Red Hat Process Automation Manager 7.12

Release notes for Red Hat Process Automation Manager 7.12

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Legal Notice

Abstract

This document contains release notes for Red Hat Process Automation Manager 7.12.

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PREFACE

These release notes list new features, features in technology preview, known issues, and issues fixed in Red Hat Process Automation Manager 7.12.

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. PRODUCT OVERVIEW

Red Hat Process Automation Manager is an open-source business automation platform that combines business process management (BPM), case management, business rules management, and resource planning. It enables business and IT users to create, manage, validate, and deploy business processes, cases, and business rules.

Red Hat Process Automation Manager uses a centralized repository where all resources are stored. This ensures consistency, transparency, and the ability to audit across the business. Business users can modify business logic and business processes without requiring assistance from IT personnel.

Red Hat Process Automation Manager 7.12 provides increased stability, several fixed issues, and new features.

Red Hat Process Automation Manager is fully supported on Red Hat OpenShift Container Platform and can be installed on various platforms.

For information about the support policy for Red Hat Process Automation Manager, see the *Release maintenance plan for Red Hat Decision Manager 7.x and Red Hat Process Automation Manager 7.x*.

CHAPTER 2. RED HAT BUILD OF KOGITO FEATURES INCLUDED WITH RED HAT PROCESS AUTOMATION MANAGER

Red Hat build of Kogito is a cloud-native business automation technology for building cloud-ready business applications. Red Hat build of Kogito in Red Hat Process Automation Manager is optimized for a hybrid cloud environment and adapts to your domain and tooling needs. The core objective of Red Hat build of Kogito is to help you mold a set of decisions into your own domain-specific cloud-native set of services.

This section highlights the Red Hat build of Kogito features included with Red Hat Process Automation Manager.

2.1. ABILITY TO MIGRATE BUSINESS CENTRAL PROJECTS TO RED HAT BUILD OF KOGITO MICROSERVICES PROJECTS

You can now migrate your existing Business Central projects developed using DMN, PMML, or DRL to Red Hat build of Kogito microservices projects. For more information, see *Migrating to Red Hat build of Kogito microservices*.

2.2. SUPPORT FOR SPRING BOOT STARTERS

You can now add Spring Boot starters to your Red Hat build of Kogito project to get started with Red Hat build of Kogito quickly. For more information, see *Getting started with Red Hat build of Kogito in Red Hat Process Automation Manager*.

CHAPTER 3. NEW FEATURES

This section highlights new features in Red Hat Process Automation Manager 7.12.

3.1. ABILITY TO SEND COOKIES IN THE REST WORK ITEM HANDLER

You can now send cookies to the REST work item handler using the **Cookie** header and cookie parameters in a REST API as shown in the following example:

cookieParam1=cookieParam1_Value;cookieParam2=cookieParam2_Value

You can also define the path for which the cookie is valid using the **CookiePath** header. By default, the value of **CookiePath** is set to /.

3.2. SUPPORT FOR THE GENERAL NPM REGISTRY FOR STANDALONE EDITORS

You can now use the general NPM registry to install the standalone editors including BPMN and DMN editors. For more information about standalone editors, see *Designing business processes using BPMN models* and for more information about the NPM registry, see https://www.npmjs.com/package/@kogito-tooling/kie-editors-standalone.

3.3. ABILITY TO SEE INSTANCE BADGES IN THE SVG FILE

You can now also see instance badges in the SVG file, which is returned from the **GET/server/containers/{containerId}/images/processes/{processId}** endpoint.

3.4. SUPPORT FOR CLAIMING TASKS IN BULK USING A REST ENDPOINT

You can now claim tasks in bulk using a REST endpoint. To claim tasks in bulk, you must pass the task ID of all tasks as a query parameter. For more information, see *Interacting with Red Hat Process Automation Manager using KIE APIs*.

3.5. MIGRATION OF A STANDALONE PROCESS INSTANCE MIGRATION SERVICE TO RED HAT BUILD OF QUARKUS

It is now possible to migrate a standalone process instance migration service to Red Hat build of Quarkus 2.2.0.

3.6. DISTANCE-BASED CLUSTERING MODEL IN PMML

Red Hat Process Automation Manager now includes consumer conformance support for the distance-based clustering model in PMML. You can now integrate clustering models with your decision services in Red Hat Process Automation Manager. For more information about clustering models, see *Designing a decision service using PMML models*.

3.7. FILE-BASED USER DATA STORAGE

Red Hat Process Automation Manager can now store user data in sets of files instead sets of properties. File-based storage provides several extra features, such as SSH login and a user maintenance UI.

3.8. KIE SERVER

3.8.1. Support for adding a request identifier to the JMS header

A new KIE Server system property, **org.kie.executor.jms.jobHeader**, was added to Red Hat Process Automation Manager. If the value of this property is set to **true**, the **jobId** JMS header property will contain the request identifier.

For a list of KIE Server system properties, see *Managing and monitoring KIE Server* .

3.9. PROCESS DESIGNER

3.9.1. Process designer updates

The following list provides a summary of process designer updates:

- The ability to edit the names of the new nodes automatically

- The ability to add orthogonal polylines to connect two nodes

- The ability to reuse data types across other elements of a business process, such as process variables and task input or output data

- The ability to add metadata attributes to all nodes and events

For more information, see *Designing business processes using BPMN models* .

3.9.2. Support for automated mapping with DMN

When a DMN model is invoked from a business rule task in a BPMN workflow, the output is automatically mapped with the DMN model and returns an object of the type that is defined in the DMN model.

3.9.3. Support for line splicing in the BPMN editor

In the BPMN editor, if two nodes are connected with a sequence flow and another node is dragged and dropped over the same sequence flow, then a new sequence flow is created to perform the correct connection assignments.

3.10. PROCESS ENGINE

3.10.1. New custom query for human tasks with administration data

The KIE API includes the new **jbpmHumanTasksWithAdminExtended** custom query. This query provides a list of all human task instances on the KIE Server instance. This list includes the administrator user responsible for the task, as well as extended information about the task, such as the user that modified the task most recently.

For more information about custom queries in the KIE API, see *Interacting with Red Hat Process Automation Manager using KIE APIs*.

3.10.2. Configuration file for Smart Router

You can now use a configuration file to configure Smart Router instead of providing parameters in the command line.

For more information about configuring Smart Router using a configuration file, see *Installing and configuring Red Hat Process Automation Manager in a Red Hat JBoss EAP clustered environment*.

3.10.3. Sending headers in Web Service custom tasks

You can now use the Web Service custom task to send a request including custom information in Simple Object Access Protocol (SOAP) headers.

For more information about custom tasks, see *Custom tasks and work item handlers* .

3.10.4. Send Task event handler included by default

Processes developed in Business Central now include the Send Task event handler by default. When creating processes that interact with Red Hat AMQ Streams, you no longer need to add this event handler manually.

For more information about creating processes that interact with Red Hat AMQ Streams, see *Integrating Red Hat Process Automation Manager with Red Hat AMQ Streams* .

3.11. RED HAT BUILD OF OPTAPLANNER

3.11.1. OptaPlanner quickstarts

The following quickstarts are included in the Red Hat Process Automation Manager 7.12.0 Kogito and OptaPlanner 8 Decision Services Quickstarts download (**rhpam-7.12.0-kogito-and-optaplanner-quickstarts.zip**):

- **optaplanner-quickstarts-8.11.1.Final-redhat-00006/hello-world**

- **optaplanner-quickstarts-8.11.1.Final-redhat-00006/technology**

    - **java-activemq-quarkus**

    - **java-quarkus**

    - **java-spring-boot**

    - **kotlin-quarkus**

- **optaplanner-quickstarts-8.11.1.Final-redhat-00006/use-cases**

    - **call-center**

    - **facility-location**

    - **maintenance-scheduling**

    - **school-timetable**

    - **vaccination-scheduling**

3.11.2. Micrometer with OptaPlanner

Red Hat build of OptaPlanner exposes metrics through Micrometer, a metrics instrumentation library for Java applications. You can use Micrometer with popular monitoring systems to monitor the OptaPlanner solver. For information about using Micrometer with OptaPlanner, see *Developing Solvers with Red Hat Process Automation Manager*.

3.12. RED HAT OPENSHIFT CONTAINER PLATFORM

3.12.1. Process Instance Migration Service now uses Quarkus

Process Instance Migration Service now uses Quarkus instead of Thorntail.

3.12.2. Configurable startup strategy when using the Operator installer

When you deploy Red Hat Process Automation Manager on Red Hat OpenShift Container Platform using the operator installer, by default the deployment uses the **OpenShiftStartupStrategy** setting. You can now switch to the Controller startup strategy in the configuration user interface if necessary.

3.12.3. Custom hostname routes

You can now set custom hostnames for external routes by using the **routeHostname** property.

3.12.4. Improved SSL configurability

You can now enable or disable SSL in the operator and expose the SSL route.

3.12.5. Default configuration for Cross Domain Resource Sharing (CORS)

You can now specify whether to use a default or user customized CORS configuration.

3.12.6. LDAP configuration changes for Red Hat OpenShift Container Platform

When deploying Red Hat Process Automation Manager on Red Hat OpenShift Container Platform, LDAP security configuration now uses the Elytron subsystem. To support the Elytron subsystem, the following configuration settings were removed:

- **AUTH_ROLE_MAPPER_REPLACE_ROLE**

- **AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE**

- **AUTH_LDAP_JAAS_SECURITY_DOMAIN**

- **AUTH_LDAP_USERNAME_BEGIN_STRING**

- **AUTH_LDAP_USERNAME_END_STRING**

- **AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN**

- **AUTH_LDAP_PARSE_USERNAME**

- **AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK**

- **AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN**

- **AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID**

The following configuration settings were added:

- **LDAP_AUTH_RECURSIVE_SEARCH**

- **AUTH_LDAP_MAPPER_KEEP_MAPPED**

- **AUTH_LDAP_MAPPER_KEEP_NON_MAPPED**

- **AUTH_LDAP_REFERRAL_MODE**

- **LDAP_AUTH_NEW_IDENTITY_ATTRIBUTES**

- **AUTH_LDAP_LOGIN_FAILOVER**

3.12.7. Red Hat Data Grid user name and password configuration on Red Hat OpenShift Container Platform

When deploying a high-availability Red Hat Process Automation Manager environment on Red Hat OpenShift Container Platform, you can now configure the user name and password for the Red Hat Data Grid component.

3.12.8. Post-configuration scripts for Red Hat OpenShift Container Platform

When deploying Red Hat Process Automation Manager on Red Hat OpenShift Container Platform, running post-configuration scripts on Red Hat JBoss EAP on the Business Central and KIE Server pods is now supported. You can use these scripts to configure Elytron users.

3.12.9. Role mapping configuration for Red Hat OpenShift Container Platform without a file

When deploying Red Hat Process Automation Manager on Red Hat OpenShift Container Platform, you can now configure role mapping for Red Hat Single Sign-On or LDAP configuration by entering the configuration directly in the settings, without using a role mapping configuration file. The use of a role mapping configuration file is now optional but still supported.

CHAPTER 4. SUPPORT AND COMPATIBILITY

This section highlights supported version updates in Red Hat Process Automation Manager 7.12.

For a complete list of supported configurations, see Red Hat Process Automation Manager 7 Supported Configurations.

Table 4.1. Supported configurations in Red Hat Process Automation Manager 7.12

Component	Supported Version	Notes
Microsoft SQL Server	2019	Supported as an external database for KIE Server
MariaDB	10.3	Supported as an external database for KIE Server
PostgreSQL	13.2, 13.1 Enterprise	Supported as an external database for KIE Server
Red Hat build of Quarkus	2.2.x	NA
Red Hat OpenShift Container Platform	4.8	NA
Red Hat Data Grid	8.1	Exclusively for a clustered setup of Business Central
Red Hat JBoss EAP	7.4.x	Red Hat Process Automation Manager now supports Red Hat JBoss EAP version 7.4.2 or later
Red Hat AMQ	7.8.2	NA
Red Hat Single Sign-On	7.5.0	NA
AMQ Streams	1.8.0	Supported for high-availability event-driven decisions
Red Hat JBoss Web Server	5.5	NA

CHAPTER 5. DEPRECATED COMPONENTS

The components listed in this section have been deprecated.

5.1. RED HAT ENTERPRISE LINUX 7

Support for Red Hat Enterprise Linux 7 is deprecated in Red Hat Process Automation Manager and features and will be removed in a future release.

5.2. OPTAPLANNER 7

Both OptaPlanner 7 and OptaPlanner 8 are included with Red Hat Process Automation Manager 7.12, but OptaPlanner 7 is deprecated and might be removed in a future release. For information about migrating your OptaPlanner 7 projects to OptaPlanner 8, see *Upgrading your Red Hat build of OptaPlanner projects to OptaPlanner 8*.

5.3. OPTAPLANNER TOOLING COMPONENTS IN BUSINESS CENTRAL

The following OptaPlanner tooling in Business Central is part of OptaPlanner 7. It is deprecated and might be removed in a future release.

- Data modeler annotations

- Guided rule editor actions for OptaPlanner score modification

- Solver assets

5.4. SUPPORT FOR JDK 8

Support for JDK 8 is deprecated in Red Hat Process Automation Manager and might be removed in a future release.

For a complete list of supported JDK configurations, see *Red Hat Process Automation Manager 7 Supported Configurations*.

5.5. LEGACY KIE-PMML DEPENDENCY

The legacy **kie-pmml** dependency was deprecated with Red Hat Process Automation Manager 7.10.0 and will be replaced in a future Red Hat Process Automation Manager release. For more information, see *Designing a decision service using PMML models* .

5.6. SUPPORT FOR OSGI FRAMEWORK INTEGRATION

Support for integration with the OSGi framework is deprecated in Red Hat Process Automation Manager. It does not receive any new enhancements or features and will be removed in a future release. The decision and process engine integration with the OSGi framework is currently incompatible in Fuse version 7.8. If you intend to use the OSGi framework, continue to use Red Hat Process Automation Manager version 7.9 with Fuse version 7.7 until Fuse version 7.9 is available and certified.

5.7. SUPPORT FOR THE RULEUNIT API

The Red Hat Process Automation Manager RuleUnit API is now deprecated due to incompatibility with the Kogito RuleUnit API.

5.8. LEGACY TEST SCENARIOS TOOL

The legacy Test Scenarios tool was deprecated in Red Hat Process Automation Manager version 7.3.0. It will be removed in a future Red Hat Process Automation Manager release. Use the new Test Scenarios designer instead.

5.9. SUPPORT FOR RED HAT OPENSHIFT CONTAINER PLATFORM 3.X

From Red Hat Process Automation Manager version 7.5, images and templates for Red Hat OpenShift Container Platform 3.x are deprecated. The deprecated images and templates are not supported with new features but remain available until the end of Red Hat OpenShift Container Platform version 3.x support. For more information about the full support lifecycle phase for Red Hat OpenShift Container Platform version 3.x, see Red Hat OpenShift Container Platform Life Cycle Policy (non-current versions).

Consider deploying Red Hat Process Automation Manager using the operator on Red Hat OpenShift Container Platform 4.x.

5.10. LEGACY PROCESS DESIGNER

The legacy process designer in Business Central was deprecated in Red Hat Process Automation Manager 7.6.0. The legacy process designer does not receive any new enhancements or features. If you intend to use the new process designer, start migrating your processes to the new designer and create new processes in the new process designer. For information about migrating projects to the new designer, see Managing projects in Business Central.

CHAPTER 6. TECHNOLOGY PREVIEW

This section lists features that are in Technology Preview in Red Hat Process Automation Manager 7.12. Business Central includes an experimental features administration page that is disabled by default. To enable this page, set the value of the **appformer.experimental.features** property to **true**.

> **IMPORTANT**
>
> These features are for Technology Preview only. 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 for 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 on Red Hat Technology Preview features, see Technology Preview Features Scope.

6.1. PREDICTION SERVICE API

You can use the prediction service API to provide a prediction service that assists with user tasks. The prediction service can use artificial intelligence (AI). For example, you can use the Predictive Model Markup Language (PMML) models or Statistical Machine Intelligence and Learning Engine (SMILE) to implement the service.

6.2. DEPLOYING A HIGH-AVAILABILITY AUTHORING ENVIRONMENT ON RED HAT OPENSHIFT CONTAINER PLATFORM 4.X

You can deploy a high-availability Red Hat Process Automation Manager authoring environment on Red Hat OpenShift Container Platform 4.x using the operator.

6.3. OPENSHIFT OPERATOR INSTALLER WIZARD

An installer wizard is provided in the Red Hat OpenShift Container Platform operator for Red Hat Process Automation Manager. You can use the wizard to deploy a Red Hat Process Automation Manager environment on Red Hat OpenShift Container Platform with the operator.

6.4. AUTHORING PERSPECTIVE CUSTOMIZATION

You can perform the following tasks to customize the Business Central authoring perspective:

- Open a Business Central project directly using an URL path parameter, without going through a list of spaces and projects.

- Hide or show the project toolbar, **Metrics** tab, and **Change Request** tab according to your requirements.

- Enhance the pagination.

- Customize the number of assets present on the project screen.

6.5. RED HAT BUILD OF OPTAPLANNER NEW CONSTRAINT COLLECTORS

In order to provide a full implementation of some pre-existing OptaPlanner examples using the Constraint Streams API, the standard library of constraint collectors has been extended to include the following constraint collectors:

- One constraint collector takes point values such as dates, orders them on a number line, and makes groups of consecutive values with breaks between the groups available downstream.

- Another constraint collector takes interval values such as shifts, creates clusters of consecutive and possibly overlapping values with breaks between clusters, and makes the clusters available downstream.

These new collectors are in technology preview. Their interfaces, names, and functionality are subject to change. They have been placed in an experimental package outside of the public API to encourage public feedback before they become an officially supported part of the OptaPlanner public API.

6.6. RED HAT BUILD OF KOGITO AND KAFKA INTEGRATION

Red Hat build of Kogito decision microservices integration with managed Kafka by using the **org.kie.kogito:kogito-addons-{quarkus|springboot}-events-decisions** event-driven add-on is now available as technology preview. on Red Hat build of Quarkus, you can add the **io.quarkus:quarkus-kubernetes-service-binding** dependency to the application to handle the service binding created by the managed kafka. On Spring boot, you must add **mappings** field to the created service binding which must contain the required environment variables needed by the application. Another solution is to use the custom configuration maps available in the Red Hat build of Kogito operator.

CHAPTER 7. KNOWN ISSUES IN RED HAT PROCESS AUTOMATION MANAGER 7.12.0

This section lists known issues with Red Hat Process Automation Manager 7.12.

7.1. BUSINESS CENTRAL

In the test scenarios table, today() and now() functions are not evaluated correctly [RHDM-1816]

Issue: In the test scenarios table, **today()** and **now()** functions are not evaluated correctly. For example, the **string(today())** function should produce output similar to **2021-05-11** but instead it displays a null value.

Steps to reproduce:

Import the **check-today-1.dmn** and **check-today-test-1.scesim** files attached in the [RHDM-1816] issue and check the results.

Workaround: None.

7.2. FORM MODELER

When you create and open a form in the form modeler, you receive a recursion handling issue [RHPAM-4107]

Issue: In the form modeler, when you try to create and open a form, you receive an error message about a recursion handling issue

Steps to reproduce:

1. Create a data object called **A1** and enter the field values as **id:String** and **aField:A1**.

2. Create a custom form as **Form1** for the **A1** data object.

3. Select **aField** and drag it to the canvas and set **Form1** as its nested form.

4. Click **Save**.

5. Reopen the editor.
   You receive an error message.

Workaround: None.

7.3. RED HAT BUILD OF KOGITO

Unable to run the tests for Red Hat build of Kogito examples with scenario simulations [RHPAM-4068]

Issue: It is not possible to run the tests for Red Hat build of Kogito examples which contain scenario simulation dependency. The Surefire plugin fails with an exception.

The following two modules in the Red Hat build of Kogito examples fail because there is a mismatch of JUnit version dependency:

- **dmn-pmml-quarkus-example**

- **dmn-quarkus-example**

These examples are included in the **sources.zip** and **kogito-quickstarts.zip** files.

Steps to reproduce:

1. Download the Red Hat build of Kogito examples.

2. Execute the **mvn clean install** command for **dmn-quarkus-example** or **dmn-pmml-quarkus-example**.

Workaround: Override the transitive JUnit dependency of **kogito-scenario-simulation** file and use the version **4.13.1.redhat-00001**.

7.4. KIE SERVER

When you initialize Swagger on WebSphere, you receive an IllegalArgumentException error [RHPAM-3949]

Issue: When you use the KIE Server Swagger extension on WebSphere, KIE Server is unavailable and it returns the HTTP 500 error with an **IllegalArgumentException** exception.

Steps to reproduce:

1. Start KIE Server with basic configuration on WebSphere.

2. Try to access the **http://localhost:9080/kie-server/services/rest/server** URL.
   You receive the HTTP 500 error.

Workaround: Disable Swagger UI by setting the value of the **org.kie.swagger.server.ext.disabled** system property to **true**.

7.5. DMN DESIGNER

Elbow lines for object connections do not work [RHDM-1856]

Issue: You can adjust the DMN connections shape by adding control point to it. However this feature does not work for connections with the text annotation nodes.

Steps to reproduce for Red Hat build of Kogito:

1. Enter **http://sandbox.kie.org/#/** in a browser.

2. Import the **association.dmn** file attached in the [RHDM-1856] issue.

3. In the **Import** field, upload the **association.dmn** file.

4. Run the project.

Steps to reproduce for Business Central:

1. Open an existing project or create a new one.

2. Import the **association.dmn** file attached in the [RHDM-1856] issue.

3. Build the project and observe the results.

Workaround: None.

7.6. RED HAT OPENSHIFT CONTAINER PLATFORM

When you set the default role variable as AUTH_LDAP_DEFAULT_ROLE, Red Hat OpenShift Container Platform images ignore the LDAP roles [RHPAM-4132]

Issue: For Red Hat OpenShift Container Platform images, when you set the LDAP default roles as **AUTH_LDAP_DEFAULT_ROLE**, all the roles from LDAP are ignored and you can not log in to the Business Central application. But when you do not set the default roles, all the roles from the LDAP are used correctly and you can log in to the Business Central application.

Steps to reproduce for operator on Red Hat OpenShift Container Platform 4.x:

1. Create a KieApp application and set the default role as follows:

   ```
   spec:
     auth:
       ldap:
         ...
         defaultRole: guest
     ...
   ```

2. Log in to the Business Central.

Steps to reproduce for templates on Red Hat OpenShift Container Platform 3.11:

1. Create a template.

2. Set the **AUTH_LDAP_DEFAULT_ROLE** environment variable as **AUTH_LDAP_DEFAULT_ROLE = "guest"**.

3. Log in to the Business Central.

Workaround for operator on Red Hat OpenShift Container Platform 4.x: Remove the set **defaultRole: guest** from your KieApp application.

Workaround for templates on Red Hat OpenShift Container Platform 3.11: Do not set the environment variable as **AUTH_LDAP_DEFAULT_ROLE = "guest"**.

When the KieApp instance containing one server configuration to pull the image from a given registry, the operator fails to deploy the server and you receive errors [RHPAM-3787]

Issue: When deploying Red Hat Process Automation Manager on Red Hat OpenShift Container Platform using the operator, you can not use a docker image for the KIE Server by enabling the **Set KIE Server Image** option and setting the **Kind** value to **DockerImage**. To use a docker image for the KIE Server, you must set the image Context, name, and image tag fields from the from the custom registry.

Steps to reproduce:

1. Install the operator on Red Hat OpenShift Container Platform platform.

2. Configure one KieApp instance using **DockerImage** image as **Kind** value and provide the image name including the registry name.

3. Click **Set KIE Server image**

4. Change the **Kind** value to **DockerImage**, and then provide the image name including the registry name, but without the version tag

Workaround: None.

Authorization fails while using the role mapping [RHPAM-4146]

Issue: When you set the **roleMapper**, authorization fails and it is not specified in the **KIELdapSecurityDomain** security-domain.

Workaround:

1. Create the **workaround.cli** script as follows:

   ```
   embed-server --std-out=echo --server-config=standalone-openshift.xml
   batch

   /subsystem=elytron/security-domain=KIELdapSecurityDomain:write-
   attribute(name=realms[0].role-mapper, value=kie-custom-role-mapper)

   run-batch
   quit
   ```

2. Create a empty file as **delayedpostconfigure.sh**.

3. Create the **postconfigure.sh** file and add the following content:

   ```
   echo "trying to execute /opt/eap/bin/jboss-cli.sh --file=/opt/eap/extensions/workaround.cli "
   /opt/eap/bin/jboss-cli.sh --file=/opt/eap/extensions/workaround.cli
   echo "END - cli script executed"
   ```

4. Create the **config-map** and add the following content:

   ```
   oc create configmap postconfigure \
     --from-file=workaround.cli=workaround.cli \
     --from-file=delayedpostconfigure.sh=delayedpostconfigure.sh \
     --from-file=postconfigure.sh=postconfigure.sh
   ```

5. To mount the **config-map**, follow the steps mentioned in Operator method.

You will receive the following message in the logs during Red Hat JBoss EAP startup:

```
trying to execute /opt/eap/bin/jboss-cli.sh --file=/opt/eap/extensions/workaround.cli
19:15:55,744 INFO  [org.jboss.modules] (CLI command executor) JBoss Modules version
1.11.0.Final-redhat-00001
...
The batch executed successfully
process-state: reload-required
19:16:04,757 INFO  [org.jboss.as] (MSC service thread 1-1) WFLYSRV0050: JBoss EAP 7.4.1.GA
(WildFly Core 15.0.4.Final-redhat-00001) stopped in 18ms
END - cli script executed
```

-

The security domain is also updated as follows:

```
<security-domain name="KIELdapSecurityDomain" default-realm="KIELdapRealm" permission-mapper="default-permission-mapper">
      <realm name="KIELdapRealm" role-decoder="from-roles-attribute" role-mapper="kie-custom-role-mapper"/>
      </security-domain>
```

CHAPTER 8. KNOWN ISSUES IN RED HAT PROCESS AUTOMATION MANAGER 7.12.1

This section lists known issues with Red Hat Process Automation Manager 7.12.1.

8.1. FORM MODELER

When you create and open a form in the form modeler, you receive a recursion handling issue [RHPAM-4107]

Issue: In the form modeler, when you try to create and open a form, you receive an error message about a recursion handling issue

Steps to reproduce:

1. Create a data object called **A1** and enter the field values as **id:String** and **aField:A1**.

2. Create a custom form as **Form1** for the **A1** data object.

3. Select **aField** and drag it to the canvas and set **Form1** as its nested form.

4. Click **Save**.

5. Reopen the editor.
   You receive an error message.

Workaround: None.

8.2. PROCESS DESIGNER

JavaScript language in an On Entry Action causes an unexpected system error after changing node to Multiple Instance [RHPAM-3409]

Issue: In the **Properties** panel, if the language is set to JavaScript in an **On Entry Action** property and you change the node to **Multiple Instance**, you receive an unexpected system error.

Steps to reproduce:

1. Create a new business process.

2. Create a task that contains the **Multiple Instance** property.

3. Enter any string to the **On Entry Action** property.

4. Change the language to JavaScript.

5. Set the value of the **Multiple Instance** property to **true**.

Expected result: No errors occur in the user interface or server log.

Actual result: You receive an unexpected system error.

Workaround: None.

CHAPTER 9. FIXED ISSUES IN RED HAT PROCESS AUTOMATION MANAGER 7.12.0

Red Hat Process Automation Manager 7.12.0 provides increased stability and fixed issues listed in this section.

9.1. BUSINESS CENTRAL

- Business Central fails to start when a wildcard host is set to **nonProxyHosts** in the **settings.xml** file [RHPAM-3856]

- In standalone editors, the **setContent** method implementation must receive path and content [RHPAM-3629]

- The Controller periodically pings the list of registered KIE Server. However if this ping fails, the KIE Server template is automatically removed [RHPAM-3627]

- When you execute the Business Central REST API through Swagger, the pop-up window for the user name and password fails to open [RHPAM-3560]

- When you create a project using the REST API, it must include the project name in the response of the REST API [RHPAM-3519]

- When you set the **org.jbpm.wb.forms.renderer.ext** system property to **true** and you try to attach a document, the **Upload** button fails to display [RHPAM-3515]

- When you clone a Git project from outside of Business Central, you can clone the project even though it is not shown in Business Central because of lack of permissions [RHPAM-3375]

- When you migrate a Git project from version 6.4 to version 7.8.1, you receive an error message [RHPAM-3232]

- Editing a data object in the guided decision table fails with the null response [RHDM-1781]

- The test scenario tool is unable to execute models using imported inputs and/or decisions nodes and you receive an error message [RHDM-1645]

- When the KIE Server is connected to Business Central using **ws protocol**, you can not stop the KIE container via Business Central user interface and you receive **Not supported for Web Socket implementation** error [RHPAM-3814]

9.2. BUILD AND ASSEMBLY

- When a system log contains an attacker controlled string value, remote code execution happens in the Java logging library of Log4j 2.x [RHPAM-4077]

- JBoss Java EE 8 with Red Hat Business Automation now references Jakarta EE 8 dependencies instead of Java EE 8 dependencies [RHPAM-3858]

- **EJBTimerScheduler** fails to perform further action when the active timer is rolled because of the **javax.persistence.OptimisticLock** exception [RHPAM-3854]

- In an XStream security framework, by manipulating the processed input stream, a remote attacker can obtain sufficient rights to execute commands. The highest threat from this vulnerability is to data confidentiality, integrity, and system availability

- App Fomer Maven integration is not honoring the **nonProxyHosts** property [RHPAM-3638]

9.3. KIE SERVER

- JSON marshalling is slow due to inefficient **com.fasterxml.jackson.databind.type.TypeFactory.findClass** call methods [RHPAM-3855]

- Because of Oracle 19c, a time out occurs while KIE Server is registering queries and some queries take a long time to respond [RHPAM-3782]

- Synchronize the system properties from **standalone-*.xml** file with the **default-kieserver.xml** file [RHPAM-3738]

9.4. CASE MANAGEMENT

- Running the endpoint to receive the tasks of a potential owner from a specific case is not returning any information [RHPAM-3778]

9.5. PROCESS ENGINE

- In a multi-node setup, task deadline timers leave stale entries in the database and they are fired repeatedly [RHPAM-3826]

- Spring Boot JAR files containing KJAR and **commons-beanutils** files throw the **Could not read pom in jar** error message [RHPAM-3797]

- SQL server scripts use identities instead of sequences for Spring Boot [RHPAM-3791]

- When you try to create a process instance with a duplicate correlation key, the REST API returns the http 500 error message [RHPAM-3641]

- You must now include a **datasource.properties** file for extending the **JbpmJUnitBaseTestCase** if the **setupDataSource** parameter is set to true [RHPAM-3610]

- You can send cookies to the REST work item handler using the **cookieParam1=cookieParam1_Value;cookieParam2=cookieParam2_Value** format [RHPAM-3538]

9.6. PROCESS DESIGNER

- When you set the **Process Instance Description** with any value, a duplicate row is added in the **Metadata Attributes** [RHPAM-3848]

- When you are using the singleton runtime strategy initialize listener, the Kafka server fails to publish events to the broker [RHPAM-3818]

- The sub-process navigation link is not clickable when the boundary event aborts the child process [RHPAM-3806]

- When you use the KIE Server image navigation diagram / (+) button, it must display the last active active sub-process instance [RHPAM-3780]

- The navigation link / (+) button is not working when a sub-process contains boundary event [RHPAM-3779]

- The BPMN designer fails to parse the work item definition file if the file contains unexpected properties [RHPAM-3619]

- In the BPMN designer, an unknown custom task causes the diagram explorer to be empty [RHPAM-3606]

- When the reusable sub-process has some dataInput mapping but no dataOutput mapping, you receive an error message in the **server.log** file [RHPAM-3480]

9.7. INSTALLER

- When you use the JAR installer on Red Hat JBoss EAP 7.3.8, the installation fails with the **Cannot start embedded Host Controller** error message [RHPAM-3803]

- Red Hat Process Automation Manager now supports Red Hat JBoss EAP 7.4.0 [RHPAM-3510]

9.8. OPTAPLANNER

- OptaPlanner requires an immutable class for an **@PlanningId** such as Long, long, String or UUID. As of now for version 8.4.0, **ConstraintVerifier** throws an exception if it's not a Long [RHDM-1771]

9.9. RED HAT OPENSHIFT CONTAINER PLATFORM

- An installer wizard provided in the Red Hat OpenShift Container Platform operator throws a 500 internal error [RHPAM-4101]

9.10. DECISION ENGINE

- When you are upgrading Red Hat Process Automation Manager from 7.8 to 7.10, there is a change to the **FactHandleId** values when disposing a KieSession instance [RHDM-1796]

- When you build a rule written in the MVEL dialect with the executable model disabled and run the rule, a MVEL optimization concurrency issue occurs [RHDM-1790]

- When a bind variable produced by accumulate function is used in the condition of subsequent accumulate, you receive a compilation error [RHDM-1772]

- When you call **fireAllRules** simultaneously from multiple threads, you receive an exception inside the **MVELConsequence#evaluate** class [RHDM-1764]

- When you are executing **mvn clean compile -DgenerateModel=YES** on a project which contains a rule using the custom accumulate function, the build fails and your receive an error message [RHDM-1754]

- There is a performance difference while using JDK 8 and JDK 11 [RHDM-1735]

- Reduce an unnecessary classloading by parent classloader [RHDM-1728]

CHAPTER 10. FIXED ISSUES IN RED HAT PROCESS AUTOMATION MANAGER 7.12.1

Red Hat Process Automation Manager 7.12.1 provides increased stability and fixed issues listed in this section.

10.1. BUSINESS CENTRAL

- When you have two data objects, form generation enters into an infinite loop when it reaches the first nested form [RHPAM-3366]

- An inaccurate alert about duplicate rule name after copying a rule in Business Central [RHPAM-2871]

- In the test scenarios designer, **today()** and **now()** functions are not evaluated correctly [RHDM-1816]

- When you delete a column from a guided decision table and try to validate that guided decision table, you receive an error [RHDM-1813]

- When you are converting a guided decision table to XLS, a backslash is added before the double quotes and you receive an error [RHDM-1723]

10.2. BUILD AND ASSEMBLY

- In the Spring framework, versions 5.3.0 - 5.3.10, 5.2.0 - 5.2.17, and an older unsupported versions, it is possible for a user to provide malicious input to cause the insertion of additional log entries [RHPAM-4098]

10.3. PROCESS ENGINE

- Boundary timer is not triggered after a rollback [RHPAM-4102]

- Incorrect response for REST service when **org.kie.server.bypass.auth.user** system property is used with **JAASUserGroupCallbackImpl** implementation [RHPAM-4087]

- When you use the **ClusteredJobFailOverListener** method, you receive system errors caused by the **ConcurrentModificationException** exception [RHPAM-4069]

- Certificate-based authentication is required between KIE Server and process instance migration tool [RHPAM-4038]

- Smart router send requests to a stopped KIE Server [RHPAM-4035]

- The **ProcessServiceImpl.getAvailableSignals** method must obtain process instances in read-only mode to avoid race condition [RHPAM-3967]

- **OptimisticLockRetryInterceptor** triggers a retry logic when **javax.persistence.OptimisticLockException** or **org.hibernate.exception.ConstraintViolationException** exceptions are thrown. This impacts the pluggable variable persistence when persisting the custom entity classes [RHPAM-3948]

- All the scheduled notifications are duplicated on restart [RHPAM-3946]

- Even after the timers are fired, entries from **EJBTimerScheduler.localCache** are not removed [RHPAM-3936]

- In a setup with multiple KIE Server nodes, duplicate EJB timer instances are created [RHPAM-3929]

- Unable to find the task instance with the ID **xxx** if audit mode is disabled [RHPAM-3847]

10.4. PROCESS DESIGNER

- When you make a rest call to retrieve the task form where a data object contains a **LocalDate** type, it is not displayed on any browsers. An input box displays an empty value [RHPAM-4020]

- If there are multiple **intermediateCatchEvent** events, you receive an **ExtensibleXmlParser** error due to duplicate ID values [RHPAM-3878]

10.5. DMN DESIGNER

- When the same FEEL object-access invocation is used by two KIE containers, you receive DMN evaluation errors [RHDM-1877]

10.6. RED HAT OPENSHIFT CONTAINER PLATFORM

- When you install different versions of the Red Hat OpenShift Container Platform operator in each namespace on the same Red Hat OpenShift Container Platform cluster, you receive a validation error and CRD conflict [RHPAM-4158]

- Authorization fails while using role mapping [RHPAM-4146]

- When you set the default role variable as **AUTH_LDAP_DEFAULT_ROLE**, Red Hat OpenShift Container Platform images ignore the LDAP roles [RHPAM-4132]

- The DockerImage type is not accepted in the business automation operator with JDBC extension images [RHPAM-3787]

- The **kie_server_container_started_total** counter displays the total number of containers with the status **STARTED** and **DEACTIVATED**, but it counts the **DEACTIVATED** containers as well and gives the wrong count [RHPAM-3784]

- Increase the **KieExecutorMDB** threads in Red Hat Process Automation Manager image [RHPAM-3528]

10.7. DECISION ENGINE

- When you use **RuleTerminalNodeLeftTuple**, the delete or insert child facts causes a loop in **PhreakJoinNode.doRightInserts()** function and you receive an **OutOfMemoryError** error [RHDM-1865]

- When you are executing the rules multiple times, you receive a random exception in a specific rule after constraint jitting [RHDM-1861]

- You must define the **allVars** field as **final** in the **org.mvel2.util.VariableSpaceModel** class [RHDM-1854]

- The result type of the **BigDecimal** operation with one or more null value operands must not be a **String** or **Boolean** type value [RHDM-1852]

- Already expired events are remaining forever in a working memory while entering a session [RHDM-1843]

- **NotNode** proceeds with unmatched facts [RHDM-1827]

- An executable model fails to build a rule which contains **&&** constraint with a bind variable on right side [RHDM-1820]

APPENDIX A. VERSIONING INFORMATION

Documentation last updated on Wednesday, February 1, 2023.

APPENDIX B. CONTACT INFORMATION

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