

Cloudera Flow Management 1

Cloudera Flow Management Installation

Date of Publish: 2019-04-15



<https://docs.hortonworks.com/>

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CFM Installation Overview

It is helpful to understand an overview of the Cloudera Flow Management (CFM) installation process before you begin. Installing CFM involves meeting basic system requirements, getting the CFM Custom Service Descriptor Files, Installing the CFM Parcel, and then adding and configuring CFM Services.

Review System Requirements

Before getting started with the Cloudera Flow Management (CFM) installation, it is helpful to review the system requirements.

System Requirements

- JDK 8 – If your cluster is already configured with JDK 8, you may skip this step. If not, install JDK 8 before proceeding.
- ZooKeeper – You may add the ZooKeeper service available with your CDH cluster.
- CFM supports Cloudera Manager and CDH versions 6.x and 5.5.6 and later. This documentation assumes you already have a CDH cluster installed. If you do not, see the Cloudera Manager installation documentation.

Cloudera Services Support

The following tables include information about which Cloudera services are supported in CFM.

Table 1: Data Stores

Cloudera Service	Supported?	CDH Version	Apache Version
HBase	Yes	5.5.6 +	1.0.0 +
HDFS	Yes	5.5.6 +	2.6.0 +
Hive	Yes	5.12 +; No 6.x support	1.1 +
Impala	Yes	5.5.6 +	2.3.0 +
Kudu	Yes	5.13.0 +	1.5.0 +
Solr	Yes	5.5.6 +	4.10.3

Table 2: Data Movement and Processing

Cloudera Service	Supported?	CDH Version	Apache Version
Kafka	Yes	5.5.6 +	0.10.0 +
Spark	Yes	5.5.6 +	1.5.0 +
Flume	Yes	5.5.6 +	1.6.0 +
Sqoop	No	N/A	N/A
Pig	No	N/A	N/A

Table 3: Storage Formats

Cloudera Service	Supported?	CDH Version	Apache Version
Avro	Yes	5.5.6 +	1.7.6 +
Kite (SDK)	Yes	5.5.6 +	1.0.0 + (not ASF)

Cloudera Service	Supported?	CDH Version	Apache Version
Parquet	Yes	5.5.6 +	1.5.0 +

Table 4: Enterprise Services

Cloudera Service	Supported?	CDH Versions
Cloudera Manager	Yes	5.5.6 +
Sentry	No	N/A
Navigator	No	N/A
HUE	N/A	N/A

Related Information

[Cloudera Installation Guide](#)

Install the JDK

You should install JDK 8 on each machine on which you will install NiFi, if your version of Cloudera Manager is not already configured with JDK 8.

Before you begin

Review the *Cloudera Enterprise Release Notes* to ensure you understand which versions of JDK 8 are supported on your cluster.

Procedure

1. Download JDK from the appropriate website.
2. Run the installation command appropriate for your operating system:

Open JDK for RHEL/CentOS/SLES:

```
yum install java-1.8.0-openjdk-devel
```

Open JDK for Ubuntu:

```
apt-get install openjdk-8-jdk
```

Oracle JDK for RHEL/CentOS/SLES:

```
sudo yum localinstall jdk-8u161-linux-x64.rpm
```

Oracle JDK for Ubuntu

```
sudo apt-get install oracle-java8-installer
```

Related Information

[Cloudera Enterprise Release Notes](#)

[Open JDK Download](#)

[Oracle JDK Download](#)

Add the ZooKeeper Service

If you are running NiFi in a clustered environment, you must install ZooKeeper before adding the NiFi service. To add ZooKeeper, navigate to the **Add Service** page for your cluster and select ZooKeeper.

Procedure

1. From **Home > Status** tab, select the drop-down to the right of your cluster, and select **Add a Service**.
2. Select ZooKeeper, and click **Continue**.
3. Select the cluster nodes onto which you want to install ZooKeeper. Do not install ZooKeeper onto the same cluster node as NiFi.

Get the CFM Custom Service Descriptor Files

A Custom Service Descriptor (CSD) file contains configuration information needed to describe and manage a new service. Download the CSDs for each CFM Service, specify ownership and permissions, and then restart the Cloudera Manager Server. You may find the CSD location in the *CFM Release Notes*.

Before you begin

You should perform these steps as root.

Procedure

1. Navigate to the Local Descriptor Repository Path configured in Cloudera Manager. The default is `/opt/cloudera/csd`:

```
cd /opt/cloudera/csd
```

2. Download the CSDs for NiFi, NiFi Registry, and the NiFi Toolkit.

```
wget <NiFi-CSD-location>  
wget <NiFi Registry CSD location>  
wget <NiFi Toolkit location>
```

3. Change the CSD owner. In `/opt/cloudera/csd`, enter:

```
chown cloudera-scm:cloudera-scm NIFI*.jar  
chmod 644 NIFI*.jar
```

4. Restart the Cloudera Manager Server.

```
service cloudera-scm-server restart
```

5. Restart the Cloudera Management Service. From the Cloudera Manager Status tab, click the **Restart Icon** or select **Restart** from the Cloudera Management Service drop-down.

Related Information

[CFM Release Notes](#)

Install the CFM Parcel

You can install the CFM parcel using the public parcel repository, or you manually download the CFM parcel and the `.sha` file. The public repository and the parcel and `.sha` files are available in the *CFM Release Notes*.

Related Information

[CFM Release Notes](#)

Install the CFM Parcel from the Public Repository

Install the CFM parcel to make the NiFi, NiFi Registry, and NiFi Toolkit services available for installation. To install the CFM parcel to Cloudera Manager, you must update the Parcel URL, and then download, distribute and activate the CFM parcels.

Procedure

1. Navigate to the **Parcel Configuration** page. From the navigation bar click **Hosts** then **Parcels**, and click the **Edit Settings** button.
2. From the **Parcel Configuration** page, in the **Remote Parcel Repository URLs** list, click **+** to add an additional row.
3. Add the CFM parcel URL available in from the Cloudera download location. For example:

```
http://archive.cloudera.com/CFM/parcels/1.0.0.0
```

4. Click **Save Changes**. The new CFM parcel displays with the set of parcels available for download on the **Parcels** page.
5. From the **Parcels** page, download, distribute, and activate the CFM parcel.

Manually Install the CFM Parcel

You can manually download the parcel and .sha files and then perform the CFM parcel installation.

Procedure

1. Download the CFM parcel and parcels files appropriate for your operating system.

RHEL/Centos 7

```
wget http://archive.cloudera.com/CFM/parcels/1.0.0.0/CFM-1.0.0.0-el7.parcel
wget http://archive.cloudera.com/CFM/parcels/1.0.0.0/CFM-1.0.0.0-el7.parcel.sha1
```

SUSE 12

```
wget http://archive.cloudera.com/CFM/parcels/1.0.0.0/CFM-1.0.0.0-sles12.parcel
wget http://archive.cloudera.com/CFM/parcels/1.0.0.0/CFM-1.0.0.0-sles12.parcel.sha1
```

Ubuntu 14

```
wget http://archive.cloudera.com/CFM/parcels/1.0.0.0/CFM-1.0.0.0-trusty.parcel
wget http://archive.cloudera.com/CFM/parcels/1.0.0.0/CFM-1.0.0.0-trusty.parcel.sha1
```

Ubuntu 16

```
wget http://archive.cloudera.com/CFM/parcels/1.0.0.0/CFM-1.0.0.0-xenial.parcel
wget http://archive.cloudera.com/CFM/parcels/1.0.0.0/CFM-1.0.0.0-xenial.parcel.sha1
```

2. Rename your sha file. Change:

```
CFM-1.0.0.0-<OS-name>.parcel.sha1
```

To:

```
CFM-1.0.0.0-<OS-name>.parcel.sha
```

3. Change the parcel and sha file owner. In `/opt/cloudera/csd`, enter:

```
chown cloudera-scm:cloudera-scm <parcel-file>
chmod 644 <parcel-file>

chown cloudera-scm:cloudera-scm <sha-file>
chmod 644 <sha-file>
```

4. Copy both the parcel file and sha files to the cluster parcel repository location. By default this is located in the Cloudera Manager Server `/opt/cloudera/parcel-repo` folder.
5. Navigate to the **Parcel Configuration** page. From the navigation bar, click **Hosts** then **Parcels**, and click the **Edit Settings** button.
6. Review the parcel list and verify that the CFM is available. If not, click on the **Check for New Parcels** button. The new CFM parcel should display Available for Download on the **Parcels** page.
7. From the **Parcels** page, download, distribute, and activate the CFM parcel.

Add and Configure CFM Services

To complete the CFM installation, add and configure the CFM services. You can add them in any order you like, but if you are using the NiFi Toolkit CA service, it is recommended that you add NiFi Toolkit CA, then NiFi Registry, and then NiFi.

Add and Configure NiFi Toolkit CA Service

Procedure

1. From **Home > Status** tab, select the drop-down to the right of your cluster, and select **Add a Service**. Install one service at a time.
2. If you want to use the NiFi Toolkit CA service for TLS support, it is recommended that you can add and configure it first.

The following two values for the NiFi Toolkit CA Service are required:

- If the cluster is not configured to use JDK 8, use the **Java Home Path Override** configuration field, specify the location of the JDK you installed at the beginning of the installation process.
- For the **NiFi CA Token**, ensure you enter a token with at least 16 characters.

3. Click **Continue** and **Continue** again once the installation is completed.

Results

Verify the new service is started properly by checking the health status for the new service. If the Health Status is Good, then the service started properly.

Add and Configure NiFi Registry Service

Procedure

1. From **Home > Status** tab, select the drop-down to the right of your cluster, and select **Add a Service**. Install one service at a time.
2. Add and configure the NiFi Registry service.
 - If the cluster is not configured to use JDK 8, use the **Java Home Path Override** configuration field, specify the location of the JDK you installed at the beginning of the installation process.
 - Specify the security settings appropriate for your installation. See *Securing CFM* for detailed information.
3. Click **Continue** and **Continue** again once the installation is completed.

Results

Verify the new service is started properly by checking the health status for the new service. If the Health Status is Good, then the service started properly.

Related Information

[Securing CFM](#)

Add and Configure NiFi Service

Procedure

1. From **Home > Status** tab, select the drop-down to the right of your cluster, and select **Add a Service**. Install one service at a time.
2. Add and configure the NiFi Service.
 - When selecting the set of dependencies for NiFi, you must select ZooKeeper, and optionally select **NiFi CA Service** if you are using the NiFi Toolkit CA for security.
 - If the cluster is not configured to use JDK 8, use the **Java Home Path Override** configuration field, specify the location of the JDK you installed at the beginning of the installation process.
 - Specify the security settings appropriate for your installation. See *Securing CFM* for detailed information.
3. Click **Continue** and **Continue** again once the installation is completed.

Results

Verify the new service is started properly by checking the health status for the new service. If the Health Status is Good, then the service started properly.

Related Information

[Securing CFM](#)