Red Hat Fuse 7.4

Release Notes

What's new in Red Hat Fuse

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Legal Notice

Abstract

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

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CHAPTER 1. FUSE 7.4 PRODUCT OVERVIEW

1.1. FUSE DISTRIBUTIONS

Fuse 7.4 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:

- Pre-installed on the OpenShift Online Professional tier

- On a Red Hat Managed Integration cluster

- For installation on an on-premises OpenShift cluster

1.2. NEW FEATURES

Fuse 7.4 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 standalone

1.3. SUPPORTED CONFIGURATIONS

For information about supported configurations, standards, and components in version 7.4, see the following Customer Portal articles:

- Red Hat JBoss Fuse Supported Configurations

- Red Hat JBoss Fuse Supported Standards

- Red Hat JBoss Fuse Component Details

- Red Hat JBoss Fuse Supported Standards

- Red Hat JBoss 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. As a Technology Preview feature, Camel-K is available as an additional runtime.

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 Online 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 7.4

Fuse Online 7.4 provides the following new features:

- New connectors in this release:

  - Amazon Simple Notification Service (SNS) — sends messages to SNS topics.

  - Amazon Simple Queue Service (SQS) — retrieves messages from and sends messages to SNS queues.

- The following connectors, which were Technology Preview features in the previous release, are now supported:

  - FHIR - connects to a Fast Healthcare Interoperability Resources (FHIR) server.

  - OData - connects to an Open Data Protocol (OData) service.

- When you are running Fuse Online on OpenShift Container Platform (OCP) on premise, the following new features are available:

  - A new public endpoint creates a new environment label without applying it to an integration.

  - The endpoint that returns a list of defined environment labels now optionally returns the number of integrations that are tagged with that environment label.

2.3. CHANGES IN FUSE ONLINE 7.4

Fuse Online 7.4 changes Fuse Online 7.3 features as follows:

- Google Sheets connector enhancements:

  - You can now obtain spreadsheet values in a Google Sheets connection that is in the middle

of a flow.

- When obtaining spreadsheet values in a start connection, you can now specify a heading row number, which enables the connection to obtain column names from the spreadsheet you are obtaining data from. In the new **Column names** field, you can accept or edit the column names. If you configure the connection to return row objects, then the data mapper can display meaningful column names rather than the letter labels (A, B, C, and so on) that it displayed in the previous release.

- When obtaining spreadsheet values in a start connection, the new default value for the **Max results** field is **0**. Accept the default if you do not want to restrict how many rows or columns polling can return. The setting of **Max results** applies to the setting of the major dimension in the result matrix. To limit the data that the connection returns for the major dimension, specify an integer.

  For example, suppose that the major dimension is rows and that **Max results** is set to **25**. The poll returns no more than 25 rows of values.

- New Twitter connection actions:

  - Retrieve obtains direct messages (private messages) that were sent to the user account that the Twitter connection has access to. This action can be performed by a Twitter start connection in a simple integration.

  - Send dispatches a message to the Twitter username that you specify. You can map the message content from a previous integration step or specify the message when you configure the action. The Send action can be performed by a Twitter connection that is in the middle of a flow or that is the finish connection in a simple integration.

- Custom REST API client connector security enhancement
  A custom REST API client connector can now provide security by means of API keys. When you create the API client connector, Fuse Online prompts for some API key details if your OpenAPI document specifies API key security. When you create a connection from the custom connector, Fuse Online prompts for the API key value.

- Database connection enhancement
  Input to a connection that updates a database can now be a collection of parameter values. A new parameter, **Batch update**, determines how the connection updates the database:

  - **No**, the default, accepts only one set of parameter values and executes the SQL statement exactly once.

  - **Yes** executes the SQL statement once and uses a batch update operation to update the database for all collection members.

  For more information, see:

  - About parameter placeholders and values.

  - Accessing a database in the middle or to complete an integration .

2.4. UPGRADING EXISTING INTEGRATIONS THAT ARE RUNNING ON OPENSHIFT ONLINE

When Fuse 7.4 is released, the Fuse Online infrastructure on OpenShift Online is automatically upgraded. During the infrastructure upgrade, any existing integrations that are running on OpenShift Online continue to run both during and after the upgrade. However, the existing integrations continue to

run with the *older* versions of Fuse libraries and dependencies.

After you receive an email message that lets you know that the Fuse Online infrastructure has been upgraded to the new release, upgrade your existing integrations by republishing them (not just restarting them). Do this as soon as you can.

To republish your integrations, in your Fuse Online environment, in the left navigation panel, click **Integrations**. Then do the following for each integration:

1. To the right of the integration entry, click and select **Edit**.

2. When Fuse Online displays the integration for editing, in the upper right, click **Publish**.

Publishing forces a rebuild that uses the latest Fuse Online dependencies.

> **NOTE**
>
> The Fuse Online user interface shows a warning if any element of an integration has a newer dependency that needs to be updated.

2.5. IMPORTANT NOTES

Important notes for the Fuse 7.4 release of the Fuse Online distribution:

- In this release, connections to Kafka do not support SSL. It is expected that this will change in a future release.

- A Fuse Online account is limited to a specific number of integrations that can be running at one time. For details, see the pricing plan. If you are using a Fuse Online evaluation account, then only one integration at a time can be running.

- 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 Apicurito, which is an API design tool, and add input/output type specifications.

- 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.

- In the previous release, in a Google Sheets connection that obtained spreadsheet values, the setting for **Max results** was observed only when **Split results** was set to **Yes**. This dependency no longer exists.

2.6. OBTAINING TECHNICAL SUPPORT

To obtain technical support, in Fuse Online, 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

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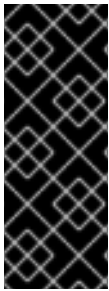
> **IMPORTANT**
>
> Technology Preview features are not supported with Red Hat production service level agreements (SLAs), might not be functionally complete, and Red Hat does not recommend using them in production. These features provide early access to upcoming product features, enabling customers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

- Data virtualization
  For Fuse Online development environments that run on OpenShift Container Platform on-site, data virtualization is a container-native service. It integrates data from multiple heterogeneous sources, including relational databases, files, web services, and SaaS repositories. In Fuse Online, developers can create a virtual database image that defines a custom, logical view of their source data. They can then deploy that image on OpenShift. Applications connect to the virtual database over a standard OData, REST, or JDBC interface, and can run SQL queries across all of the data sources, even those that do not support SQL.

  To enable data virtualization, see Installing Fuse Online on OCP .

- Connectors for:

  - Box

  - IMAP or POP3 email

  - Jira

  - SMTP email

- Conditional flows
  You can now add a **Conditional Flows** step to a simple integration's flow or to an API provider integration operation flow. When you add a **Conditional Flows** step, you specify one or more conditions for the integration to evaluate against the integration data at run time. You then create a flow for the integration to execute when that condition evaluates to true. During execution, when an evaluation result is true, the integration executes the flow that you have specified for that condition. A conditional flow can have the same connections and steps that you can add to a simple integration flow or an API provider operation flow.

- Conditional expressions for mapping data fields
  In the data mapper, you can specify a conditional expression and apply it to one 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.

- Camel-K is available as an additional runtime.

- 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 OPENSHIFT

Fuse on OpenShift (the new name for Fuse Integration Services since 7.0) enables you to deploy Fuse applications on OpenShift Container Platform.

3.1. SUPPORTED VERSION OF OPENSHIFT

Fuse on OpenShift is now supported on OpenShift Container Platform 4.1. 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** — Spring Boot

- **fuse7**/**fuse-karaf-openshift** — Apache Karaf

- **fuse7**/**fuse-eap-openshift** — Red Hat JBoss Enterprise Application Platform

- **fuse7**/**fuse-console** — Hawtio console

- **fuse7**/**fuse-console-operator** — Hawtio console operator

- **fuse7**/**fuse-apicurito** — Apicurito REST API editor

- **fuse7**/**fuse-apicurito-generator** — Apicurito REST application generator

- **fuse7-tech-preview**/**fuse-apicurito-operator** — Apicurito Operator

3.3. NEW FEATURES IN FUSE 7.4

The main new feature of Fuse on OpenShift in version 7.4 is:

- Fuse on OpenShift is now supported on OpenShift server 4.1.

3.4. TECHNOLOGY PREVIEW FEATURES

The following features of Fuse on OpenShift are *Technology Preview* only and are not supported in Fuse 7.4:

Data Virtualization

Red Hat Data Virtualization is a container-native data virtualization service, based on the Teiid data virtualization project. Red Hat Data Virtualization combines data from multiple heterogeneous sources, such as relational databases, files, web services, and SaaS repositories. For more details, see Data Integration.

Hawtio Operator installation (for OpenShift 3.11)

A Kubernetes Operator is a script that simplifies the installation and management of an OpenShift (or Kubernetes) application. From the Hawtio community, you can access a Technology Preview of the Hawtio Operator for Fuse on OpenShift, which simplifies the procedures for installing, upgrading, and uninstalling the Hawtio Console on OpenShift. For details of how to use the Hawtio Operator, see the README on the Hawtio community site.

> **NOTE**
>
> Neither the Hawtio Operator nor the Hawtio Console that it installs are supported. This technology preview feature is not suitable for testing on a production environment.

Apicurito Operator installation

You can install Apicurito Operator from the OperatorHub of OpenShift Container Platform 4.1. The Apicurito Operator provides you access to a Technology Preview of the Apicurito Operator for Fuse on OpenShift. The Apicurito Operator simplifies the procedures for installing, upgrading, and uninstalling Apicurito on OpenShift. For details on how to install the Apicurito Operator, see Installing Fuse Imagestreams and Temaplates on the OpenShift 4.x Server.
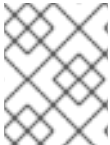
> **NOTE**
>
> Neither the Apicurito Operator nor the Apicurito instance that it installs are supported. This technology preview feature is not suitable for testing on a production environment.

3.5. IMPORTANT NOTES

Important notes for the Fuse 7.4 release of the Fuse on OpenShift distribution:

Container Development Kit (CDK) 3.9 is the recommended version for use with Fuse 7.4

We recommend that developers use CDK 3.9 to try out applications on OpenShift. As explained in Section 7.3, "Fuse on OpenShift", earlier CDK versions are likely to be affected by CDK-397.
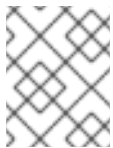
> **NOTE**
>
> CDK is provided only as a convenience for developers and is not a supported OpenShift distribution.

Redeploying an application using the Fabric8 Maven plugin

When deploying a Fuse on OpenShift application to OpenShift Container Platform using the Fabric8 Maven plugin, you cannot redeploy the application using just the command **mvn fabric8:deploy**. Use the following sequence of commands instead:

```
mvn fabric8:undeploy
mvn fabric8:deploy
```

CHAPTER 4. FUSE STANDALONE

4.1. SUPPORTED CONTAINERS

Fuse standalone 7.4 is supported on the following runtime containers:

- Spring Boot 1 and Spring Boot 2 (standalone)

- Apache Karaf

- Red Hat JBoss Enterprise Application Platform (JBoss EAP)

4.2. NEW FEATURES IN FUSE 7.4

The main new features of Fuse standalone in version 7.4 are:

New Maven artifacts for Fuse on Spring Boot 2.x

The **hawtio-springboot** artifact now provides Hawtio integration with Spring Boot 2. The **hawtio-springboot-1** artifact now provides Hawtio integration with Spring Boot 1.

New path for management endpoints for Spring Boot 2.x

Management endpoints exist under a new **/actuator** path which is managed under the following path:

> management.endpoints.web.base-path=/

New Camel 2.22 and 2.23 components for Fuse on Spring Boot 2

The following additional Camel components are now supported for Fuse on Spring Boot 2:

- **as2-component**

- **aws-iam-component**

- **fhir-component**

- **google-calendar-stream-component**

- **google-mail-stream-component**

- **google-sheets-component**

- **google-sheets-stream-component**

- **ipfs-component**

- **kubernetes-hpa-component**

- **kubernetes-job-component**

- **micrometer-component**

- **mybatis-bean-component**

- **nsq-component**

- **rxjava2**

- **service-component**

- **spring-cloud-consul**

- **spring-cloud-zookeeper**

- **testcontainers-spring**

- **testcontainers**

- **web3j-component**

4.3. TECHNOLOGY PREVIEW FEATURES

The following features of Fuse standalone are *Technology Preview* only and are not supported in Fuse 7.4:

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 Camel LSP

Fuse Tooling provides a cross-platform, cross-IDE approach to Camel application development, with Camel language server protocol (LSP) 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

The Language Support for Apache Camel extension provides the following features for Camel URIs:

For 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).

- As you edit the file, the editor performs an Apache Camel validation check on the Camel code.

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.

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 Camel LSP** 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

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 6 provides features for Camel URIs and XML DSL only.

- 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 need to edit your workspace's configuration. For details on how to activate it, see the "Use in OpenShift.io" section in this Red Hat Developers blog entry .

Note: Che 7 (in Beta) includes support for Camel Java DSL. For details, see https://github.com/eclipse/che/issues/12584.

4.4. BOM FILES FOR FUSE 7.4

To configure your Maven projects to use the supported Fuse 7.4 artifacts, use the BOM versions documented in this section.

4.4.1. BOM File

To upgrade your Fuse standalone applications to use the 7.4 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 7.4 using the BOM

Container Type	Maven BOM or Plugin Artifact groupId/artifactId	Version for Fuse 7.4
Spring Boot 1	**org.jboss.redhat-fuse/fuse-springboot-bom**	**7.4.0.fuse-740036-redhat-00002**
	org.jboss.redhat-fuse/fabric8-maven-plugin	**7.4.0.fuse-740036-redhat-00002**
	org.jboss.redhat-fuse/spring-boot-maven-plugin	**7.4.0.fuse-740036-redhat-00002**
Spring Boot 2	**org.jboss.redhat-fuse/fuse-springboot-bom**	**7.4.0.fuse-sb2-740019-redhat-00005**
	org.jboss.redhat-fuse/fabric8-maven-plugin	**7.4.0.fuse-sb2-740019-redhat-00005**
	org.jboss.redhat-fuse/spring-boot-maven-plugin	**7.4.0.fuse-sb2-740019-redhat-00005**
Apache Karaf	**org.jboss.redhat-fuse/fuse-karaf-bom**	**7.4.0.fuse-740036-redhat-00002**
	org.jboss.redhat-fuse/karaf-maven-plugin	**7.4.0.fuse-740036-redhat-00002**
JBoss EAP	**org.jboss.redhat-fuse/fuse-eap-bom**	**7.4.0.fuse-740036-redhat-00002**

For more details about using the BOM, see Fuse Migration Guide .

4.5. IMPORTANT NOTES

Important notes for the Fuse 7.4 release of the Fuse standalone distribution:

Fuse on EAP is upgraded to use JBoss EAP 7.2.1 (from JBoss EAP 7.2)

The Fuse 7.4 release now runs on the JBoss Enterprise Application Platform (EAP) 7.2.1 container (upgraded from JBoss EAP 7.2 in the previous release of Fuse). For more details, see JBoss EAP 7.2.0 Release Notes.

ENTESB-10537: Add support for camel-jbpm, Spring Boot 2.1, Camel 2.23 in Fuse 7.4

- The Spring Boot 2 BOM references a currently unsupported **camel-jbpm** component.

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 7.4 and may be removed in a future release:

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.

JDBC pools c3p0, aries, and hikaricp are deprecated and will be removed in a future release of Fuse

The following jdbc pools are deprecated and are no longer supported from Fuse 7.4:

- **pax-jdbc-pool-c3p0**

- **pax-jdbc-pool-aries**

- **pax-jdbc-pool-hikaricp**

> **NOTE**
>
> Instead, use **pax-jdbc-pool-transx**, **pax-jdbc-pool-narayana**, or **pax-jdbc-pool-dbcp2**

5.2. 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 blacklisted in 7.3

The **openjpa** feature and the **openjpa3** feature have been blacklisted (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 blacklisted in 7.3

The **camel-jetty** feature has been blacklisted (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 blacklisted in 7.3

The **pax-jms-oracleaq** feature has been blacklisted (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.

5.3. 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.

5.4. 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.
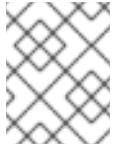
NOTE

In the Fuse 7.0 GA release, the **instance:** commands are not blacklisted. 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 Fuse7.0. It is recommended that you use the Hibernate implementation instead.

5.5. 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 7.4

The following features are unsupported in Red Hat Fuse 7.4.

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 7.4.

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 security vulnerabilities affecting third-party dependencies of Fuse 7.4.

ENTESB-12489 CVE-2019-9827 – Fuse Console standalone on Amazon Web Services

Due to security concerns, you should not deploy a standalone Fuse application to Amazon Web Services (AWS). This restriction applies to all supported standalone environments (Spring Boot 1.x and 2.x, Karaf, and Red Hat JBoss Enterprise Application Platform). If you want to deploy the Fuse Console standalone on AWS, it is highly recommended that you upgrade to Fuse 7.7 or later and disable the Fuse Console's proxy servlet by setting the **hawtio.disableProxy** system property to **true**.

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).

Multiple CVEs Multiple CVEs related to jackson-databind security vulnerability

Applications that that use the FasterXML **jackson-databind** library to instantiate Java objects by deserializing JSON content are potentially vulnerable to a *remote code execution* attack. The vulnerability is not automatic, however, and it can be avoided if you take the appropriate mitigation steps.

At a minimum, the following prerequisites must all be satisfied before an attack becomes possible:

1. You have enabled polymorphic type handling for deserialization of JSON content in **jackson-databind**. There are two alternative ways of enabling polymorphic type handling in Jackson JSON:

   a. Using a combination of the **@JsonTypeInfo** and **@JsonSubTypes** annotations.

   b. By calling the **ObjectMapper.enableDefaultTyping()** method. This option is particularly dangerous, as it effectively enables polymorphic typing globally.

2. There are one or more *gadget classes* in your Java classpath, which have not yet been blacklisted by the current version of **jackson-databind**. A gadget class is defined as any class that performs a sensitive (potentially exploitable) operation as a side effect of executing a constructor or a setter method (which are the methods that can be called during a deserialization). The gadget blacklist maintained by the Jackson JSON library is the last line of defence against the remote code execution vulnerability.

It is the existence of a large number of gadget classes which explains why there are many individual CVEs related to the **jackson-databind** vulnerability. There are different CVEs related to different kinds of gadget class.

> **IMPORTANT**
>
> Fuse will be upgraded to use the latest version of **jackson-databind** at the earliest opportunity. However, Fuse 7.4.0 is currently not aligned with the latest version of **jackson-databind**.

If you do need to use the **jackson-databind** library in your application, the most important measure you can take to mitigate the risk is this: *avoid polymorphic type handling in Jackson JSON and on no account should you call the **ObjectMapper.enableDefaultTyping()** method*.

7.2. FUSE ONLINE

The Fuse Online distribution has the following known issues:

6052 [1.7.8] **No activities after small load (~80000 messages in 20hours)**

Performance testing has shown that the activity tracking logic can result in an exceptionally high number of dead tuples in the database used by Fuse Online to track activities. This issue causes a general slowdown in any operation that requires reads from the database, most notably accessing the list of integrations from the UI or refreshing the activities of an integration. The workaround for this issue is to perform periodic maintenance of the database by issuing the SQL statement **VACUUM FULL ANALYSE jsondb**.

Here are the steps to perform this task:

```
# check to see if there are dead tuples (not vacuumed)
$ oc exec -c postgresql $(oc get pod -l 'syndesis.io/component=syndesis-db' --no-headers=true -
o=custom-columns=x:.metadata.name) -- bash -c "echo SELECT schemaname, relname,
n_live_tup, n_dead_tup, last_autovacuum FROM pg_stat_all_tables WHERE relname =
\'jsondb\'|psql -U syndesis"

 schemaname | relname | n_live_tup | n_dead_tup |       last_autovacuum
------------+---------+------------+------------+-----------------------------
 public     | jsondb  |      26893 |     491210 | 2019-07-17 09:26:51.264029+00
(1 row)

# since there are 491210 dead tuples, perform the following

# scale down the server
$ oc scale --replicas=0 dc syndesis-server

# terminate all running connections
$ oc exec -c postgresql $(oc get pod -l 'syndesis.io/component=syndesis-db' --no-headers=true -
o=custom-columns=x:.metadata.name) -- bash -c "echo SELECT pg_terminate_backend\(a.pid\)
FROM pg_locks l join pg_stat_activity a ON a.pid = l.pid WHERE l.mode = \'ExclusiveLock\' AND
a.usename = \'syndesis\'|psql -U syndesis"
FATAL:  terminating connection due to administrator command
server closed the connection unexpectedly
 This probably means the server terminated abnormally
 before or while processing the request.
connection to server was lost
```

```
command terminated with exit code 2

# the preceding FATAL error is expected, because the statement also closes the connection psql
is using

# execute `VACUUM FULL ANALYSE`
$ oc exec -c postgresql $(oc get pod -l 'syndesis.io/component=syndesis-db' --no-headers=true -
o=custom-columns=x:.metadata.name) -- bash -c "echo VACUUM FULL ANALYSE jsondb|psql -
U syndesis"
VACUUM


# scale up server
$ oc scale --replicas=1 dc syndesis-server
```

5458 Operator tries to update outdated Syndesis resource

When installing Fuse Online using the operator, the following error occurs multiple times, but it can
be ignored as it has no significant effect on the installation:

```
{"level":"error","ts":1558617960.2453232,"logger":"controller","msg":"Error
reconciling","action":"*action.startupAction","phase":"Starting","error":"Operation cannot be fulfilled
on syndesises.syndesis.io \"app\": the object has been modified; please apply your changes to the
latest version and try
again","stacktrace":"github.com/syndesisio/syndesis/install/operator/vendor/github.com/go-
logr/zapr.
(*zapLogger).Error\n\t/go/src/github.com/syndesisio/syndesis/install/operator/vendor/github.com/go-
logr/zapr/zapr.go:128\ngithub.com/syndesisio/syndesis/install/operator/pkg/controller/syndesis.
(*ReconcileSyndesis).Reconcile\n\t/go/src/github.com/syndesisio/syndesis/install/operator/pkg/contro
er/syndesis/syndesis_controller.go:120\ngithub.com/syndesisio/syndesis/install/operator/vendor/sigs.
8s.io/controller-runtime/pkg/internal/controller.
(*Controller).processNextWorkItem\n\t/go/src/github.com/syndesisio/syndesis/install/operator/vendor/
sigs.k8s.io/controller-
runtime/pkg/internal/controller/controller.go:215\ngithub.com/syndesisio/syndesis/install/operator/ven
dor/sigs.k8s.io/controller-runtime/pkg/internal/controller.
(*Controller).Start.func1\n\t/go/src/github.com/syndesisio/syndesis/install/operator/vendor/sigs.k8s.io/
controller-
runtime/pkg/internal/controller/controller.go:158\ngithub.com/syndesisio/syndesis/install/operator/ven
dor/k8s.io/apimachinery/pkg/util/wait.JitterUntil.func1\n\t/go/src/github.com/syndesisio/syndesis/instal
operator/vendor/k8s.io/apimachinery/pkg/util/wait/wait.go:133\ngithub.com/syndesisio/syndesis/instal
operator/vendor/k8s.io/apimachinery/pkg/util/wait.JitterUntil\n\t/go/src/github.com/syndesisio/syndesis
install/operator/vendor/k8s.io/apimachinery/pkg/util/wait/wait.go:134\ngithub.com/syndesisio/syndesis
install/operator/vendor/k8s.io/apimachinery/pkg/util/wait.Until\n\t/go/src/github.com/syndesisio/syndes
s/install/operator/vendor/k8s.io/apimachinery/pkg/util/wait/wait.go:88"}
```

ENTESB-10577 Apicurito does not support YAML Open API spec files

In Fuse 7.4 on OpenShift, Apicurito generates OpenAPI specification files in YAML format *by default*,
but is not capable of re-importing the generated YAML file. Only JSON format can be imported into
Apicurito at the moment.

667 'null' when using "ItemAt" transformation from List<> ➞ Number

When mapping from a **List** to a **Double** type field using the **ItemAt** transformation, an exception gets
thrown by the data mapper.

1558 "Save as draft" and "Publish" buttons

Both the **Save as draft** button and the **Publish** button remain active, even after a user has clicked
on one of the buttons and started stepping through the procedure.

698 DB Connector: SQL parser doesn't recognize parameters for LIKE

In SQL statements containing the **LIKE** keyword (for example, **DELETE FROM TODO WHERE task LIKE ':#param'**), the **LIKE** keyword cannot be used with datamapper parameters, such as **:#param**.

7.3. FUSE ON OPENSHIFT

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-10817 Openshift 4.1 + FMP: Unexpected response (403 Forbidden), to the authorization request. Missing header:[Location]!

On OpenShift Container Platform (OCP) 4.1, if the **fabric8-maven-plugin** uses Fabric8's Kubernetes client implementation to authenticate itself to OpenShift — instead of relying on an existing session created by the **oc login** command — you get the following error:

> [ERROR] Failed to execute goal org.jboss.redhat-fuse:fabric8-maven-plugin:7.4.0.fuse-740024:build (default) on project fabric8-maven-sample-zero-config: Failed to execute the build: Unable to build the image using the OpenShift build service: Unexpected response (403 Forbidden), to the authorization request. Missing header:[Location]!

In particular, the procedure for building and deploying the *Fuse on OpenShift* quickstart example in the *Tooling User Guide* relies on the **fabric8-maven-plugin** authenticating itself directly to OpenShift. When following the instructions in the section, Deploying the Fuse Integration project to OpenShift, to deploy the project to an OCP 4.1 cluster, modify step 5 as follows:

1. Log into the OpenShift console for the OCP 4.1 cluster where you want to deploy your application.

2. Click on the username in the upper right corner of the OpenShift console and select the menu option, **Copy Login Command**. This copies a string of the form **oc login https://192.168.42.218:8443 --token=xxxxxxxx** into the clipboard, where **xxxxxxxx** is a base-64 encoded string representing the session token.

3. Remove the **-Dkubernetes.auth.basic.password=admin** setting from the **VM arguments** pane and replace it with the setting, **-Dkubernetes.auth.token=xxxxxxxx**, where **xxxxxxxx** is the session token extracted from the clipboard string.
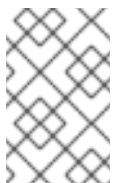
> **NOTE**
>
> The examples and tutorials in the *Fuse on OpenShift Guide* generally rely on a session created by the **oc login** command. So if you are following the steps for one of those examples, you will not encounter this error.

ENTESB-10694 Problem using Fuse Console on OCP4.1 beta

On OpenShift 4, if you want to manage Fuse services with the Fuse Console, you must install the community version (Hawtio) by using the community operator from OperatorHub. You access the OperatorHub from the OpenShift web console's main catalog.
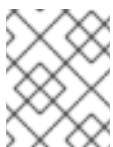
> **NOTE**
>
> A Kubernetes Operator is a script that simplifies the installation and management of an OpenShift (or Kubernetes) application.

To keep the connection between the Fuse Console proxy and the Jolokia agent secure, after you install the community version of the Fuse Console and before you deploy it, you must generate, sign and deploy a client certificate. See this README file for instructions on how to secure the Fuse Console on OpenShift 4.

ENTESB-10577 Apicurito does not support YAML Open API spec files

In Fuse 7.4 on OpenShift, Apicurito generates OpenAPI specification files in YAML format *by default*, but is not capable of re-importing the generated YAML file. Only JSON format can be imported into Apicurito at the moment.

7.4. FUSE ON SPRING BOOT

Fuse on Spring Boot has the following known issues:

ENTESB-11164 Missing qpid-jms-client in SB2 BOM

In the Fuse 7.4.0 release, the Spring Boot 2 Bill of Materials (BOM) file references the incorrect version of the **org.apache.qpid:qpid-jms-client** Maven artifact for the Qpid JMS client. To use the correct (Red Hat supported) version of **org.apache.qpid:qpid-jms-client** in your Maven project, add the following dependencies to your project's POM file:

```
<dependency>
    <groupId>org.apache.camel</groupId>
    <artifactId>camel-amqp</artifactId>
    <exclusions>
        <exclusion>
            <groupId>org.apache.qpid</groupId>
            <artifactId>qpid-jms-client</artifactId>
        </exclusion>
        <exclusion>
            <groupId>org.apache.qpid</groupId>
            <artifactId>proton-j</artifactId>
        </exclusion>
    </exclusions>
</dependency>
<dependency>
    <groupId>org.apache.qpid</groupId>
    <artifactId>qpid-jms-client</artifactId>
    <version>0.40.0.redhat-00001</version>
</dependency>
<dependency>
    <groupId>org.apache.qpid</groupId>
    <artifactId>proton-j</artifactId>
    <version>0.31.0.redhat-00001</version>
</dependency>
```

ENTESB-11163 Incorrect version of AMQ client in SB2 BOM in Fuse 7.4.0.CR4

In the Fuse 7.4.0 release, the Spring Boot 2 BOM file references the incorrect version of the **org.apache.activemq:activemq-client** Maven artifact.

Spring Boot 2 BOM references unsupported Camel jBPM component

In the Fuse 7.4.0 release, the Spring Boot 2 BOM (Bill of Materials) references the Camel jBPM component, which is currently unsupported in Fuse.

7.5. FUSE ON APACHE KARAF

Fuse on Apache Karaf has the following known issues:

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

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

7.6. APACHE CAMEL

Apache Camel has the following known issues:

ENTESB-11060 **[camel-linkedin] V1 API is no longer supported**

In 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 reponse 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 7.4

The following sections list the issues that have been fixed in Fuse 7.4:

- Section 8.1, "Enhancements in Fuse 7.4"

- Section 8.2, "Feature requests in Fuse 7.4"

- Section 8.3, "Bugs resolved in Fuse 7.4"

8.1. ENHANCEMENTS IN FUSE 7.4

The following table lists the enhancements in Fuse 7.4.

Table 8.1. Fuse 7.4 Enhancements

Issue	Description
ENTESB-10722	Fix camel-jira client close and add logging
ENTESB-10349	Make credential:store usable with bin/client
ENTESB-10620	jasypt:* and credential-store:* commands should allow to specify master password using env/sys variables
ENTESB-10491	Adding property to exclude any ssl protocol version for JMX
ENTESB-10324	Switch to RHOAR Spring Boot BOM
ENTESB-10839	Enhance documentation for twitter search of multiple words
ENTESB-10398	Review the list of JDBC pools comes with karaf to adjust support cost
ENTESB-10640	JdbcAggregationRepository does not work with postgresql's OID data type for exchange column

8.2. FEATURE REQUESTS IN FUSE 7.4

The following table lists the features requests in Fuse 7.4.

Table 8.2. Fuse 7.4 Feature Requests

Issue	Description
ENTESB-10502	Create a Data Virtualization Module
ENTESB-10506	SQL Preview of a Virtualization
ENTESB-10503	Show Views in a Virtualization

Issue	Description
ENTESB-10499	Provide GoogleSheets support
ENTESB-10501	OpenApi 3.0 Support for OData
ENTESB-10497	Provide Salesforce source support
ENTESB-6202	Support for AS2
ENTESB-10607	Include Narayana Spring Boot 2 support
ENTESB-10674	Develop new jira component based on rest api
ENTESB-10505	Expert (ad-hoc) developer based view
ENTESB-10443	Hawtio add filters on specific exchanges
ENTESB-10603	Add Camel 2.23 / Spring Boot 2 support to Hawtio
ENTESB-10495	Support Keycloak based OpenID authentication for OData Through 3scale
ENTESB-11038	External monitoring on OCP4
ENTESB-10483	Create a POC Camel adapter for Kafka Connect
ENTESB-10604	Add Spring Boot 2 support to CXF

8.3. BUGS RESOLVED IN FUSE 7.4

The following table lists the resolved bugs in Fuse 7.4.

Table 8.3. Fuse 7.4 Resolved Bugs

Issue	Description
ENTESB-10288	[Hawtio Spring Boot] There are hidden nodes when Camel tree is expanded
ENTESB-10420	Fuse Online logo is small
ENTESB-10411	Merge productization changes to atlasmap
ENTESB-10385	Openshift 4 + FMP: DefaultKubernetesClient cannot be cast to OpenShiftClient
ENTESB-10795	Import invalid table fails but creates a view

Issue	Description
ENTESB-10794	Route for OData is not created automatically and it doesn't appear anywhere in UI
ENTESB-10792	SQL Client doesn't work
ENTESB-10726	Trying to validate invalid DDL breaks the editor
ENTESB-10727	Saving invalid DDL is possible and makes it disappear
ENTESB-10725	Cursor jumps while editing DDL
ENTESB-10723	Only lowercase letters and numbers allowed for Data Virtualization connection
ENTESB-10679	Integration with RH-SSO and Hawtio (on Karaf) doesn't work
ENTESB-9619	[Hawtio] Unpredictable behaviour of Chart tab in Camel tree
ENTESB-10434	camel-cxf - failure processor for custom exception handling cannot get the original message
ENTESB-10390	Regression - Namespaces defined on the SOAP envelope get lost in PAYLOAD mode
ENTESB-10686	JcrIntegrationTest fails with 2.21.0.fuse-731
ENTESB-10742	Yammer throws Jackson serialisation exception
ENTESB-10835	SB2 - spring-boot-camel-rest-sql: servletRegistrationBean has already been defined
ENTESB-10838	"SB2 - spring-boot-camel-xa: relation ""audit_log"" does not exist"
ENTESB-10744	application-templates are using old tag for Fuse 7.4
ENTESB-10583	camel-amqp is using a very old qpid client
ENTESB-10857	latest java image doesn't work
ENTESB-7936	Cannot deploy Fuse on EAP camel-mail quickstart within DevStudio IDE
ENTESB-10350	camel-yammer - olderThan and newerThan endpoint options are not working for high message number
ENTESB-10593	No way to prevent java mail "expected resource not found" warnings from camel-mail component
ENTESB-10798	[Hawtio] Direct url gives an access to Hawtio without authentication

Issue	Description
ENTESB-10724	No Publish button for Data Virtualization
ENTESB-10832	Wrong version of Spring Boot in fuse-sb2 pom
ENTESB-10600	[Hawtio Karaf 6.3] Type Converters page not showing
ENTESB-10844	"SQL query page - generates SELECT * query
ENTESB-10445	Incorrect label - Generate Fuse 7.1 Camel Project for Minishift installations
ENTESB-10586	fuse-karaf-7.2.0.fuse-720035-redhat-00001.zip does not contain org.ops4j.pax.jdbc/pax-jdbc-pool-dbcp2/1.3.0 artifact by default
ENTESB-9996	[Fuse Online] schema field is ignored in Database Connection
ENTESB-10400	Performance regression in camel-cbr-xpath integration example on EAP
ENTESB-10876	SQL Client page - enable horizontal scrolling on result table display
ENTESB-10362	multiple class javax/activation/DataHandler from different bundles
ENTESB-10368	"camel-linkedin: If accessToken is set
ENTESB-10845	ViewEditor issue - changing view name in the DDL does not affect view
ENTESB-10417	Memory leak in JMX/Camel Attributes page
ENTESB-9484	[camel-validator] Non valid exchange ends in pending queue
ENTESB-10436	CXF BOM/EAP container version mismatch
ENTESB-9972	Camel Bindy Tab delimited - Handling Blank Values
ENTESB-10881	Cannot enable JDBC and PG transports
ENTESB-10929	Route Permission issue while deploying the Virtualization
ENTESB-10873	SB2 - spring-boot-camel-rest-sql: Table 'sampledb.orders' doesn't exist
ENTESB-10836	SB2 - spring-boot-camel-config: NoSuchMethodError
ENTESB-10988	eap-cxf-jax[w|r]s, eap-jpa quickstart: NoSuchMethodError
ENTESB-10913	[Hawtio] CSS doesn't work on Login page in Mozilla Firefox

Issue	Description
ENTESB-10870	Upgrade org.apache.logging.log4j to 2.9.0
ENTESB-10820	Concurrent Modification Exception thrown by camel cxf
ENTESB-10825	SB2 quickstarts - missing component version
ENTESB-10878	fuse-apicurito.yaml doesnt work with Openshift 4.1
ENTESB-10714	Backport CAMEL-12785
ENTESB-10921	[Apicurito] No logos and pictures in UI of Apicurito
ENTESB-10813	Fabric8 quickstart spring-boot-camel-infinispan does not work locally
ENTESB-10252	[FIS]no_proxy in jvm argument not honoured in FIS Image
ENTESB-10399	Response truncated from camel-rest-dsl application with undertow as underlying web-container.
ENTESB-10860	quickstarts from application-templates refers to old BOM version
ENTESB-10920	"CVE: vim update RHSA: 43265 Important due July 27
ENTESB-10710	Fabric8 quickstart spring-boot-camel-amq does not work correctly (probably missing configuration)
ENTESB-10599	Exception tag is missing when Camel Java DSL is converted into XML using Hawtio.
ENTESB-10869	Upgrade Xalan transitive dependency to 2.7.2
ENTESB-10916	Security Context not being propagated in OData with Keycloak
ENTESB-10990	Save Multiple Tables Selected from View Wizard
ENTESB-10989	Remove Extraneous Alert from DV View Creation Wizard
ENTESB-10793	Remove Fabric8 quickstart spring-boot-camel-teiid from 7.4 release
ENTESB-10926	Old UI for the 7.4 CR1 Fuse Console and EAP quickstart
ENTESB-11029	[Apicurito] apicurito operator: failed to start container
ENTESB-11116	"CVE: vim update RHSA: 43265 Important due July 27
ENTESB-10872	SB2 - Problems in BOM

Issue	Description
ENTESB-10510	Wrong versions or missing entries for artifacts from extras[ABC] in licenses.xml
ENTESB-10652	Camel-twitter fixes
ENTESB-10884	"syndesis aligned to camel-k-runtime 0.3.3
ENTESB-10348	Backport CAMEL-12880
ENTESB-10485	Failing CXF tests on SpringBoot and AIX72
ENTESB-10486	Failing CXF tests on AIX using Karaf runtime
ENTESB-10618	"CXFRS header ""CamelDestinationOverrideUrl"" ignored after changing it twice"
ENTESB-10524	NoSuchMethodError: CamelCxfClientImpl.reloadResponseContext(Map)
ENTESB-10927	fuse-java-openshift and fuse-karaf-openshift can't be deployed on Openshift v3.11
ENTESB-10571	wildfly-camel: license-maven-plugin ignores proxies set in settings.xml
ENTESB-10643	Disable HTTP TRACE method on CXF embedded Undertow transport
ENTESB-10492	EAP: Missing fuse-patch entries in licenses.xml
ENTESB-11058	[CR1] Old altasmap in Fuse online 7.4 CR1
ENTESB-10002	EAP: licenses-fuse/licenses.xml is out of sync with jar files
ENTESB-11124	SB2 BOM contains unproductized version of kafka clients
ENTESB-11042	[7.4 CR1] komodo does not start
ENTESB-10985	spring-boot-camel-infinispan is missing readiness/liveness probes
ENTESB-10808	"OCP 4.1 - prometheus-operator: Deployment in version ""v1beta2"" cannot be handled as a Deployment"
ENTESB-11061	[Fuse Console Operator] fuse-console-operator image contains wrong image stream for Hawtio
ENTESB-11080	eap image has wrong version in docker labels
ENTESB-11064	[camel-k] kamel install --repository option is not working for plugins

Issue	Description
ENTESB-11110	Step missing when building fuse online operator
ENTESB-11040	Version of cxf-rt-transports-http-undertow is missing in spring boot 2 BOM
ENTESB-11176	Backspace does not work when accessing the karaf shell of the fuse container running on windows via ssh
ENTESB-11168	wrong version of FMP is pulled with BOM