



Red Hat Fuse 7.9

Release Notes for Red Hat Fuse 7.9

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 7.9 PRODUCT OVERVIEW

1.1. FUSE DISTRIBUTIONS

Fuse 7.9 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 7.9 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. 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 7.9, 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 7.9

Fuse Online 7.9 provides the following new features:

- **SOAP API client connector**

You can add a custom SOAP API client connector and then add a connection for a SOAP API client to Fuse Online integrations. For more information, see [Creating SOAP API client connectors](#).

This release of the SOAP API client connector has some limitations as described in the [Fuse Online](#) section of Important Notes for Fuse Online.

- **New data mapper features**

- Support for a new conditional expression. For a collection with multiple fields, the data mapper can now filter the values in one source field based on the value of a different source field (in the same collection).
- Support for two new transformations:
 - **CopyTo** Copies the value of a source string field into a specified field of a target collection without splitting.
 - **Repeat** When mapping a simple type to an array type, fills multiple array fields with the value taken from the simple type.
- In the data mapper UI, XML attributes are now indicated by the @ symbol.
- The Fuse Online 7.9 data mapper is upgraded from AtlasMap 2.0.0 to 2.2.2. For details about the bug fixes and minor enhancements in version 2.2.2, see the following upstream AtlasMap release notes:
 - <https://github.com/atlasmap/atlasmap/releases/tag/atlasmap-2.1.1>
 - <https://github.com/atlasmap/atlasmap/releases/tag/atlasmap-2.2.2>

2.1.2<https://github.com/atlasmap/atlasmap/releases/tag/atlasmap-2.2.0>
2.2.0<https://github.com/atlasmap/atlasmap/releases/tag/atlasmap-2.2.1>
2.2.1<https://github.com/atlasmap/atlasmap/releases/tag/atlasmap-2.2.2>

- **FTP connector actions**

In previous releases, the FTP connector had two actions (**Download** and **Upload**). Starting with Fuse Online 7.9, there are two additional actions for an FTP server: **DownloadNamedFile** and **UploadNamedFile**. Also, for the **file name expression**, you now provide an [Apache Camel File language](#) expression to specify the file or files to download or upload.

2.3. CHANGES IN FUSE ONLINE 7.9

Fuse Online 7.9 changes Fuse Online 7.8 features as follows:

- **New option for enabling the sample PostgresDB database and connection**

By default, when you deploy Fuse Online, the sample PostgresDB database and connector are disabled (not installed). To enable them, edit the syndesis CR by setting the **demoData** option to **true**. For more information, see the [Adding sample data to a Fuse environment running on OCP](#) in *Installing and Operating Fuse Online on OpenShift Container Platform* .

- **Slack connector now uses the Bot User OAuth Access Token**

When you create a Slack connector, you now specify the Bot User OAuth Access Token to authorize access to your Slack app. Slack has deprecated the legacy token authorization.

- **Updates to the Fuse Online custom resource are applied when saved**

When you make changes in the **components.server** section of the Fuse Online custom resource, Fuse Online applies your updates after you save the custom resource. Starting with Fuse Online 7.9, you no longer need to manually delete the **syndesis-server** pod for the changes to take effect.

2.4. 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](#) .

Note that you should upgrade from Fuse Online 7.8 to 7.9 by using the OperatorHub, regardless of how you installed Fuse Online 7.8 (by using the install script or the OperatorHub).

2.5. IMPORTANT NOTES FOR FUSE ONLINE

Important notes for the Fuse 7.9 release of the Fuse Online distribution:

- **SOAP API Client connector features**

The SOAP API client connector supports the following features:

- SOAP 1.1 and 1.2 message formats
- Both RPC and Document bindings only support Literal encoding.
- All Workday WSDLs use inline schemas, SOAP document literal binding, and WS Username Token text password authentication.
- Nested circular reference types.
- External schemas - Only URL-based WSDLs support external schemas based on the

relative URLs from the WSDL's base path. The WSDL URL must be available to the SOAP connector at runtime for parsing and validation. Therefore, make sure that the WSDL and schemas are hosted at a permanent URL.

- Multiple schemas - Both inline and external (WSDL URLs) support multiple schemas with unique namespaces.
- Security-related features:
 - WS_Basic profile and list combinations.
 - For Basic Authentication, HTTPS username/password is supported.
 - For Username Token profiles, both Text and Digest passwords are supported.

In this release, the SOAP API client connector does not include support for the following features:

- External schemas - Disk-based external schemas referenced in WSDL files directly imported into the connector (by using the File Upload form) are not supported. Uploaded WSDL files must use inline schemas. However, URL-based WSDLs support external schemas hosted with the WSDLs.
- SOAP encoding is not supported.
- For security, SAML is not supported.
- **Kafka broker URIs not auto-discovered for AMQ Streams**
The CRD version for AMQ Streams has increased in Fuse Online to **v1beta2** as described in [this AMQ release note](#). If you are using AMQ Streams, when you create a new Kafka Message Broker connection in Fuse Online, the Kafka Broker URI is not auto-discovered and not shown in the **Kafka Broker URI** drop-down list. Instead, you must type the URI.
- 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.

2.6. 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.

2.7. 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](#).

- **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

Fuse on OpenShift is supported on OpenShift Container Platform 4.x and OpenShift Container Platform 3.11. 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:

- **fuse7/fuse-java-openshift-rhel8** – Spring Boot
- **fuse7/fuse-java-openshift-jdk11-rhel8** – Spring Boot
- **fuse7/fuse-karaf-openshift-rhel8** – Apache Karaf
- **fuse7/fuse-eap-openshift-jdk8-rhel7** – Red Hat JBoss Enterprise Application Platform
- **fuse7/fuse-eap-openshift-jdk11-rhel8** – Red Hat JBoss Enterprise Application Platform
- **fuse7/fuse-console-rhel8** – Fuse console
- **fuse7/fuse-console—rhel8-operator** – Fuse console operator
- **fuse7/fuse-apicurito-generator-rhel8** – Apicurito REST application generator
- **fuse7/fuse-apicurito-rhel8** – Apicurito REST API editor
- **fuse7/fuse-apicurito-rhel8-operator** – API Designer Operator

3.3. NEW FEATURES IN FUSE 7.9 ON OPENSIFT

Fuse on OpenShift provides following new features in version 7.9:

- Support for JDK 11
Fuse 7.9 offers support for building the Fuse on OpenShift quickstarts using JDK 11.
- Running quickstarts with **openshift-maven-plugin**
Fuse 7.9 uses new **openshift-maven-plugin** when building and running the Fuse on OpenShift quickstarts with Maven archtypes.

3.4. IMPORTANT NOTES

Important notes for the Fuse 7.9 release of the Fuse on OpenShift distribution:

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 now deprecated

Fabric8 Maven plugin is deprecated and replaced with [OpenShift Maven plugin](#) since Fuse 7.9. 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 7.9 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 7.9

The main new features of Fuse standalone in version 7.9 are:

Configuration of undertow thread pool names

Undertow thread pools and their names can now be configured on a per-service/bundle basis to improve monitoring and debugging from the Hawtio console.

For more information, see the [Worker IO configuration](#) section of the *Apache Karaf Security Guide*.

Implement consumer priority in Camel

Some brokers (and Artemis in particular) allow you to specify consumer priority for the messages you are sending. In Fuse 7.9 this configuration option is exposed in the **camel-amqp** and **camel-jms** components.

For more information, see the [JMS Component](#) section of the *Apache Camel Component Reference*.

Support for Salesforce Bulk API V2

The Camel SAP Salesforce Bulk 2.0 API is now supported and can be used to quickly load a large amount of data into Salesforce, or query a large amount of data from Salesforce.

For more information, see the [Bulk 2.0 API](#) section of the *Apache Camel Component Reference*.

Support for fast RFC serialization in the Camel SAP component

The **camel-sap** component now supports fast RFC serialization.

For more information, see the [Destination Configuration](#) section of the *Apache Camel Component Reference*.

Support Spring Security for Fuse on Karaf

The **camel-spring-security** component is now supported.

4.3. TECHNOLOGY PREVIEW FEATURES

The following features of Fuse standalone are *Technology Preview* only and are not supported in Fuse 7.9:

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".

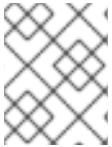
4.3.1. Fuse Tooling support for Apache Camel

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.

For Visual Studio Code, you can also add an extension that provides WSDL to Camel Rest DSL support.

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

The [WSDL 2 Camel Rest DSL](#) extension ([wsdl2rest](#) implementation) provides WSDL to Camel Rest DSL support. By specifying an existing WSDL file, you can use this extension to generate a Camel Rest DSL +

CXF solution for REST-style access. The WSDL file can be located either on your local file system or from an accessible web URL.

To access the **Language Support for Apache Camel** and **WSDL to Camel Rest DSL** 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](#)
- [WSDL 2 Camel Rest DSL](#)
- [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 [WSDL to Camel Rest DSL](#)

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](#)).

When you use the Eclipse XML or Java editor, only the auto-completion feature is provided.

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 7.9

To configure your Maven projects to use the supported Fuse 7.9 artifacts, use the BOM versions documented in this section.

4.4.1. BOM File

To upgrade your Fuse standalone applications to use the 7.9 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 7.9 using the BOM

Container Type	Maven BOM or Plugin Artifact groupId/artifactId	Version for Fuse 7.9
Spring Boot 2	org.jboss.redhat-fuse/fuse-springboot-bom	7.9.0.fuse-sb2-790065-redhat-00001
	org.jboss.redhat-fuse/fabric8-maven-plugin	7.9.0.fuse-sb2-790065-redhat-00001
	org.jboss.redhat-fuse/spring-boot-maven-plugin	7.9.0.fuse-sb2-790065-redhat-00001
Apache Karaf	org.jboss.redhat-fuse/fuse-karaf-bom	7.9.0.fuse-sb2-790065-redhat-00001
	org.jboss.redhat-fuse/karaf-maven-plugin	7.9.0.fuse-sb2-790065-redhat-00001
JBoss EAP	org.jboss.redhat-fuse/fuse-eap-bom	7.9.0.fuse-sb2-790065-redhat-00001

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

4.5. IMPORTANT NOTES

Important notes for the Fuse 7.9 release of the Fuse standalone distribution:

Fuse on EAP is upgraded to use JBoss EAP 7.4.0 (from JBoss EAP 7.3.2)

The Fuse 7.9 release now runs on the JBoss Enterprise Application Platform (EAP) 7.4 container (upgraded from JBoss EAP 7.3.2 in the previous release of Fuse). For more details, see [JBoss EAP 7.4.0 Release Notes](#).

Updated Jackson libraries

Updated the Jackson libraries from 2.9 and 2.10 to 2.12.1.

Using OpenJDK 8u292 with Apache Karaf

When running Fuse in Apache Karaf, Red Hat recommend using OpenJDK 8u282. Do not use OpenJDK 8u292 which has a known issue affecting the credential store.

Upgrading Fuse on Karaf

The Fuse 7.9 release restores the Apache Karaf mechanism (removed in Fuse 7.8) which enables you to apply fixes to an Apache Karaf container without needing to reinstall an updated version of Fuse on Karaf.

For more details on upgrading to Fuse 7.9 on Karaf, see [Fuse Migration Guide](#).

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 7.9 and may be removed in a future release:

fabric8-maven-plugin is deprecated

Since Fuse 7.9, the **fabric8-maven-plugin** is deprecated. From Fuse 7.9 onward, 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.

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 7.8

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.

5.3. 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.

5.4. 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.

5.5. 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.

5.6. 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.

5.7. 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 7.9

The following features are unsupported in Red Hat Fuse 7.9.

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 7.9.

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 7.9.

[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 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 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).

7.2. FUSE ONLINE

The Fuse Online distribution has the following known issues:

ENTESB-17137 Cannot access Fuse Online on disconnected environment

In Fuse 7.9, after installing Fuse Online on a disconnected OpenShift Container Platform (OCP) cluster, you cannot access the UI for Fuse Online. When you try to access the UI, you get the following error:

```
504 Gateway Time-out
The server didn't respond in time.
```

To work around this issue, you need to scale the Fuse Online Operator down to zero, and then set three environment variables in the Syndesis OAuth Proxy deployment configuration. You can do this at the command line, by entering the following commands:

```
oc scale deployment fuse-online-operator --replicas 0
sleep 10
oc set env deploymentconfig/syndesis-oauthproxy HTTP_PROXY=$(oc get proxy cluster -o jsonpath='{.status.httpProxy}')
oc set env deploymentconfig/syndesis-oauthproxy HTTPS_PROXY=$(oc get proxy cluster -o jsonpath='{.status.httpsProxy}')
oc set env deploymentconfig/syndesis-oauthproxy NO_PROXY=$(oc get proxy cluster -o jsonpath='{.status.noProxy}')
```

Note that the Fuse Online Operator **must remain scaled at zero**. If you scale the Operator back to one, it will overwrite the environment variables, resetting them to the (incorrect) default values.

ENTESB-16987 [Hawtio] Broken layout for drop-down menu in OSGi → Features

Since Fuse 7.8, when using the Fuse Console on Apache Karaf, on the **OSGi | Features** tab, the **Filter by repository** dropdown menu has a bad layout.

ENTESB-16989 DataMapper backslash delimiter in split transformation works only when the message has double backslashes

Since Fuse 7.9, when using the DataMapper **one-to-many** split transformation, if you choose the backslash character, `\`, as the delimiter to define the split points, the split transformation will succeed only if the backslash character is escaped by another backslash. In other words, the splits are made on each occurrence of a double backslash, `\\`. The JSON standard requires backslash literals to be escaped by another backslash, so this behavior is consistent with the JSON standard.

ENTESB-16990 DataMapper multi spaces delimiter in split transformation behaves as "double spaces" delimiter

Since Fuse 7.9, when using the DataMapper **one-to-many** split transformation, if you choose a multi-space delimiter consisting of more than two spaces to define the split points, the split content will contain additional space(s). For example, when using a multi-space delimiter consisting of `n` spaces, the resulting split fields will be preceded by `n-2` spaces. In other words, the split transformation behaves as if it was splitting on a double space.

ENTESB-15063 Unable to override maven repositories

Since Fuse 7.8, if you are running Fuse Online in an offline (disconnected from the internet) environment and you have configured the Fuse Online custom resource (CR) to use a custom Maven repository on your local network, for example:

```
...
  server:
  features:
  maven:
```

```

append: false
repositories:
  customRepo1: http://192.0.2.0:8080
...

```

Then there are particular circumstances where other Maven repositories are consulted, in addition to the specified **customRepo1**, in spite of the fact that the **append: false** flag is specified in the CR. For example, this can happen if Fuse Online is configured to use extensions that download Maven dependencies while they are building. Typically, this issue causes longer build times, because the incorrect Maven repositories are consulted **before** the specified custom Maven repository, which wastes time during the build process.

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-17144 Fuse Camel project generated by Apicurito Generator not exposes management port

In Fuse 7.9, a Fuse Camel project generated by API Designer (Apicurito Generator) does not expose a management port, because the file, **src/main/resources/application.yml** is configured incorrectly. The generated **src/main/resources/application.yml** file has the following configuration:

```

management:

```

```

port: 8081
endpoints:
  enabled: false
  health:
    enabled: true

```

This configuration must be changed to:

```

management:
  server:
    port: 8081

  endpoints:
    enabled-by-default: false

  endpoint:
    health:
      enabled: true

```

Moreover, the **pom.xml** file in the generated project uses the **fabric8-maven-plugin**, which is deprecated. It is preferable to use the new **openshift-maven-plugin** in a Maven project.

ENTESB-17125 Quickstart Spring-Boot Soap2Rest integration tests fail because of invalid algorithm parameter

In Fuse 7.9, the Spring Boot Soap2Rest integration tests are failing, but this does not affect the functionality.

ENTESB-17091 Missing metering labels on spring-boot-camel-rhosak quickstart

In Fuse 7.9, Fuse running on Spring Boot 2 does not support metering labels.

ENTESB-15994 API Designer upgrade from 7.8 to 7.9 requires delete and reinstall

In Fuse 7.9, The normal operator upgrade process does not work when upgrading from API Designer 7.8 to API Designer 7.9. To upgrade the API Designer from Fuse 7.8 to Fuse 7.9, you must delete the 7.8 API Designer operator and then install the 7.9 API Designer operator.

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.

ENTESB-16287 Unable to start Karaf

In Fuse 7.9, when building a Karaf application to run on OpenShift, you must edit the **pom.xml**, adding a line to the **Import-Package** section of the POM file to specify the explicit version range for **javax.annotation;version="[1.3,2.0)"** for the **javax.annotation** package.

For example, if the **Import-Package** section in your **pom.xml** file looks like this:

```

<Import-Package>
  javax.ws.rs;version="[2, 3)",
  javax.ws.rs.core;version="[2, 3)",
  javax.ws.rs.ext;version="[2, 3)",
  javax.xml.bind;version="[2,3)",
  javax.xml.bind.annotation;version="[2,3)",
  org.osgi.service.blueprint,
  org.apache.cxf.transport.http,
  *
</Import-Package>

```

You would add a line with **javax.annotation;version="[1.3,2.0]"**, so that the section looks like:

```
<Import-Package>
  javax.annotation;version="[1.3,2.0]",
  javax.ws.rs;version="[2, 3)",
  javax.ws.rs.core;version="[2, 3)",
  javax.ws.rs.ext;version="[2, 3)",
  javax.xml.bind;version="[2,3)",
  javax.xml.bind.annotation;version="[2,3)",
  org.osgi.service.blueprint,
  org.apache.cxf.transport.http,
  *
</Import-Package>
```

The reason this is needed is because some common third-party dependencies can pull in the wrong version of the **javax.annotations** library into the Karaf container.

7.4. FUSE ON APACHE KARAF

Fuse on Apache Karaf has the following known issues:

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:

[JBEP-21929](#) (7.4.z) org.infinispan.client.hotrod module is missing a dependency on org.infinispan.protostream

In Fuse 7.9, the Camel Infinispan (**camel-infinispan**) component does not work for Fuse on JBoss EAP, because JBoss EAP 7.4.0 is missing a dependency on **org.infinispan.protostream** (see also [ENTESB-16186](#)). If you get the following error when using the Camel Infinispan component in Fuse on JBoss EAP 7.4.0:

```
java.lang.NoClassDefFoundError: org/infinispan/protostream/SerializationContextInitializer
    Caused by: java.lang.ClassNotFoundException:
    org.infinispan.protostream.SerializationContextInitializer from [Module
    "org.infinispan.client.hotrod" version 11.0.9.Final-redhat-00001 from local module loader
```

You can work around this problem by modifying

\$EAP_HOME/modules/system/layers/base/org/infinispan/client/hotrod/main/module.xml, adding the **org.infinispan.protostream** module as follows:

```
<module name="org.infinispan.client.hotrod" xmlns="urn:jboss:module:1.x">
  <properties>
    <property name="jboss.api" value="private"/>
  </properties>

  <resources>
    <resource-root path="infinispan-client-hotrod-x.x.x.Final-redhat-00001.jar"/>
  </resources>

  <dependencies>
    <module name="javax.api"/>
    <module name="javax.transaction.api"/>
    <module name="com.google.protobuf" optional="true"/>
    <module name="io.netty"/>
    <module name="org.infinispan.common"/>
    <module name="org.jboss.logging"/>
    <module name="org.infinispan.protostream" optional="true"/> <!-- add this line -->
  </dependencies>
</module>
```

As this problem arises in the underlying JBoss EAP container, the problem could be solved by upgrading to a fixed (and supported) version of JBoss EAP as soon as a fix becomes available.

[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 issue:

FUSETOOLS-3460 Fuse Tooling temporarily uses deprecated templates

After CodeReady Studio 12.21 is released, Fuse Tooling will migrate from using the **fabric8-maven-plugin** to the **openshift-maven-plugin**.

FUSETOOLS-3384 Fuse Tooling temporarily uses Java 8

While Fuse Tooling currently works with Java 11, full support for the templates that use Java 11 will be provided with Fuse Tooling in the CodeReady Studio 12.21 release.

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 7.9

The following sections list the issues that have been fixed in Fuse 7.9:

- [Section 8.1, “Enhancements in Fuse 7.9”](#)
- [Section 8.2, “Feature requests in Fuse 7.9”](#)
- [Section 8.3, “Clarifications in Fuse 7.9”](#)
- [Section 8.4, “Bugs resolved in Fuse 7.9”](#)

8.1. ENHANCEMENTS IN FUSE 7.9

The following table lists the enhancements in Fuse 7.9.

Table 8.1. Fuse 7.9 Enhancements

Issue	Description
ENTESB-15831	Provide stronger masking (PBE) algorithms for credential store
ENTESB-15265	Use openshift-maven-plugin for quickstarts / archetypes
ENTESB-15752	"Backport to camel 2.*
ENTESB-15488	camel-sap to support fast RFC serialization feature of SAP
ENTESB-15117	Implement consumer priority in camel
ENTESB-15616	Postgres 12 testing
ENTESB-15498	Enhancement Request: Back Port [CAMEL-14118]: camel-http4 - Add option getWithBody
ENTESB-14087	Allow configuration of undertow thread pool names
ENTESB-14295	Reintroduce Quartz Scheduler Page in Web Console / Hawtio
ENTESB-13685	Add activemq-http transport to Fuse on EAP installation
ENTESB-15111	Add support for component paho-mqtt5
ENTESB-16505	[FoO] Plan for API deprecation in OCP 4.9
ENTESB-15883	Upgrade Fuse Online to use Postgres 12
ENTESB-16261	Use rhel8 based images for fuse-online 7.9

Issue	Description
ENTESB-16353	Update AtlasMap to 2.2.1
ENTESB-16381	Use AMQ image based on top of rhel8 for fuse-online 7.9
ENTESB-12712	Display Index & change order
ENTESB-12721	Properties & Constants
ENTESB-12715	Inline notification
ENTESB-12361	Sample source file conflict
ENTESB-15445	Document and test the migration from a script based installation to an Operatorhub subscription
ENTESB-15225	Make the nodeAffinity and toleration configuration in install time
ENTESB-14989	Fuse Online Jaeger enablement
ENTESB-15311	"Allow the use of external DB for Synthesis (already available for RHMI)
ENTESB-12732	Edit and manage the lookup mode
ENTESB-14446	Atlasmap CSV modal window design
ENTESB-16122	Update Fuse Console channel to conform with the RHI proposal
ENTESB-15520	AtlasMap update in Fuse Online 7.9 to 2.1.x
ENTESB-15631	Add Kustomize install method to operator-based projects
ENTESB-15538	"Enhance patching mechanism
ENTESB-15853	Set affinity/tolerations to syndesis-jaeger pods
ENTESB-14875	Reload ConfigMaps to avoid manual pod respin
ENTESB-15015	Support for OSD in Fuse Online
ENTESB-15035	Migrate FoO Quickstarts off Arquillian
ENTESB-15356	Upgrade to EAP-7.4.0.CD21
ENTESB-14339	SOAP Connector GA

Issue	Description
ENTESB-16627	Respin Fuse 7.9 images [OpenJDK 8u282]
ENTESB-16369	Update AtlasMap to 2.2.2
ENTESB-12407	Improve enum support in expression
ENTESB-16891	Respin Fuse 7.9 images [OpenJDK 8u302]
ENTESB-14340	Support Camel message headers to be mapped for AtlasMap properties
ENTESB-16120	Update Fuse Online channel to conform with the RHI proposal
ENTESB-13037	Populate the default-cr.yml file with defaults for all changeable attributes
ENTESB-15540	Noauth jaeger query service for Jaeger hybrid use case
ENTESB-15801	Plan for API deprecation in OCP 4.9

8.2. FEATURE REQUESTS IN FUSE 7.9

The following table lists the features requests in Fuse 7.9.

Table 8.2. Fuse 7.9 Feature Requests

Issue	Description
ENTESB-15621	record-request-start-time access logging option for cxf with embedded undertow server on karaf
ENTESB-15314	access logging support by cxf with embedded undertow server on karaf
ENTESB-15497	RequestLimitingHandler support by cxf with embedded undertow server on karaf
ENTESB-15554	[CAMEL-14968] Configurable shutdownAwaitTermination on Kafka Consumer Graceful Shutdown
ENTESB-14871	Support for Java 11 in Fuse 7 - Spring Boot 2 runtime
ENTESB-15246	Support for Java 11 in Fuse 7 - EAP runtime
ENTESB-15656	Support for Microsoft SQL Server 2019 in Red Hat Fuse
ENTESB-15504	RequestLimitingHandler support by managed pax-web on karaf(pax-web-undertow)

Issue	Description
ENTESB-14545	Requesting to add component for Salesforce Bulk API V2
ENTESB-12232	Add auditing capabilities to Fuse Online
ENTESB-9620	RHEL 8
ENTESB-10639	FUSE (camel-sap) SAP Certification with SAP S4/HANA
ENTESB-13402	"How to use ""useIAMCredentials"" for aws SQS component in Camel ?"
ENTESB-14495	Certify Fuse for SAP S/4HANA (1809/1909)
ENTESB-14755	extend ftp connector
ENTESB-15605	Upgrade camel-ssh to be compatible with EAP-7.4
ENTESB-16269	Port infinispn authentication support

8.3. CLARIFICATIONS IN FUSE 7.9

The following table lists the clarifications in Fuse 7.9.

Table 8.3. Fuse 7.9 Clarifications

Issue	Description
ENTESB-16157	Inconvenience when applying a full 7.9 patch on Fuse 7.8.0.GA.

8.4. BUGS RESOLVED IN FUSE 7.9

The following table lists the resolved bugs in Fuse 7.9.

Table 8.4. Fuse 7.9 Resolved Bugs

Issue	Description
ENTESB-15650	Fuse console operator description should be modified
ENTESB-15471	[CXF-8251] Lack of org.apache.cxf.transports.http_undertow.EnableHttp2 option
ENTESB-15543	"Fuse Online - Warn message ""Configuration required"" is shown after importing integrations"
ENTESB-15272	fileExist=Move is broken when tempFile is also configured [Fuse 7.x]

Issue	Description
ENTESB-15350	Using the cxf rest endpoint with OpenApi V3 on Karaf environment
ENTESB-15324	Make Spring Security works in Fuse/Karaf
ENTESB-15790	Configuration admin doesn't match against non-lowercase credential store keys
ENTESB-15771	Fuse 7 (on Karaf): camel-ssh does not support EdDSA digital signing
ENTESB-15625	Red Hat Fuse 7.x on EAP : Two way ssl is not working when keystore and truststore details are set as system property in EAP.
ENTESB-15607	Upgrading SpringBoot 2 app from 7.7 to 7.8 prevents all Camel context to be loaded
ENTESB-15548	[Fuse Online] Export integrations leaves opened connections to the syndesis-db
ENTESB-15430	Duplicate Custom RoutePolicyFactory by Camel on SpringBoot
ENTESB-15435	"camel undertow component forces to set ""text/plain"" even Rest DSL sets ""application/json"" to ""produces"" option"
ENTESB-15547	There is no option to configure allowOptimisedComponents in toD EIP using Java DSL
ENTESB-15484	Upgrade to Narayana 5.11.3.Final-redhat-00001 - Fuse Spring Boot narayana-jta does not treat null value in com.arjuna.ats.internal.jta.recovery.arjunacore.XARecoveryModule.xaRecoveryFirstPass()
ENTESB-15635	""java.lang.NoSuchMethodException"" thrown from org.apache.cxf.common.util.ReflectionInvokationHandler.invoke() on karaf due to loading multiple CodeWriter instances"
ENTESB-15852	springboot2 cxf throwing com.fasterxml.jackson.databind.exc.InvalidDefinitionException: Cannot construct instance of javax.ws.rs.core.Response
ENTESB-15526	"Since 7.8
ENTESB-15610	patch:add command from 7.8.0.GA can't extract everything from hot fix patch for 7.8
ENTESB-15541	camel-salesforce: wrong channel name for standard platform events – CAMEL-15338

Issue	Description
ENTESB-16812	camel stream cache data loss issue
ENTESB-16324	Fuse-EAP image use outdated EAP image.
ENTESB-16282	Red Hat Fuse 7.8 on Karaf : camel-activemq consumer throw javax.jms.MessageNotWriteableException with AMQ7
ENTESB-15991	ImageChangeTags not being applied in DeploymentConfig generated by plugin in case of resource fragments.
ENTESB-16525	ehcache embeds classes from jackson-databind that are not up to date
ENTESB-16444	backport CAMEL-16181 to fuse 7.x Latest version
ENTESB-16591	Backport CAMEL-16343 - Avoid committing offsets onPartitionsRevoked if the user is manually committing the offsets
ENTESB-16508	CVE-2017-5645 log4j; Socket receiver deserialization vulnerability [fuse-7.8]
ENTESB-16364	"The ""camel-ldif"" feature is missing org.apache.directory.api/api-ldap-net-mina artifact"
ENTESB-16535	CVE: Narayana bundles contains Netty jar with some CVE
ENTESB-16642	proxyHost / proxyPort parameters seem to be ignored by HTTP4 component (and HTTP component)
ENTESB-13920	[Fuse Online] - DataMapper : Convert kafka message to json ends with org.apache.camel.TypeConversionException: Error during type conversion from type: java.lang.String to the required type: java.util.List
ENTESB-16974	Add commons-beanutils to Fuse Spring-Boot BOM
ENTESB-15327	[CAMEL-15027]KafkaEndpoint Sourced Headers are Overwritten By Default Propagation
ENTESB-15304	org.apache.camel.spi.RoutePolicy can't be used when exposed via OSGi
ENTESB-16507	Integration test fails on spring-boot-2-camel-soap-rest-bridge quickstart
ENTESB-16370	Fuse Online syndesis-db upgrade fails
ENTESB-16464	NullPointerException when creating SOAP Client Connector
ENTESB-16196	Fuse Online syndesis-db-upgrade pod stuck in error state

Issue	Description
ENTESB-16171	Non-productized artifacts in Fuse 7.9 AR7
ENTESB-16307	Fuse Online AR11 atlasmap UI backend mismatch
ENTESB-16300	DataMapper constant is missing in the output message
ENTESB-16295	Auditing feature doesn't work when Jaeger addon is enabled
ENTESB-16358	Missing return type for the Periodic stored procedure invocation step
ENTESB-16338	paho-mqtt5 NPE during route shutdown
ENTESB-16323	Karaf java default memory parameter changed
ENTESB-16039	UI throws an error during editing the Conditional Flows
ENTESB-16041	Error in building release of Syndesis
ENTESB-16032	Mapping details are missing for a field in array when editing
ENTESB-15881	Productized boosters missing for 7.9
ENTESB-16511	Karaf cxf jaxws application fail
ENTESB-16480	javax.activation.UnsupportedDataTypeException in google.mail.AttachmentsTest
ENTESB-16274	Camel 2.23 downstream test failures
ENTESB-16258	CRD is not updated during the install cluster phase
ENTESB-16284	NoClassDefFoundError in ServiceNow integration
ENTESB-16286	Syndesis doesn't show PostgreSQL demo data procedures
ENTESB-16368	DataMapper version mismatch warning
ENTESB-13996	[React-UI] Mapping preview with expression not working
ENTESB-13266	Create connection hangs when using Extension Connector missing properties attribute
ENTESB-11568	API Provider Data Type Mismatch

Issue	Description
ENTESB-15469	[Fuse Console] RBAC is not set to True by default when deploying from the operator
ENTESB-15704	[Application Templates] Wrong versions in fis and fuse templates
ENTESB-15749	Fuse Online bundle incorrectly references specific image versions
ENTESB-15804	API provider integration is not able to start due to FailedToStartRouteException
ENTESB-15707	S2I stream via application template of spring-boot-2-camel-soap-rest-bridge fails
ENTESB-16065	S2I Quickstarts karaf-camel-amq fails because of mismatching env variables
ENTESB-16127	Unable to execute jps command in java containers
ENTESB-13689	UUID database column misrepresentation
ENTESB-16319	Fuse 7.9 AR11 Build - Misalignments with Component alignment document
ENTESB-16130	Commit ID is missing in About page
ENTESB-16080	JKube Pod ReplicaCount doesn't work on OMP productized version
ENTESB-16062	Quickstarts spring-boot-camel-rest-sql fails because of Multiple consumers
ENTESB-16134	Missing tag for spring-boot-camel-infinispan quickstart
ENTESB-16064	Missing pod role on spring-boot-camel-xa quickstart
ENTESB-16063	Probes not generated using OMP on Karaf quickstarts
ENTESB-16069	New conditional flow steps are created in the background
ENTESB-16033	Error when a constant is used for Repeat transformation without Count
ENTESB-15997	Missing rerunFailingTestsCount configuration on fabric8-quickstarts/spring-boot-cxf-jaxws
ENTESB-15931	Replace reference to geronimo-ws-metadata_2.0_spec
ENTESB-15791	[Fuse Console] Fuse Console Operator Metadata is missing
ENTESB-15785	Camel Opentracing broken

Issue	Description
ENTESB-15744	The left panel shows the next step incorrectly during creating a new one
ENTESB-15899	Quickstart archetypes have unaligned tag versions in README.adoc
ENTESB-15664	Logout doesn't log out the user
ENTESB-15764	patch:list to show installed = 'true' instead of 'root' if a patch got installed successfully
ENTESB-15756	DataMapper map only one element from GoogleSpreadsheet sheets collection
ENTESB-15743	The email address cannot be used in a constant in Data Mapper
ENTESB-15747	FHIR transaction integration stopped working after the AtlasMap update
ENTESB-15827	Operator pod does not contain redhat metering labels
ENTESB-16038	Not able to delete integration middle step
ENTESB-15979	GlobalModules & WFCEXtrasModule fail on EAP-7.4 / JDK11
ENTESB-15705	Unable to install 2 features
ENTESB-15700	Deployment to OpenShift 4.6 not working using login parameters instead of oc login
ENTESB-15671	Error during importing JDBC extension
ENTESB-15658	No productized tag exists for application-templates [2.1.0.fuse-sb2-790017-redhat-00001]
ENTESB-15751	DataMapper doesn't work properly on Build AR1
ENTESB-15750	Fuse Online bundle uses wrong channel name
ENTESB-16220	Unable to install 14 Karaf features
ENTESB-16270	Many to many mapping doesn't work correctly
ENTESB-16277	camel-ssh client can't connect to server using ed25519 certificate
ENTESB-16205	Misalignments with Component alignment document in 7.9.AR10
ENTESB-16265	Patch Maven Plugin can't find Fuse BOMs in multi-module Maven project

Issue	Description
ENTESB-16609	Show invalid SQL query from previous Fuse Online versions
ENTESB-15461	Postgres-exporter fails to build due to absolute path link
ENTESB-15846	Example camel-example-spring-boot-xml return 404
ENTESB-15840	EmbeddedCassandraServer fails to start on JDK11
ENTESB-15808	Apicurito pods contain metering labels with incorrect values
ENTESB-15754	Non-productized tomcat-annotations-api in fuse-sb2 7.9.AR1
ENTESB-15755	Upgrade Fuse Online 7.8 to 7.9
ENTESB-15738	Next button is not disabled when required fields are empty
ENTESB-15843	Quickstarts archetype still refers to fabric8 plugin
ENTESB-15845	Mapping preview does not work on Mapping table page
ENTESB-14969	Link Secrets Creation page to Quickstarts
ENTESB-14961	UUID not generated for imported CSV files
ENTESB-15487	Backport CAMEL-15974 - Fix RAW parameters resolution in HttpSendDynamicAware
ENTESB-15292	Creating connection from API connector prefills old values
ENTESB-15419	some kafka class was not included in the spring boot starter
ENTESB-15364	Use productized images for backup
ENTESB-16513	Versions validation fails for productized versions
ENTESB-16860	Fuse online installed from Operatorhub uses wrong Syndesis and Camel versions
ENTESB-15388	Fields disappear from conditional mapping text field when hint is displayed
ENTESB-16509	[fabric8 quickstarts] rhel7 is used instead of rhel8
ENTESB-16928	Application templates rhosak use wrong git references
ENTESB-14432	Unexpected exception is thrown while reading source field

Issue	Description
ENTESB-16813	FO Operator installed from Operatorhub can't create subscription to Jaeger
ENTESB-16929	Misalignments with Component alignment document in 7.9.AR17
ENTESB-16698	spring-kafka-test doesn't work
ENTESB-16751	Not possible to install feature camel-salesforce
ENTESB-16409	XPathFactoryImpl not found during Camel Context start
ENTESB-15361	Default value for postgres-exporter links to wrong image
ENTESB-16608	SQL query with ON CONFLICT is not valid anymore
ENTESB-14078	When creating a WSDL connector from invalid spec (probably?) no error is shown
ENTESB-15936	Camel 2.23 test failures after version alignment (Fuse 7.9)
ENTESB-16804	Installation via OperatorHub probably uses the old CRD
ENTESB-16374	Fail to install jaeger-operator on openshift3
ENTESB-12841	Error handling broken for existing API provider integrations
ENTESB-16564	spring-boot-camel-infinispan-archetype errors using JDK11
ENTESB-16529	S2I Quickstart Spring Boot Soap2Rest doesn't have Route definition in application template
ENTESB-16775	Camel 2.23 downstream test failures with latest openjdk1.8.0
ENTESB-16174	"camel-sql sql-stored component queryTimeout option not present"
ENTESB-15995	Permission issue with deploy/finalizers when installing as user
ENTESB-16759	Camel 2.23 downstream test failures
ENTESB-16367	CSV document disappears after refreshing AtlasMap UI
ENTESB-14457	Wrong expression format when creating Select/Filter expression with UI
ENTESB-16902	Missing API Connector review page when API contains error

Issue	Description
ENTESB-15900	Quickstart S2I have unaligned tag versions in README.adoc
ENTESB-14440	Atlasmap - imported CSV file doesn't retain state when page refreshes
ENTESB-14532	Atlasmap camel header/property lookup not working in UI
ENTESB-14237	Missing patch body in FHIR Patch operation
ENTESB-14114	Icon for SOAP connector is not generated
ENTESB-16219	Camel-Swagger incompatible with fasterxml-jackson-2.12.1
ENTESB-16463	Jackson2 version incompatible with EAP 7.4.0.GA
ENTESB-15678	Example camel-example-spring-boot-health-checks - checks return 404
ENTESB-16066	Jolokia port not exposed using OMP on Karaf quickstarts
ENTESB-16779	Quickstart karaf-camel-amq cannot be executed as expected
ENTESB-7464	Camel salesforce does not run on IBM java
ENTESB-16948	Application templates Eap Camel use wrong git references
ENTESB-16774	productized org.apache.servicemix.bundles.xalan-2.7.2.3-fuse-redhat-0000x.jar has incorrect header
ENTESB-14411	Mappings of source fields named with the character '@' doesn't work in Fuse Online Data Mapper
ENTESB-16255	Wildfly-camel BOM contains reference to non-existent artifact
ENTESB-16365	"Remove support of EAP 7.4.0.beta
ENTESB-16438	Camel 2.23 downstream test failures
ENTESB-16078	README refers to wrong maven plugin (FMP instead of OMP)
ENTESB-16418	Fuse online operator crashes when installed from bundle
ENTESB-15432	Align the deployment resources used in syndesis install and csv generation
ENTESB-12104	demoData option Make it disable sampleDB stuff

Issue	Description
ENTESB-11603	"When going ""back"" during connection creation - all filled fields are removed "
ENTESB-12209	Fuse Online - remove the -p / --project switch as causes failures in install_ocp.sh script
ENTESB-12127	Divergence in camel-google-sheets component
ENTESB-15680	Slack connector failing in UI when added to a flow
ENTESB-15810	Linked documentation is for version 7.8 instead of version 7.9
ENTESB-15984	Quickstarts company metering labels are not created
ENTESB-16180	windows user certificate store with the undertow component does not work
ENTESB-15696	Salesforce integration fails with authorization issue
ENTESB-15697	"Enhance patching mechanism
ENTESB-15981	InfinispanIntegration fails with EAP-7.4 / JDK11
ENTESB-15308	Camel CXF not compatible with EAP-7.3.3.GA-redhat-00004
ENTESB-15924	Credential store NoSuchAlgorithmException on IBM jdk 8
ENTESB-16186	camel-infinispan stopped working on EAP
ENTESB-15342	Adding already added patch after patch:update and before patch:install breaks up patching mechanism
ENTESB-14088	Quickstart archetypes have non-consistent readmes
ENTESB-12128	Divergence in camel-olingo4 component
ENTESB-16169	JPA unable to join transaction
ENTESB-16187	Unable to install feature pax-jdbc-pool-aries
ENTESB-15988	OMP Route creation via jkube.createExternalUrls parameter doesn't work
ENTESB-15982	SpringRedisIntegration fails with CNF redis.clients.jedis.util.Pool
ENTESB-15989	Wrong version of docker image in quickstarts pom.xml

Issue	Description
ENTESB-15980	Fuse 7.9 Boosters not migrated to Eclipse JKube
ENTESB-15958	Unaligned spring-boot version between SB Fuse BOM and Curator
ENTESB-15940	bin/client asks for password for .ssh/id_rsa
ENTESB-14221	AMQ Online Fuse on Openshift quickstarts should be refactored
ENTESB-16142	oracle.jdbc.internal.Monitor not found by ojdbc8
ENTESB-16200	Cannot install Fuse 7.9 on EAP 7.4-beta
ENTESB-15679	Example camel-example-spring-boot-supervising-route-controller returns 404
ENTESB-16297	Problems patching Fuse on Karaf 7.6 and 7.7 to 7.9
ENTESB-16148	Unable to connect with JMX on windows
ENTESB-15034	Missing labels on Openshift Service Object in FMP quickstart spring-boot-camel-rest-3scale
ENTESB-15766	Unable to install camel-olingo4 feature
ENTESB-15972	CXFRSSecureConsumerIntegrationTest cannot find valid certification path