Cloudera Flow Management Operator for Kubernetes 2.11.0

CFM Operator Release Notes

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What's new

Learn about the new features and notable changes throughout releases of Cloudera Flow Management Operator for Kubernetes.

Release 3.0.0

Learn about the new features and notable changes in release 3.0.0 of Cloudera Flow Management Operator for Kubernetes.

New features

User

This release introduces a new Custom Resource Definition (CRD) that represents a NiFi user and allows you to define a user identity and associated access policies.

Fixed issues

Lost flow during zero leader scale up

If a NiFi cluster lost all viable leaders during scale up (usually a single node cluster scaling to two nodes), the new Node would begin waiting for leader election, eventually time out, and declare itself the leader with an empty flow definition. When the old leader finally recovered, it would take the empty flow of the leader, assuming it had no data in queues. Cloudera Flow Management Operator for Kubernetes now temporarily reverts the scale up if there is no viable leader at any point in the scale up process.

Release 2.11.0

Learn about the new features and notable changes in release 2.11.0 of Cloudera Flow Management Operator for Kubernetes.

New features

NifiRegistryBinding

Connect a NiFi and NiFi Registry instance using the NifiRegistryBinding custom resource.

Initial Admin Canvas Access Policies

The initial admin user specified in the NiFi custom resource's spec.security.initialAdminIdentity field now has immediate access to the NiFi canvas on first startup, making getting up and running with a new NiFi cluster much faster.

Fixed issues

OOM Recovery did not maintain QoS of Pods

OOM Recovery would increase resource limits but not requests, resulting in a changed quality of service of Pods, i.e. changing from Guaranteed (request == limit) to Burstable (request < limit).

Operational Changes

cfm-operator NiFi User

A default 'cfm-operator.cfm-operator-system.svc' user was added to give Cloudera Flow Management - Kubernetes Operator the permissions it needs to manage the NiFi cluster. Do not remove this user or any of its permissions, as it will render the operator unable to manage that NiFi Cluster.

Release 2.10.0

Learn about the new features and notable changes in release 2.10.0 of Cloudera Flow Management Operator for Kubernetes.

New features

Cluster scheduling

The NiFi custom resource now contains a schedule spec that can be used to define the times during which the NiFi cluster should be running.

Security providers

In order to support FIPS compliant operation, a method of providing and declaring additional Java security providers, such as CryptoComply for Java and Bouncy Castle, has been added to the NiFi spec.

OIDC authentication

Support for OpenID Connect authentication has been added to the NiFi Registry spec.

Out of memory (OOM) recovery

An OOM Recovery function has been added to the NiFi controller. When configured, the CFM Operator will detect OOM events in NiFi and increase the memory of the Pod by a configurable step.

Additional proxy hosts

A NiFi spec field has been added such that multiple hostnames can be provided to NiFi. This allows configuration of alternate DNS names for the NiFi service beyond the hostName spec field.

NAR volume providers

Provide NiFi NARs through Kubernetes volumes. NARs can be landed in a networked filesystem or object storage and provided to NiFi by way of a CSI driver, i.e. EFS or S3.

Additional CA bundles reference

Additional CA certificates can now be provided by a Secret or ConfigMap reference instead of in-line in the NiFi spec yaml, greatly reducing file length and improving readability.

Environment variables

An environment variable override has been provided in the NiFi spec. This allows for setting custom environment variables on the NiFi container for use in Flows or Python scripts.

Fixed issues

- This release of Cloudera Flow Management Operator for Kubernetes is shipped with NiFi 1 and 2 versions that contain the remediation for CVE-2025-30065.
- NiFi Registry resources not cleaned up on delete, i.e. PVCs and Certificate Secrets.
- NiFi Registry hostname not added to Node Certificate.
- NiFi Registry users and authorizations incorrectly persisted.
- NiFi not restarting when additional CA bundles are provided.

Older releases

Overview of new features, enhancements, and changed behavior introduced in earlier releases of Cloudera Flow Management Operator for Kubernetes.

Release 2.9.1

Learn about the new features and notable changes in release 2.9.1 of Cloudera Flow Management Operator for Kubernetes.

A Cloudera Flow Management Operator for Kubernetes 2.9.1 bundle for RedHat OpenShift OperatorHub is released. This is not a functional release, deployed images are still at 2.9.0-b96.

Fixed issues

- Cloudera Flow Management Operator for Kubernetes running out of memory when deploying NiFis
- Missing role permissions

Release 2.9.0

Learn about the new features and notable changes in release 2.9.0 of Cloudera Flow Management Operator for Kubernetes.

Improvements

- Cluster domains other than the default 'cluster.local' are now supported.
- Kubernetes replaced ZooKeeper as the default state management and leader election option.
- JVM memory settings are now calculated based on Pod memory.
- A NiFi CR config for Single User Authentication is now available.
- Pod and Node affinity are now configurable.
- The cfmctl CLI utility lists resources that block uninstallation of a cluster.

Fixed issues

- Node Cert alt names for proper SNI resolution
- NiFi Registry StatefulSet not updated on spec change
- OIDC did not use NiFi truststore
- CFM Operator continually overwriting default sensitive properties key
- Incorrect port configuration for non secure NiFi

Release 2.8.0

Learn about the new features and notable changes in release 2.8.0 of Cloudera Flow Management Operator for Kubernetes.

Cloudera Flow Management Operator for Kubernetes 2.8.0 is the first release of the CFM Kubernetes operator, which provides a way to deploy, manage, and operate NiFi clusters on Kubernetes application platforms. This release comes with container images based on Apache NiFi 1.25 and Apache NiFi 2.0 (milestone release). To learn more about the Cloudera Flow Management Operator for Kubernetes and its typical deployment architecture, see the Cloudera Flow Management Operator for Kubernetes Overview. To get started with installing the operator, see Installation overview.

Apache Parquet CVE-2025-30065

A critical vulnerability (CVE-2025-30065) in Apache Parquet's parquet-avro module allows arbitrary code execution through schema manipulation and crafted files. Cloudera advises upgrading to supported versions with fixes once they become available and implementing mitigations in the meantime.

Background:

On April 1, 2025, a critical vulnerability in the parquet-avro module of Apache Parquet (CVE-2025-30065, CVSS score 10.0) was announced.

Cloudera has determined the list of affected products, and is issuing this TSB to provide details of remediation for affected versions.

Upgraded versions are being released for all currently affected supported releases of Cloudera products. Customers using older versions are advised to upgrade to a supported release that has the remediation, once it becomes available.

Addressed in release/refresh/patch:

Upgrade your NiFi clusters to one of the NiFi Runtime versions that contain the fix:

- 1.28.0 or higher
- 1.27.0.2.3.14.2-2
- 1.25.0.2.3.13.2-3
- 1.24.0.2.3.12.4-4
- 1.23.2.2.3.11.1-4
- 1.21.0.2.3.9.3-5
- 1.20.0.2.3.8.3-3

For more information on upgrading a NiFi cluster to a newer Runtime version, see Configuring NiFi image.

For the latest updates on this issue, see the corresponding Knowledge article.

Known issues

Learn about the known issues in this release of Cloudera Flow Management Operator for Kubernetes

CDPDFX-10225: Cloudera Flow Management Operator for Kubernetes crashes once when creating a NiFi Registry (Standalone)

When first creating a NifiRegistry resource, the Cloudera Flow Management Operator for Kubernetes may crash once before recovering. No impact to functionality.

None.

Supported component versions

Cloudera Flow Management Operator for Kubernetes components and their versions delivered in this release of the product.

Table 1: Cloudera Flow Management Operator for Kubernetes component versions

Component	Version
Cloudera Flow Management Operator for Kubernetes and cfmctl	3.0.0
NiFi	1.28.1 /2.6.0
NiFi Registry	1.28.1/2.6.0

System requirements

To install and use Cloudera Flow Management Operator for Kubernetes and its components, your Kubernetes cluster environment must meet the following system requirements and prerequisites.

- Kubernetes cluster
  - Version 1.23 or later
  - OpenShift 4.10 or later

  

  Note: Cloudera Flow Management Operator for Kubernetes complies with Cloud Native Computing Foundation (CNCF) standards and is compatible with CNCF-compliant Kubernetes distributions. For supporting your specific Kubernetes distribution, contact Cloudera.
- Administrative rights on the Kubernetes cluster
- Access to kubectl or oc, configured to connect to your running cluster
- Access to helm
- cert-manager installed on the Kubernetes cluster
- Log collection enabled for the Kubernetes cluster
- Cloudera requires that the logs of Cloudera Flow Management Operator for Kubernetes components are stored long term for diagnostic and supportability purposes.
- Persistent storage class configured on the Kubernetes cluster that satisfies the durability and low-latency requirements for operating NiFi. The ideal storage class configuration can vary depending on the environment and use case, and it is determined by the Kubernetes platform where the product is deployed.
- (Optional): Prometheus installation running in the same Kubernetes cluster where you install Cloudera Flow Management Operator for Kubernetes. Prometheus is used for collecting and monitoring NiFi metrics.