

Cloudera Streams Messaging Operator 1.1.0

Release Notes

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Release notes

Learn about the new features, improvements, known and fixed issues, limitations, and unsupported features in this release of CSM Operator.

What's New

Learn about the new features and notable changes in this release of CSM Operator.

Rebase on Strimzi 0.41.0

This release of CSM Operator is based on Strimzi 0.41.0. For more information, see the [Strimzi 0.41.0 Release Notes](#).

Kafka Connect support

You can now deploy Kafka Connect clusters and Kafka connectors using `KafkaConnect` and `KafkaConnector` resources. For more information, see [Deploying Kafka Connect clusters](#).

Kafka replication support

You can now set up data replication between Kafka clusters using CSM Operator.

Replication of Kafka data is achieved by manually deploying Kafka Connect clusters and various replication connectors. This type replication setup is referred to as **Kafka Connect-based** replication. Kafka Connect-based replication does not involve the use of MirrorMaker 2 or the `KafkaMirrorMaker2` resource shipped as part of Strimzi.

For more information, see [Replication overview](#).

Fixed Issues

Learn what issues are fixed in this release of CSM Operator.

CSMDS-644: Kafka CLI commands fail with a TLS handshake error when using `kafka_shell.sh`

The `kafka_shell.sh` tool no longer fails with a TLS handshake error when an mTLS listener is configured for the Kafka cluster targeted by the tool.

CSMDS-721: Some alerts are triggered when deploying the `prometheus-rules.yaml` example

False positive results are no longer triggered when deploying the `prometheus-rules.yaml` example. The pod selector from the `KafkaBrokerContainersDown` rule is removed. The `BridgeContainersDown`,

`EntityOperatorTlsSidecarContainerDown`, and `MirrorMakerContainerDown` alerts are deleted.

Known Issues

Learn about the known issues in this release of CSM Operator.

CSMDS-334: ZooKeeper pods are running but Kafka pods are not created

Under certain circumstances, ZooKeeper pods might not be able to form a quorum. In a case like this, the creation of the Kafka cluster gets stuck in a state where ZooKeeper pods are running, but Kafka pods are not created.

If you encounter this issue, at least one of the ZooKeeper pods logs a WARN entry similar to the following:

```
2024-02-23 18:45:00,311 WARN Unexpected exception (org.apache.zoo
keeper.server.quorum.QuorumPeer) [QuorumPeer[myid=3](plain=127.
0.0.1:12181)(secure=[0:0:0:0:0:0:0:0]:2181)]
java.lang.InterruptedException: Timeout while waiting for epoch
from quorum
    at org.apache.zookeeper.server.quorum.Leader.getEpochToPropose
(Leader.java:1443)
    at org.apache.zookeeper.server.quorum.Leader.lead(Leader.java:60
6)
    at org.apache.zookeeper.server.quorum.QuorumPeer.run(QuorumPeer.
java:1552)
```

This is caused by a race condition issue in ZooKeeper. ZooKeeper is unable to recover from this state automatically.

Delete the ZooKeeper pods that are unable to form a quorum.

```
kubectl delete pod [***ZOOKEEPER POD***] -n [***NAMESPACE***]
```

The Cluster Operator automatically recreates the ZooKeeper pods that are deleted. The newly created ZooKeeper pods are less likely to encounter the issue.

Unsupported features

Learn what features are unsupported in this release of CSM Operator.

The following Strimzi features are unsupported in CSM Operator:

- Kafka MirrorMaker
- Kafka MirrorMaker 2
- Kafka Bridge
- Kafka cluster creation without using `KafkaNodePool` resources

Component versions

CSM Operator components and their versions shipped in this release of CSM Operator.

Table 1: CSM Operator component versions

Component	Version
Cruise Control	2.5.137.1.1.0-b79
Kafka	3.7.0.1.1.0-b79
Strimzi	0.41.0.1.1.0-b79
ZooKeeper	3.8.1.7.2.18.200-37

Supported Kafka versions

CSM Operator supports the following Kafka versions:

Table 2: Supported Kafka versions

Version	Component/Resource	Kafka Protocol version
3.7.0.1.1 (latest and default)	<ul style="list-style-type: none"> Kafka – <code>Kafka</code> resources Kafka Connect – <code>KafkaConnect</code> resources 	3.7
3.7.0.1.0	<ul style="list-style-type: none"> Kafka – <code>Kafka</code> resources 	3.7

Kafka versions shipped in CSM Operator are specific to Cloudera. You specify them in the `spec.version` property of cluster resources like `Kafka` and `KafkaConnect` resources.

The latest version is the current and latest supported version. This version is used by default to deploy clusters if an explicit version is not provided in your resource configuration. This version is also the version recommended by Cloudera. All other versions listed here are Kafka versions shipped in previous releases of CSM Operator that are also supported.

The Kafka version is made up of two parts. The first three digits specify the Apache Kafka version. The digits following the Apache Kafka version specify the major and minor version of CSM Operator. When deploying a cluster, you must use the versions listed here. Specifying upstream versions is not supported.

The Kafka protocol version is relevant for upgrades. Depending on your specific upgrade path, explicitly setting the protocol version might be necessary.



Note: Kafka Connect also uses the Kafka version. However, Kafka Connect is only supported starting with CSM Operator 1.1.

System requirements

CSM Operator requires a Kubernetes cluster environment that meets the following system requirements and prerequisites. Ensure that you meet these requirements, otherwise, you will not be able to install and use CSM Operator or its components.

- A Kubernetes 1.23 or later cluster:
 - OpenShift 4.10 or later.
 - RKE2 (Rancher Kubernetes Engine 2) 1.23 or later.



Note: Cloudera recommends using Rancher with RKE2.

- Administrative rights on the Kubernetes cluster.
- Access to `kubectl` or `oc`. These command line tools must be configured to connect to your running cluster.
- Access to `helm`.
- Log collection is enabled for the Kubernetes cluster. Cloudera requires that the logs of CSM Operator components are stored long term for diagnostic and supportability purposes. Review [Log collection](#).
- A persistent storage class configured on the Kubernetes cluster that satisfies the durability and low-latency requirements for operating Kafka. The ideal storage class configuration can vary per environment and use-case and is determined by the Kubernetes platform where CSM Operator is deployed.
- A [Prometheus](#) installation running in the same Kubernetes cluster where you install CSM Operator is recommended. Prometheus is used for collecting and monitoring Kafka and Strimzi metrics.