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Abstract

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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 7.6.
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 7.6 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.

NOTE

Red Hat Process Automation Manager requires Java 8 or later.

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. NEW FEATURES

This section highlights new features in Red Hat Process Automation Manager 7.6.

2.1. BUSINESS CENTRAL

2.1.1. Business Central UI updates

The following list provides a summary of Business Central UI updates:

- Ability to filter process instances by the parent process instance ID
- Ability to rearrange the order of columns on the Task Inbox page

2.1.2. Change requests

You can now submit a change request from one branch to another branch of the same project.

2.1.3. Removing a service task

If you configured service tasks in the administration menu of Business Central, you can now remove any of these service tasks.

2.1.4. Test Scenarios

The test scenarios designer in Business Central is now available with the new features supported in Red Hat Process Automation Manager 7.6.

- If the same data is shared by multiple test scenarios, you can use the Background tab to define them once for rules-based as well as DMN-based test scenarios. You can add and define the GIVEN data, which is common for the dedicated test scenario simulation, based on the available data objects.
- In rule-based test scenarios, you can use the MVEL expression with the prefix # to call a java method to a property or instance header cell during test scenarios execution.

2.1.5. Generic error dialog improvement in Business Central

A generic error dialog is a pop-up window that notifies users about different runtime errors that are produced in Business Central. The following list provides a summary of generic error dialog enhancements:

- When an error is generated, the error is logged in the server logs. You can fetch and retrieve the generated errors if required.
- You can see the stack trace of the generated error in the popup itself.
- To suppress the error notifications temporarily, select the Don’t show this message again for checkbox and select the time duration from the drop-down list. However, the error messages are still logged in the server logs.
- It provides an error ID to fetch the error details if required.
2.1.6. Decision Model and Notation (DMN) designer improvements

The Decision Model and Notation (DMN) designer in Business Central includes the following notable enhancements:

- Automatic layout and decision service enhancements. You can now select **Perform automatic layout** in the DMN designer toolbar if a DMN model that you import into Business Central is not automatically formatted during the import. When automatic layout is applied to an imported DMN model, the DMN designer retains the height and width of each DMN node instead of using the default size of 100x50 pixels. Also, the nodes inside of an imported decision service node are not reordered outside of the decision service node as they were in previous releases. If you delete a decision service node from a decision requirements diagram (DRD), the nodes inside of the decision service are not deleted as they were in previous releases.

- Improved layout for data type rows in the **Data Types** tab. You can now drag data type elements between parent data types.

- Support for Business Central data objects as DMN data types. You can now import existing data objects in Business Central as DMN data types in the DMN designer. To import existing data objects as DMN data types, go to **Data types → Import data object** in the DMN designer.

For more information about DMN support in Red Hat Process Automation Manager 7.6, see the following resources:

- **Designing a decision service using DMN models**
- **Getting started with decision services**

2.1.7. High-availability Business Central

High-availability (HA) deployment of Business Central is now supported on Red Hat OpenShift Container Platform version 3.11.

In Red Hat Process Automation Manager version 7.6, HA deployment of Business Central is supported with certain limitations:

- If a Business Central instance fails while a user is using it, the user might receive an error message. In this case, the user is redirected to another pod. If Business Central is configured to use Red Hat Single Sign-on, logging on again is not required.

- If a Business Central instance fails during a user operation, data that was not committed (saved) might be lost.

- If a Business Central instance fails while the instance is creating a project, an unusable project might be created.

- If a Business Central instance fails while the instance is creating an asset, the asset might be created but not indexed so it cannot be used. To make the asset indexed, the user can open the asset in Business Central and save it again.

2.2. PROCESS DESIGNER

2.2.1. Process designer updates

The following list provides a summary of process designer updates:
• UI enhancements that guide first-time users on adding the first process nodes on the canvas
• Performance improvements, including improvements in load time, node selection, and copy and paste

2.3. SUPPORT FOR CASE MANAGEMENT CAPABILITIES

Process designer in Business Central fully supports case management capabilities.

For more information about case management support in process designer, see the following resources:

• Designing and building cases for case management
• Getting started with case management
• Using the Showcase application for case management

2.4. PROCESS ENGINE

2.4.1. Assigning roles for operations

You can now assign required security roles for specific types of operations, for example execute or view, on a process.

2.4.2. API support for requesting all sub-cases that belong to a parent case

In the process engine, when using case management, you can now use the API to request a list of all sub-cases immediately belonging to a parent case or a list of sub-cases belonging to a parent case and to all its sub-cases.

2.5. RED HAT BUSINESS OPTIMIZER

2.5.1. Red Hat Business Optimizer updates

The following list provides a summary of Red Hat Business Optimizer updates:

• A script that deploys OptaWeb Vehicle Route Planning (VRP) to Red Hat OpenShift Container Platform from source.

• Move selectors that understand entity sequences.

• Support for ReactJs and SpringBoot with OptaWeb Employee Rostering.

• Constraint Streams API full support for the the NQueens, Task assigning, and Flight Crew scheduling use cases. Note that other features of the API are still technology preview.

2.6. RED HAT OPENSHIFT CONTAINER PLATFORM

2.6.1. Support for AMQ configuration in operator deployment
When deploying Red Hat Process Automation Manager on Red Hat OpenShift Container Platform using the operator user interface, you can now configure Process Server to support the JMS API using an external AMQ message broker.

2.7. SMART ROUTER

2.7.1. Smart Router authentication

Smart Router now provides authentication for Process Server instances by using a system property flag. To configure Smart Router authentication you must define and apply the credentials to Smart Router by using the `addUser` and `removeUser` commands. Process Server uses these credentials to authenticate against Smart Router. The parameters are `username` and `password`. The default `username` is the user’s Process Server ID. The credentials are stored in hash format in a file and custom identity providers can be used.
CHAPTER 3. DEPRECATED AND REMOVED COMPONENTS

The components listed in this section have been deprecated or removed.

3.1. INSTALLATION ON RED HAT OPENS SHIFT CONTAINER PLATFORM USING THE AUTOMATION BROKER

The possibility to install Red Hat Process Automation Manager on Red Hat OpenShift Container Platform using the Automation Broker (Ansible Playbook) was removed from Red Hat Process Automation Manager 7.6.

3.2. LEGACY TEST SCENARIOS TOOL

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

3.3. SUPPORT FOR RED HAT OPENS SHIFT CONTAINER PLATFORM 3.X

CHAPTER 4. TECHNOLOGY PREVIEW

This section lists features that are in Technology Preview in Red Hat Process Automation Manager 7.6. 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 to use 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.

4.1. CASE MODELER

Case modeler in Business Central now includes the new process designer. It provides the option to model a case as a sequence of stages so it is simple to define a case model at high-level. Case modeling supports three types of tasks: human tasks, sub-processes, and sub-cases.

**NOTE**

The case modeler in Red Hat Process Automation Manager 7.6 is a Technology Preview feature and is disabled by default in Business Central. To enable the case modeler preview in Business Central, in the upper-right corner of the window click **Settings → Roles**, select a role from the left panel, click **Editors → (New) Case Modeler → Read**, and then click **Save** to save the changes.

4.2. PROCESS INSTANCE MIGRATION AS A STANDALONE SERVICE

Process instance migration is now available as a standalone service that contains a user interface and a back end, and packaged as a Thorntail uber JAR. The process instance migration service enables you to define the migration between two different process definitions, known as a migration plan. You can apply the migration plan to the running process instances in a specific Process Server.

For more information about the process instance migration standalone service, see the Process Instance Migration Service page in GitHub.

4.3. PREDICTION SERVICE API

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

4.4. HIGH-AVAILABILITY AUTHORING ON RED HAT JBOSS EAP ON PREMISE
Configuration of Business Central for high availability on premise is currently a Technology Preview feature. Note that high-availability deployment of Business Central is now supported on Red Hat OpenShift Container Platform version 3.11.

4.5. CONSTRAINT STREAMS API

You can use the Constraint Streams API as an alternative to the Drools Rules Language (DRL) to program incremental score calculations in plain Java. The Constraint Streams API is fast, scalable, and debuggable. You can use any IDE to develop and debug solvers using the Constraint Streams API. It uses deltas that enable the engine to redo only necessary calculations. It also supports justifications, so you can review the reason a solution was reached in order to debug the solver. Note that the Constraint Streams API fully supports the NQueens, Task assigning, and Flight Crew Scheduling use cases.

4.6. OPENSHIFT OPERATOR INSTALLER WIZARD

An installer wizard is provided in the OpenShift 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.

4.7. RED HAT JBOSS DATA GRID REPLACES ELASTICSEARCH

Red Hat JBoss Data Grid replaces Elasticsearch as the distributed highly scalable full-text search and analytics engine for Red Hat Process Automation Manager.

Red Hat Data Grid is built from the Infinispan open-source software project and contains indexing capabilities that enable you to store, search, and analyze high volumes of data quickly and in near-real time. In a Red Hat Process Automation Manager clustered environment, it enables you to perform complex and efficient searches across cluster nodes.
CHAPTER 5. KNOWN ISSUES

This section lists known issues with Red Hat Process Automation Manager 7.6.

5.1. BUSINESS CENTRAL

When you add a deployment unit and manually enter GAV values, the runtime strategy is not set to the configured default value [RHPAM-2623]

Issue: In Business Central, you can configure a default runtime strategy. However, when you add a new deployment unit and enter the group, artifact, and version (GAV) values manually, the runtime strategy is not set to this configured default.

Steps to reproduce:

1. Import the Evaluation_Process sample project into Business Central.
2. In the project window, click Settings and then select Deployments → General Settings.
4. Click the drop-down list next to the Build button and select Build & Install.
5. In the main menu, select Deploy → Execution Servers and then click Add Deployment Unit.
6. Enter the values in the following list into the corresponding fields:
   - Name: evaluation:evaluation:1.0.0-SNAPSHOT
   - Group Name: evaluation
   - Artifact Id: evaluation
   - Version: 1.0.0-SNAPSHOT
7. Click Next. If you click Finish at this stage, the result will not be changed.
8. In the window that appears, note that the runtime strategy is Singleton.
9. Click Finish.
10. Start the deployment.
11. When the deployment has completed, click the deployment link, for example http://localhost:8080/kie-server/services/rest/server/containers/evaluation:evaluation:1.0.0-SNAPSHOT.
12. View the runtime strategy in the XML information displayed at the link, for example:

    <config-items>
      <itemName>RuntimeStrategy</itemName>
      <itemValue>SINGLETON</itemValue>
      <itemType>BPM</itemType>
    </config-items>

Expected result: The runtime strategy is Per Process Instance.
Actual result: The runtime strategy is **Singleton**.

Workaround: When you create a new deployment unit, select the artifact from the list without entering GAV values manually. Alternatively, manually select the runtime strategy when creating a new deployment unit.

**You cannot start a task if the Elytron adapter is installed** [RHPAM-2450]

Issue: If Business Central on Red Hat JBoss EAP is integrated with RH-SSO using the Elytron adapter, errors are displayed after a task is started.

Steps to reproduce:

1. Install Red Hat Process Automation Manager on Red Hat JBoss EAP.
2. Configure Business Central with RH-SSO using the Elytron adapter.
3. Import a process sample.
4. Start the process.
5. Start a task.

Expected result: The task starts correctly.

Actual result: The task does not start and an error is displayed.

Workaround: Use the legacy adapter instead of the Elytron adapter. Enter the following command to install the legacy adapter:

```
./bin/jboss-cli.sh -c --file=bin/adapter-install.cli
```

**In the guided rule editor, you cannot use the **is contained in comma separated list** constraint in combination with complex values** [RHPAM-2457]

Issue: In the guided rule editor, you cannot use the **is contained in comma separated list** constraint in combination with complex values. Complex values are values that contain a comma or are wrapped by brackets.

Workaround: None.

**The state of a Process Server is not updated in the server template in Business Central after the server disconnects and reconnects to Business Central** [RHPAM-2544]

Issue: After a Process Server disconnects and reconnects to Business Central, the state of this server in the server template in Business Central is not updated. For example, if the Process Server is switched from development mode into production mode, Business Central does not recognize the change.

Steps to reproduce:

1. Ensure a Process Server is connected to Business Central and set to development mode.
2. Shut down the Process Server.
3. Reconfigure the Process Server to use production mode. Do not change other configuration settings.
5. Deploy a service with a **SNAPSHOT** version onto the server template.

Expected result: Business Central displays a message that the server is in production mode and the service can not be deployed.

Actual result: The deployment starts and fails.

Workaround: Manually delete the server template in Business Central before restarting the server. Alternatively, change the name of the server when you reconfigure it.

**When you save a filter and then activate it, an error message displays** [**RHPAM-2545**]

Issue: When you save a filter and immediately after this action activate it from the **Saved filters** view, an error message displays.

Steps to reproduce:

1. Open the **Manage Process Instances** perspective.
2. Configure a quick filter.
3. Save the filter.
4. Click the **Saved filters** dock icon.
5. Click the new filter to activate it.

Expected result: The filter is activated.

Actual result: An **Unexpected system error** message displays. The filter is activated.

Workaround: none.

**In scenario simulation, the right-hand Test Tools panel displays the name of a field instead of the type** [**RHDM-1153**]

Issue: In come cases, instead of the type of a field, the right-hand **Test Tools** panel displays the name of the field.

Steps to reproduce:

1. Open an existing DMN file in Business Central.
2. Add a new structure, for example, **Vacation**.
3. Add a new field to **Vacation**, for example, **Price** of type **number**.
4. Start editing the **Price** field.
5. Click **Add Constraints** and enter some constraints for the **Price** field.
6. Save all changes to the DMN file and close the file.
7. Create a new test scenario for the DMN file.
8. Select a column.
9. Expand the right-hand panel.
10. Click the Test Tools panel.

Expected result: The panel displays the name and type of the field: **Price[number]**.
Actual result: The panel displays the name of the field twice: **Price[Price]**.
Workaround: none.

### 5.2. HIGH AVAILABILITY

In a high-availability authoring environment, when one user imports a project, another user is unable to see it [RHPAM-2470]

Issue: When multiple users connect to a high-availability Business Central and one user creates a project, another user cannot see the project.

Steps to reproduce:

1. Log in to Business Central as two different users (A and B) from two different hosts or browsers.
2. As user A and as user B, open the same space.
3. As user A, import a project using an external Git repository URL.

Expected result: As user B, you can see the imported project in the space.
Actual result: As user B, you cannot see the imported project in the space.
Workaround: As user B, reload the space.

In a high-availability authoring environment, project creation fails when a Business Central node is down [RHPAM-2475]

Issue: When you create a project, the project creation does not complete. The cause is one Business Central node in a high-availability authoring environment going down.

Workaround: Create the project again.

In a high-availability authoring environment, asset creation is not completed when a Business Central node is down [RHPAM-2476]

Issue: When you create an asset, the asset is not indexed. It is displayed in Business Central but you cannot use it. The cause is one Business Central node in a high-availability authoring environment going down.

Workaround: In the Project Explorer view, open the asset and click Save.

### 5.3. DMN DESIGNER

When you import a data object from a Java class, fields that have the Java Date type are not converted to the DMN date type [RHDM-1145]

Issue: When you use DMN designer to import a data object from a Java class and the class has a field of type **Date**, the resulting DMN field does not have the DMN **date** type.

Steps to reproduce:
1. Open a project in Business Central.
2. Add a Java data object.
3. Create a `java.util.Date` field in this object.
4. Save and close the Java class.
5. Open a DMN file.
6. Select the Data Types tab.
7. Click Import Data Object.
8. Select the Java class that you created.
9. Click Import.
10. Check the type of the field into which the `java.util.Date` field was converted.

**Expected result:** The field has the type **date** or **date and time**.

**Actual result:** The field has the type **Any**.

**Workaround:** Manually change the type of the field to **date** or **date and time**.

---

**When you import a data object from a Java class, a field of the Java **List** type is not converted to the DMN collection type [RHDM-1144]**

**Issue:** When you use DMN designer to import a data object from a Java class and the class has a field of type **List**, the resulting DMN field does not have the DMN **collection** type.

**Steps to reproduce:**

1. Open a project in Business Central.
2. Add a Java data object.
3. Create a **List** field in this object.
4. Save and close the Java class.
5. Open a DMN file.
6. Select the Data Types tab.
7. Click Import Data Object.
8. Select the Java class that you created.
9. Click Import.
10. Check the type of the field into which the **List** field was converted.

**Expected result:** The field has the type **collection**.

**Actual result:** The field has the type **Any**.
Workaround: Manually change the type of the field to **collection**.

**When you change a decision table header in the properties panel, the change is not saved [RHDM-1181]**

Issue: In the DMN designer, when you edit a decision table you can click a header to view its properties panel. However, if you change settings for the header in the properties panel, the change is not saved.

Steps to reproduce:

1. Edit a decision table in an element in the DMN designer.
2. Click a header in the table.
3. Change a field, such as **Input expression**, in the properties panel on the right side of the screen.

Expected result: The change is reflected in the table.

Actual result: The change is not reflected in the table.

Workaround: Click the header to view the pop-up window next to the header. Edit the settings in this window.

**When you open a DMN diagram that does not contain layout information, nodes are all in the same position [RHDM-1150]**

Issue: When you open a DMN model file and this file does not contain layout information, all DMN nodes are displayed in the same position.

Steps to reproduce:

1. Open or create a project in Business Central.
2. Import a DMN model file that does not contain layout information.

Expected result: The nodes are spread across the canvas.

Actual result: All nodes are in the same position.

Workaround: Click the **Automatic layout** button in the toolbar.

**5.4. PROCESS DESIGNER**

**Validation for a signal name fails if the name includes spaces, colons (:), or other special characters [RHPAM-2557]**

Issue: In the process designer, the validation for a signal name fails if the name includes spaces, colons (:), or other special characters.

Steps to reproduce:

1. Open a BPMN project in the process designer.
2. Add a signal node on the canvas.
3. In the **Properties** panel for the node, expand **Implementation/Execution**.
4. Click the **Signal** drop-down list and select **New**.

5. In the **Signal** field, enter **Milestone 2: Order shipped**.

6. Press **Tab** on the keyboard to switch to the next field.

**Expected result:** The field content is saved successfully.

**Actual result:** The field contains the text without the spaces that you entered, **Milestone2:Ordershipped** and an **Invalid characters** error message appears.

**Workaround:** Use signal names that contain only letters, numbers, and the underscore character (_).

---

**NOTE**

If you import or migrate a project to the new process designer and any signal name in the project contains spaces or special characters, a warning displays. You can ignore the warning because the execution of the project is not affected.

**If the process designer Properties panel is open and you maximize and then restore the panel, it closes [RHPAM-2613]**

**Issue:** If the process designer **Properties** panel is open and then you maximize and restore the panel, it closes.

**Steps to reproduce:**

1. Open the process designer.

2. In the process designer, create and save a business process.

3. Open the process designer **Properties** panel.

4. Click the **Maximize** button to maximize the process designer panel to the size of the entire screen.

5. Click the **Minimize** button to restore the process designer panel to its previous size.

**Expected result:** The **Properties** panel remains open.

**Actual result:** The **Properties** panel is closed.

**Workaround:** Open the **Properties** panel again.

**If the process designer Properties panel is open and you switch to a different view, the panel closes [RHPAM-2612]**

**Issue:** If the process designer **Properties** panel is open and you switch to a different view, the panel closes.

**Steps to reproduce:**

1. Open the process designer.

2. In the process designer, create and save a business process.
3. Open the process designer **Properties** panel.

4. Switch the view in one of the following ways:
   - Click the process name in the breadcrumb trail in the top part of the window and then select the business process asset again.
   - Click the process in a drop-down menu and then select the business process asset again.
   - Switch to the **Documentation** tab and then switch back to the **Model** tab.

Expected result: The **Properties** panel remains open.

Actual result: The **Properties** panel is closed.

Workaround: Open the **Properties** panel again.

**When you create a gateway, no options are available from the Default Route drop-down list in the Properties panel** [RHPAM-2536]

Issue: In some cases, when you create a gateway no options are available from the **Default Route** drop-down list in the **Properties** panel.

Steps to reproduce:

1. Create a process with a parallel gateway.
2. Append several nodes to the parallel gateway.
3. Convert the parallel gateway into an exclusive gateway.
4. Select the gateway and click the **Default Route** option in the **Properties** panel.

Expected result: The drop-down list contains all of the nodes that follow the gateway.

Actual result: The drop-down list is empty.

Workaround: Deactivate the gateway and activate it again. Alternatively, save and reopen the process.

**If you try to migrate a process with a sequence flow without the source and target nodes set, you should receive a warning message, but you do not** [RHPAM-2453]

Issue: If a process in the legacy process designer contains a sequence flow without the source and target nodes set, and you try to migrate that process to the new process designer, you should receive a warning message, but you do not. It is also not possible to migrate process.

Steps to reproduce:

1. Create a process in the legacy process designer.
2. Add a sequence flow to the process, do not set the source and target nodes, and then save the process.
3. Click the **Migrate** button.

Expected result: You see a message telling you that the source and target nodes for a sequence flow are not set and you cannot migrate the process.
If you migrate a process from the legacy process designer to the new process designer, you receive an incorrect warning that a node will be ignored [RHPAM-2452]

Issue: If you migrate a process from the legacy process designer to the new process designer, you receive a warning that a node will be ignored. However, the node is not ignored and is migrated successfully.

Steps to reproduce:

1. Create a Start to End process in the legacy process designer.
2. Migrate the process to the new process designer.

Expected result: No warning about ignoring elements are shown if no elements will be ignored after migration.

Actual result: Warnings are shown that some unknown element will be ignored.

Workaround: Ignore the warnings and confirm that all nodes migrate successfully.

In the new process designer, the warning message for migrating a Group element is missing [RHPAM-2454]

Issue: If you migrate a process that contains a Group element from the legacy process designer to the new process designer, the warning message about ignoring the node is missing.

Steps to reproduce:

1. Create a process in the legacy process designer.
2. Add a Group element to the process and then save the process.
3. Migrate the process from the legacy process designer to the new process designer.

Expected result: You see a warning message about ignoring the node.

Actual result: You do not see the warning message.

Workaround: None.

5.5. PROCESS INSTANCE MIGRATION

The process instance migration service does not work with an Oracle database [RHPAM-2558]

Issue: The process instance migration service fails to start when it is configured to use an Oracle database.

Steps to reproduce:

1. Configure the process migration service to use an Oracle database.
2. Start the process migration service.
Expected result: The process migration service starts.

Actual result: The process migration service fails to start.

Workaround: Configure the process migration service to use a database on a non-Oracle database server.

5.6. RED HAT OPENSSHIFT CONTAINER PLATFORM

Product environment fails to deploy on Amazon Web Services (AWS) with AWS Elastic Block Storage (EBS) because of AWS EBS volume plugin lack of support for ReadWriteMany (RWX) persistent volume access mode [RHPAM-2480]

Issue: Several templates used for installing Red Hat Process Automation Manager on Red Hat OpenShift Container Platform, as well as deployment of several environment types using the Business Automation operator, fail to deploy on AWS with EBS. The templates and environment types include persistent volume claims that require support for the ReadWriteMany access mode and the AWS EBS volume plugin does not provision persistent volumes with this access mode.

The following templates are affected:

- rhpam76-managed.yaml
- rhpam76-prod.yaml
- rhpam76-prod-immutable-monitor.yaml
- rhpam76-authoring.yaml
- rhpam76-authoring-ha.yaml

Workaround: Deploy an NFS server and provision the persistent volumes using NFS. For information about provisioning persistent volumes using NFS, see one of the following guides:

- For Red Hat OpenShift Container Platform version 3, see the "Persistent storage using NFS" section of the OpenShift Container Platform 3.11 Installation and Configuration guide.
- For Red Hat OpenShift Container Platform version 4, see the "Persistent storage using NFS" section of the OpenShift Container Platform 4.2 Storage guide.

OptaWeb Vehicle Routing tests fail due to different versions of dependencies [RHDM-1129]

Issue: OptaWeb Vehicle Routing is distributed with the incorrect package-lock.json file. As a result, snapshot tests of the optaweb-vehicle-routing-frontend module fail because of changes in HTML code generated by different versions of dependencies.

Workaround:

1. Change directory to the optaweb-vehicle-routing-frontend module.
2. Enter the following command to download the required dependencies:
   
   $ npm install

3. Enter the following command to run the tests:
$ npm test

4. Press the u key to update failing snapshots.

5.7. OFFLINE MAVEN REPOSITORY

The offliner tool reports errors when it downloads artifacts for an offline Maven repository [RHPAM-2234]

Issue: When you run the offliner tool to download artifacts for an offline Maven repository, the tool reports that some artifacts failed to download. The error message is The artifact was not found in any of the provided repositories.

Workaround: If the failed artifacts relate to installer, ignore the error messages. These artifacts are not required for the offline Maven repository.

In other cases, for example, for maven-compiler-plugin or docbook artifacts, specify an additional repository and run the offliner command again:

```
```
CHAPTER 6. FIXED ISSUES IN RED HAT PROCESS AUTOMATION MANAGER 7.6.0

Red Hat Process Automation Manager 7.6.0 provides increased stability and fixed issues listed in this section.

NOTE

Red Hat Decision Manager fixed issues apply to Red Hat Process Automation Manager as well. For a list of Red Hat Decision Manager 7.6.0 fixed issues, see the Release Notes for Red Hat Decision Manager 7.6

6.1. INSTALLER

- Red Hat JBoss Web Server-only datasource configuration is missing elements [RHPAM-2428]

6.2. BUSINESS CENTRAL

- After execution of a multi-instance subprocess, nodes are not blurred even though the process instance is completed [RHPAM-2472]
- Cloning from a remote Git repository that requires credentials does not work [RHPAM-2531]
- An error dialog appears when you import a sample project twice [RHPAM-2434]
- You cannot upload or download files that contain spaces or ampersands (&) in the name [RHPAM-2368]
- Performance issues occur when you open assets with the project explorer [RHPAM-2359]
- Role permissions do not persist and can reset after some time [RHPAM-2342]
- A JavaScript error occurs when you try to modify action columns in guided decision table [RHPAM-2286]
- Set the default runtime strategy in the new deployment unit wizard as it is set in kie-deployment-descriptor.xml file [RHPAM-2119]
- Process designer performance degradation occurs for large processes [RHPAM-1976]
- The Manage section filter tag displays the raw query instead of the named filter [RHPAM-1194]
- A form modeler error occurs after you click New Instance in the MultipleSubForm Field properties window [RHPAM-1027]

6.3. HIGH AVAILABILITY

- Indexing in high-availability Business Central repeatedly creates threads that cause a Business Central pod to fail [RHPAM-2477]
- Business Central imports a sample project several times [RHPAM-2372]
- A TimeoutException occurs when you log in to clustered Business Central [RHPAM-1749]
6.4. PROCESS ENGINE

- A GlobalTimerService.timerJobsPerSession leak occurs with the StartProcess timer [RHPAM-2479]

- The engine must perform security checking (based on required roles) on process operations only [RHPAM-2449]

- The REST API returns a quoted string, which is an invalid type, instead of a json or xml object [RHPAM-2012]

6.5. PROCESS SERVER

- Process Server periodically restarts if a container deployment fails [RHPAM-1793]

6.6. SMART ROUTER

- Smart Router must provide authentication for management endpoints [RHPAM-2462]

6.7. RED HAT OPENSSHIFT CONTAINER PLATFORM

- The Process Server pod fails to start after a user updates the BusyBox image on Red Hat OpenShift Container Platform [RHPAM-2431]

- It is not possible to build a high-availability complex image processing image because of a microdnf bug [RHPAM-2500]

- Add AMQ support to the operator installer UI [RHPAM-2205]

- Increase the AMQ broker version to 7.5 in OpenShift templates [RHDM-1122]

- Add the missing environment variable for the Red Hat Business Optimizer thread pool size [RHDM-1096]
APPENDIX A. VERSIONING INFORMATION

Documentation last updated on Friday, May 22, 2020.