Cloudera Flow Management - Kubernetes Operator 2.11.0

CFM Operator Installation

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CLOUDERA

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Contents

Installation artifacts

Learn about installing the Cloudera Flow Management - Kubernetes Operator, the installation artifacts, and where these artifacts are hosted.

Installing the Cloudera Flow Management - Kubernetes Operator installs NiFi and optionally the NiFi Registry. It also installs the custom resources (CRs) required for deploying NiFi clusters with the Cloudera Flow Management - Kubernetes Operator after installation.

Installation artifacts and artifact locations

Cloudera Flow Management - Kubernetes Operator comes with various installation artifacts. These artifacts are hosted at two locations, the Cloudera Docker registry and the Cloudera Archive.

Both the Cloudera Docker registry and the Cloudera Archive require Cloudera credentials (username and password) for access. These credentials are provided to you as part of your license and subscription agreement and can be used to access both the registry and the archive.

Artifact	Location
Cloudera Flow Management - Kubernetes Operator Docker image	container.repository.cloudera.com/cloudera/cfm-operator:2.11.0-b57
Cloudera Flow Management - Kubernetes Operator Tini Docker image	container.repository.cloudera.com/cloudera/cfm-tini:2.11.0-b57
Apache NiFi Docker images	container.repository.cloudera.com/cloudera/cfm-nifi-k8s:2.11.0-b57-nifi_1.28.1.2.3.16.0-10
	container.repository.cloudera.com/cloudera/cfm-nifi-k8s:2.11.0-b57-nifi_2.4.0.4.3.3.0-40
Apache NiFi Registry Docker images	container.repository.cloudera.com/cloudera/cfm-nifiregistry-k8s:2.11.0-b57-nifi_1.28.1.2.3.16.0-10
	container.repository.cloudera.com/cloudera/cfm-nifiregistry-k8s:2.11.0-b54-nifi_2.4.0.4.3.3.0-39
cfmctl binaries	• https://archive.cloudera.com/p/cfm-operator/cfmctl-darwin-amd64 • https://archive.cloudera.com/p/cfm-operator/cfmctl-darwin-arm64 • https://archive.cloudera.com/p/cfm-operator/cfmctl-linux-amd64 • https://archive.cloudera.com/p/cfm-operator/cfmctl-linux-arm64 • https://archive.cloudera.com/p/cfm-operator/cfmctl-windows-amd64 • https://archive.cloudera.com/p/cfm-operator/cfmctl-windows-arm64
Cloudera Flow Management - Kubernetes Operator Helm chart	https://archive.cloudera.com/p/cfm-operator/cfm-operator-2.10.0-b134.tgz

Related Tasks

Installing Cloudera Flow Management - Kubernetes Operator (internet)

Installing Cloudera Flow Management - Kubernetes Operator (air-gap)

Installing Cloudera Flow Management - Kubernetes Operator (internet)

You can install Cloudera Flow Management - Kubernetes Operator after meeting all prerequisites and installing dependencies, either using the cfmctl CLI tool or Helm.

Before you begin

- Ensure that your Kubernetes environment meets requirements listed in System requirements.
- Your Kubernetes cluster requires internet connectivity to complete these steps. It must be able to reach the Cloudera Docker registry.
- Ensure that you have access to your Cloudera credentials (username and password). Credentials are required to access the Cloudera Archive and Cloudera Docker registry where installation artifacts are hosted.
- Ensure that you have access to a valid Cloudera license.
- Review the Helm chart reference before installation.

  The Helm chart accepts various configuration properties that you can set during installation. Using these properties you can customize your installation.

Procedure

1. Install cert-manager.

   For OpenShift

   Follow the instructions for installing the cert-manager Operator for RedHat OpenShift.

   For Helm

   ```
   helm install cert-manager jetstack/cert-manager \
   --version [***CERT MANAGER VERSION***]\
   --namespace cert-manager \
   --create-namespace \
   --set installCRDs=true
   ```

   Replace *[***CERT MANAGER VERSION***]* with the certificate manager version you want to install.

   Note:

   For Cloudera Flow Management - Kubernetes Operator, there is no specific version requirement.

2. Create a namespace for the Cloudera Flow Management - Kubernetes Operator if it does not already exist.

   ```
   kubectl create namespace [***OPERATOR NAMESPACE***]
   ```

   Replace *[***OPERATOR NAMESPACE***]* with the desired namespace for Cloudera Flow Management - Kubernetes Operator.

   For example:

   ```
   $ kubectl create namespace cfm-operator-system
   ```

3. Create a Kubernetes secret containing your Cloudera credentials.

   ```
   kubectl create secret docker-registry [***SECRET NAME***] \
     --namespace [***OPERATOR NAMESPACE***] \
     --docker-server container.repository.cloudera.com \
     --docker-username [***USERNAME***] \
     --docker-password [***PASSWORD***]
   ```

   Replace:

   - *[***SECRET NAME***]* with the desired Kubernetes secret name.
   - *[***OPERATOR NAMESPACE***]* with the Cloudera Flow Management - Kubernetes Operator installation namespace.
   - *[***USERNAME***]* and *[***PASSWORD***]* with your internal registry credentials.

4. Install the cfmctl CLI tool. While installing the tool is not strictly required for the operation of Cloudera Flow Management - Kubernetes Operator, it makes performing common tasks more convenient. The examples in this documentation make heavy use of the cfmctl CLI tool.

   The cfmctl tool allows you to:

   - Manage your environment
   - Check the current state and existence of prerequisites in an environment
   - Install and uninstall the operator
   - Quickstart install NiFi clusters
   - Perform common configuration tasks using flags, with the ability to provide a helmvalues.yaml file
   - Install using default image location without the need to provide it manually

   a) Copy the CLI tool version appropriate for your environment to the Cloudera Flow Management - Kubernetes Operator installation directory and run it.
   b) Make the tool executable.

   ```
   chmod +x [***CFMCTL FILE***]
   ```

   Replace *[***CFMCTL FILE***]* with the name of the executable file that you have downloaded.

5. Install Cloudera Flow Management - Kubernetes Operator.

   For cfmctl

   Install Cloudera Flow Management - Kubernetes Operator using the `cfmctl install` command:

   ```
   ./cfmctl install --license [***LICENSE***] \
   --image-repository "[***IMAGE REPOSITORY***]" \
   --image-tag "[***OPERATOR VERSION***]" \
   –values [***VALUES.YAML***] \
   --namespace [***OPERATOR NAMESPACE***]
   ```

   Replace

   - *[***LICENSE***]* with the license file. This flag is mandatory.
   - *[***IMAGE REPOSITORY***]* Defaults to “container.repository.cloudera.com/cloudera/cfm-operator” unless a Helm values.yaml is provided. This flag is optional.
   - *[***OPERATOR VERSION***]* Defaults to “latest” unless a Helm values.yaml is provided. This flag is optional.
   - *[***VALUES.YAML***]* with a Helm values.yaml file to supply any variables to the underlying Helm chart that is not available through cfmctl command flags. This flag is optional.
   - *[***OPERATOR NAMESPACE***]* with the desired operator installation namespace. Defaults to "cfm-operator-system".

   This command installs the CustomResourceDefinitions and Helm chart for the operator, and starts the operator.

   ```
   $ ./cfmctl install --license ./license.txt --image-repository "container
   .repository.cloudera.com/cloudera/cfm-operator" --image-tag "2.8.0-b94"
   2024-06-11T21:22:19.678+0200 INFO cli.install cmd/install.go:90 install
   ing chart {"namespace": "cfm-operator-system"}
   2024-06-11T21:22:23.820+0200 INFO cli.install.helmclient cmd/install.
   go:162 creating 1 resource(s)
   2024-06-11T21:22:24.601+0200 INFO cli.install.helmclient cmd/install.g
   o:162 creating 18 resource(s)
   2024-06-11T21:22:26.063+0200 INFO cli.install.helmclient cmd/install.g
   o:162 beginning wait for 18 resources with timeout of 10m0s
   2024-06-11T21:22:26.697+0200 INFO cli.install.helmclient cmd/install.go:
   162 Deployment is not ready: cfm-operator-system/cfm-operator. 0 out of
   1 expected pods are ready
   ```

```
…
2024-06-11T21:24:28.414+0200 INFO cli.install.helmclient cmd/install.go:
162 release installed successfully: cfm-operator/cfm-operator-0.0.0-dev
```

For Helm

a. Create your license secret.

```
kubectl create secret generic cfm-operator-license --from-file=licen
se.txt=[***PATH/TO/LICENSE.TXT***] -n [***OPERATOR NAMESPACE***]
```

Replace

- *[***PATH/TO/LICENSE.TXT***]* with the relative path to the license file
- *[***OPERATOR NAMESPACE***]* with the namespace where you install Cloudera Flow Management - Kubernetes Operator

b. Run Helm install.

```
helm install cfm-operator [***PATH TO OPERATOR HELM CHART***] \
       --create-namespace \
       --namespace [***OPERATOR NAMESPACE***] \
       --set installCRDs=true \
       --set image.repository=[***IMAGE REPOSITORY***] \
       --set image.tag=[***OPERATOR VERSION***] \
       --set licenseSecret=cfm-operator-license
       --set "imagePullSecrets={[***DOCKER PULL SECRET***]}"
```

Replace

- *[***PATH TO OPERATOR HELM CHART***]* with the path to the downloaded and unpacked Cloudera Flow Management - Kubernetes Operator Helm chart, for example,

  ```
  ./cfm-operator-2.11.0-b57.tgz
  ```

- *[***OPERATOR NAMESPACE***]* with the desired installation namespace, for example,

  ```
  cfm-operator-system
  ```

- *[***IMAGE REPOSITORY***]* with the Cloudera Flow Management - Kubernetes Operator image repository.
  - If you install from the Cloudera Docker Registry, replace it with

    ```
    container.repository.cloudera.com/cloudera/cfm-operator
    ```

  - If you install from a self-hosted private registry, replace it with your internal registry URL.
- *[***OPERATOR VERSION***]* with your desired Cloudera Flow Management - Kubernetes Operator version, for example,

  ```
  2.11.0
  ```

c. *[***DOCKER PULL SECRET***]* with the

6. Validate your installation.

a) Check if CustomResourceDefinitions for NiFi were installed or updated:

```
kubectl get crds | grep nifi
```

Expect a similar output:

```
nifiregistries.cfm.cloudera.com 2024-01-25T21:31:28Z
nifis.cfm.cloudera.com 2024-01-25T21:31:29Z
```

b) Check if a Cloudera Flow Management - Kubernetes Operator pod is up and running:

```
kubectl get pods -n [***OPERATOR NAMESPACE***]
```

Replace *[***OPERATOR NAMESPACE***]* with the namespace you created to deploy Cloudera Flow Management - Kubernetes Operator.

Expect a similar output:

```
NAME                                READY   STATUS    RESTARTS   AGE
cfm-operator-545bfbc96b-sx4jt   2/2     Running   0          18m
```

What to do next

With the operator installed and running, you can create and manage instances of NiFi and NiFi Registry by manipulating the Kubernetes object definitions.

Related Concepts

Installation artifacts

Related Information

Helm chart reference

Installing Cloudera Flow Management - Kubernetes Operator (air-gap)

You can install Cloudera Flow Management - Kubernetes Operator after meeting all prerequisites and installing dependencies, either using the cfmctl CLI tool or Helm.

About this task

Complete these steps to install Cloudera Flow Management - Kubernetes Operator if your Kubernetes cluster does not have internet access, or if you want to install it from a self-hosted registry. Installing Cloudera Flow Management - Kubernetes Operator installs the applications and resources that enable you to deploy and manage NiFi and NiFi Registry in Kubernetes.

Before you begin

- Ensure that your Kubernetes environment meets requirements listed in System requirements.
- A self-hosted Docker registry is required. Your registry must be accessible by your Kubernetes cluster.
- Access to docker or equivalent utility that you can use to pull and push images is required. The following steps use docker. Replace commands where necessary.
- Ensure that you have access to your Cloudera credentials (username and password). Credentials are required to access the Cloudera Archive and Cloudera Docker registry where installation artifacts are hosted.
- Ensure that you have access to a valid Cloudera license.
- Review the Helm chart reference before installation.

  The Helm chart accepts various configuration properties that you can set during installation. Using these properties you can customize your installation.
- A machine with Internet connectivity is required. While the Kubernetes cluster does not need internet access, you will need a machine to pull the images from the Cloudera Docker registry.

- Obtain the installation artifacts that are relevant for your installation scenario and appropriate for your environment.

  Note: Installing the cfmctl command line utility is optional. If you do not plan on using it, you do not need to download the binary.

Artifact	Location
Cloudera Flow Management - Kubernetes Operator Docker image	container.repository.cloudera.com/cloudera/cfm-operator:2.11.0-b57
Cloudera Flow Management Tini Docker image	container.repository.cloudera.com/cloudera/cfm-tini:2.11.0-b57
cfmctl binaries	• https://archive.cloudera.com/p/cfm-operator/cfmctl-darwin-amd64 • https://archive.cloudera.com/p/cfm-operator/cfmctl-darwin-arm64 • https://archive.cloudera.com/p/cfm-operator/cfmctl-linux-amd64 • https://archive.cloudera.com/p/cfm-operator/cfmctl-linux-arm64 • https://archive.cloudera.com/p/cfm-operator/cfmctl-windows-amd64 • https://archive.cloudera.com/p/cfm-operator/cfmctl-windows-arm64
Cloudera Flow Management - Kubernetes Operator Helm chart	https://archive.cloudera.com/p/cfm-operator/cfm-operator-2.10.0-b134.tgz

Procedure

1. Copy the installation artifacts to a local registry using the `docker pull`, `docker tag`, and `docker push` commands.

```
docker pull container.repository.cloudera.com/cloudera/cfm-opera
tor:[***OPERATOR VERSION***]
```

```
docker tag container.repository.cloudera.com/cloudera/cfm-opera
tor:[***OPERATOR VERSION***] [***PRIVATE REGISTRY[:PORT]/PATH/TAG:OPERATOR
 VERSION***]
```

```
docker push [***PATH TO SELF-HOSTED REGISTRY***]/cfm-operator:[***OPERATOR
 VERSION***]
```

   For example:

```
docker pull container.repository.cloudera.com/cloudera/cfm-opera
tor:2.11.0-b57
```

```
docker tag container.repository.cloudera.com/cloudera/cfm-operator:2.11.0-
b57 us-central1-docker.pkg.dev/nifi/cfm-k8s/cfm-operator:2.11.0-b57
```

```
docker push us-central1-docker.pkg.dev/nifi/cfm-k8s/cfm-operator:2.11.0-
b57
```

   Note:

   If Kubernetes is running on a different architecture than your local machine, you may need to specify a --platform option for your docker pull.

   For more information on pulling, pushing, and tagging Docker images, see the Docker documentation.

2. Create a namespace for the Cloudera Flow Management - Kubernetes Operator if it does not already exist.

```
kubectl create namespace [***OPERATOR NAMESPACE***]
```

Replace *[***OPERATOR NAMESPACE***]* with the desired namespace for Cloudera Flow Management - Kubernetes Operator.

For example:

```
$ kubectl create namespace cfm-operator-system
```

3. Install cert-manager.

For OpenShift

Follow the instructions for installing the cert-manager Operator for RedHat OpenShift.

For Helm

```
helm install cert-manager jetstack/cert-manager \
--version [***CERT MANAGER VERSION***]\
--namespace cert-manager \
--create-namespace \
--set installCRDs=true
```

Replace *[***CERT MANAGER VERSION***]* with the certificate manager version you want to install.

Note:

For Cloudera Flow Management - Kubernetes Operator, there is no specific version requirement.

4. Create a Kubernetes secret containing your Cloudera credentials.

```
kubectl create secret docker-registry [***SECRET NAME***] \
  --namespace [***OPERATOR NAMESPACE***] \
  --docker-server [***CONTAINER REGISTRY***] \
  --docker-username [***USERNAME***] \
  --docker-password [***PASSWORD***]
```

Replace:

- *[***SECRET NAME***]* with the desired Kubernetes secret name.
- *[***USERNAME***]* and *[***PASSWORD***]* with your internal registry credentials.
- *[***OPERATOR NAMESPACE***]* with the Cloudera Flow Management - Kubernetes Operator installation namespace.
- *[***CONTAINER REGISTRY***]* with your internal registry URL.

5. Install the cfmctl CLI tool. While installing the tool is not strictly required for the operation of Cloudera Flow Management - Kubernetes Operator, it makes performing common tasks more convenient. The examples in this documentation make heavy use of the cfmctl CLI tool.

   The cfmctl tool allows you to:

   - Manage your environment
   - Check the current state and existence of prerequisites in an environment
   - Install and uninstall the operator
   - Quickstart install NiFi clusters
   - Perform common configuration tasks using flags, with the ability to provide a helmvalues.yaml file
   - Install using default image location without the need to provide it manually

   a) Copy the CLI tool version appropriate for your environment to the Cloudera Flow Management - Kubernetes Operator installation directory and run it.
   b) Make the tool executable.

   ```
   chmod +x [***CFMCTL FILE***]
   ```

   Replace *[***CFMCTL FILE***]* with the name of the executable file that you have downloaded.

6. Install Cloudera Flow Management - Kubernetes Operator.

   For cfmctl

   Install Cloudera Flow Management - Kubernetes Operator using the `cfmctl install` command:

   ```
   ./cfmctl install --license [***LICENSE***] \
   --image-repository "[***IMAGE REPOSITORY***]" \
   --image-tag "[***OPERATOR VERSION***]" \
   –values [***VALUES.YAML***] \
   --namespace [***OPERATOR NAMESPACE***]
   ```

   Replace

   - *[***LICENSE***]* with the license file. This flag is mandatory.
   - *[***IMAGE REPOSITORY***]* Defaults to “container.repository.cloudera.com/cloudera/cfm-operator” unless a Helm values.yaml is provided. This flag is optional.
   - *[***OPERATOR VERSION***]* Defaults to “latest” unless a Helm values.yaml is provided. This flag is optional.
   - *[***VALUES.YAML***]* with a Helm values.yaml file to supply any variables to the underlying Helm chart that is not available through cfmctl command flags. This flag is optional.
   - *[***OPERATOR NAMESPACE***]* with the desired operator installation namespace. Defaults to "cfm-operator-system".

   This command installs the CustomResourceDefinitions and Helm chart for the operator, and starts the operator.

   ```
   $ ./cfmctl install --license ./license.txt --image-repository "container
   .repository.cloudera.com/cloudera/cfm-operator" --image-tag "2.8.0-b94"
   2024-06-11T21:22:19.678+0200 INFO cli.install cmd/install.go:90 install
   ing chart {"namespace": "cfm-operator-system"}
   2024-06-11T21:22:23.820+0200 INFO cli.install.helmclient cmd/install.
   go:162 creating 1 resource(s)
   2024-06-11T21:22:24.601+0200 INFO cli.install.helmclient cmd/install.g
   o:162 creating 18 resource(s)
   2024-06-11T21:22:26.063+0200 INFO cli.install.helmclient cmd/install.g
   o:162 beginning wait for 18 resources with timeout of 10m0s
   2024-06-11T21:22:26.697+0200 INFO cli.install.helmclient cmd/install.go:
   162 Deployment is not ready: cfm-operator-system/cfm-operator. 0 out of
   1 expected pods are ready
   ```

```
…
2024-06-11T21:24:28.414+0200 INFO cli.install.helmclient cmd/install.go:
162 release installed successfully: cfm-operator/cfm-operator-0.0.0-dev
```

For Helm

a. Create your license secret.

```
kubectl create secret generic cfm-operator-license --from-file=licen
se.txt=[***PATH/TO/LICENSE.TXT***] -n [***OPERATOR NAMESPACE***]
```

Replace

- *[***PATH/TO/LICENSE.TXT***]* with the relative path to the license file
- *[***OPERATOR NAMESPACE***]* with the namespace where you install Cloudera Flow Management - Kubernetes Operator

b. Run Helm install.

```
helm install cfm-operator [***PATH TO OPERATOR HELM CHART***] \
       --create-namespace \
       --namespace [***OPERATOR NAMESPACE***] \
       --set installCRDs=true \
       --set image.repository=[***IMAGE REPOSITORY***] \
       --set image.tag=[***OPERATOR VERSION***] \
       --set licenseSecret=cfm-operator-license
       --set "imagePullSecrets={[***DOCKER PULL SECRET***]}"
```

Replace

- *[***PATH TO OPERATOR HELM CHART***]* with the path to the downloaded and unpacked Cloudera Flow Management - Kubernetes Operator Helm chart, for example,

  ```
  ./cfm-operator-2.11.0-b57.tgz
  ```

- *[***OPERATOR NAMESPACE***]* with the desired installation namespace, for example,

  ```
  cfm-operator-system
  ```

- *[***IMAGE REPOSITORY***]* with the Cloudera Flow Management - Kubernetes Operator image repository.
  - If you install from the Cloudera Docker Registry, replace it with

    ```
    container.repository.cloudera.com/cloudera/cfm-operator
    ```

  - If you install from a self-hosted private registry, replace it with your internal registry URL.
- *[***OPERATOR VERSION***]* with your desired Cloudera Flow Management - Kubernetes Operator version, for example,

  ```
  2.11.0
  ```

c. *[***DOCKER PULL SECRET***]* with the

7. Validate your installation.

a) Check if CustomResourceDefinitions for NiFi were installed or updated:

```
kubectl get crds | grep nifi
```

Expect a similar output:

```
nifiregistries.cfm.cloudera.com 2024-01-25T21:31:28Z
nifis.cfm.cloudera.com 2024-01-25T21:31:29Z
```

b) Check if a Cloudera Flow Management - Kubernetes Operator pod is up and running:

```
kubectl get pods -n [***OPERATOR NAMESPACE***]
```

Replace *[***OPERATOR NAMESPACE***]* with the namespace you created to deploy Cloudera Flow Management - Kubernetes Operator.

Expect a similar output:

```
NAME                                READY   STATUS    RESTARTS   AGE
cfm-operator-545bfbc96b-sx4jt   2/2     Running   0          18m
```

What to do next

With the operator installed and running, you can create and manage instances of NiFi and NiFi Registry by manipulating the Kubernetes object definitions.

Related Concepts

Installation artifacts

Related Information

Docker image pull
Docker image push
Docker image tag
Helm chart reference

Installing Cloudera Flow Management - Kubernetes Operator on Taikun CloudWorks [Technical Preview]

Learn how to install Cloudera Flow Management - Kubernetes Operator on Taikun CloudWorks. Installation involves importing the cfm-operator repository, adding cfm-operator to a new or existing catalog, and installing Cloudera Flow Management - Kubernetes Operator using the Taikun CloudWorks webUI.

Before you begin

Note: This feature is in Technical Preview and is not ready for production deployments. Cloudera recommends trying this feature in test or development environments and encourages you to provide feedback on your experiences.

- You have access to a project in Taikun CloudWorks, referred to as *[***YOUR PROJECT***]* in this document, that consists of a Kubernetes cluster with at least the following nodes:
  - 1 bastion node
  - 3 master nodes
  - 3 worker nodes
- Your Kubernetes environment meets requirements listed in System requirements.
- Access to your cluster with kubectl is configured. For more information, see Accessing Cluster with Kubeconfig.
- Your Kubernetes cluster requires internet connectivity to complete these steps. It must be able to reach the Cloudera Docker registry.
- cert-manager is installed in your Kubernetes cluster in its own separate namespace.
- You have access to a valid Cloudera license.

- You have access to your Cloudera credentials (username and password). Credentials are required to access the Cloudera Archive and Cloudera Docker registry where installation artifacts are hosted.

Importing the repository and adding Cloudera Flow Management - Kubernetes Operator to a catalog

Complete these steps to import the cfm-operator repository and to add Cloudera Flow Management - Kubernetes Operator to a new or existing catalog in Taikun CloudWorks.

Procedure

1. In Taikun CloudWorks, go to Repositories and select the **Private** tab.
   a) Click Import Repository.
   b) Enter the following in **Import Repository**:
      - Enter a unique name in Name.
      - Enter the following OCI repository URL in URL:

        ```
        oci://container.repository.cloudera.com/cloudera-helm/cfm-operator/cfm-operator
        ```

      - Enter your Cloudera credentials in Username and Password.
   c) Click Import.
2. Add Cloudera Flow Management - Kubernetes Operator to a catalog.

   Tip: These instructions create a new catalog. You can also add your application to an existing catalog.

   a) Go to Catalogs and click ⊕ Add Catalog.
   b) Enter a catalog name and description in Create Catalog.

      This will be referred to as *[***YOUR CATALOG***]* in subsequent steps.
   c) Click Save.
   d) Go to *[***YOUR CATALOG***]* and click ⊕ Add Applications.
   e) Select *[***YOUR REPOSITORY***]* from the Repository drop-down listand click Apply.
   f) Find the cfm-operator application in the list of available applications and click ⊕.
   g) Click ⊕ Add to the catalog.

Installing Cloudera Flow Management - Kubernetes Operator on Taikun CloudWorks

Complete these steps to install Cloudera Flow Management - Kubernetes Operator on Taikun CloudWorks.

Procedure

1. Create a namespace in your Kubernetes cluster.

   ```
   kubectl create namespace [***OPERATOR NAMESPACE***]
   ```

   Use this namespace in all of the Cloudera Flow Management - Kubernetes Operator installation steps.

2. Create a Kubernetes secret containing your Cloudera license.

```
kubectl -n [***OPERATOR NAMESPACE***] create secret generic license --fro
m-file=license.txt=[**PATH TO *LICENSE FILE***]
```

3. Create a Kubernetes Secret containing your Cloudera credentials.

```
kubectl create secret docker-registry [***REGISTRY CREDENTIALS SECRET***]
 \
--namespace [***OPERATOR NAMESPACE***] \
--docker-server container.repository.cloudera.com \
--docker-username [***USERNAME***] \
--docker-password "$(echo -n 'Enter Docker registry password: ' >&2; read
 -s password; echo >&2; echo $password)"
```

   Take note of the name you specify as *[***REGISTRY CREDENTIALS SECRET***]*. You will need to specify the name in a later step.

   Replace *[***USERNAME***]* with your Cloudera username.

   Enter your Cloudera password when prompted.

4. Install Cloudera Flow Management - Kubernetes Operator.
   a) In Taikun CloudWorks, go to Projects *[***YOUR PROJECT***]* Applications .
   b) Click ⊕ Install
   c) Search for cfm-operator.
   d) Find the cfm-operator application in the list of available applications. Select the one that is in *[***YOUR CATALOG***]* and click ⊕.
   e) Click Bind if you get a prompt to bind the catalog to your project.
   f) Configure the following common settings in **Application Instance**:
      - Enter a name in Application Instance Name.
      - In Namespace, select the *[***OPERATOR NAMESPACE***]* you created in *Step 1*.
      - Select *[***YOUR PROJECT***]* as Target Project.
      - Switch the Extra Values toggle on.
   g) Click Continue.
   h) You do not need to provide any **Installation Params**. Click Continue.
   i) Provide the following **Extra Values**:

```
imagePullSecrets:
  - [***REGISTRY CREDENTIALS SECRET***]
image:
  repository: container.repository.cloudera.com/cloudera/cfm-operator
  tag: [***CFM-OPERATOR VERSION IN YOUR CATALOG***]

authProxy:
  image:
    repository: container.repository.cloudera.com/cloudera_thirdparty/
hardened/kube-rbac-proxy
    tag: 0.19.0-r3-202503182126
licenseSecret: license
```

   j) Click Run Installation.

What to do next

Deploy a NiFi cluster.

Uninstalling Cloudera Flow Management - Kubernetes Operator

You can uninstall Cloudera Flow Management - Kubernetes Operator using Helm or the cfmctl CLI tool.

About this task

By default, the uninstall command does not remove data containing resources. If you want to delete data containing resources, use the --delete flag with no arguments, whichdeletes NiFi and NiFi Registry instances in addition to uninstalling the operator and CRDs. Use the --force flag if the environment is unresponsive, and neither installation nor uninstallation is possible.

To uninstall Cloudera Flow Management - Kubernetes Operator, run the following command:

For cfmctl

```
cfmctl uninstall --namespace [***OPERATOR NAMESPACE***]
```

Replace *[***OPERATOR NAMESPACE***]* with the namespace where you installed the operator.

For Helm

```
helm uninstall cfm-operator --namespace [***OPERATOR NAMESPACE***]
```

Replace *[***OPERATOR NAMESPACE***]* with the namespace where you installed Cloudera Flow Management - Kubernetes Operator.