



Red Hat Fuse 7.10

Release Notes for Red Hat Fuse 7.10

What's new in Red Hat Fuse

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Abstract

These notes provide an overview of the changes between Red Hat Fuse releases.

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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. FUSE 7.10 PRODUCT OVERVIEW

1.1. FUSE DISTRIBUTIONS

Fuse 7.10 is provided in the form of three different distributions, as follows:

Fuse standalone

The classic distribution of Fuse, supported on multiple operating systems. This distribution is supported for the following container types:

- Apache Karaf
- JBoss Enterprise Application Platform (EAP)
- Spring Boot

Fuse on OpenShift

The distribution of Fuse for running integration applications on OpenShift (supported on the Red Hat Enterprise Linux operating system). In this case, the supported container types are provided in the form of docker-formatted container images:

- Java image (for Spring Boot)
- Apache Karaf image
- JBoss EAP image

Fuse Online

The distribution of Fuse for non-expert integrators with a simplified workflow accessed through a browser based UI. This distribution is available for the following kinds of deployment:

- On an OpenShift Dedicated (OSD) cluster.
- For installation on an on-premises OpenShift cluster

1.2. NEW FEATURES

Fuse 7.10 includes several major component upgrades and a large selection of new features. For details, consult the *new features* sections for each of the Fuse distributions:

- [New features for Fuse Online](#)
- [New features for Fuse on OpenShift](#)
- [New features for Fuse standalone](#)

1.3. FUSE 7.10.1 NOTES

For **Fuse on OpenShift 7.10.1**, the BASEURL for image streams is

https://raw.githubusercontent.com/jboss-fuse/application-templates/application-templates-2.1.0.fuse-sb2-7_10_1-00010-redhat-00001.

For **Fuse Online**, to upgrade from Fuse Online 7.9.x to 7.10.1, follow the instructions in [Section 2.4, “Upgrading from Fuse Online 7.9.x to 7.10.x requires manual upgrade steps”](#).

For **Fuse standalone**, set the 7.10.1 **fuse.version** property to the corresponding BOM version as listed in [Section 4.4.2, “BOM File for Fuse 7.10.1”](#).

See also [Section 8.4, “Bugs resolved in Fuse 7.10, 7.10.1, and 7.10.2”](#).

1.4. FUSE 7.10.2 NOTES

For **Fuse on OpenShift** 7.10.2, the BASEURL for image streams is https://raw.githubusercontent.com/jboss-fuse/application-templates/application-templates-2.1.0/fuse-sb2-7_10_2-00001-redhat-00001.

For **Fuse Online**, to upgrade from Fuse Online 7.9.x to 7.10.2, follow the instructions in [Section 2.4, “Upgrading from Fuse Online 7.9.x to 7.10.x requires manual upgrade steps”](#).

For **Fuse standalone**, set the 7.10.2 **fuse.version** property to the corresponding BOM version as listed in [Section 4.4.1, “BOM File for Fuse 7.10.2”](#).

See also [Section 8.4, “Bugs resolved in Fuse 7.10, 7.10.1, and 7.10.2”](#).

1.5. IMPORTANT NOTES

Fuse 7.10 includes a fix for the Log4j 2.x security issue, [CVE-2021-44228](#) (popularly known as Log4Shell).

Fuse 7.10.1 also includes the following fixes for the Log4j 2.x security issue:

- [CVE-2021-4104](#)
- [CVE-2022-23307](#)
- [CVE-2022-23302](#)
- [CVE-2022-23305](#)

Fuse 7.10.2 includes a fix for the Spring MVC security issue, [CVE-2022-22965](#) (popularly known as Spring4Shell).

1.6. SUPPORTED CONFIGURATIONS



IMPORTANT

For running Fuse in Apache Karaf, we recommend OpenJDK 8u282 or OpenJDK 8u302. Do not use OpenJDK 8u292, which has a known issue affecting the credential store (see [ENTESB-16417](#)). OracleJDK 1.8.0_291 is also affected by this issue.

For information about supported configurations, standards, and components in version 7.10, see the following Customer Portal articles:

- [Red Hat Fuse Supported Configurations](#)
- [Red Hat Fuse Supported Standards](#)

- [Red Hat Fuse Component Details](#)

CHAPTER 2. FUSE ONLINE

Fuse Online provides a web browser interface that lets a business expert integrate two or more different applications or services without writing code. It also provides features that allow the addition of code if it is needed for complex use cases.

Fuse Online runs an integration on OpenShift as a Spring Boot application that uses Apache Camel.

2.1. ABOUT FUSE ONLINE DISTRIBUTIONS

Fuse Online is Red Hat's web-based integration platform. [Syndesis](#) is the open source project for Fuse Online. Fuse Online runs in these OpenShift environments:

Host Environment	Installation
OpenShift Dedicated	Red Hat installs and provisions Fuse Online on Red Hat infrastructure.
OpenShift Container Platform	Customer installs and manages.

2.2. NEW FEATURES IN FUSE ONLINE 7.10

Fuse Online 7.10 provides the following new features:

- **Support for connecting to Red Hat Managed Kafka**
 To support connecting to Red Hat Managed Kafka, the Kafka Message Broker connector includes the following fields:
 - Security Protocol
 - SASL Mechanism
 - Username
 - Password
 - SASL Login Callback Handler Class
 - OAuth Token Endpoint URI
 For more information, see [Chapter 15, "Connecting to Kafka"](#) in *Connecting Fuse Online to Applications and Services*.
- **Integration labels**
 When you save an integration, you can apply one or more labels to it. A label is a key-value pair tag that you can apply to an integration (or other OpenShift resource) for later filtering and selecting in OpenShift. For example, an OpenShift admin user can filter the list of running pods or deployments by label.
- **Integration environment variables**
 Optionally, when you save an integration, you can set one or more environment variables that Fuse Online applies to the integration Pod. You can use these environment variables to set Spring Boot configuration options, for example, to set **SERVER_MAX_HTTP_HEADER_SIZE**. Existing environment variables set manually are preserved.

Note that setting these environment variables in Fuse Online when you save an integration does not change or impact any other environment settings set manually, for example, through the OpenShift web console interface.

- **Maven mirror setting**

You can specify the Maven repository that you want Fuse Online to use for accessing Maven artifacts when it builds integrations. In the Syndesis custom resource, specify the Maven repository as the value of the **components:server:features:maven:mirror** setting.

2.3. CHANGES IN FUSE ONLINE 7.10

Fuse Online 7.10 changes Fuse Online 7.9 features as follows:

- **To enable the sample Postgres database, use the `todo addon` option**

In previous releases, if you want to include a sample database and sample database connector in your Fuse Online installation, set the **demoData** option in the Fuse Online custom resource. Starting with Fuse Online 7.10, you enable the sample database and connector by setting the **todo addon** option, which also includes the sample Todo app for testing integrations.

- **Kafka broker URIs are auto-discovered for AMQ Streams**

If you use AMQ Streams (API versions v1beta1 or v1beta2), when you create a new Kafka Message Broker connection in Fuse Online, the Kafka Broker URI is auto-discovered and shown in the Kafka Broker URI drop-down list.

- **Disconnected environment requires setting environment variables**

For Fuse Online to install and work in a disconnected environment, you must set the following environment variables to **syndesis-oauthproxy**:

- **HTTPS_PROXY**
- **HTTP_PROXY**
- **NO_PROXY**

- **deployIntegrations flag no longer available**

The **deployIntegrations** option in the Fuse Online custom resource that controlled whether integrations were deployed has been removed.

2.4. UPGRADING FROM FUSE ONLINE 7.9.X TO 7.10.X REQUIRES MANUAL UPGRADE STEPS

If you installed Fuse Online 7.9.x and you want to upgrade to Fuse Online 7.10.x, you must first manually upgrade to Fuse Online 7.10.0.

1. In the **Administrator** perspective of the OpenShift Container Platform web console, navigate to **Operators > Installed Operators**.
2. Click the **Red Hat Integration Fuse Online 7.9.3** Operator.
3. Click the **Subscription** tab.
4. Verify that **Update approval** is set to **Manual**:
 - If **Update approval** is set to **Manual**, skip to the next step.

- If **Update approval** is set to **Automatic**:
 - a. Click **Automatic**.
 - b. In the **Change Update Approval Strategy** dialog, select **Manual** and then click **Save**.
- 5. Under **Update channel**, click **7.9.3**.
- 6. For the **Change subscription update channel**, select **7.10.x**.
Note: The **latest**, **candidate**, and **stable** channels are Technology Preview features.
- 7. Under **Upgrade status**, click **Upgrade available**.
- 8. Click **Preview InstallPlan** and then **Approve**.
- 9. Verify that the operator has fully completed the upgrade to Fuse Online 7.10.0:
 - a. Navigate to the **Operators > Installed Operators** page and then click **Red Hat Integration Fuse Online**. The **Operator Details** page opens.
 - b. Select the **Sydnesis** tab. The status for the Fuse Online instance (the default name is **app**) initially shows **Installed** (to indicate that Fuse Online 7.9.3 is installed). It then progresses through several phases (**Installing**, **Starting**, and **Installed**). When it reaches the **Installed** phase again, the upgrade to 7.10.0 is complete.
- 10. Navigate back to the **Operators > Installed Operators** page, and then click **Upgrade available** for the **Red Hat Integration Fuse Online** operator.
- 11. Click **Preview InstallPlan** and then **Approve**.
- 12. Verify that the operator has fully completed the upgrade to Fuse Online 7.10.x:
 - a. Navigate to **Networking > Routes** and then click on the location link for **sydnesis** to open the Fuse Online web console.
 - b. In the upper right corner of the Fuse Online console, click the **?** icon and then select **About**.
 - c. Verify that the **About** page includes **7_10_x** in the version number.

2.5. UPGRADING FUSE ONLINE INTEGRATIONS

To upgrade a Fuse Online environment that is running on OCP on-site, you must update Fuse Online by using the operator and then republish any running integrations as described in [Upgrading Fuse Online](#).

On OCP 4.9, when you upgrade to 7.10 by using the operator, the following warning is displayed during the Fuse Online Operator upgrade process:

W1219 18:38:58.064578 1 warnings.go:70] extensions/v1beta1 Ingress is deprecated in v1.14+, unavailable in v1.22+; use networking.k8s.io/v1 Ingress

This warning appears because clients (that Fuse Online uses for the Kubernetes/OpenShift API initialization code) access a deprecated Ingress version. This warning is *not* an indicator of complete use of deprecated APIs and there is no issue with upgrading to Fuse Online 7.10.

2.6. IMPORTANT NOTES FOR FUSE ONLINE

Important notes for the Fuse 7.10 release of the Fuse Online distribution:

- Fuse Online no longer supports Camel K runtime or the KNative connector.
- When Fuse Online is installed and provisioned on Red Hat infrastructure, the account is limited to a specific number of integrations that can be running at one time. For details, see the pricing plan.
- An OpenAPI schema that you upload to Fuse Online might not define input/output types. When Fuse Online creates a custom API client from an OpenAPI schema that does not specify input/output types then it is not possible to create an integration that maps integration data to fields that the API client can process or from fields that the API client processed. If an integration requires data mapping to or from a custom API, then when you upload the OpenAPI schema, click **Review/Edit** to open API Designer, which is an API editing tool, and add input/output type specifications.
- Since Fuse 7.8, an OpenAPI document that you use for a custom API client connector or for an API provider integration cannot have cyclic schema references. For example, a JSON schema that specifies a request or response body cannot reference itself as a whole nor reference any part of itself through any number of intermediate schemas.
- On OCP 4.9 (or later), the **application-monitoring** project no longer works. It is a prerequisite for monitoring Fuse Online integrations and infrastructure components with Prometheus and Grafana.
To workaround this issue, you can use the [built-in OpenShift monitoring stack](#) (in the **openshift-monitoring** namespace) to use the **openshift-user-workload-monitoring** feature and the **grafana-operator** to use the **ops addon** as described in the following *Adding Fuse Online monitoring resources (Prometheus and Grafana) on OCP 4.9 (or later)* procedure.

2.7. OBTAINING TECHNICAL SUPPORT FOR FUSE ONLINE

To obtain technical support, in the Fuse Online console, in the left navigation panel, click **Support**. Use the **Support** page to download diagnostic information for all integrations or for one or more integrations that you choose. The page also provides a link for opening a support ticket and providing the diagnostic information that you downloaded.

2.8. TECHNOLOGY PREVIEW FEATURES IN FUSE ONLINE

This release includes the Technology Preview features that are listed below.



IMPORTANT

Technology Preview features are not supported with Red Hat production service level agreements (SLAs), might not be functionally complete, and Red Hat does not recommend using them in production. These features provide early access to upcoming product features, enabling customers to test functionality and provide feedback during the development process. For more information, see [Red Hat Technology Preview features support scope](#).

- **Data Mapper supports CSV data**
For any Fuse Online connector that has an action for which you can define a data shape, you now have the option to specify a CSV instance (in addition to the options to specify JSON schema, JSON instance, XML schema, or XML instance). For example, in a Webhook connection, you can specify a CSV file as a data output type for an action.
- **Fuse Online auditing**

Fuse Online supports basic auditing for changes made by any user to the following Fuse Online components:

- **Connections** - The **Name** and any other fields shown on the connector's **Details** page in the Fuse Online web console.
- **Connectors** - The **Name** field.
- **Integrations** - The **Name** field.
- [Conditional expressions for mapping data fields](#)
In the data mapper, you can specify a conditional expression and apply it to a data mapping. For example, a conditional expression can specify evaluation of a source field and how to populate the target field if the source field is empty. The limited set of expressions that you can specify are similar to Microsoft Excel expressions.
- **Document scope for user-defined properties in data mapper**
In the data mapper, you can specify a scope for properties that you define for source and target mappings. In the **Mapping Details** panel, click **Add (+)** next to **Properties**. In the **Create Property** dialog, for the new **Scope** option, you can select the current message header, a message header from a previous step, or **Camel Exchange Property** for Camel-specific properties.
- **For a REST API client that uses OAuth**, when you create an API client connector, you can change the default OAuth2 behavior of connections that you create from that connector. Fuse Online vendor extensions to the OpenAPI specification support the following:
 - Providing client credentials as parameters.
 - Obtaining a new access token based on HTTP response status codes.

CHAPTER 3. FUSE ON OPENSIFT

Fuse on OpenShift enables you to deploy Fuse applications on OpenShift Container Platform.

3.1. SUPPORTED VERSION OF OPENSIFT

For details of the supported version (or versions) of OpenShift Container Platform to use with Fuse on OpenShift, see the [Supported Configurations](#) page.

3.2. SUPPORTED IMAGES

Fuse on OpenShift provides the following Docker-formatted images:

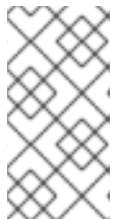
Image	Platform	Supported architectures
fuse7/fuse-java-openshift-rhel8	Spring Boot	AMD64 and Intel 64 (x86_64)
fuse7/fuse-java-openshift-jdk11-rhel8	Spring Boot	AMD64 and Intel 64 (x86_64) IBM Z and LinuxONE (s390x) IBM Power Systems (ppc64le)
fuse7/fuse-karaf-openshift-rhel8	Apache Karaf	AMD64 and Intel 64 (x86_64)
fuse7/fuse-karaf-openshift-jdk11-rhel8	Apache Karaf	AMD64 and Intel 64 (x86_64)
fuse7/fuse-eap-openshift-jdk8-rhel7	Red Hat JBoss Enterprise Application Platform	AMD64 and Intel 64 (x86_64)
fuse7/fuse-eap-openshift-jdk11-rhel8	Red Hat JBoss Enterprise Application Platform	AMD64 and Intel 64 (x86_64)
fuse7/fuse-console-rhel8	Fuse console	AMD64 and Intel 64 (x86_64) IBM Z and LinuxONE (s390x) IBM Power Systems (ppc64le)
fuse7/fuse-console—rhel8-operator	Fuse console operator	AMD64 and Intel 64 (x86_64) IBM Z and LinuxONE (s390x) IBM Power Systems (ppc64le)
fuse7/fuse-apicurito-generator-rhel8	Apicurito REST application generator	AMD64 and Intel 64 (x86_64)
fuse7/fuse-apicurito-rhel8	Apicurito REST API editor	AMD64 and Intel 64 (x86_64)
fuse7/fuse-apicurito-rhel8-operator	API Designer Operator	AMD64 and Intel 64 (x86_64)

3.3. NEW FEATURES IN FUSE 7.10 ON OPENSIFT

Fuse on OpenShift provides following new features in version 7.10:

- Fuse Console performance tuning (OpenShift 4.x only)
You can tune the performance of the Fuse Console by setting any of the **clientBodyBufferSize**, **proxyBuffers**, and **subrequestOutputBufferSize** environment variables.

Note: This feature is not supported on OpenShift 3.11.
- Support for JDK 11
Fuse 7.10 offers support for building the Fuse on OpenShift quickstarts using JDK 11.
- Running quickstarts with **openshift-maven-plugin**
Fuse 7.10 uses new **openshift-maven-plugin** when building and running the Fuse on OpenShift quickstarts with Maven archtypes.
- Support for IBM Power Systems, IBM Z, and LinuxONE
Fuse 7.10 adds support for IBM Power Systems(ppc64le), IBM Z, and LinuxONE (s390x) on Red Hat OpenShift Container Platform 4.9 and later.



NOTE

In Fuse 7.10, installing the Fuse on OpenShift imagestreams and templates on IBM Power Systems, IBM Z, and LinuxONE is **not** supported. Only the components that can be installed with Fuse on OpenShift Operators are supported on IBM Power Systems, IBM Z, and LinuxONE.

3.4. IMPORTANT NOTES

Important notes for the Fuse 7.10 release of the Fuse on OpenShift distribution:

OpenJ9 images for IBM Z and IBM Power Systems are deprecated

OpenJ9 images for IBM Z and IBM Power Systems are deprecated for Fuse 7.10. The OpenJDK11 Builder and Runtime images have been updated to support multiple architectures.

Support for Fuse 7.10 on OpenShift Container Platform (OCP) 4.9

Fuse 7.10 contains updates that enable it to work with OpenShift Container Platform (OCP) 4.9. If you plan to upgrade to OCP 4.9, you must upgrade Fuse to version 7.10 **before** you upgrade OCP to version 4.9. Earlier versions of Fuse (prior to 7.10) do not support OCP 4.9.

Data Virtualization has been removed

Data Virtualization is deprecated since Fuse 7.7 and has been removed from Fuse 7.8.

Spring Boot 1 is has been removed

Spring Boot 1 is deprecated since Fuse 7.7 and has been removed from Fuse 7.8. We recommend that you migrate your Spring Boot applications to Spring Boot 2, following the guidance in the [Spring Boot 2.0 Migration Guide](#).

Fabric8 Maven plugin is removed

Fabric8 Maven plugin is completely removed from Fuse 7.10 and replaced with [OpenShift Maven plugin](#) since Fuse 7.10. Use OpenShift Maven plugin to build and deploy your applications.

Running quickstarts with JDK11

Use the correct JDK11 profile during the compile time if you want to use JDK11 based image at runtime. When building and deploying the quickstarts using JDK11, ensure that you have installed JDK11 on your build machine and then build your quickstarts using the correct JDK11 profile.

The eap-camel-jpa quickstart has been removed

The **eap-camel-jpa** quickstart has been removed from Fuse 7.8 due to an issue with a dependency.

Jolokia not externally accessible on Fuse 7.8

Starting in Fuse 7.8, Jolokia default protocol is switched from HTTP to HTTPS.

CHAPTER 4. FUSE STANDALONE

4.1. SUPPORTED CONTAINERS

Fuse standalone 7.10 is supported on the following runtime containers:

- Spring Boot 2 (standalone)
- Apache Karaf
- Red Hat JBoss Enterprise Application Platform (JBoss EAP)

4.2. NEW FEATURES IN FUSE 7.10

The main new features of Fuse standalone in version 7.10 are:

Java 11 is supported for Apache Karaf

Java 11 is now supported on the Apache Karaf runtime.

4.3. TECHNOLOGY PREVIEW FEATURES

The following features of Fuse standalone are *Technology Preview* only and are not supported in Fuse 7.10:

Saga EIP

The Saga Enterprise Integration Pattern (EIP) is a technology preview feature and features only the *In-Memory* Saga service (which is not suitable for a production environments). The LRA Saga service is *not* supported. For more details, see section [Saga EIP](#) of the "Apache Camel Development Guide".

4.3.1. Fuse Tooling support for Apache Camel

Fuse Tooling provides a cross-platform, cross-IDE approach to Camel application development, with Apache Camel language support extensions or plugins for Visual Studio Code, Eclipse IDE, and Eclipse Che.

Note: These features are already included by default with Fuse Tooling for Red Hat CodeReady Studio.

Visual Studio Code features



NOTE

VS Code Apache Camel extensions are community features. They are not supported by Red Hat.

The [Language Support for Apache Camel](#) extension provides features for Camel URIs, such as the following:

For XML DSL and Java DSL:

- You can navigate to endpoints in the VS Code **Outline** panel and in the **Go > Go to Symbol in File** navigation panel.

- When you type, the editor provides code completion for Camel components, attributes, and the list of attribute values.
- When you hover over a Camel component, the editor shows a brief description of the component (from the [Apache Camel component reference](#)).
- As you edit the file, the editor performs an Apache Camel validation check on the Camel code.
- You can specify a specific Camel Catalog version by selecting **File → Preferences → Settings → Apache Camel Tooling → Camel catalog version**.
- You can use "Quick fix" features to address invalid enum values and unknown Camel URI component properties.

For XML DSL only:

- You can navigate to Camel contexts and routes in the VS Code **Outline** panel and in the **Go > Go to Symbol in File** navigation panel.
- When you type, the editor provides code completion for referenced IDs of **direct**, **direct VM**, **VM** and **SEDA** components.
- You can find references for **direct** and **direct VM** components in all open Camel files.

For Properties:

- Completion for Camel component property
- Diagnostic

To access the **Language Support for Apache Camel** features, you add one or more extensions.

The [Apache Camel Extension Pack](#) installs the following VS Code extensions:

- [Language Support for Apache Camel](#)
- [OpenShift Connector](#)
- [Java Extension Pack](#)
- [Spring Boot extension pack](#)
- [Project initializer by Red Hat](#)
- [XML Language Support](#)
- [AtlasMap Data Transformation editor](#)
- [Didact Tutorial](#)
- [Tooling for Apache Camel K](#)

Optionally, you can install the extensions individually.

For more details, see the following readme files:

- Readme for [Apache Camel Extension Pack](#)

- Readme for [Apache Camel Language Server Protocol for Visual Studio Code](#)
- Readme for [AtlasMap Data Transformation editor](#)

Eclipse IDE features

The **Language Support for Apache Camel** Eclipse plug-in provides the following features for Camel URIs:

In the generic Eclipse text editor for both XML DSL and Java DSL:

- When you type, the editor provides code completion for Camel components, attributes, and the list of attribute values.
- When you hover over a Camel component, the editor shows a brief description of the component (from the [Apache Camel component reference](#)).

To access the **Language Support for Apache Camel** features, you install the Eclipse plug-in from the Eclipse Marketplace. For more details, see the [readme file](#) for Apache Camel Language Server Protocol for Eclipse IDE.

Eclipse Che features

The **Language Support for Apache Camel** plugin for Eclipse Che 7 provides features for Camel URIs in XML DSL and Java DSL.

- When you type, the editor provides code completion for Camel components, attributes, and the list of attribute values.
- When you hover over a Camel component, the editor shows a brief description of the component (from the [Apache Camel component reference](#)).
- When you save the file, the editor performs an Apache Camel validation check on the Camel code.

To activate this plugin for Eclipse Che, you can use the "Apache Camel based on Spring Boot" stack or edit your workspace configuration.

4.4. BOM FILES FOR FUSE 7.10, FUSE 7.10.1, AND FUSE 7.10.2

To configure your Maven projects to use the supported Fuse 7.10, 7.10.1, and 7.10.2 artifacts, use the BOM versions documented in this section.

4.4.1. BOM File for Fuse 7.10.2

To upgrade your Fuse standalone applications to use the 7.10.2 dependencies, edit the Maven **pom.xml** and change the versions of the BOMs and Maven plugins listed in the following table:

Table 4.1. Maven BOM and plugin versions for 7.10.2 using the BOM

Container Type	Maven BOM or Plugin Artifact groupId/artifactId	Version for Fuse 7.10
Spring Boot 2	org.jboss.redhat-fuse/fuse-springboot-bom	7.10.0.fuse-sb2-7_10_2-00001-redhat-00002

Container Type	Maven BOM or Plugin Artifact groupId/artifactId	Version for Fuse 7.10
	org.jboss.redhat-fuse/spring-boot-maven-plugin	7.10.0.fuse-sb2-7_10_2-00001-redhat-00002
Apache Karaf	org.jboss.redhat-fuse/fuse-karaf-bom	7.10.0.fuse-sb2-7_10_2-00001-redhat-00002
	org.jboss.redhat-fuse/karaf-maven-plugin	7.10.0.fuse-sb2-7_10_2-00001-redhat-00002
JBoss EAP	org.jboss.redhat-fuse/fuse-eap-bom	7.10.0.fuse-sb2-7_10_2-00001-redhat-00002

For more details about using the BOM, see the [Migration Guide](#).

4.4.2. BOM File for Fuse 7.10.1

To upgrade your Fuse standalone applications to use the 7.10.1 dependencies, edit the Maven **pom.xml** and change the versions of the BOMs and Maven plugins listed in the following table:

Table 4.2. Maven BOM and plugin versions for 7.10.1 using the BOM

Container Type	Maven BOM or Plugin Artifact groupId/artifactId	Version for Fuse 7.10
Spring Boot 2	org.jboss.redhat-fuse/fuse-springboot-bom	7.10.0.fuse-sb2-7_10_1-00008-redhat-00001
	org.jboss.redhat-fuse/spring-boot-maven-plugin	7.10.0.fuse-sb2-7_10_1-00008-redhat-00001
Apache Karaf	org.jboss.redhat-fuse/fuse-karaf-bom	7.10.0.fuse-sb2-7_10_1-00008-redhat-00001
	org.jboss.redhat-fuse/karaf-maven-plugin	7.10.0.fuse-sb2-7_10_1-00008-redhat-00001
JBoss EAP	org.jboss.redhat-fuse/fuse-eap-bom	7.10.0.fuse-sb2-7_10_1-00008-redhat-00001

For more details about using the BOM, see the [Migration Guide](#).

4.4.3. BOM File for Fuse 7.10

To upgrade your Fuse standalone applications to use the 7.10 dependencies, edit the Maven **pom.xml** and change the versions of the BOMs and Maven plugins listed in the following table:

Table 4.3. Maven BOM and plugin versions for 7.10 using the BOM

Container Type	Maven BOM or Plugin Artifact groupId/artifactId	Version for Fuse 7.10
Spring Boot 2	org.jboss.redhat-fuse/fuse-springboot-bom	7.10.0.fuse-sb2-7_10_0-00014-redhat-00001
	org.jboss.redhat-fuse/spring-boot-maven-plugin	7.10.0.fuse-sb2-7_10_0-00014-redhat-00001
Apache Karaf	org.jboss.redhat-fuse/fuse-karaf-bom	7.10.0.fuse-sb2-7_10_0-00014-redhat-00001
	org.jboss.redhat-fuse/karaf-maven-plugin	7.10.0.fuse-sb2-7_10_0-00014-redhat-00001
JBoss EAP	org.jboss.redhat-fuse/fuse-eap-bom	7.10.0.fuse-sb2-7_10_0-00014-redhat-00001

For more details about using the BOM, see the [Migration Guide](#).

4.5. IMPORTANT NOTES

Important notes for the Fuse 7.10 release of the Fuse standalone distribution:

Java 11 is supported for Apache Karaf

The Fuse 7.10 release now supports Java 11 on the Apache Karaf runtime.

Creating a connection to MongoDB using the MongoClientFactory factory

From Fuse 7.10, use **com.mongodb.client.MongoClient** instead of **com.mongodb.MongoClient** to create a connection to MongoDB (note the extra *.client* sub-package in the full path).

This affects any user applications that use **camel-mongodb**, which will now need to create a connection bean as a **com.mongodb.client.MongoClient** instance. Moreover, the methods exposed by this class are not exactly the same as the old class which could require more refactoring of user code.

For example, create a connection to MongoDB as follows:

```
import com.mongodb.client.MongoClient;
```

You can then create the MongoClient bean as shown in following example:

```
return MongoClientFactory.create("mongodb://admin:password@192.168.99.102:32553");
```


CHAPTER 5. DEPRECATED AND REMOVED FEATURES

If you need any assistance or have any questions about the upcoming changes in Fuse 7, contact support@redhat.com.

5.1. DEPRECATED

The following features are deprecated in Fuse 7.10 and may be removed in a future release:

OpenWire protocol is deprecated

Since Fuse 7.10, use of the OpenWire protocol (which could be used to connect AMQ Broker instances) is deprecated. Note that the OpenWire protocol is also deprecated in AMQ Broker since AMQ Broker version 7.9.0.

wSDL2rest tool is deprecated

Since Fuse 7.10, the **wSDL2rest** command line tool is deprecated. The WSDL 2 Camel Rest DSL extension for VS Code is also deprecated.

Fuse Online install script for installation on OCP 4

Since Fuse 7.8, the Fuse Online install script is deprecated for installing Fuse Online on OpenShift Container Platform (OCP) 4.x versions. On OCP 4.x versions, we recommend that you use the Fuse Online Operator. The Fuse Online install script is still supported for installing Fuse Online on OCP 3.11.

PHP, Python, and Ruby scripting languages are deprecated in Camel applications

The PHP, Python, and Ruby scripting languages are deprecated in Camel applications since Fuse 7.4 and will be removed in a future release. The Camel community has deprecated PHP, Python, and Ruby since Camel 2.19 (see [CAMEL-10973](#)). This applies to all Fuse containers types: Apache Karaf, JBoss EAP, and Spring Boot.

HP-UX OS is deprecated

The HP-UX operating system is deprecated since Fuse 7.2 and support for this operating system could be removed in a future release of Fuse. In particular, note that the JBoss EAP 7.2 container has already dropped support for HP-UX and, consequently, any future version of Fuse on JBoss EAP that runs on JBoss EAP 7.2 will *not* be supported on HP-UX.

Camel MQTT component is deprecated

The Camel MQTT component is deprecated in Fuse 7.0 and will be removed in a future release of Fuse. You can use the Camel Paho component instead, which supports the MQTT messaging protocol using the popular [Eclipse Paho](#) library.

Camel LevelDB component is deprecated on all operating systems except for Linux

Since Fuse 6.3, the Camel LevelDB (**camel-leveldb**) component is deprecated on all operating systems except for Red Hat Enterprise Linux. In future, the Camel LevelDB component will be supported only on Red Hat Enterprise Linux.

BatchMessage class from the Camel SJMS component is deprecated

The BatchMessage class from the Camel SJMS component is deprecated in Fuse 7 (deprecated in Apache Camel since version 2.17) and may be removed from a future version of Apache Camel and Fuse.

5.2. REMOVED IN FUSE 7.10

fabric8-maven-plugin

The **fabric8-maven-plugin** has been completely removed from Fuse 7.10. We recommend that you use the **openshift-maven-plugin** instead for building and deploying Maven projects in Fuse on

OpenShift. The plugin is maintained by Eclipse JKube, which provides extensive [documentation](#) for the plugin.

5.3. REMOVED IN FUSE 7.8

Spring Boot 1

Spring Boot 1 is no longer supported in Fuse 7.8. We recommend that you migrate your Spring Boot applications to Spring Boot 2, following the guidance in the [Spring Boot 2.0 Migration Guide](#).

Camel K runtime in Fuse Online

Camel K runtime in Fuse Online (technology preview feature) is no longer supported in Fuse 7.8.

Camel XmlJson component has been removed in 7.8

The Camel XmlJson (**camel-xmljson**) component has been removed in Fuse 7.8.

5.4. REMOVED IN FUSE 7.5

The following features were removed in Fuse 7.5:

Support for integration with MS SQL Server 2014 has been dropped in 7.5

MS SQL Server 2014 is no longer tested and supported for integrations with Fuse 7.5. We recommend that you use one of the more recent versions of MS SQL Server instead – for example, MS SQL Server 2016 or 2017.

Camel LinkedIn component has been removed in 7.5

The **camel-linkedin** component has been removed in Fuse 7.5.



IMPORTANT

Although removed from Fuse 7.5, the **camel-linkedin** component is likely to be restored in a later release.

5.5. REMOVED IN FUSE 7.3

The following features were removed in Fuse 7.3:

Camel YQL component has been removed in 7.3

The Camel YQL component has been removed in Fuse 7.3.

OpenJPA and OpenJPA3 Karaf features have been removed in 7.3

The **openjpa** feature and the **openjpa3** feature have been removed from the Apache Karaf container in 7.3. For a Java Persistence Architecture (JPA) implementation, use the supported **hibernate** feature instead.

camel-jetty Karaf feature has been removed in 7.3

The **camel-jetty** feature has been removed from the Apache Karaf container in 7.3, because it uses Jetty 8. Use the **camel-jetty9** feature instead.

pax-jms-oracleaq Karaf feature has been removed in 7.3

The **pax-jms-oracleaq** feature has been removed from the Apache Karaf container in 7.3, because it requires 3rd party, non-free Oracle AQ libraries.

camel-elasticsearch component has been removed from Fuse on EAP (Wildfly Camel) in 7.3

The **camel-elasticsearch** component has been removed from Fuse on EAP (Wildfly Camel) in 7.3. Use the newer **camel-elasticsearch-rest** component instead.

5.6. REMOVED IN FUSE 7.2

The following features were removed in Fuse 7.2:

Camel XMLRPC component has been removed in 7.2

The Camel XMLRPC component has been removed in Fuse 7.2.

Camel Netty component has been removed in 7.2

The Camel Netty component has been removed in Fuse 7.2. It is recommended that you use the Camel Netty4 component instead.

5.7. REMOVED IN FUSE 7.0

The following features were removed in Fuse 7.0:

Support for Red Hat JBoss Operations Network (JON) has been removed in 7.0

Since Fuse 7.0, Fuse on Karaf no longer supports JON and no longer provides JON plugins for integrating with the JON runtime.

Embedded ActiveMQ broker has been removed in 7.0

Since Fuse 7.0, Fuse on Karaf no longer provides an embedded ActiveMQ Broker. Customers should connect to a supported remote broker directly. For more information on our supported brokers, refer to the "Supported Messaging Providers" section of the [Red Hat Fuse Supported Configurations page](#).

Fuse integration pack has been removed in 7.0

Support for running rules and processes is provided by components shipped with Red Hat JBoss BPM Suite and Red Hat JBoss BRMS.

Karaf console commands for child container administration have been removed in 7.0

Since Fuse 7.0, the Karaf console commands for child container administration are *not* supported. That is, the console commands prefixed by **instance:** (Karaf 4.x syntax) and the console commands prefixed by **admin:** (Karaf 2.x syntax) are not supported.



NOTE

In the Fuse 7.0 GA release, the **instance:** commands are not removed. This is a known issue.

SwitchYard has been removed in 7.0

Since Fuse 7.0, SwitchYard has been removed, and you should use Apache Camel directly instead. For more detailed information, see the knowledge base article, [SwitchYard Support Plan After Releasing Fuse 7](#).

Support for Fabric8 1.x has been removed in 7.0

Since Fuse 7.0, Fabric8 v1 has been replaced by Fuse on OpenShift (previously, Fuse Integration Services), which includes components of Fabric8 v2 technology. Fuse on OpenShift provides a set of tools and Docker-formatted images that enable development, deployment, and management of integration microservices within OpenShift.

Although Fuse on OpenShift has a different architecture, it fulfills the same provisioning, automation, central configuration and management requirements that Fabric8 v1 provides. For more information, see [Fuse on OpenShift Guide](#).

Camel components for Google App Engine have been removed in 7.0

The Camel components for Google App Engine (**camel-gae**) have been removed in Fuse 7.0.

Camel jBPM component has been removed in 7.0

The Camel jBPM component (**camel-jbpm**) has been removed in Fuse 7.0.

Tanuki based wrapper for installing Fuse as a service has been removed in 7.0

The Tanuki based wrapper scripts – generated using the **wrapper:install** Karaf console command – for installing Fuse as a service have been removed in Fuse 7.0. To install the Apache Karaf container as a service, it is recommended that you use the new **karaf-service-*.sh** scripts from the **bin/contrib** directory instead.

Smooks has been removed in 7.0

Since Fuse 7.0, the Smooks component for SwitchYard has been removed.

BPEL has been removed in 7.0

BPEL (based on the [Riftsaw](#) project) has been removed from Fuse 7.0. If you are currently using BPEL, it is recommended that you consider migrating to the Red Hat JBoss BPM Suite.

Design Time Governance has been removed in 7.0

The Design Time Governance component has been removed in 7.0.

Runtime Governance has been removed in 7.0

Since Fuse 7.0, the Runtime Governance (RTGov) component has been removed.

S-RAMP has been removed in 7.0

The SOA Repository Artifact Model and Protocol (S-RAMP) component has been removed in Fuse 7.0.

bin/patch script has been removed in 7.0

The **bin/patch** script (**bin\patch.bat** on Windows O/S) has been removed in a Fuse 7.0.

Spring Dynamic Modules (Spring-DM) is not supported in 7.0

Spring-DM (which integrates Spring XML with the OSGi service layer in Apache Karaf) is not supported in Fuse 7.0 and you should use the Blueprint framework instead. Using Blueprint XML does not prevent you from using the Java libraries from the Spring framework: the latest version of Spring is compatible with Blueprint.

Apache OpenJPA is not supported in 7.0

The [Apache OpenJPA](#) implementation of the Java Persistence API (JPA) is not supported in Fuse 7.0. It is recommended that you use the [Hibernate](#) implementation instead.

5.8. REPLACED IN FUSE 7.0

The following features were replaced in Fuse 7.0:

Geronimo transaction manager has been replaced in 7.0

In Fuse 7.0, the Geronimo transaction manager in the Karaf container has been replaced by [Narayana](#).

Jetty container has been replaced in 7.0

In Fuse 7.0, the Jetty container has been replaced by [Undertow](#). Initially, this change applies only to internal use of the Jetty container (for example, in the Karaf container). Other Jetty components might be removed in a future release.

CHAPTER 6. UNSUPPORTED FEATURES IN FUSE 7.10

The following features are unsupported in Red Hat Fuse 7.10.

camel-leveldb component is not supported for Fuse on the IBM PowerPC and Z platforms

When Fuse is installed on the IBM PowerPC or IBM Z platforms, the Camel LevelDB component is not supported.

Installation of Fuse Console using the Operator is not supported on OCP 3.11

Installation of the Fuse Console using the Operator is not supported and does not work on OpenShift Container Platform (OCP) 3.11. The recommended way to install Fuse Console on OCP 3.11 is to use templates.

Apache Karaf EclipseLink feature is unsupported

The Apache Karaf EclipseLink feature is **not** supported in Fuse, because this feature depends on JPA 2.2, while the Karaf container for Fuse 7.2 is aligned with JPA 2.1.

Apache Aries Blueprint Web module is unsupported

The Apache Aries [Blueprint Web](#) module is **not** supported in Fuse. The presence of an example featuring Blueprint Web in the community edition of Apache Camel (provided as a separate download) does **not** imply that this feature is supported in Fuse.

The PHP scripting language is not supported in Apache Camel on Apache Karaf

The PHP scripting language is **not** supported in Camel applications on the Apache Karaf container, because there is no OSGi bundle available for PHP. The PHP scripting language is deprecated in Camel applications on the JBoss EAP container and on the Spring Boot container.

The Python scripting language is not supported in Apache Camel on Apache Karaf

The Python scripting language is **not** supported in Camel applications on the Apache Karaf container, because there is no OSGi bundle available for Python. The Python scripting language is deprecated in Camel applications on the JBoss EAP container and on the Spring Boot container.

CHAPTER 7. KNOWN ISSUES

The following subsections describe the known issues in version 7.10.

7.1. CVE SECURITY VULNERABILITIES

As a middleware integration platform, Fuse can potentially be integrated with a large number of third-party components. It is not always possible to exclude the possibility that some third-party dependencies of Fuse could have security vulnerabilities. This section documents known common vulnerabilities and exposures (CVEs) related to security that affect third-party dependencies of Fuse 7.10.

[CVE-2020-13936](#) CVE-2020-13936 velocity: arbitrary code execution when attacker is able to modify templates

An attacker that is able to modify Velocity templates may execute arbitrary Java code or run arbitrary system commands with the same privileges as the account running the Servlet container. This applies to applications that allow untrusted users to upload/modify velocity templates running Apache Velocity Engine versions up to 2.2.

Fuse 7.9 (and later) has modified its dependencies to ensure that it uses only the Velocity version (that is, version 2.3) that has been fixed to protect against this security vulnerability. If your application code has any explicit dependencies on the Apache Velocity component, we recommend that you upgrade these dependencies to use the fixed version.

[ENTESB-8113](#) CVE-2018-10237 guava: Unbounded memory allocation in AtomicDoubleArray and CompoundOrdering classes allow remote attackers to cause a denial of service [fuse-7.0.0]

Google Guava versions 11.0 through 24.1 are vulnerable to unbounded memory allocation in the **AtomicDoubleArray** class (when serialized with Java serialization) and the **CompoundOrdering** class (when serialized with GWT serialization). An attacker could exploit applications that use Guava and deserialize untrusted data to cause a denial of service – for more details, see [CVE-2018-10237](#). To avoid this security vulnerability, we recommend that you:

- Never deserialize an **AtomicDoubleArray** instance or a **CompoundOrdering** instance from an unknown source.
- Avoid using Guava versions 24 and earlier (although in some cases it is not possible to avoid the earlier versions).

To make it easier to avoid the earlier (vulnerable) versions of Guava, Fuse 7.7 (and later) has configured its Maven Bill of Materials (BOM) files for all containers to select Guava 27 by default. This means that if you incorporate a Fuse BOM into your Maven project (by adding a dependency on the BOM to the **dependencyManagement** section of your POM file) and then specify a dependency on the Guava artifact *without* specifying an explicit version, the Guava version will default to the version specified in the BOM, which is version 27 for the Fuse 7.7 BOMs.

But there is at least one common use case involving the Apache Karaf (OSGi) container, where it is not possible to avoid using a vulnerable version of Guava: if your OSGi application uses Guava and Swagger together, you are obliged to use Guava 20, because that is the version required by Swagger. Here we explain why this is the case and how to configure your POM file to revert the earlier (vulnerable) Guava 20 library. First, you need to understand the concept of a *double OSGi chain*.

Double OSGi chain

Bundles in the OSGi runtime are *wired* together using package constraints (package name + optional version/range) – imports and exports. Each bundle can have multiple imports and usually those imports wire a given bundle with multiple bundles. For example:

```

BundleA
+-- BundleB
|  +-- BundleCa
+-- BundleCb

```

Where **BundleA** depends on **BundleB** and **BundleCb**, while **BundleB** depends on **BundleCa**. **BundleCa** and **BundleCb** should be the same bundle, if they export the same packages, but due to version (range) constraints, **BundleB** uses (*wires to*) a different revision/version of **BundleC** than **BundleA**.

Rewriting the preceding diagram to reflect what happens when you include dependencies on both Guava and Swagger in an application:

```

org.jboss.qe.cxf.rs.swagger-deployment
+-- Guava 27
+-- Swagger 1.5
    +-- reflections 0.9.11
        +-- Guava 20

```

If you try to deploy this bundle configuration, you get the error, **org.osgi.framework.BundleException: Uses constraint violation**.

Reverting to Guava 20

If your project uses both Guava and Swagger libraries (directly or indirectly), you should configure the **maven-bundle-plugin** to use an explicit version range (or no range at all) for the Guava bundle import, as follows:

```

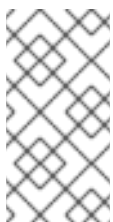
<Import-Package>
  com.google.common.base;version="[20.0,21.0)",
  com.google.common.collect;version="[20.0,21.0)",
  com.google.common.io;version="[20.0,21.0)"
</Import-Package>

```

This configuration forces your OSGi application to revert to the (vulnerable) Guava 20 library. It is therefore particularly important to avoid deserializing **AtomicDoubleArray** instances in this case.

[CVE-2017-12629 Solr/Lucene -security bypass to access sensitive data - CVE-2017-12629](#)

Apache Solr is a popular open source search platform that uses the Apache Lucene search engine. If your application uses a combination of Apache Solr with Apache Lucene (for example, when using the Camel Solr component), it could be affected by this security vulnerability. Please consult the linked security advisory for more details of this vulnerability and the mitigation steps to take.



NOTE

The Fuse runtime does *not* use Apache Solr or Apache Lucene directly. The security risk only arises, if you are using Apache Solr and Apache Lucene together in the context of an integration application (for example, when using the Camel Solr component).

[CVE-2021-30129 mina-sshd-core: Memory leak denial of service in Apache Mina SSHD Server](#)

A vulnerability in `sshd-core` of Apache Mina SSHD allows an attacker to overflow the server causing an `OutOfMemory` error. This issue affects the SFTP and port forwarding features of Apache Mina SSHD version 2.0.0 and later versions. It was addressed in Apache Mina SSHD 2.7.0

This vulnerability in Apache Mina SSHD was addressed by [SSHD-1004](#), which deprecates certain cryptographic algorithms that have this vulnerability. In Fuse 7.10 on Karaf and Fuse 7.10 on JBoss EAP, these deprecated algorithms are still supported (for reasons of backwards compatibility). However, if you are using one of these deprecated algorithms, it is strongly recommended that you refactor your application code to use a different algorithm instead.

In Fuse 7.10, the default cipher algorithms have changed as follows.

Fuse 7.9	Fuse 7.10	Deprecated in Fuse 7.10?
aes128-ctr	aes128-ctr	
	aes192-ctr	
	aes256-ctr	
	aes128-gcm@openssh.com	
	aes256-gcm@openssh.com	
arcfour128	arcfour128	yes
aes128-cbc	aes128-cbc	
	aes192-cbc	
	aes256-cbc	
3des-cbc	3des-cbc	yes
blowfish-cbc	blowfish-cbc	yes

In Fuse 7.10, the default key exchange algorithms have changed as follows.

Fuse 7.9	Fuse 7.10	deprecated in 7.10?
diffie-hellman-group-exchange-sha256	diffie-hellman-group-exchange-sha256	
ecdh-sha2-nistp521	ecdh-sha2-nistp521	
ecdh-sha2-nistp384	ecdh-sha2-nistp384	
ecdh-sha2-nistp256	ecdh-sha2-nistp256	

Fuse 7.9	Fuse 7.10	deprecated in 7.10?
	diffie-hellman-group18-sha512	
	diffie-hellman-group17-sha512	
	diffie-hellman-group16-sha512	
	diffie-hellman-group15-sha512	
	diffie-hellman-group14-sha256	
diffie-hellman-group-exchange-sha1	diffie-hellman-group-exchange-sha1	yes
diffie-hellman-group1-sha1	diffie-hellman-group1-sha1	yes

7.2. FUSE ONLINE

The Fuse Online distribution has the following known issues:

[ENTESB-17674](#) Monitoring Fuse Online with Prometheus and Grafana on OCP 4.9 (or later) requires workaround

On OCP 4.9 (or later), the **application-monitoring** project no longer works. It is a prerequisite for monitoring Fuse Online integrations and infrastructure components with Prometheus and Grafana. To workaround this issue, you can use the [built-in OpenShift monitoring stack](#) (in the **openshift-monitoring** namespace) to use the **openshift-user-workload-monitoring** feature and the **grafana-operator** to use the **ops addon** as described in the **Important notes for Fuse Online** section of these release notes.

[_ENTESB-17796](#) CSV parameters are not updated in AtlasMap step

In a Fuse Online integration, if you change the value of a CSV parameter, you must also edit all mapping steps that use that data shape by making some change (for example, add and then remove a constant value) to update the mapping.

Note that Data Mapper support for CSV data is a Technology Preview feature.

[ENTESB-15348](#) Syndesis-jaeger uses unproductized image on OCP 3.11

Since Fuse 7.8, if you are attempting to install Fuse Online on OCP 3.11 with the Jaeger add-on enabled (enhanced activity tracking), it is possible you might encounter the following error:

Unknown desc = toomanyrequests: You have reached your pull rate limit. You may increase the limit by authenticating and upgrading: <https://www.docker.com/increase-rate-limit>

This happens because the productised Jaeger container references Dockerhub images, which are out of Red Hat's control. To work around this issue, you can either wait until rate limit window times out, or disable the Jaeger add-on.

ENTESB-14518 Jaeger operator installed by Syndesis 1.11 affects other namespaces

Since Fuse 7.8, when you install Fuse 7.8 Online (Syndesis 1.11) on an OpenShift cluster, the Jaeger Operator (which gets installed along with Fuse Online) is configured to manage *All namespaces* by default. A side effect of this behavior is that, in the case where you already have Fuse 7.7 Online (Syndesis 1.10) installed on a cluster and then you install Fuse 7.8 Online in a different namespace, the Jaeger Operator installed with Fuse 7.8 Online tries to manage the (older) Jaeger instance installed on the Fuse 7.7 Online namespace. The result is that a new **syndesis-jaeger** pod – in addition to the existing **syndesis-jaeger** pod – appears in the Fuse 7.7 Online namespace and the new **syndesis-jaeger** pod enters the **CrashLoopBackOff** state. The original Fuse 7.7 Online instance is not affected and the crashed **syndesis-jaeger** pod can be safely ignored.

ENTESB-13966 Discovery of deployed integration API seems disabled but not really

Starting in Fuse 7.7, after creating a new integration containing an API, the integration detail page wrongly implies that 3scale discovery is disabled for this integration. Additionally, the integration detail page does not show the API URL. By clicking this button three times (click **Enable**, then click **Disable**, then click **Enable**), you can resynchronize the page so that 3scale discovery is enabled and the API URL is displayed.

7.3. FUSE ON OPENSIFT

This section lists issues that affect the deployment of Fuse applications on OpenShift. For details of issues affecting specific containers, see also the sections for Spring Boot, Fuse on Apache Karaf, and Fuse on JBoss EAP. The Fuse on OpenShift distribution has the following known issues:

ENTESB-17895 [Fuse Console] Upgrade subscription does not update Hawtio

In Fuse 7.10, if you update the Fuse Console by changing the Operator subscription channel to version 7.10, the Fuse Console remains on version 7.9. Even if the the Fuse Console containers and pods have the label 7.10, they are still using the 7.9 images. To work around this problem, perform the upgrade by removing the older version of Fuse Console and then making a fresh install of Fuse Console version 7.10.

ENTESB-17861 Apicurito generator cannot generate Fuse Camel Project

In Fuse 7.10, the API Designer (Apicurito) does not work properly, if it is installed via the Apicurito Operator (giving an Invalid Cert Error). To work around this problem:

1. Open a new tab on <https://apicurito-service-generator-apicurito.apps.clusterURL> (for fo.49-c it is <https://apicurito-service-generator-apicurito.apps.fo-49-c.openshift-aws.rhocf-dev.net>).
2. Accept the certificates.
3. Switch to the application and click on the generate button again.

ENTESB-17848 fis-image-streams is using non-groupified API resources (deprecated)

In Fuse 7.10, when installing the image streams for Fuse on OpenShift (for example, using the a command like **oc create -n openshift -f \${BASEURL}/fis-image-streams.json**) on OCP 4, you could see warning messages like the following:

```
W1119 13:27:43.408688 22220 shim_kubectl.go:55] Using non-groupified API resources is deprecated and will be removed in a future release, update apiVersion to "image.openshift.io/v1" for your resource
```

You can safely ignore these warning messages.

ENTESB-17836 [Fuse Console] A newly added route is not displayed in the Camel tree

In Fuse 7.10, after deploying an application, the route (or routes) is not displayed in the Camel tree on the Fuse Console. You can work around this issue by refreshing the page, which should make the route appear.

ENTESB-17741 [Fuse Console] Open pod details leads to Page Not Found

In Fuse 7.10, after deploying some quickstarts, if you open the **Discover** page of the Fuse Console, click on the drop-down menu of the pod (3 dots icon), and then click on **Pod detail** page, you will get a **Page Not Found** error.

ENTESB-16814 Monitoring resources are linked wrongly from the documentation

Since Fuse 7.8, the locations of the monitoring resources referenced in section 2.5.2. [Setting up Prometheus](#) of the *Fuse on OpenShift Guide* are incorrect and return a 404 exception. This documented procedure will be fixed in a post-GA documentation update.

7.4. FUSE ON APACHE KARAF

Fuse on Apache Karaf has the following known issues:

ENTESB-18018 Fuse 7.10 AR10 offliner validation problems

In Fuse 7.10, two of the quickstarts do not get installed with the offliner tool: **camel-sap** and **camel-cxf-contract-first**. The missing artifacts are available from the (online) Red Hat Maven repository, however.

ENTESB-17819 camel-grpc does not work on fuse-karaf

In Fuse 7.10, the Camel GRPC component does not work on the Apache Karaf container. This will be fixed in a later release of Fuse.

ENTESB-16417 Credential store is using PBESWithSHA1AndDESede by default

The security API in OpenJDK 8u292 and in OracleJDK 1.8.0_291 returns an incomplete list of security providers, which causes the credential store in Apache Karaf to fail (because the required security provider appears to be unavailable). The underlying issue that causes this problem is <https://bugs.openjdk.java.net/browse/JDK-8249906>. We recommend that you use the earlier OpenJDK version, OpenJDK 8u282, or the later OpenJDK version, OpenJDK 8u302, which do not have this bug.

ENTESB-16526 fuse-karaf on Windows cannot restart during patch:install

While running **patch:install** in the Apache Karaf container on the Windows platform, under certain circumstances you might encounter the following error when the **patch:install** command attempts an automatic restart of the container:

```
Red Hat Fuse starting up. Press Enter to open the shell now...
100%
[=====]
Karaf started in 18s. Bundle stats: 235 active, 235 total
'.tmpdir' is not recognized as an internal or external command,
operable program or batch file.
There is a Root instance already running with name ~14 and pid ~13. If you know what you are
doing and want to force the run anyway, SET CHECK_ROOT_INSTANCE_RUNNING=false and
re run the command.
```

If you encounter this error, simply restart the Karaf container manually.

ENTESB-8140 Start level of hot deploy bundles is 80 by default

Starting in the Fuse 7.0 GA release, in the Apache Karaf container the start level of hot deployed bundles is 80 by default. This can cause problems for the hot deployed bundles, because there are many system bundles and features that have the same start level. To work around this problem and ensure that hot deployed bundles start reliably, edit the `etc/org.apache.felix.fileinstall-deploy.cfg` file and change the `felix.fileinstall.start.level` setting as follows:

```
felix.fileinstall.start.level = 90
```

ENTESB-7664 Installing framework-security feature kills karaf

The `framework-security` OSGi feature must be installed using the `--no-auto-refresh` option, otherwise this feature will shut down the Apache Karaf container. For example:

```
feature:install -v --no-auto-refresh framework-security
```

7.5. FUSE ON JBOSS EAP

Fuse on JBoss EAP has the following known issues:

ENTESB-13168 Camel deployment on EAP domain mode is not working on Windows

Starting in Fuse 7.6.0, for Fuse on JBoss EAP, the Camel subsystem cannot be deployed on JBoss EAP in domain mode on Windows OS.

7.6. FUSE TOOLING

Fuse Tooling has the following known issues:

ENTESB-17705 [[Hawtio](#)] Logout button disappears

In Fuse 7.10, after logging in and logging out several times in a row, the **Logout** button is not shown. To work around this issue, you can refresh the page one or more times and the **Logout** button should reappear.

FUSETOOLS-3567 Fuse 7.10.0.AR7 on Karaf cannot be started in CodeReady Studio with Java 11

Starting with CodeReady Studio 12.22, Fuse Tooling will support it.

7.7. APACHE CAMEL

Apache Camel has the following known issues:

ENTESB-15343 XSLT component not working properly with IBM1.8 JDK

In Fuse 7.8, the Camel XSLT component does not work properly with the IBM 1.8 JDK. The problem occurs because the underlying Apache Xerces implementation of XSLT does not support the `javax.xml.XMLConstants#FEATURE_SECURE_PROCESSING` property (see [XERCESJ-1654](#)).

ENTESB-11060 [[camel-linkedin](#)] V1 API is no longer supported

Since Fuse 7.4.0, the Camel LinkedIn component is no longer able to communicate with the LinkedIn server, because it is implemented using the LinkedIn Version 1.0 API, which is no longer supported by LinkedIn. The Camel LinkedIn component will be updated to use the Version 2 API in a future release of Fuse.

ENTESB-7469 Camel Docker component cannot use Unix socket connections on EAP

Since Fuse 7.0, the **camel-docker** component can connect to Docker only through its REST API, not through UNIX sockets.

ENTESB-5231 PHP script language does not work

The PHP scripting language is **not** supported in Camel applications on the Apache Karaf container, because there is no OSGi bundle available for PHP.

ENTESB-5232 Python language does not work

The Python scripting language is **not** supported in Camel applications on the Apache Karaf container, because there is no OSGi bundle available for Python.

ENTESB-2443 Google Mail API - Sending of messages and drafts is not synchronous

When you send a message or draft, the response contains a Message object with an ID. It may not be possible to immediately get this message via another call to the API. You may have to wait and retry the call.

ENTESB-2332 Google Drive API JSON response for changes returns bad count of items for the first page

Google Drive API JSON response for changes returns bad count of items for the first page. Setting **maxResults** for a list operation may not return all the results in the first page. You may have to go through several pages to get the complete list (that is by setting **pageToken** on new requests).

CHAPTER 8. FIXED ISSUES IN FUSE 7.10

The following sections list the issues that have been fixed in Fuse 7.10:

- [Section 8.1, “Enhancements in Fuse 7.10”](#)
- [Section 8.2, “Feature requests in Fuse 7.10”](#)
- [Section 8.3, “Component Upgrades in Fuse 7.10”](#)
- [Section 8.4, “Bugs resolved in Fuse 7.10, 7.10.1, and 7.10.2”](#)

8.1. ENHANCEMENTS IN FUSE 7.10

The following table lists the enhancements in Fuse 7.10.

Table 8.1. Fuse 7.10 Enhancements

Issue	Description
ENTESB-17591	Update AtlasMap to 2.3.0
ENTESB-17610	Update AtlasMap to 2.3.1
ENTESB-17355	Update AtlasMap to 2.3.0-M.3
ENTESB-16734	RHEL8 based image for syndesis-db
ENTESB-16809	Camel Clients Getting Started with Managed Kafka
ENTESB-16517	[FoO] Plan for API deprecation in OCP 4.9 (Fuse 7.10)
ENTESB-17694	[Fuse Console] Make Operator Metadata image multiarch
ENTESB-17290	[Build] UI deprecated dependencies update
ENTESB-17405	Add Java 11 Maven profile to Fuse on OpenShift quickstarts
ENTESB-14379	Fuse Online: Upgrade to Patternfly 4.4.x and React 17
ENTESB-16485	[Fuse Console] Create CVP for Fuse Console Operator
ENTESB-14750	Provide metering labels for Fuse on Openshift Console (Operator)
ENTESB-15863	Default CR options should be consistent and user-friendly
ENTESB-17662	Update AtlasMap to 2.3.2
ENTESB-17480	Fuse Online 7.10 Component Alignment

Issue	Description
ENTESB-17615	Upgrade to EAP 7.4.2.GA-redhat-00002
ENTESB-17806	Upgrade to camel-2.23.2.fuse-7_10_0-00017
ENTESB-15485	Backport CAMEL-15971 - SimpleFileLanguage always null due to DummyExchange
ENTESB-15928	CSV support in Fuse Online
ENTESB-17236	FMP Removal [Fuse 7.10]

8.2. FEATURE REQUESTS IN FUSE 7.10

The following table lists the features requests in Fuse 7.10.

Table 8.2. Fuse 7.10 Feature Requests

Issue	Description
ENTESB-17153	Set environment variables for syndesis-oauthproxy
ENTESB-14559	allow labeling the integrations from when saving and publishing them

8.3. COMPONENT UPGRADES IN FUSE 7.10

The following table lists the component upgrades in Fuse 7.10.

Table 8.3. Fuse 7.10 Component Upgrades

Issue	Description
ENTESB-17359	Upgrade protobuf to 3.10.0
ENTESB-17320	Upgrade to Netty 4.1.67.Final-redhat-00001
ENTESB-17270	Upgrade to 7.4.1.GA-redhat-00003
ENTESB-17322	Upgrade to Narayana 5.11.3.Final-redhat-00001
ENTESB-17321	Upgrade to Hibernate 5.3.21.Final-redhat-00001
ENTESB-17319	Upgrade to BouncyCastle 1.69
ENTESB-17311	Upgrade to ASM 9.2

Issue	Description
ENTESB-17335	Upgrade to Jolokia 1.7.1.redhat-00001
ENTESB-17323	Upgrade to RH-SSO 7.4.9 / Keycloak 9.0.15.redhat-00002
ENTESB-17318	Upgrade to Spring Boot 2.3.12.RELEASE
ENTESB-17704	Upgrade to camel-2.23.2.fuse-7_10_0-00015

8.4. BUGS RESOLVED IN FUSE 7.10, 7.10.1, AND 7.10.2

The following tables list the resolved bugs in Fuse 7.10, 7.10.1, and 7.10.2.

Table 8.4. Fuse 7.10.2 Resolved Bugs

Issue	Description
ENTESB-18800	CVE-2022-22965 Spring4Shell: Unsafe parameter binding flaw which could allow an attacker to pass malicious requests to certain parameters and possibly gain access to normally-restricted functionality within the Java Virtual Machine [fuse-7]

Table 8.5. Fuse 7.10.1 Resolved Bugs

Issue	Description
ENTESB-17986	CVE-2021-4104 log4j: Remote code execution in Log4j 1.x when application is configured to use JMSSAppender [fuse-7]
ENTESB-18312	CVE-2022-23307 log4j: Unsafe deserialization flaw in Chainsaw log viewer [fuse-7]
ENTESB-18326	CVE-2022-23302 log4j: Remote code execution in Log4j 1.x when application is configured to use JMSSink [fuse-7]
ENTESB-18327	CVE-2022-23305 log4j: SQL injection in Log4j 1.x when application is configured to use JDBCAppender [fuse-7]

Table 8.6. Fuse 7.10 Resolved Bugs

Issue	Description
ENTESB-17968	CVE-2021-44228 log4j-core: Remote code execution in Log4j 2.x when logs contain an attacker-controlled string value [fuse-7]
ENTESB-17597	[Hawtio] Spring Boot 2 fails on Windows machine

Issue	Description
ENTESB-17588	Invalid authentication type for Postgresql
ENTESB-17603	Camel-infinispan not working on karaf + jdk11
ENTESB-17590	wildfly-camel build fails with camel-2.23.2.fuse-7_10_0-00012
ENTESB-17646	jdk11 + karaf + cxf codewrtier instance issue
ENTESB-17642	Not possible to install feature hibernate-validator-groovy
ENTESB-17640	Quickstart spring-boot-camel-xa contains wrong image reference for jdk11
ENTESB-17636	Misalignments with Component alignment document in 7.10.AR6
ENTESB-17643	Collapse Repeating Delimiters checkbox is not shown right after a mapping is created
ENTESB-17708	Move source jar maven plugin to prod profile for quickstarts
ENTESB-17700	No Class Def Found errors when client bin command in Karaf
ENTESB-17660	Karaf cannot start when Elytron is set as PersistenceManager
ENTESB-17414	Fuse console won't start on ppc64le
ENTESB-17409	Missing fuse-karaf-openshift-jdk11-rhel8 in fis-image-streams.json
ENTESB-17445	fuse-karaf + jdk11 - javax.xml.ws wrong Import-package version
ENTESB-17466	Apicurito 7.10 bundle uses 7.9 channel
ENTESB-17527	Camel 2.23 downstream failures
ENTESB-17654	Client script does not work on Karaf
ENTESB-17377	DataMapper constant can be saved without any values
ENTESB-17226	PubSubIntegrationTest fails with Invalid grant: account not found
ENTESB-16765	Fuse on Karaf using jdk11 / open-jdk11 gives NoClassDefFoundError while blueprint installation
ENTESB-16504	[Fuse Console] Spring Boot Camel quickstart fails
ENTESB-16987	[Hawtio] Broken layout for drop-down menu in OSGi → Features

Issue	Description
ENTESB-16990	DataMapper multi spaces delimiter in split transformation behaves as "double spaces" delimiter.
ENTESB-16425	Spring Boot Camel AMQ S2I quickstart has unreachable link in Readme.adoc
ENTESB-16283	Missing metering labels on spring-boot-camel-xa quickstart
ENTESB-17611	Camel 2.23 downstream failures with openjdk11
ENTESB-17281	Missing API Connector review page when API contains error
ENTESB-17253	Quickstart spring-boot-camel-amq still contains README.md file
ENTESB-17411	Fuse Online 7.10 bundle can't create an index
ENTESB-17399	AtlasMap exception in an integration
ENTESB-17406	Old metering labels in build Fuse Online 7.10 AR4
ENTESB-17478	[Fuse Console] Metadata image points to fuse console operator 1.9 image
ENTESB-17416	CSV Instance Parameters are disappeared during edit webhook step
ENTESB-17282	Fuse Online UI enhancement after PF update
ENTESB-17280	Maven-deploy-plugin version alignment
ENTESB-17328	Wrong fuse-karaf productization version
ENTESB-17329	Wrong metadata values, labels, appName, metering labels in quickstarts templates
ENTESB-17308	Camel Hystrix component doesn't work on karaf
ENTESB-17396	Misalignments with Component alignment document in 7.10.AR4
ENTESB-17385	hawtio 2 should not simply remove hawtio-log Karaf feature (and MBean)
ENTESB-17341	nodeAffinity and toleration are not set in an integration pod
ENTESB-17337	Invalid JSON template file for Spring Boot Rhosak Quickstart
ENTESB-17354	Upgrade Fuse Online 7.9 → 7.10 doesn't work on OCP 3.11

Issue	Description
ENTESB-17343	Linked documentation is for version 7.9 instead of version 7.10
ENTESB-17146	RedisConstants.COMMAND header is not take into consideration when using GET command
ENTESB-17332	Wrong Karaf Framework version in Fuse Karaf Images
ENTESB-17330	Wrong image reference in Archetypes
ENTESB-17256	Missing ServiceAccount labels in S2I SpringBoot Rhosak Quickstart
ENTESB-17251	View logs links points to an unexisting page
ENTESB-13112	Autodiscovery AMQ streams web element doesn't have data-testid
ENTESB-14032	Synthesis/Fuse online logo does not link to the home page
ENTESB-17091	Missing metering labels on spring-boot-camel-rhosak quickstart
ENTESB-16482	Illegal reflective access by org.jolokia.util.ClassUtil while running quickstarts with JDK11
ENTESB-16256	Camel springboot BOM references non-existent artifact
ENTESB-12106	Remove the deployIntegrations flag from the CR
ENTESB-16037	Creating API Client Connector and Connection - duplicate username and password section
ENTESB-16285	Wrong labels on fuse circuit breaker booster don't allow services and routes to work
ENTESB-15153	500 response isnt displayed in the validation UI page
ENTESB-17749	Misalignments with Component alignment document in 7.10.AR7
ENTESB-17780	Camel 2.23 downstream failures in 7.10.AR7
ENTESB-17773	spring-boot-camel-drools route exception
ENTESB-17744	Karaf quickstarts does not support java 11
ENTESB-17748	Deleted or renamed ENVs are still presented in the integration pod
ENTESB-17734	Deleting CSV parameters works until the second attempt

Issue	Description
ENTESB-17165	Istio Booster - status
ENTESB-17746	Wrong git reference for spring-boot-camel-rhosak in application template
ENTESB-17762	Authentication failure on Karaf with public key while using ssh feature
ENTESB-17671	Camel 2.23 downstream failures
ENTESB-17707	ClassCastException with com.mongodb.client.MongoClient
ENTESB-17706	libthrift-0.14.0.redhat-00001 not compatible with cassandra
ENTESB-17776	[Apicurito] Metadata points to older generator image
ENTESB-16892	Elastic Search Rest cannot be used on SpringBoot
ENTESB-17750	4 Features not installed
ENTESB-17402	Wrong metadata values, labels, appName, metering labels in pom.xml
ENTESB-17815	History command does not show previous history
ENTESB-17769	CVE-2020-13949, ensure Syndesis contains correct version of libthrift
ENTESB-17699	CVE-2020-27218, Ensure that Syndesis is using fixed net.sf.ehcache:ehcache
ENTESB-17790	CVE-2021-29425, Ensure that Syndesis is using fixed commons-io
ENTESB-17598	SSH client libraries incompatible with camel-ftp and camel-jsch
ENTESB-17137	Cannot access Fuse Online on disconnected environment
ENTESB-17890	Dependency version of springboot is missing in a particular integration build
ENTESB-17885	Integration with OData (v2 only) connector is not able to start
ENTESB-17144	Fuse Camel project generated by Apicurito Generator not exposes management port
ENTESB-17800	karaf-camel-amq quickstart restarts camel context during startup
ENTESB-17300	Fuse Online image (7.10) builds are failing due to wrong arches: arm64, ppc64le, s390x

Issue	Description
ENTESB-17697	CVE-2021-37136, Ensure that Syndesis is using fixed io.netty:netty-codec
ENTESB-17770	CVE-2021-3629, ensure Syndesis contains correct version of undertow
ENTESB-17772	CVE-2021-20220, ensure Syndesis contains correct versions of undertow
ENTESB-17771	CVE-2021-3690, ensure Syndesis contains correct version of undertow
ENTESB-17632	CVE-2020-27223, Ensure that Syndesis is using fixed org.eclipse.jetty:jetty-http
ENTESB-17683	CVE-2021-27568, Ensure that Syndesis is using fixed net.minidev:json-smart
ENTESB-17853	AR8 Fuse Online bundle replaces an older version
ENTESB-17765	CVE-2021-37714, ensure syndesis contains correct version of jsoup
ENTESB-17709	Camel 2.23.2 downstream failure on s390x
ENTESB-17607	Salesforce authentication error
ENTESB-16790	Update all productized xml examples to use a correct xsd
ENTESB-17767	Integration with MongoDB connector is not able to start
ENTESB-17847	The repository cache contains corrupt maven-tooling JAR
ENTESB-17811	Creating custom OpenAPI clients broken
ENTESB-17757	SSH client libraries incompatible with camel-ftp and camel-jsch
ENTESB-17840	S2I Spring Boot Camel Rhosak quickstart has wrong selector in template
ENTESB-17786	Use OpenShift Maven Plugin instead of Fabric8 Maven Plugin in Fuse Apicurio Generator
ENTESB-17618	ZookeeperIntegrationTest intermittently fails in Jenkins
ENTESB-17379	Native libraries for SAP
ENTESB-17668	After CRD is updated on OCP3, oc get syndesis don't work for a couple of minutes

Issue	Description
ENTESB-17858	AR9 Fuse smoke tests failing
ENTESB-17766	CVE-2021-34428, ensure Syndesis contains correct versions of jetty
ENTESB-17877	AR8 Apicurito bundle replaces an older version
ENTESB-17791	Artifacts missing when using offliner for Fuse 7.10 AR7
ENTESB-16971	MongoDb3 component always connects to localhost