

Flow Management Overview

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What is Apache NiFi?

Cloudera Flow Management (CFM) is a no-code data ingestion and management solution powered by Apache NiFi.

CFM includes two primary components, NiFi and NiFi Registry. NiFi serves as the core data ingestion engine, with a wide range of processors, facilitating seamless connectivity, transformation, and content routing. It enables easy data ingestion and movement between CDP services, as well as 3rd party cloud services. NiFi has a no-code graphical user interface and offers a user-friendly environment to design and manage data flows.

For more information about the fundamental concepts behind NiFi, see the *Apache NiFi Overview* available in the Apache NiFi documentation.



Important:

The Apache NiFi documentation is available both online and within the NiFi user interface (UI). The online documentation consistently reflects the latest NiFi version. If you are using an earlier NiFi version, content differences may exist between the latest documentation and the version you would need. You can access the documentation specific to your NiFi version directly from the NiFi UI:

1. Launch the NiFi UI.
2. From the Global Menu, select `Help Documentation`.

Related Information

[Apache NiFi Overview](#)

What is Apache NiFi Registry?

Cloudera Flow Management (CFM) is a no-code data ingestion and management solution powered by Apache NiFi.

CFM includes two primary components, NiFi and NiFi Registry. NiFi Registry, a companion to Apache NiFi, enables DevOps style development and deployment of flow files. It also supports flow versioning, promoting flows from one environment into another, and flow deployment. It is automatically set up when you create the Flow Management cluster and it serves as a centralized hub for managing your versioned data flows.

For more information about the fundamental concepts behind NiFi Registry, see the *Getting Started with Apache NiFi Registry* guide in the Apache NiFi Registry documentation.



Important:

The Apache NiFi Registry documentation is available both online and within the NiFi Registry user interface (UI). The online documentation consistently reflects the latest NiFi Registry version. If you are using an earlier NiFi Registry version, content differences may exist between the latest documentation and the version you would need. You can access the documentation specific to your NiFi Registry version directly from the NiFi Registry UI:

1. Launch the NiFi Registry UI.
2. From the Global Menu, select `Help Documentation`.

Related Information

[Getting Started with Apache NiFi Registry](#)

Cloudera Manager integration

The NiFi service of Cloudera Flow Management (CFM) is integrated with Cloudera Manager on CDP Private Cloud Base.

Cloudera Manager monitoring

Cloudera Manager is retrieving monitoring data from NiFi by calling the below endpoint:

```
/nifi-api/flow/metrics/json?rootFieldName=beans&sampleName=.*_jvm_.*&sampleLabelValue=RootProcessGroup
```

Metrics and graphs for the NiFi service are available starting with version CFM 2.1.4 and it requires Cloudera Manager 7.4.5 or higher.

This endpoint is called by the Cloudera Manager agent running on each NiFi node and the identity of the node is used to make the call. If Ranger is used for authorization, the calls are authorized as the nodes belong to the nifi group.

Cloudera Manager alerting

Multiple health checks are configured out of the box for the NiFi service in Cloudera Manager:

- **NiFi node connection**

It checks if the NiFi node is disconnected or not from the NiFi cluster. This can help to detect cluster instability in case the NiFi node is up and running but the node is not part of the NiFi cluster. The check executes the NiFi CLI `get -nodes` command on each NiFi node, which calls the corresponding NiFi API. If Ranger is used for authorization, the health check is authorized as the nodes belong to the nifi group.

- **NiFi Content repository usage**

It is used to check how much disk space is used on the Content repository.

- **NiFi Provenance repository usage**

It is used to check how much disk space is used on the Provenance repository.

- **NiFi FlowFile repository usage**

It is used to check how much disk space is used on the FlowFile repository.