Cloudera Flow Management 2.1.6

Cloudera Flow Management Upgrade and Migration

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Upgrade and migration paths

To use the latest enhancements and capabilities of NiFi, Cloudera recommends deploying it on the Cloudera Data Platform (CDP). You can seamlessly integrate NiFi with CDP by installing the Cloudera Flow Management (CFM) parcel on your CDP infrastructure.

This guide provides information on upgrading or migrating from various NiFi deployment scenarios, including HDF, CFM on CDH, or earlier versions of CFM on CDP Private Cloud Base. Review the upgrade and migration details to ensure that you understand the specific requirements relevant to your chosen upgrade or migration scenario, aligning them with your unique use case.

Upgrade and migration paths overview

From CFM 2.x on CDP Private Cloud Base

If you are using CFM 2.x on CDP Private Cloud Base (CDP PvC Base) version 7.1.1 – 7.1.8 and you intend to upgrade to a higher CFM version, there are specific upgrade paths to follow. Check the Upgrade paths diagram and refer to the step-by-step procedure outlined in the following table:

Table 1: Upgrade procedure from CFM 2.x

	Upgrade
Step 1	Upgrade CFM to 2.0.4 if you are using CFM 2.0.1 on CDP PvC Base 7.1.1
Step 2	Upgrade CDP PvC Base to 7.1.7, 7.1.7 SP1, or 7.1.7 SP2
Step 3	Upgrade CFM to a higher version Check the Upgrade paths diagram to determine the sequence of intermediate upgrades required to transition from your current CFM version to the desired one.
Step 4	Optional: Upgrade CDP PvC Base to 7.1.9

Note: CFM 2.1.1 is also supported on CDP PvC Base 7.1.6.

From CFM 1.x on CDH

If you are using CFM 1.x on CDH 5 or CDH 6, or as standalone CFM, and you intend to upgrade to a higher CFM version, there are specific upgrade paths to follow. Check the Upgrade paths diagram and refer to the step-by-step procedure outlined in the following table:

Table 2: Upgrade/migration options from CFM 1.x

	Migration		Upgrade from CFM 1.x on CDH 6		Upgrade from CFM 1.x on CDH 5		Upgrade from standalone CFM 1.x	
Step 1	Upgrade CFM 1.0.0 to 1.1.0	Upgrade CFM 1.0.1 to 1.1.0	Upgrade CFM 1.0.0 to 1.1.0	Upgrade CFM 1.0.1 to 1.1.0	Upgrade CFM 1.0.0 to 1.1.0	Upgrade CFM 1.0.1 to 1.1.0	Upgrade CFM 1.0.0 to 1.1.0	Upgrade CFM 1.0.1 to 1.1.0
Step 2	Install CFM 2.x on CDP PvC Base 7.1.1 – 7.1.9 **Note:** The highest possible CFM version in a migration sceneario is 2.1.5.		Upgrade CDH 6 to CDP PvC Base 7.1.7, 7.1.7 SP1 or 7.1.7 SP2		Upgrade CDH 5.0 - 5.12 to CDH 5.13 or higher For instructions, see the Cloudera Enterprise Upgrade Guide.		Upgrade CFM 1.1.0 to CFM 2.x **Note:** In-place upgrade from CFM 1.x to CFM 2.1.6 is not supported.	
Step 3	Migrate data from CFM 1.x to CFM 2.x		Upgrade from CFM 1.1.0 to CFM 2.x **Note:** In-place upgrade from CFM 1.x to CFM 2.1.6 is not supported.		Upgrade CDH 5.13 or higher to CDP PvC Base **Note:** The supported CDP PvC Base versions are 7.1.1 – 7.1.7.			
Step 4					Upgrade CFM 1.1.0 to CFM 2.x **Note:** In-place upgrade from CFM 1.x to CFM 2.1.6 is not supported.			

Note: Cloudera recommends migration over in-place upgrade.

For a better understanding of the differences between upgrade and migration, see CFM upgrade and migration options.

From HDF

If you are using HDF and you intend to upgrade to CFM, there are specific upgrade paths to follow. Check the Upgrade paths diagram and refer to the step-by-step migration and in-place upgrade procedures outlined in the following table:

Table 3: Upgrade/migration options from HDF

	Migration	In-place upgrade
Step 1	Upgrade HDF to 3.5.x. See also the HDF 3.5.2 Release Notes.	Upgrade HDF to 3.5.2 See also the HDF 3.5.2 Release Notes.
Step 2	Install CFM 2.x on CDP PvC Base 7.1.1 – 7.1.8	In-place upgrade HDF 3.5.2 to CFM 2.1.1 on CDP PvC Base 7.1.6 or to CFM 2.1.2 – 2.1.4 on CDP PvC Base 7.1.7
Step 3	Migrate data from HDF to CFM	**Note:** In-place upgrade from HDF with AM2CM to CFM 2.1.6 is not supported.

Note: Cloudera recommends migration over in-place upgrade.

For a better understanding of the differences between upgrade and migration, see CFM upgrade and migration options.

CFM upgrade and migration options

There are three methods available for transitioning from an older version to CFM 2.x:

Upgrade

Upgrade refers to a full upgrade of CFM on CDP PvC Base without the necessity for migrating the data between clusters.

Possible upgrade paths include:

- CFM 1.1.0 CFM 2.x
- CFM 2.x CFM 2.x

Important: For precise version-to-version upgrade paths, see the Upgrade paths diagram.

Migration

Data migration involves the transfer of existing HDF or CFM 1.x cluster workloads to a fresh installation of CDP PvC Base. You can migrate your NiFi dataflows and NiFi Registry versioned flows from an HDF 3.5.x or CFM 1.1.0 (standalone, or on CDH 5 / CDH 6) cluster to a CFM 2.x cluster on CDP PvC Base. This method requires that you have both your HDF or CFM 1.1.0 cluster and a CFM 2.x cluster running at the same time.

Note: Cloudera recommends migration over in-place upgrade.

Possible migration paths include:

- HDF 3.5.x CFM 2.x
- CFM 1.1.0 CFM 2.x

Important: For precise version-to-version migration routes, see the Upgrade paths diagram.

In-place upgrade

This option allows you to install Cloudera Manager when using HDF and then enable Cloudera Manager to take over the management of your services. You can transform your existing Ambari blueprint into a Cloudera Manager Deployment template using the AM2CM tool.

> **Note:** Cloudera recommends migration over in-place upgrade.

If your HDF version is lower than 3.5.2.0, first upgrade to HDF 3.5.2.0 and then proceed to upgrade HDF to CFM 2.1.1 – 2.1.4 on CDP PvC Base 7.1.6 or 7.1.7.

Possible in-place upgrade paths include:

- HDF 3.5.2.0 CFM 2.1.1 on CDP 7.1.6
- HDF 3.5.2.0 CFM 2.1.1-2.1.5 on CDP 7.1.7

> **Important:** For precise version-to-version routes, see the Upgrade paths diagram.

Upgrading to CFM 2.1.6 from CFM 2.1.5

This guide outlines the prerequisites and steps of the upgrade process from Cloudera Flow Management (CFM) 2.1.5 to CFM 2.1.6. If you want to upgrade from other CFM 2.x versions, check the available upgrade paths in Upgrade and migration paths diagram to determine the sequence of intermediate upgrades required to transition from your current CFM version to CFM 2.1.6.

Before you begin

- Review the possible upgrade paths.

  Before starting your CFM upgrade, it is crucial that you review the available upgrade paths to ensure that you are performing the right upgrade for your use case.

  If you want to use CFM 2.1.6, you have the following options:

  - Upgrade from CFM 2.1.5 on CDP 7.1.7 to CFM 2.1.6
  - Upgrade from CFM 2.1.5 on CDP 7.1.8 to CFM 2.1.6
  - Upgrade from CFM 2.1.6 on CDP 7.1.7 / 7.1.8 to CFM 2.1.6 on CDP 7.1.8 / 7.1.9

  > **Important:** In-place upgrades from CFM 1.x and in-place upgrades from HDF with AM2CM are not supported.

  For an overview of all available paths, see Upgrade and migration paths.
- Upgrade Cloudera Manager and CDP Private Cloud Base, if needed.

  > **Important:**
  >
  > CFM 2.1.6 requires at least CDP 7.1.7.

About this task

To upgrade to CFM 2.1.6 from an earlier version of CFM on CDP Private Cloud Base, you must stop the CFM services, update the CSD files, restart the SCM Server, activate the new CFM parcel, and then restart your CFM services.

Procedure

1. Stop the NiFi and NiFi Registry services, in this order.
2. Delete the old CSD files.

3. Download the new CSD files.

   The default CSD location is /opt/cloudera/csd, but you can configure that location from Cloudera Manager Administration | Settings | Local Descriptor Repository Path.

   Ensure that you maintain the appropriate file ownership and access attributes and SELinux permissions if needed.

4. Download the new CFM parcel and .sha checksums file appropriate for your operating system.

   The default parcel location is /opt/cloudera/parcel-repo/.

   Ensure that you maintain the appropriate file ownership and access attributes and SELinux permissions if needed.

5. Restart the cloudera-scm-server service:

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

6. In Cloudera Manager, from the **Parcels** page, distribute and activate the CFM 2.1.6 parcel.

   After clicking Activate, the Activate CFM <version> on <cluster-name> pop-up displays. Click Activate Only, and then OK.

7. Restart Cloudera Management Service.

8. Restart NiFi and NiFi Registry and deploy the client configurations.

9. Optionally, to clean up, remove the previous parcels from the host.

   a) From the Parcel menu, go to the older CFM parcel.
   b) Select Remove From Host.
   c) Select Delete.

10. From the Ranger UI, NiFi service controller policy:

   a) Add the nifi user to the policy with READ permissions.
   b) Verify the nifi group is set in the policy.