

NiFi Registry Deployment

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Deploying a NiFi Registry instance (internet)

Learn about deploying a NiFi Registry cluster using Cloudera Flow Management - Kubernetes Operator.

About this task

You can deploy a NiFi Registry cluster by creating a NiFi Registry custom resource (CR) and deploying in a Kubernetes cluster.

Before you begin

- Ensure the Cloudera Flow Management - Kubernetes Operator has been installed and is running.
- You have created a NiFi Registry custom resource (CR) YAML file that complies with the documentation provided by Cloudera.

Procedure

1. Create a namespace for the NiFi Registry if it does not already exist.

```
$ kubectl create namespace my-nifi-registry
```

2. In `[***REGISTRY CLUSTER NAMESPACE***]`, create an image pull secret to access the installation artifacts.

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

Replace:

- `[***SECRET NAME***]` with the desired Kubernetes secret name.
- `[***REGISTRY CLUSTER NAMESPACE***]` with the namespace you created.
- `[***USERNAME***]` and `[***PASSWORD***]` with your Cloudera credentials.

For example:

```
kubectl create secret docker-registry docker-pull-secret \  
  --namespace cfm-operator-system \  
  --docker-server container.repository.cloudera.com \  
  --docker-username my-username \  
  --docker-password my-password
```

3. Deploy NiFi Registry to the Kubernetes cluster.

```
kubectl apply -f [***CR YAML PATH***] --namespace [***REGISTRY CLUSTER NAMESPACE***]
```

Replace:

- `[***CR YAML PATH***]` with the absolute or relative path to the CR YAML file you created for NiFi Registry.
- `[***REGISTRY CLUSTER NAMESPACE***]` with the namespace. you created to deploy NiFi Registry.

Deploying a NiFi Registry instance in an air-gapped environment

Learn about deploying a NiFi Registry cluster using Cloudera Flow Management - Kubernetes Operator. Complete these steps if your Kubernetes cluster does not have internet access, or if you want to install it from a self-hosted registry.

About this task

You can deploy a NiFi Registry cluster by creating a NiFi Registry custom resource (CR) and deploying on Kubernetes.

Before you begin

- Ensure the Cloudera Flow Management - Kubernetes Operator has been installed and is running.
- A self-hosted Docker registry is required. Your registry must be accessible by your Kubernetes cluster.
- 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.
- 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.

- You have created a NiFi Registry custom resource (CR) YAML file that complies with the documentation provided by Cloudera.
- Obtain the Apache NiFi Registry Docker image that is required for your installation scenario.

Artifact	Location
Apache NiFi Registry Docker images	container.repository.cloudera.com/cloudera/cfm-nifiregistry-k8s:2.9.0-b96-nifi_1.27.0.2.3.14.0-14
	container.repository.cloudera.com/cloudera/cfm-nifiregistry-k8s:2.9.0-b96-nifi_2.0.0.4.3.1.0-56

Procedure

1. Create a namespace for the NiFi Registry if it does not already exist.

```
kubectl create namespace [***REGISTRY CLUSTER NAMESPACE***]
```

Replace `[***REGISTRY CLUSTER NAMESPACE***]` with the desired namespace for NiFi Registry.

```
$ kubectl create namespace my-nifi-registry
```

2. Create a Kubernetes secret containing your Cloudera credentials.

```
kubectl create secret docker-registry [***SECRET NAME***] \
  --namespace [***REGISTRY CLUSTER 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.
 - [***REGISTRY CLUSTER NAMESPACE***] with the Cloudera Flow Management - Kubernetes Operator installation namespace.
 - [***CONTAINER REGISTRY***] with your internal registry URL.
3. Move 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-nifiregistry-k8s:[***NIFI_REGISTRY_VERSION***] \
docker tag container.repository.cloudera.com/cloudera/cfm-nifiregistry-k8s:[***NIFI_REGISTRY_VERSION***] [***PRIVATE_REGISTRY[:PORT]/PATH/TAG:NIFI_REGISTRY_VERSION***] \
docker push [***PATH TO SELF-HOSTED REGISTRY***]/cfm-nifiregistry-k8s:[***NIFI_REGISTRY_VERSION***]
```

For example:

```
docker pull container.repository.cloudera.com/cloudera/cfm-nifiregistry-k8s:2.9.0-b96-nifi_1.27.0.2.3.14.0-14 \
docker tag container.repository.cloudera.com/cloudera/cfm-nifiregistry-k8s:2.9.0-b96-nifi_1.27.0.2.3.14.0-14 us-centrall-docker.pkg.dev/nifi-testing/cfm-k8s/cfm-nifiregistry-k8s:2.9.0-b96-nifi_1.27.0.2.3.14.0-14 \
docker push us-centrall-docker.pkg.dev/nifi-testing/cfm-k8s/cfm-nifiregistry-k8s:2.9.0-b96-nifi_1.27.0.2.3.14.0-14
```



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.

4. Deploy NiFi Registry to the Kubernetes cluster.

```
kubectl apply -f [***CR YAML PATH***] --namespace [***REGISTRY CLUSTER NAMESPACE***]
```

Replace:

- [***CR YAML PATH***] with the absolute or relative path to the CR YAML file you created for NiFi Registry.
- [***REGISTRY CLUSTER NAMESPACE***] with the namespace you created to deploy NiFi Registry.