



# **Red Hat Decision Manager 7.1**

## **Release notes for Red Hat Decision Manager 7.1**



# Red Hat Decision Manager 7.1 Release notes for Red Hat Decision Manager 7.1

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## Abstract

This document contains release notes for Red Hat Decision Manager 7.1.

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# PREFACE

These release notes list new features, features in technical preview, known issues, and issues fixed in Red Hat Decision Manager 7.1.

## CHAPTER 1. PRODUCT OVERVIEW

Red Hat Decision Manager is an open-source decision management platform that combines business rules management, complex event processing, Decision Model & Notation (DMN) execution, and Business Optimizer for solving planning problems. It automates business decisions and makes that logic available to the entire business.

Business assets such as rules, decision tables, and DMN models are stored in a central repository. This ensures consistency, transparency, and the ability to audit across the business. Business users can modify business logic without requiring assistance from IT personnel.

Red Hat Decision Manager 7.1 provides increased stability, several fixed issues, and a few new features.

Red Hat Decision Manager is fully supported on OpenShift and can be installed on various platforms.



### NOTE

Red Hat Decision Manager requires Java 8 or higher.

For information about the support policy for Red Hat Decision 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 Decision Manager 7.1.

### 2.1. INSTALLATION AND UPGRADES

#### 2.1.1. Consolidated Red Hat Decision Manager update tool

Previously, Red Hat Decision Manager patch updates and minor release upgrades were applied with separate patch and upgrade tools. With this release, you can use the new **rhdm-\$VERSION-update.zip** update tool to apply both patch updates and minor release upgrades to Red Hat Decision Manager 7.1. Patch updates of Red Hat Decision Manager, such as an update from version 7.1 to 7.1.1, include the latest security updates and bug fixes. Minor release upgrades of Red Hat Decision Manager, such as an upgrade from version 7.1.x to 7.2, include enhancements, security updates, and bug fixes.

For information about using the Red Hat Decision Manager update tool, see [Patching and upgrading Red Hat Decision Manager 7.1](#).



#### IMPORTANT

To upgrade from Red Hat Decision Manager 7.0.x to 7.1, you must use a Decision Central migration tool provided with the Red Hat Decision Manager 7.1 release to accommodate an improved project data structure in Red Hat Decision Manager 7.1. For migration instructions, see [Migrating from Red Hat Decision Manager 7.0 to Red Hat Decision Manager 7.1](#).

#### 2.1.2. Tomcat 9 support

Red Hat Decision Manager is now available for JBoss Web Server 5.0 with support for Tomcat 9.

### 2.2. DECISION CENTRAL

#### 2.2.1. Multiple GIT branch support

Decision Central now provides multiple GIT branch support which enables you to work on multiple source branches interchangeably. On the project's page, select the branch drop-down menu in the library breadcrumbs to access this feature.

### 2.3. DECISION SERVER

#### 2.3.1. Decision Model and Notation (DMN) models

Red Hat Decision Manager 7.1 includes full runtime support for DMN 1.2 models at conformance level 3. Red Hat Decision Manager 7.1 currently does not include a built-in DMN model designer, but you can design your DMN models using a third-party DMN authoring tool and include them in your Red Hat Decision Manager projects for deployment and execution. A DMN model designer will be added to Red Hat Decision Manager in the near future.

For more information about DMN support in Red Hat Decision Manager 7.1, see [Designing a decision service using DMN models](#).

### 2.3.2. Predictive Modeling Markup Language (PMML) models

Red Hat Decision Manager 7.1 now supports the following PMML 4.2.1 model types:

- Regression models
- Scorecard models
- Tree models
- Mining models (with sub-types **modelChain**, **selectAll**, and **selectFirst**)

More PMML model types and Mining model sub-types will be supported as they become available.

For more information about PMML support in Red Hat Decision Manager 7.1, see [Designing a decision service using PMML models](#).

### 2.3.3. Executable rule models

Executable rule models are embeddable models that provide a Java-based representation of a rule set for execution at build time. The executable model is a more efficient alternative to the standard asset packaging in Red Hat Decision Manager and enables KIE containers and KIE bases to be created more quickly, especially when you have large lists of DRL (Drools Rule Language) files and other Red Hat Decision Manager assets.

For more information about executable rule models in Red Hat Decision Manager 7.1, see "[Executable rule models](#)" in [Designing a decision service using DRL rules](#).

### 2.3.4. Spring Boot support

You can use the following Spring Boot starters to bootstrap your projects with Spring Boot:

- Fully featured Decision Server
  - **groupId:** **org.kie**
  - **artifactId:** **kie-server-spring-boot-starter**
- Rules and decisions Decision Server
  - **groupId:** **org.kie**
  - **artifactId:** **kie-server-spring-boot-starter-drools**
- Planning Decision Server
  - **groupId:** **org.kie**
  - **artifactId:** **kie-server-spring-boot-starter-optaplaner**

## 2.4. RED HAT BUSINESS OPTIMIZER

### 2.4.1. Multithreaded incremental solving

Red Hat Business Optimizer now supports multithreaded incremental solving. The solving process can

now run on several CPU cores in parallel while remaining fully reproducible through repeated runs. Depending on the task, using four cores can increase the speed by a factor of three or more compared to solving on a single core. You do not need to modify the task source to use multithreaded incremental solving.

### **2.4.2. Employee Rostering**

The Employee Rostering starter application has been significantly improved:

- You can now create a new tenant so you can use the application with your own real-world data and enter this data starting from a blank slate.
- The user interface was improved, including notifications and performance.
- You can now select the week to view instead of scrolling through long time periods.

## CHAPTER 3. TECHNOLOGY PREVIEW

This section lists features that are in technology preview in Red Hat Decision Manager 7.1.



### 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](#).

- Optaweb employee rostering.
- High-availability authoring on Red Hat JBoss EAP (on premise and OpenShift). Configuration of Decision Central for high availability is currently tech preview. Search and messaging technology used to enable search feature is considered an implementation detail. Red Hat Decision Manager may choose to replace that technology in the future while preserving the capability offered.
- Rule units: Rule units represent a declarative approach to partitioning a rule set into smaller units, binding different data sources to those units, and the execution of the individual unit. A rule unit consists of data sources, global variables, and rules.
- Multithreaded Execution - Solves a single data set by partitioning across multiple threads. It is turned off by default and can be enabled either with a `KieBaseConfiguration` option or with a system property as explained in the [Drools Documentation](#).

## CHAPTER 4. KNOWN ISSUES

This section lists known issues with Red Hat Decision Manager 7.1.

### 4.1. DECISION CENTRAL

#### Cannot close the standalone editor [[RHPAM-976](#)]

Issue: If you make a change in a standalone editor, you cannot close the editor until you save your changes.

Steps to reproduce:

1. Open a standalone editor.
2. Make a change to asset.
3. Try to close the editor.

Expected result: The editor closes.

Actual result: The editor does not close.

Workaround: Save any changes before closing the editor.

#### In guided rules, guided decision tables, and guided decision templates, the use of the "contains" operator does not add values from enumerations that have quotes. [[RHDM-25](#)]

Issue: When enumeration is used for a string field of a fact in guided rules, guided decision tables, and guided decision templates, the resultant rule does not wrap the selected value from the enumeration drop down in quotes (") and a validation error occurs.

#### Project cannot be built and deployed in Decision Central when connected to a snapshot Maven repo [[RHPAM-1544](#)]

Steps to reproduce:

1. Start the local Nexus repository.
2. Install Red Hat JBoss EAP with Decision Central.
3. Set the value of the `kie.maven.settings.custom` system property to `settings.xml` which will point to the Nexus snapshot repository.
4. Start Red Hat JBoss EAP, log in to Red Hat JBoss EAP, and try to create a project.

Actual result: An error appears.

Workaround: Remove the snapshot Maven repository from the `settings.xml` file used by Decision Central.

### 4.2. OPENSIFT

#### Opening Case Modeler (legacy) throws a JSON exception [[RHPAM-1431](#)]

Steps to reproduce:

1. Install Red Hat Single Sign-On in OpenShift.
2. Create a realm.
3. Install Red Hat Decision Manager in OpenShift.
4. Open the IT-Orders orders hardware case definition.

Actual result: An error occurs and the application restarts.

Workaround: Replace the **keycloak.sh** script that is configuring **autodeploy**:

1. Download the updated **keycloak.sh** script from the [Business Central Authoring Environment \(on Openshift\) crashes when a new "Business Processes \(legacy\)" asset is created](#) article.
2. Use the script to create a configuration map:

```
$ oc create configmap sso-script --from-file=keycloak.sh=keycloak.sh
```

3. Mount the configuration map and override the previous script, where **<NAME>** is the name of the volume, for example **myapp-rhpam**:

```
$ oc volume dc/<NAME> --add --type configmap --configmap-name=sso-script --sub-path=keycloak.sh --name=keycloak-script --mount-path=/opt/eap/bin/launch/keycloak.sh
```

## 4.3. DECISION ENGINE

**MVEL expression  $(1 + 2 * 3 + \$v)$  causes a "no such method or function " error for bind variable[RHDM-707]**

Issue: When using an expression such as  $(1 + 2 * 3 + \$v)$  in the consequence of a rule which uses the mvel dialect, where **\$v** is a bound variable from rule constraints, the evaluation of the rule produces an exception.

Workaround: Change the expression to  $(1 + (2 * 3) + \$v)$ .

# CHAPTER 5. FIXED ISSUES IN RED HAT DECISION MANAGER

## 7.1.0

Red Hat Decision Manager 7.1.0 provides increased stability and fixed issues listed in this section.

### 5.1. INSTALLATION AND MIGRATION

- RHDM artifacts are not correctly updated during rhdm-installer build. [\[RHDM-528\]](#)
- CVE-2017-15095 jackson-databind: Unsafe deserialization due to incomplete black list (incomplete fix for CVE-2017-7525) [brms-7.0.0] build. [\[RHDM-373\]](#)

### 5.2. DECISION CENTRAL

- "Install Git" dialog displayed on starting RHDM [\[RHDM-396\]](#)
- [GSS](7.0.z) Java Object in DMNContext not working properly with Filter function [\[RHDM-568\]](#)
- publication URL for DMN XSD [\[RHDM-513\]](#)
- Accessing DMN container info is not possible by container alias [\[RHDM-387\]](#)
- FEEL Parser: refactor **not** unary negation and **not** function call; fix support to wildcard ? [\[RHDM-744\]](#)
- Missing WebSocketNotificationServiceFactory service definition [\[RHDM-363\]](#)
- Data object class name is not renamed after copying in standalone editor [\[RHDM-256\]](#)
- Missing configuration in standalone configuration files [\[RHDM-22\]](#)
- Decision-central fails to deploy on EAP with space in its path [\[RHDM-371\]](#)
- "New Data Set" button does nothing when already in "New Data Set" screen [\[RHDM-425\]](#)
- Labels (even English texts) are not rendered in Solver configuration with locale=ja [\[RHDM-390\]](#)
- "Create New Asset" doesn't list "Global Variable(s)" and "Solver configuration" with locale=ja [\[RHDM-391\]](#)
- No way to get the git URL of the internal project repo [\[RHDM-294\]](#)
- Java-level deadlock after cloning a repository [\[RHDM-404\]](#)
- [Guided Rule Editor] Field Value Tooltips are not well readable [\[RHDM-356\]](#)
- Enum deletion throws an Error [\[RHDM-698\]](#)
- [Guided Decision Table] Parsing Number from value list doesn't work with white spaces [\[RHDM-26\]](#)
- [Guided Decision Table Editor] From accumulate causes validation errors [\[RHDM-216\]](#)
- [GSS](7.0.z) Unable to push changes to a remote repository why has been cloned from remote repo in RHDM [\[RHDM-668\]](#)

- [Guided Decision Table] Trouble to add a row into table with WI [[RHDM-323](#)]
- Guided Rule Editor does not open popup when binding a variable of type `java.time.LocalDate` in another constraint [[RHDM-664](#)]
- Slow performance using business-central with GlusterFS [[RHDM-71](#)]
- Guided Decision Table is changing date field value based on the timezone [[RHDM-693](#)]
- ERRORS when running standalone decision central [[RHDM-403](#)]

### 5.3. DECISION ENGINE

- Concurrency problems with enum constraints in MVEL [[RHDM-27](#)]
- `NullPointerException` in `Declaration.getHashCode()` when getter in LHS and `serialize/deserialize` package [[RHDM-609](#)]
- Uncovered edge cases in executable model [[RHDM-723](#)]
- Wrong division calculation in Mvel Jitted constraint [[RHDM-720](#)]
- `"java.security.AccessControlException: WFSM000001: Permission check failed"` when enabled `security-manager` [[RHDM-645](#)]
- Beta node indexes don't support type coercion [[RHDM-677](#)]
- Support Java 8 date API in dates comparison [[RHDM-686](#)]
- `ArithmeticException` happens in average function with `BigDecimal` type [[RHDM-603](#)]
- `NullPointerException` in `BaseClassFieldReader.writeExternal()` when a global method is used in LHS and `serialize` package [[RHDM-613](#)]
- Unexpected rule fire by sharing `From` and `pojo` without `hashCode/equals` [[RHDM-611](#)]
- Executable model isn't generated correctly for `from` clause in the form `func(x)` [[RHDM-565](#)]
- Executable model - `kcontext` cannot be used as a `RuleContext` [[RHDM-586](#)]
- When compiling a `kjar` which includes a `kbase` from another `kjar` containing an `enum` the compilation fails [[RHDM-562](#)]
- Build of executable model based `kproject` doesn't take count of `KieBase` includes [[RHDM-561](#)]
- `Timers` attribute aren't parsed correctly by the executable model [[RHDM-564](#)]
- `Accumulate` on `'this'` doesn't work in executable model [[RHDM-585](#)]
- Property reactivity mask is mistakenly set as empty by executable model when it is not possible to infer the modified properties [[RHDM-542](#)]
- `Kjars` aren't recognized as projects using the executable model when installed directly into the `KieRepository` [[RHDM-548](#)]
- Stateless sessions aren't under control of `KieBase` coordination during an incremental update [[RHDM-543](#)]



- Child left tuples doesn't get reordered when property reactivity skips an update [[RHDM-554](#)]
- Various bugs in executable model [[RHDM-519](#)]
- DRL function import doesn't work using static inner class [[RHDM-591](#)]
- LinkageError with IBM JDK >= 8.0.5.6 [[RHDM-297](#)]
- WorkflowRuntimeException wraps only the most bottom root cause Exception in RuleSetNodeInstance [[RHDM-614](#)]
- Missing "import" doesn't always produce a compilation error in BPMN2 process [[RHDM-631](#)]
- Drools engine does not compile PMML SimpleSetPredicate correctly [[RHDM-317](#)]
- GetResultValue method does not return empty Optional for missing values [[RHDM-342](#)]
- Last prediction missing value strategy does not work correctly in PMML tree models [[RHDM-341](#)]
- Weighted confidence missing value strategy does not work correctly in PMML tree models [[RHDM-343](#)]
- Wrong dsl generation of constraint calling a constructor in executable model [[RHDM-738](#)]
- Missing beta node sharing [[RHDM-523](#)]
- Adding a PMML asset into a workbench project does not work [[RHDM-479](#)]
- Drools compiler does not recognize Java 9 [[RHDM-376](#)]
- Wrong dsl generation of constraints using globals in executable model [[RHDM-525](#)]
- Static imports in generated executable model dsl can cause method name clashes [[RHDM-527](#)]
- Wrong dsl generation of constraints invoking method on a variable bound from a different pattern in executable model [[RHDM-533](#)]
- Constraints checking against a null value isn't generated correctly by the executable model [[RHDM-563](#)]

## 5.4. DECISION SERVER

- Storage and notification services are not picked by standalone controller [[RHDM-372](#)]
- File "kie.policy" contains "kie-execution-server" string in permission definition [[RHDM-264](#)]

## 5.5. DATA MODELLER

- [GSS] (7.0.z) Cannot use multibyte class name for Data Objects [[RHDM-398](#)]
- Cannot use multibyte field name for Data Objects [[RHDM-626](#)]
- Multibyte labels are persisted as Unicode numbers for the first time in Data Objects source [[RHDM-458](#)]

## 5.6. RED HAT DECISION MANAGER ON OPENSIFT

- Remove xpaas label from RHDM templates [[RHDM-684](#)]
- optaweb-employee-rostering templates incomplete [[RHDM-739](#)]
- Switch the imagestreams to the new redhat.io registry [[RHDM-715](#)]
- Update EAP base image for RHDM images from 7.1.2 to 7.1.3 [[RHDM-690](#)]
- Liveness and Readiness probes for Decision Central OpenShift Image deployment failed [[RHDM-706](#)]
- Allow KIE server / OpenShift to be completely immutable [[RHDM-587](#)]
- rename RHDM optaweb to optaweb-employee-rostering [[RHDM-727](#)]
- Inconsistent naming of KIE server in RHDM OpenShift templates [[RHDM-729](#)]
- GIT\_HOOKS\_DIR parameter not exposed in RHDM templates [[RHDM-722](#)]
- Git hooks support for imported projects [[RHDM-666](#)]
- Missing org.appformer.m2repo.url configuration in Workbench scripts [[RHDM-732](#)]
- Remove EAP ADMIN parameters from templates in RHDM [[RHDM-672](#)]

## 5.7. MAVEN REPOSITORY

- Maven repo: freemarker version does not conform with MRRC requirements [[RHDM-588](#)]
- PMML assets are not compiled by kie-maven-plugin [[RHDM-478](#)]
- RHDM maven repository id should be configurable instead of generated [[RHDM-735](#)]
- Missing MAVEN\_REPO\_SERVICE parameter in kieserver templates in RHDM [[RHDM-673](#)]
- Missing drlx-parser and java-parser artifacts [[RHDM-574](#)]

## 5.8. RED HAT BUSINESS OPTIMIZER

- Performance regression related to Partitioned Search feature [[RHDM-32](#)]
- Backport optaplanner-persistence-jpa dependency bloat fix [[RHDM-636](#)]
- Labels in OptaPlanner property panel in DataModeller are badly positioned [[RHDM-336](#)]
- SolverValidator not registered as a bean [[RHDM-257](#)]

## APPENDIX A. VERSIONING INFORMATION

Documentation last updated on Friday, October 12, 2018.