



Red Hat Data Grid 8.5

Data Grid Operator 8.5 Release Notes

Get release information for Data Grid Operator 8.5

Red Hat Data Grid 8.5 Data Grid Operator 8.5 Release Notes

Get release information for Data Grid Operator 8.5

Legal Notice

Copyright © 2024 Red Hat, Inc.

The text of and illustrations in this document are licensed by Red Hat under a Creative Commons Attribution–Share Alike 3.0 Unported license ("CC-BY-SA"). An explanation of CC-BY-SA is available at

<http://creativecommons.org/licenses/by-sa/3.0/>

. In accordance with CC-BY-SA, if you distribute this document or an adaptation of it, you must provide the URL for the original version.

Red Hat, as the licensor of this document, waives the right to enforce, and agrees not to assert, Section 4d of CC-BY-SA to the fullest extent permitted by applicable law.

Red Hat, Red Hat Enterprise Linux, the Shadowman logo, the Red Hat logo, JBoss, OpenShift, Fedora, the Infinity logo, and RHCE are trademarks of Red Hat, Inc., registered in the United States and other countries.

Linux[®] is the registered trademark of Linus Torvalds in the United States and other countries.

Java[®] is a registered trademark of Oracle and/or its affiliates.

XFS[®] is a trademark of Silicon Graphics International Corp. or its subsidiaries in the United States and/or other countries.

MySQL[®] is a registered trademark of MySQL AB in the United States, the European Union and other countries.

Node.js[®] is an official trademark of Joyent. Red Hat is not formally related to or endorsed by the official Joyent Node.js open source or commercial project.

The OpenStack[®] Word Mark and OpenStack logo are either registered trademarks/service marks or trademarks/service marks of the OpenStack Foundation, in the United States and other countries and are used with the OpenStack Foundation's permission. We are not affiliated with, endorsed or sponsored by the OpenStack Foundation, or the OpenStack community.

All other trademarks are the property of their respective owners.

Abstract

Find out about features and enhancements in Data Grid Operator 8.5 as well as known and resolved issues.

Table of Contents

RED HAT DATA GRID	3
DATA GRID DOCUMENTATION	4
DATA GRID DOWNLOADS	5
MAKING OPEN SOURCE MORE INCLUSIVE	6
CHAPTER 1. DATA GRID OPERATOR 8.5	7
1.1. DATA GRID OPERATOR 8.5.3	7
Automatic reloading of SSL/TLS certificates	7
1.2. DATA GRID OPERATOR 8.5.0	7
Ability to configure InitContainer resource	7
Ability to define Batch resource CPU and memory request/limits	7
TLSv1.3 encryption for cross-site encryption	7
Ability to define TopologyPodConstraints and Tolerations in StatefulSet	7
Cache service type removed	8
Cloud events removed	8
1.3. DATA GRID OPERATOR 8.5.X RELEASE INFORMATION	8
CHAPTER 2. KNOWN AND FIXED ISSUES	10
2.1. KNOWN ISSUES WITH DATA GRID OPERATOR DEPLOYMENTS	10
2.2. FIXED IN DATA GRID OPERATOR 8.5.3	10
2.3. FIXED IN DATA GRID OPERATOR 8.5.0	10
CHAPTER 3. DATA GRID ON OPENSIFT	11
3.1. DATA GRID 8.5 IMAGES	11
Custom Data Grid Deployments	11
3.2. EMBEDDED CACHES ON OPENSIFT	11

RED HAT DATA GRID

Data Grid is a high-performance, distributed in-memory data store.

Schemaless data structure

Flexibility to store different objects as key-value pairs.

Grid-based data storage

Designed to distribute and replicate data across clusters.

Elastic scaling

Dynamically adjust the number of nodes to meet demand without service disruption.

Data interoperability

Store, retrieve, and query data in the grid from different endpoints.

DATA GRID DOCUMENTATION

Documentation for Data Grid is available on the Red Hat customer portal.

- [Data Grid 8.5 Documentation](#)
- [Data Grid 8.5 Component Details](#)
- [Supported Configurations for Data Grid 8.5](#)
- [Data Grid 8 Feature Support](#)
- [Data Grid Deprecated Features and Functionality](#)

DATA GRID DOWNLOADS

Access the [Data Grid Software Downloads](#) on the Red Hat customer portal.



NOTE

You must have a Red Hat account to access and download Data Grid software.

MAKING OPEN SOURCE MORE INCLUSIVE

Red Hat is committed to replacing problematic language in our code, documentation, and web properties. We are beginning with these four terms: master, slave, blacklist, and whitelist. Because of the enormity of this endeavor, these changes will be implemented gradually over several upcoming releases. For more details, see [our CTO Chris Wright's message](#).

CHAPTER 1. DATA GRID OPERATOR 8.5

Get version details for Data Grid Operator 8.5 and information about issues.

1.1. DATA GRID OPERATOR 8.5.3

What's new in 8.5.3.

Automatic reloading of SSL/TLS certificates

Starting with Data Grid 8.5.1, Data Grid monitors keystore files for changes and automatically reloads them, without requiring a server or client restart, when certificates are renewed.

Therefore, with Data Grid Operator 8.5.3, **StatefulSet** rolling update is not triggered on key or truststore update in a server when managing Data Grid 8.5.1 Operands because it is not required.

1.2. DATA GRID OPERATOR 8.5.0

What's new in 8.5.0.

Ability to configure **InitContainer** resource

You can now configure the **InitContainer** resource. Previously, if a **LimitRange** was in effect for the deployment namespace, then the **InitContainer** would be restricted to these resource values causing issues such as `OutOfMemoryError`. You can configure **InitContainer** resource configuration in the Data Grid CR as follows:

```
spec:
  dependencies:
    initContainer:
      cpu: "2000m:1000m"
      memory: "2Gi:1Gi"
```

Ability to define **Batch** resource CPU and memory request/limits

You can now define CPU and memory request/limits for Batch Job created by the Operator. You can define the resource request/limits in the Batch CR as follows:

```
apiVersion: infinispn.org/v2alpha1
kind: Batch
metadata:
  name: mybatch
spec:
  cluster: infinispn
  configMap: mybatch-config-map
  container:
    cpu: "2000m:1000m"
    memory: "2Gi:1Gi"
```

TLsv1.3 encryption for cross-site encryption

The default encryption protocol for cross-site is now TLsv1.3 instead of TLsv1.2.

Ability to define **TopologyPodConstraints** and **Tolerations** in **StatefulSet**

You can now configure more advanced high availability configurations by defining **TopologyPodConstraints** and **Tolerations** in **spec.statefulSet**.

Example

```

kind: Infinispan
...
spec:
  scheduling:
    affinity:
      ...
  tolerations:
    ...
  topologySpreadConstraints:
    ...

```

Cache service type removed

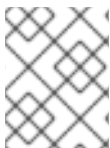
RHDG 8.5 removes the Cache service type cache. Instead, use the **DataGrid** service type to automate complex operations such as cluster upgrades and data migration.

Cloud events removed

RHDG 8.5 removes cloud events integration.

1.3. DATA GRID OPERATOR 8.5.X RELEASE INFORMATION

The following table provides detailed version information for Data Grid Operator.



NOTE

Data Grid Operator versions do not always directly correspond to Data Grid versions because the release schedule is different.

Data Grid Operator version	Data Grid version	Operand versions	Features
8.5.3	8.5.1	8.5.1-1 8.5.0-3 8.5.0-2 8.5.0-1 8.4.8-1 8.4.7-1 8.4.6-2 8.4.6-1 8.4.5-2 8.4.5-1 8.4.4-1 8.4.3-2 8.4.3-1 8.4.2-1 8.4.1-3 8.4.1-2 8.4.1-1 8.4.0-2 8.4.0-1	Includes several bug fixes.

8.5.2	8.5.0	8.5.0-3 8.5.0-2 8.5.0-1 8.4.8-1 8.4.7-1 8.4.6-2 8.4.6-1 8.4.5-2 8.4.5-1 8.4.4-1 8.4.3-2 8.4.3-1 8.4.2-1 8.4.1-3 8.4.1-2 8.4.1-1 8.4.0-2 8.4.0-1	Includes several bug fixes.
8.5.1	8.5.0	8.5.0-2 8.5.0-1 8.4.8-1 8.4.7-1 8.4.6-2 8.4.6-1 8.4.5-2 8.4.5-1 8.4.4-1 8.4.3-2 8.4.3-1 8.4.2-1 8.4.1-3 8.4.1-2 8.4.1-1 8.4.0-2 8.4.0-1	Includes several bug fixes.
8.5.0	8.5.0	8.5.0-1 8.4.8-1 8.4.7-1 8.4.6-2 8.4.6-1 8.4.5-2 8.4.5-1 8.4.4-1 8.4.3-2 8.4.3-1 8.4.2-1 8.4.1-3 8.4.1-2 8.4.1-1 8.4.0-2 8.4.0-1	Includes several bug fixes.

CHAPTER 2. KNOWN AND FIXED ISSUES

Learn about known issues for Data Grid Operator and find out which issues are fixed.

2.1. KNOWN ISSUES WITH DATA GRID OPERATOR DEPLOYMENTS

This release does not include any known issues that affect Data Grid clusters that you manage with Data Grid Operator. For complete details about Data Grid, see the [Data Grid 8.5 release notes](#).

2.2. FIXED IN DATA GRID OPERATOR 8.5.3

Data Grid Operator 8.5.3 includes the following notable fixes:

- [JDG-6764](#) Updates to spec.image on existing Infinispan CR have no effect

2.3. FIXED IN DATA GRID OPERATOR 8.5.0

Data Grid Operator 8.5.0 includes the following notable fixes:

- [JDG-5000](#) Gossip router pod generates lot of SSLHandshake warn messages
- [JDG-7063](#) Nil pointer error on upgrade from dropped Operand version
- [JDG-7032](#) Operator generates truststore from certificates using outdated algorithms
- [JDG-7093](#) Operator may not reconcile Data Grid cluster properly after upgrade
- [JDG-5989](#) Operator Configuration spec.autoscale should not be possible with a Data Grid service

CHAPTER 3. DATA GRID ON OPENSHIFT

3.1. DATA GRID 8.5 IMAGES

Data Grid 8.5 includes two container images, the Data Grid Operator image and Data Grid Server image.

Data Grid images are hosted on the Red Hat Container Registry, where you can find health indexes for the images along with information about each tagged version.

Custom Data Grid Deployments

Red Hat does not support customization of any 8.5 images from the Red Hat Container Registry through the Source-to-Image (S2I) process or **ConfigMap** API.

As a result it is not possible to use custom:

- Discovery protocols
- JGroups **SYM_ENCRYPT** or **ASYM_ENCRYPT** encryption mechanisms

Additional resources

- [Data Grid Container Images](#)

3.2. EMBEDDED CACHES ON OPENSHIFT

Using embedded Data Grid caches in applications running on OpenShift, which was referred to as Library Mode in previous releases, is intended for specific uses only:

- Using local or distributed caching in custom Java applications to retain full control of the cache lifecycle. Additionally, when using features that are available only with embedded Data Grid such as distributed streams.
- Reducing network latency to improve the speed of cache operations.

The Hot Rod protocol provides near-cache capabilities that achieve equivalent performance to a standard client-server architecture.

Requirements

Embedding Data Grid in applications running on OpenShift requires you to use a discovery mechanism so Data Grid nodes can form clusters to replicate and distribute data.

Red Hat supports only `DNS_PING` as the cluster discovery mechanism.

`DNS_PING` exposes a port named **ping** that Data Grid nodes use to perform discovery and join clusters. TCP is the only supported protocol for the **ping** port, as in the following example for a pod on OpenShift:

```
spec:
  ...
  ports:
    - name: ping
```

port: **8888**
protocol: TCP
targetPort: **8888**

Limitations

Embedding Data Grid in applications running on OpenShift also has some specific limitations:

- Persistent cache stores are not currently supported.
- UDP is not supported with embedded Data Grid.

Custom caching services

Red Hat highly discourages embedding Data Grid to build custom caching servers to handle remote client requests. To benefit from regular, automatic updates with performance improvements and fix security issues, you should create Data Grid clusters with the Data Grid Operator instead.

Additional resources

- [Embedding Data Grid in Java Applications](#)