



# Red Hat Process Automation Manager 7.4

## Patching and upgrading Red Hat Process Automation Manager 7.4



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## Abstract

This document describes how to apply patch updates and minor release upgrades to Red Hat Process Automation Manager 7.4.

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## PREFACE

As a Red Hat Process Automation Manager user, you can apply updates to Red Hat Process Automation Manager as they become available in the Red Hat Customer Portal to keep your Red Hat Process Automation Manager distribution current with the latest enhancements and fixes. Red Hat provides update tools and product notifications for new product releases so you can more readily apply helpful updates to Red Hat Process Automation Manager and Process Server.

### Prerequisites

- You have a Red Hat Customer Portal account.
- Red Hat Process Automation Manager 7.4 is installed. For installation options, see [Planning a Red Hat Process Automation Manager installation](#).



### NOTE

If you are using Red Hat Process Automation Manager 7.3 and you want to upgrade to Red Hat Process Automation Manager 7.4, see [Patching and upgrading Red Hat Process Automation Manager 7.3](#) or follow the instructions in this document and adjust the example upgrade versions accordingly.

# CHAPTER 1. RED HAT PROCESS AUTOMATION MANAGER VERSIONING

Red Hat Process Automation Manager versions are designated with a numerical **Major.Minor.Patch** format, such as **7.4.1**. In this example, the major release is **7.x.x**, the minor release is **7.4.x**, and the patch release is **7.4.1**. Major releases often require data migration, while minor release upgrades and patch updates are typically managed with update tools provided with the Red Hat Process Automation Manager release artifacts.

The following are the general types of releases for Red Hat Process Automation Manager:

## Major release migrations

Major releases of Red Hat Process Automation Manager include substantial enhancements, security updates, bug fixes, and possibly redesigned features and functions. Data migration is typically required when an application is moved from one major release to another major release, such as from Red Hat JBoss BPM Suite 6.4.x to Red Hat Process Automation Manager 7.0. Automated migration tools are often provided with new major versions of Red Hat Process Automation Manager to facilitate migration, but some manual effort is likely required for certain data and configurations. The supported migration paths are specified in product announcements and documentation.

For example migration instructions, see [Migrating from Red Hat JBoss BPM Suite 6.4 to Red Hat Process Automation Manager 7.0](#).

## Minor release upgrades

Minor releases of Red Hat Process Automation Manager include enhancements, security updates, and bug fixes. Data migration may be required when an application is moved from one minor release to another minor release, such as from Red Hat Process Automation Manager 7.4.x to 7.5.

Automated update tools are often provided with both patch updates and new minor versions of Red Hat Process Automation Manager to facilitate updating certain components of Red Hat Process Automation Manager, such as Business Central, Process Server, and the headless Process Automation Manager controller. Other Red Hat Process Automation Manager artifacts, such as the decision engine and standalone Business Central, are released as new artifacts with each minor release and you must re-install them to apply the update.

Before you upgrade to a new minor release, apply the latest patch update to your current version of Red Hat Process Automation Manager to ensure that the minor release upgrade is successful.

## Patch updates

Patch updates of Red Hat Process Automation Manager include the latest security updates and bug fixes. Scheduled patch updates contain all previously released patch updates for that minor version of the product, so you do not need to apply each patch update incrementally in order to apply the latest update. For example, you can update Red Hat Process Automation Manager 7.4.0 or 7.4.1 to Red Hat Process Automation Manager 7.4.2. However, for optimal Red Hat Process Automation Manager performance, apply product updates as they become available. Occasionally, unscheduled patch updates may be released outside the normal update cycle of the existing product. These may include security or other updates provided by Red Hat Global Support Services (GSS) to fix specific issues, and may not be cumulative updates.

Automated update tools are often provided with both patch updates and new minor versions of Red Hat Process Automation Manager to facilitate updating certain components of Red Hat Process Automation Manager, such as Business Central, Process Server, and the headless Process Automation Manager controller. Other Red Hat Process Automation Manager artifacts, such as the decision engine and standalone Business Central, are released as new artifacts with each minor release and you must re-install them to apply the update.

To ensure optimal transition between releases and to keep your Red Hat Process Automation Manager



distribution current with the latest enhancements and fixes, apply new product releases and updates to Red Hat Process Automation Manager as they become available in the Red Hat Customer Portal. Consider also enabling product notifications in the Red Hat Customer Portal.

For information about enabling product notifications, see [Chapter 2, \*Enabling Red Hat Process Automation Manager notifications in the Red Hat Customer Portal\*](#).

## CHAPTER 2. ENABLING RED HAT PROCESS AUTOMATION MANAGER NOTIFICATIONS IN THE RED HAT CUSTOMER PORTAL

You can enable notifications in the Red Hat Customer Portal to receive Red Hat Process Automation Manager updates and announcements. These notifications inform you of updated or added documentation, product releases, and patch updates related to Red Hat Process Automation Manager. With notifications enabled, you can more readily apply product updates to Red Hat Process Automation Manager as they become available in the Red Hat Customer Portal to keep your Red Hat Process Automation Manager distribution current with the latest enhancements and fixes.

### Prerequisites

- You have a Red Hat Customer Portal account and are logged in.

### Procedure

1. In the top-right corner of the Red Hat Customer Portal window, click your profile name and click **Notifications**.
2. Select the **Notifications** tab and click **Manage Notifications**.
3. Next to **Follow**, select **Products** from the drop-down menu, and then select **Red Hat Process Automation Manager** from the next drop-down menu that appears.
4. Click **Save Notification** to finish.

You can add notifications for any other products as needed in the same way.

## CHAPTER 3. APPLYING PATCH UPDATES AND MINOR RELEASE UPGRADES TO RED HAT PROCESS AUTOMATION MANAGER

Automated update tools are often provided with both patch updates and new minor versions of Red Hat Process Automation Manager to facilitate updating certain components of Red Hat Process Automation Manager, such as Business Central, Process Server, and the headless Process Automation Manager controller. Other Red Hat Process Automation Manager artifacts, such as the decision engine and standalone Business Central, are released as new artifacts with each minor release and you must re-install them to apply the update.

You can use the same automated update tool to apply both patch updates and minor release upgrades to Red Hat Process Automation Manager 7.4. Patch updates of Red Hat Process Automation Manager, such as an update from version 7.4 to 7.4.1, include the latest security updates and bug fixes. Minor release upgrades of Red Hat Process Automation Manager, such as an upgrade from version 7.4.x to 7.5, include enhancements, security updates, and bug fixes.



### NOTE

Only updates for Red Hat Process Automation Manager are included in Red Hat Process Automation Manager update tools. Updates to Red Hat JBoss EAP must be applied using Red Hat JBoss EAP patch distributions. For more information about Red Hat JBoss EAP patching, see the [Red Hat JBoss EAP patching and upgrading guide](#).

### Prerequisites

- Your Red Hat Process Automation Manager and Process Server instances are not running. Do not apply updates while you are running an instance of Red Hat Process Automation Manager or Process Server.

### Procedure

1. Navigate to the [Software Downloads](#) page in the Red Hat Customer Portal (login required), and select the product and version from the drop-down options.

Example:

- **Product:** Process Automation Manager
- **Version:** 7.4.1

If you are upgrading to a new minor release of Red Hat Process Automation Manager, such as an upgrade from version 7.4.x to 7.5, first apply the latest patch update to your current version of Red Hat Process Automation Manager and then follow this procedure again to upgrade to the new minor release.



### NOTE

If you are upgrading from Red Hat Process Automation Manager 7.4.1 to Red Hat Process Automation Manager 7.5.0, you must use the Business Central migration tool on your **.niogit** directory to prepare project data and system configurations for migration to Red Hat Process Automation Manager 7.5. For instructions on using the migration tool, see [Chapter 4, Using the migration tool on a .niogit directory](#).

- Click **Patches**, download the **Red Hat Process Automation Manager [VERSION] Update Tool** and extract the downloaded **rhpmam-\$VERSION-update.zip** file to a temporary directory. This update tool automates the update of certain components of Red Hat Process Automation Manager, such as Business Central, Process Server, and the headless Process Automation Manager controller. Use this update tool first to apply updates and then install any other updates or new release artifacts that are relevant to your Red Hat Process Automation Manager distribution.
- If you want to preserve any files from being updated by the update tool, navigate to the extracted **rhpmam-\$VERSION-update** folder, open the **blacklist.txt** file, and add the relative paths to the files that you do not want to be updated. When a file is listed in the **blacklist.txt** file, the update script does not replace the file with the new version but instead leaves the file in place and in the same location adds the new version with a **.new** suffix. If you blacklist files that are no longer being distributed, the update tool creates an empty marker file with a **.removed** suffix. You can then choose to retain, merge, or delete these new files manually.

Example files to be excluded in **blacklist.txt** file:

```
WEB-INF/web.xml // Custom file
styles/base.css // Obsolete custom file kept for record
```

The contents of the blacklisted file directories after the update:

```
$ ls WEB-INF
web.xml web.xml.new
```

```
$ ls styles
base.css base.css.removed
```

- In your command terminal, navigate to the temporary directory where you extracted the **rhpmam-\$VERSION-update.zip** file and run the **apply-updates** script in the following format:



### IMPORTANT

Make sure that your Red Hat Process Automation Manager and Process Server instances are not running before you apply updates. Do not apply updates while you are running an instance of Red Hat Process Automation Manager or Process Server.

On Linux or Unix-based systems:

```
$ ./apply-updates.sh $DISTRO_PATH $DISTRO_TYPE
```

On Windows:

```
$ .\apply-updates.bat $DISTRO_PATH $DISTRO_TYPE
```

The **\$DISTRO\_PATH** portion is the path to the relevant distribution directory and the **\$DISTRO\_TYPE** portion is the type of distribution that you are updating with this update.

The following distribution types are supported in Red Hat Process Automation Manager update tool:

- **rhpm-business-central-eap7-deployable**: Updates Business Central (**business-central.war**)
- **rhpm-kie-server-ee8**: Updates Process Server (**kie-server.war**)
- **rhpm-controller-ee7**: Updates the headless Process Automation Manager controller (**controller.war**)

Example update to Business Central and Process Server for a full Red Hat Process Automation Manager distribution on Red Hat JBoss EAP:

```
./apply-updates.sh ~EAP_HOME/standalone/deployments/business-central.war rhpm-business-central-eap7-deployable

./apply-updates.sh ~EAP_HOME/standalone/deployments/kie-server.war rhpm-kie-server-ee8
```

Example update to headless Process Automation Manager controller, if used:

```
./apply-updates.sh ~EAP_HOME/standalone/deployments/controller.war rhpm-controller-ee7
```

The update script creates a **backup** folder in the extracted **rhpm-\$VERSION-update** folder with a copy of the specified distribution, and then proceeds with the update.

5. After the update tool completes, return to the **Software Downloads** page of the Red Hat Customer Portal where you downloaded the update tool and install any other updates or new release artifacts that are relevant to your Red Hat Process Automation Manager distribution. For files that already exist in your Red Hat Process Automation Manager distribution, such as **.jar** files for the decision engine or other add-ons, replace the existing version of the file with the new version from the Red Hat Customer Portal.
6. If you use the standalone **Red Hat Process Automation Manager 7.4.0 Maven Repository** artifact (**rhpm-7.4.0-maven-repository.zip**), such as in air-gap environments, download **Red Hat Process Automation Manager [VERSION] Incremental Maven Repository** and extract the downloaded **rhpm-\$VERSION-incremental-maven-repository.zip** file to your existing **~/maven-repository** directory to update the relevant contents.

Example Maven repository update:

```
$ unzip -o rhpm-7.4.1-incremental-maven-repository.zip -d $REPO_PATH/rhpm-7.4.0-maven-repository/maven-repository/
```

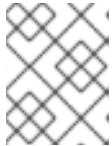
7. After you finish applying all relevant updates, start Red Hat Process Automation Manager and Process Server and log in to Business Central.
8. Verify that all project data is present and accurate in Business Central, and in the top-right corner of the Business Central window, click your profile name and click **About** to verify the updated product version number.  
If you encounter errors or notice any missing data in Business Central, you can restore the contents in the **backup** folder within the **rhpm-\$VERSION-update** folder to revert the update tool changes. You can also re-install the relevant release artifacts from your previous version of Red Hat Process Automation Manager in the Red Hat Customer Portal. After restoring your previous distribution, you can try again to run the update.

## CHAPTER 4. USING THE MIGRATION TOOL ON A `.niogit` DIRECTORY

The `.niogit` directory of your Business Central distribution contains all Business Central data. You can use the Business Central migration tool on your `.niogit` directory to prepare project data and system configurations for migration to Red Hat Process Automation Manager 7.5.

### Prerequisites

- Red Hat Process Automation Manager 7.5 is installed.



#### NOTE

Do not run Red Hat Process Automation Manager 7.5 Business Central until you have completed the steps in this section.

- Red Hat Process Automation Manager 7.4 is installed and Business Central is not running on Red Hat Process Automation Manager 7.4.
- JDK 8 is installed and is available on the path where the project migration tool will be installed.

### Procedure

1. Locate the `bin/.niogit` directory in your Red Hat Process Automation Manager 7.4 installation and locate the same directory in your new Red Hat Process Automation Manager 7.5 installation.

Example:

```
$ ~/$RHPAM_7.4_HOME/bin/.niogit
```

```
$ ~/$RHPAM_7.5_HOME/bin/.niogit
```

2. In your command terminal, copy the `.niogit` directory from your current Business Central distribution for Red Hat Process Automation Manager 7.4 to the `bin` folder of the new Red Hat Process Automation Manager 7.5 installation directory:

```
cp -r /$RHPAM_7.4_HOME/bin/.niogit /$RHPAM_7.5_HOME/bin/
```

The copied `.niogit` folder is the directory that the migration tool will prepare for Red Hat Process Automation Manager 7.5. The original `.niogit` folder remains in your Red Hat Process Automation Manager 7.4 installation and will not be modified by the migration tool in this procedure.

3. In the Red Hat Process Automation Manager 7.5. `bin` directory, delete the `.index` directory. You must delete this folder because Red Hat Process Automation Manager 7.5 comes with certain updates that are not compatible with Red Hat Process Automation Manager 7.4. The `bin` directory will be re-indexed after the migration when you start Red Hat Process Automation Manager 7.5.
4. Note the path to the copied `.niogit` directory for Red Hat Process Automation Manager 7.5. The path will be required when you run the migration tool.
5. If you have specific **dependencies**, **repositories**, or **pluginRepositories** that you want to add,

remove, or update as part of the project migration, create a **pom-migration.json** file containing these elements. When you run the migration tool, the tool will prompt you if you want to include this file in the migration.

The **pom-migration.json** file requires the following sections:

- **"dependencies":[]**
- **"repositories-add":[]**
- **"repositories-remove":[]**
- **"repositories-update-urls":[]**
- **"pluginRepositories-add":[]**
- **"pluginRepositories-remove":[]**
- **"pluginRepositories-update-urls":[]**

If any of these elements do not apply to your project, include them as empty sections to prevent parsing errors.

Example **pom-migration.json** file:

```
{
  "dependencies":[

    {"groupId":"junit", "artifactId":"junit", "version":"4.12", "scope":"test"},
    {"groupId":"com.thoughtworks.xstream", "artifactId":"xstream", "version":"4.12",
"scope":"test"}

  ],

  "repositories-add":[
    {
      "id":"jboss-public-repository-group",
      "name":"JBoss Public Repository Group",
      "url":"http://repository.jboss.org/nexus/content/groups/public/",
      "releasesEnabled":true,
      "releasesUpdatePolicy":"never",
      "snapshotEnabled":true,
      "snapshotUpdatePolicy":"never"
    },
    {
      "id":"kie-internal-staging-repository-group",
      "name":"KIE Internal Staging Repositories",
      "url":"https://origin-repository.jboss.org/nexus/content/groups/kie-internal-group",
      "releasesEnabled":true,
      "releasesUpdatePolicy":"never",
      "snapshotEnabled":false,
      "snapshotUpdatePolicy":"never"
    }
  ],

  "repositories-remove":[
    {
```

```

    "id":"productization-repository",
    "url":"http://download.lab.bos.redhat.com/brewroot/repos/jb-ip-6.1-build/latest/maven/"
  }
],

"repositories-update-urls":[
  {
    "id":"guvnor-m2-repo", "url":"http://localhost:8080/business-central/maven3/"
  }
],

"pluginRepositories-add":[

  {
    "id":"jboss-public-repository-group",
    "name":"JBoss Public Repository Group",
    "url":"http://repository.jboss.org/nexus/content/groups/public/",
    "releasesEnabled":true,
    "releasesUpdatePolicy":"never",
    "snapshotEnabled":true,
    "snapshotUpdatePolicy":"never"
  },
  {
    "id":"kie-internal-staging-repository-group",
    "name":"KIE Internal Staging Repositories",
    "url":"https://origin-repository.jboss.org/nexus/content/groups/kie-internal-group",
    "releasesEnabled":true,
    "releasesUpdatePolicy":"never",
    "snapshotEnabled":false,
    "snapshotUpdatePolicy":"never"
  }
],

"pluginRepositories-remove":[],
"pluginRepositories-update-urls":[]
}

```

Example **pom-migration.json** file with **dependencies** only:

```

{
  "dependencies":[

    {"groupId":"junit", "artifactId":"junit", "version":"4.12", "scope":"test"},
    {"groupId":"com.thoughtworks.xstream", "artifactId":"xstream", "version":"4.12",
"scope":"test"}

  ],

  "repositories-add":[],
  "repositories-remove":[],
  "repositories-update-urls":[],
  "pluginRepositories-add":[],
  "pluginRepositories-remove":[],
  "pluginRepositories-update-urls":[]
}

```



6. Navigate to the [Software Downloads](#) page in the Red Hat Customer Portal (login required), and select the product and version from the drop-down options:
  - **Product:** Process Automation Manager
  - **Version:** 7.5
7. Download **Red Hat Process Automation Manager 7.5 Add-Ons** and extract the downloaded **rhpm-7.5.0-add-ons.zip** file to a temporary directory.
8. In the extracted **rhpm-7.4.0-add-ons** folder, extract the **rhpm-7.5-migration-tool.zip** sub-folder. The migration tool is in the **bin** directory.
9. In your command terminal, navigate to the temporary directory where you extracted the **rhpm-7.5-migration-tool** folder and run the migration tool. The **\$RHPAM\_NIOGIT\_DIR** portion is the path to the **.niogit** directory that you previously copied to the Red Hat Process Automation Manager 7.5 installation.  
On Linux or UNIX-based systems:

```
$ cd $INSTALL_DIR/rhpm-7.5-migration-tool/bin
$ ./migration-tool.sh -t $RHPAM_NIOGIT_DIR
```

On Windows systems:

```
$ cd $INSTALL_DIR\rhpm-7.5-migration-tool\bin
$ migration-tool.bat -t $RHPAM_NIOGIT_DIR
```

In the command prompt that appears, the following options are displayed:

- **Project structure migration:** Migrates the Red Hat Process Automation Manager 7.4 project repository structure to the new project-oriented structure used in Red Hat Process Automation Manager 7.4.
  - **System configuration directory structure migration:** Migrates the **system.git** repository structure used in Red Hat Process Automation Manager 7.4 to the new structure used in Red Hat Process Automation Manager 7.5. This migration option requires the project structure migration to be executed first.
  - **Forms migration:** Migrates forms created in the Red Hat JBoss BPM Suite forms designer to the new forms designer. With this migration option, you must first complete the project structure migration and system configuration directory structure migration.
  - **POMs migration:** Updates **pom.xml** files with dependencies required for Red Hat Process Automation Manager 7.5. This migration option requires the project structure migration, system configuration directory structure migration, and forms migration to be executed first.
  - **All:** Runs all migration options in sequence.
  - **Exit:** Exits the migration tool.
10. Select the option to run **All** migrations in sequence.



## NOTE

If you prefer to run one migration option at a time, select and run the first individual migration option. After the tool runs, re-run the Business Central migration tool and select the next individual migration option in the sequence.

11. Enter **yes** each time you are prompted to run a specific migration option.  
For the POMs migration option, if you want to include a path to an external **pom-migration.json** file that you created previously, enter **yes** when prompted and enter the path.
12. After the tool finishes running, enter the option to **Exit** the migration tool.  
The **.niogit** directory structure is now compatible with Business Central in Red Hat Process Automation Manager 7.5.
13. Project directories are in separate repositories and all other related configurations have been migrated. You can navigate to the new **.niogit** directory to inspect the restructured contents.

## CHAPTER 5. ADDITIONAL RESOURCES

- [Planning a Red Hat Process Automation Manager installation](#)
- [Patching and upgrading Red Hat Process Automation Manager 7.3](#)
- [Release notes for Red Hat Process Automation Manager 7.4](#)

## APPENDIX A. VERSIONING INFORMATION

Documentation last updated on Monday, August 12, 2019.