can customize the storage settings for search by creating the **searchcustomization** CR. Search customization is namespace-scoped and located where search is installed in the hub cluster. View the following example of the search customization CR:

```
apiVersion: search.open-cluster-management.io/v1alpha1
kind: SearchCustomization
metadata:
  name: searchcustomization
  namespace: open-cluster-management
spec:
  persistence: true
  storageClass: gp2
  storageSize: 12Gi
```

Run the following command to view search customization CRD:

```
oc get crd searchcustomizations.search.open-cluster-management.io -o yaml
```

You can disable persistence by updating the **persistence** flag to **false** in the customization CR, which turns off saving search index to the file system. A status for persistence can be retrieved from the search operator (**searchoperator**) CR. Run the following command to view search operator CR: **oc get searchoperator searchoperator -o yaml**.

#### 1.3.2.1. Options to increase the redisgraph memory

Redisgraph is an in-memory database that needs linear growth of memory as the number of objects are cached. A Red Hat Advanced Cluster Management cluster with many managed clusters, or with a large number of Kubernetes objects require limit memory updates for the redisgraph pod (**search-redisgraph-0**).

By default, the redisgraph pod (**search-redisgraph-0**) is deployed with a memory limit of **4Gi**. If you are managing larger clusters, you might need to increase this limit by editing the **redisgraph\_resource.limit\_memory** for the **searchoperator** in the hub cluster namespace. For example, you can update the limit to **8Gi** with the following command:

```
oc patch searchoperator searchoperator --type='merge' -p '{"spec":{"redisgraph_resource":{"limit_memory":"8Gi"}}}'
```

After the change is made, the **search-redisgraph** pod automatically restarts with the updated configuration.

### 1.3.3. Queries in the console

You can type any text value in the *Search box* and results include anything with that value from any property, such as a name or namespace. Users are unable to search for values that contain an empty space.

For more specific search results, include the property selector in your search. You can combine related values for the property, for a more precise scope of your search. For example, search for **cluster:dev red** to receive results that match the string "red" in the **dev** cluster.

View the following steps to make queries with search:

1. Click **Search** in the navigation menu.
2. Type a word in the *Search box*, then Search finds your resources that contain that value.
  - As you search for resources, you receive other resources that are related to your original search result, which help you visualize how the resources interact with other resources in the system.
  - Search returns and lists each cluster with the resource that you search. For resources in the *hub* cluster, the cluster name is displayed as *local-cluster*.
  - Your search results are grouped by **kind**, and each resource **kind** is grouped in a table.
  - Your search options depend on your cluster objects. You can refine your results with specific labels. Search is case-sensitive when you query labels. See the following examples: name, namespace, status, and other resource fields. Auto-complete provides suggestions to refine your search. See the following example:
    - Search for a single field, such as **kind:pod** to find all pod resources.
    - Search for multiple fields, such as **kind:pod namespace:default** to find the pods in the default namespace.

#### Notes:

- You can also search with conditions by using characters, such as **>**, **>=**, **<**, **<=**, **!=**.
- When you search for more than one property selector with multiple values, the search returns either of the values that were queried. View the following examples:
  - When you search for **kind:pod name:a**, any pod named **a** is returned.
  - When you search for **kind:pod name:a,b**, any pod named **a** or **b** are returned.
  - Search for **kind:pod status:!Running** to find all pod resources where the status is not **Running**.
  - Search for **kind:pod restarts:>1** to find all pods that restarted at least twice.

3. If you want to save your search, click the **Save search** icon.

### 1.3.3.1. Query ArgoCD applications

When you search for an ArgoCD application, you are directed to the *Applications* page. Complete the following steps to access the ArgoCD application from the *Search* page:

1. Log in to your Red Hat Advanced Cluster Management hub cluster.
2. From the console header, select the *Search* icon.
3. Filter your query with the following values: **kind:application** and **apigroup:argoproj.io**
4. Select an application to view. The *Application* page displays an overview of information for the application.

Learn more about the Red Hat Advanced Cluster Management for Kubernetes console, see [Web console](#).