Red Hat Process Automation Manager 7.7

Managing projects in Business Central

Red Hat Process Automation Manager 7.7 Managing projects in Business Central

Red Hat Customer Content Services
brms-docs@redhat.com

Legal Notice

Abstract

This document describes how to manage new, sample, or imported projects in Business Central, and how to utilize multiple branches for project modifications.

Table of Contents

PREFACE

As a process administrator, you can use Business Central in Red Hat Process Automation Manager to manage new, sample, and imported projects on a single or multiple branches.

Prerequisites

- Red Hat JBoss Enterprise Application Platform 7.2 is installed. For details, see the *Red Hat JBoss Enterprise Application Platform 7.2 Installation Guide*.

- Red Hat Process Automation Manager is installed and configured with KIE Server. For more information, see *Installing and configuring Red Hat Process Automation Manager on Red Hat JBoss EAP 7.2*.

- Red Hat Process Automation Manager is running and you can log in to Business Central with the **developer** role. For more information, see *Planning a Red Hat Process Automation Manager installation*.

CHAPTER 1. RED HAT PROCESS AUTOMATION MANAGER PROJECTS

Red Hat Process Automation Manager projects contain the business assets that you develop in Red Hat Process Automation Manager and are assigned to a space (for example, **MyProject** within **MySpace**). Projects also contain configuration files such as a Maven project object model file (**pom.xml**), which contains build, environment, and other information about the project, and a KIE module descriptor file (**kmodule.xml**), which contains the KIE Base and KIE Session configurations for the assets in the project.

CHAPTER 2. MIGRATING BUSINESS PROCESSES TO THE NEW PROCESS DESIGNER

The legacy process designer in Business Central is deprecated in Red Hat Process Automation Manager 7.7.0. It will be removed in a future Red Hat Process Automation Manager release. The legacy process designer will not receive any new enhancements or features. If you intend to use the new process designer, start migrating your processes to the new designer. Create all new processes in the new process designer.

> **NOTE**
>
> The process engine will continue to support the execution and deployment of business processes generated with the legacy designer in to the KIE Server. If you have a legacy business process that is functioning and that you do not intend to change, it is not mandatory to migrate to the new designer at this time.

You can only migrate business processes that contain supported business process nodes in the new designer. More nodes will be added in future versions of Red Hat Process Automation Manager.

Prerequisites

- You have an existing project that contains a business process asset that was created with the legacy process designer.

Procedure

1. In Business Central, click **Menu → Design → Projects**.

2. Click the project you want to migrate, for example **Mortgage_Process**.

3. Click **Ok** to open the project's asset list.

4. Click the project's **Business Process** asset to open it in the legacy process designer.

5. Click **Migrate → Migrate Diagram**.

   Figure 2.1. Migration confirmation message
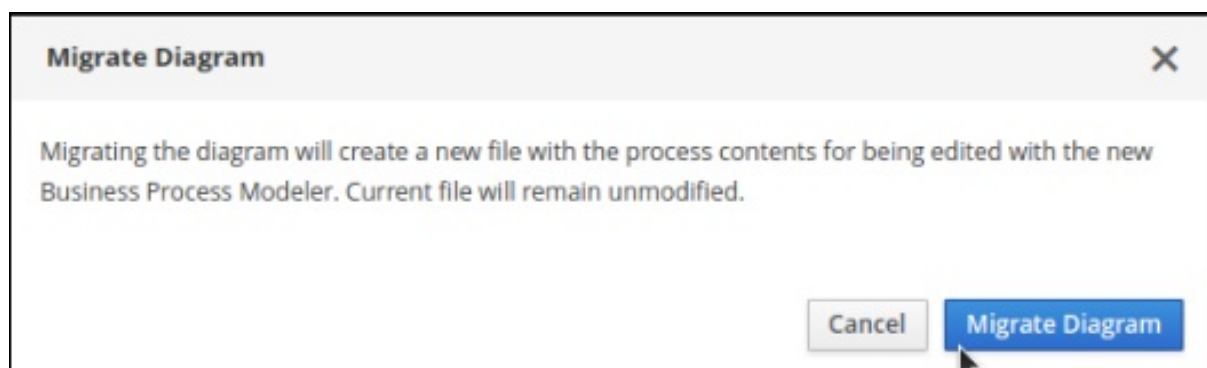
6. Select **Yes** or **No** to confirm if you made changes. This option is only available if you have made changes to your legacy business process.

Figure 2.2. Save diagram changes confirmation
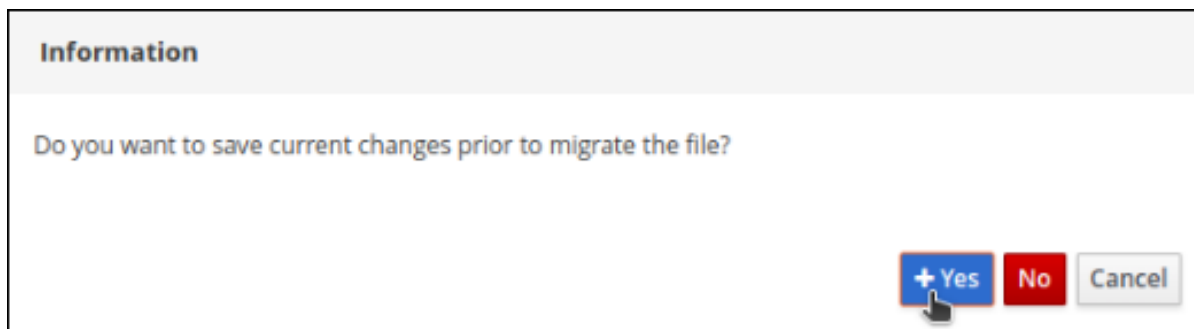
If the migration is successful, the business process opens in the new process designer and the business process name's extension changes from *.bpmn2 to *.bpmn.

If the migration is unsuccessful due to an unsupported node type, Business Central displays the following error message:

Figure 2.3. Migration failure message
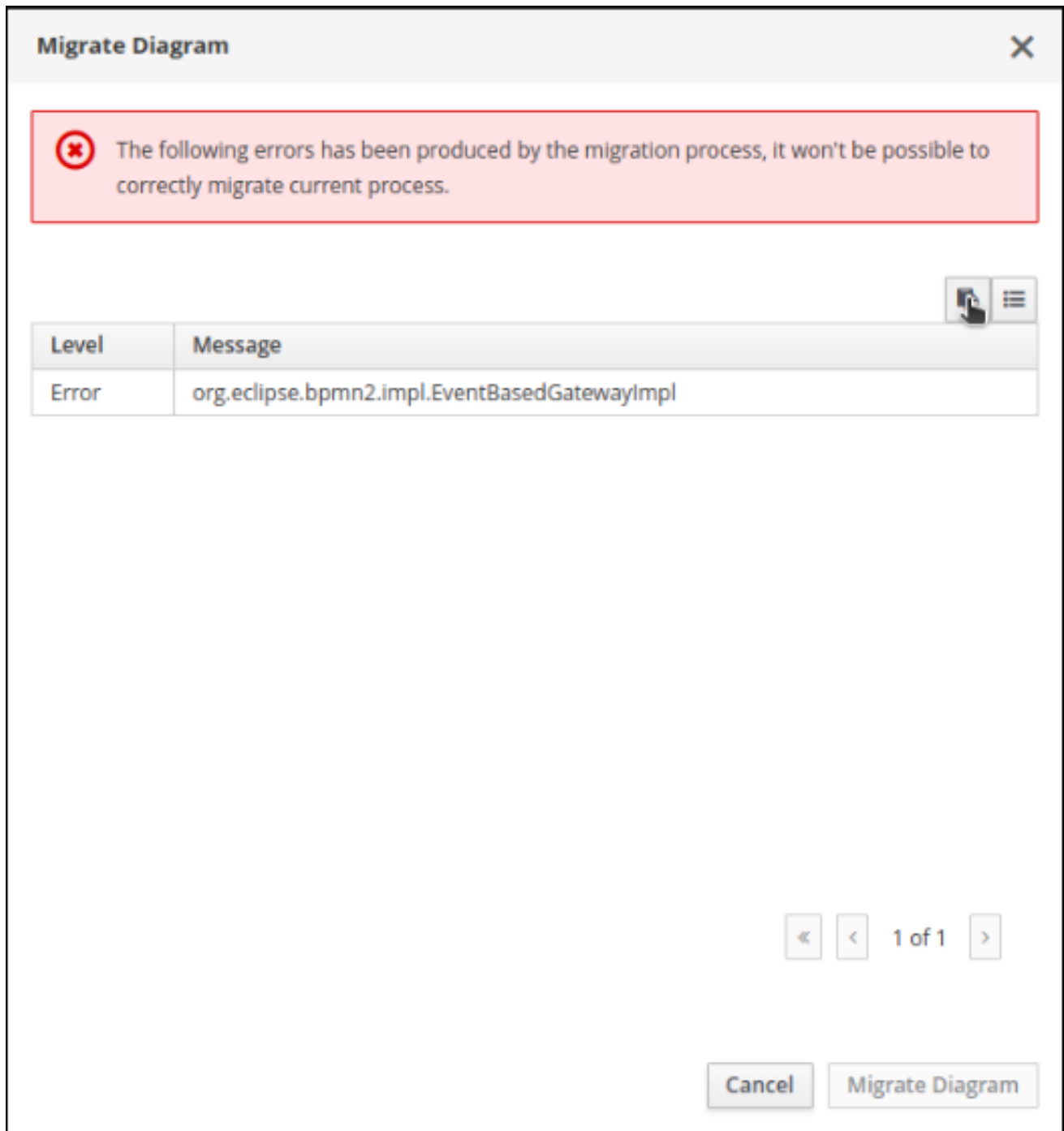
CHAPTER 3. MODIFYING EXISTING PROJECTS IN BUSINESS CENTRAL

Business Central includes a number of sample projects that you can use to get familiar with the product and its features. The sample projects have been designed and created to demonstrate a variety of business scenarios. You can modify the sample projects to meet your specific business needs. For example, Red Hat Process Automation Manager 7.7 contains the **Mortgage_Process** sample project, which consists of predefined data objects, guided decision tables, guided rules, forms, and a business process. You can edit the sample to refine your business process.

If none of the existing Business Central project samples align with your requirements, you can create a new project or import one from a Git repository. For more information, see Chapter 5, *Importing projects from Git repositories*. You can import any other project from Git. For example, a project that was developed in another Business Central instance.

CHAPTER 4. CREATING A PROJECT

A project can contain data models, business processes, business rules, forms or any other assets that are specific to your project's requirements. When you create a project in Business Central it is added to the Git repository that is connected to your Red Hat Process Automation Manager installation.

Procedure

1. In Business Central, go to **Menu → Design → Projects**.

2. Click **Add Project**.

3. Type **anyName** in the **Name** field of the **Add Project** window and click **Add**. Where **anyName** is any name that you want to name the new project.

   Figure 4.1. Add the **anyName** project

The **Assets** view of the project opens when you successfully create the project.

4.1. MODIFYING THE MORTGAGE_PROCESS SAMPLE PROJECT

The **Mortgage_Process** sample project consists of predefined data objects, guided decision tables, guided rules, forms, and a business process. Using the sample project provides a quick way to get acclimated with Red Hat Process Automation Manager. In a real business scenario, you would create all of the assets by providing data that is specific to your business requirements.

Navigate to the **Mortgage_Process** sample project to view the predefined assets.

Procedure

1. In Business Central, go to **Menu → Design → Projects**.

2. In the upper-right corner of the screen, click the arrow next to **Add Project** and select **Try Samples**.

3. Select **Mortgage_Process** and click **Ok**. The **Assets** view of the project opens.

4. Click an asset that you want to modify. All of the assets can be edited to meet your project requirements.

4.2. CREATING A PROJECT USING ARCHETYPES

Archetypes are projects that are installed in Apache Maven repositories and contain a specific template structure. You can also generate parameterized versions of the project templates using archetypes. When you use an archetype to create a project, it is added to the Git repository that is connected to your Red Hat Process Automation Manager installation.

Prerequisites

- You have created an archetype and added it to the **Archetypes** page in the Business Central **Settings**. For information about creating archetypes, see the Guide to Creating Archetypes .

- You have set a default archetype in your space in Business Central.

For more information about archetypes management, see Configuring Business Central settings and properties.

Procedure

1. In Business Central, go to **Menu → Design → Projects**.

2. Select or create the space into which you want to add a new project from an archetype template.

3. Click **Add Project**.

4. Type the project name and description in the **Name** and **Description** fields.

5. Click **Configure Advanced Options**.

6. Select the **Based on template** checkbox.

7. Select the archetype from drop-down options if required. The default archetype is selected that is already set in the space.

8. Click **Add**.

The Assets view of the project opens based on the selected archetype template.

CHAPTER 5. IMPORTING PROJECTS FROM GIT REPOSITORIES

Git is a distributed version control system. It implements revisions as commit objects. When you save your changes to a repository, a new commit object in the Git repository is created.

Business Central uses Git to store project data, including assets such as rules and processes. When you create a project in Business Central, it is added to a Git repository that is connected to Business Central. If you have projects in Git repositories, you can import the project's master branch or import the master branch along with other specific branches into the Business Central Git repository through Business Central spaces.

Prerequisites

- Red Hat Process Automation Manager projects exist in an external Git repository.

- You have the credentials required for read access to that external Git repository.

Procedure

1. In Business Central, go to **Menu → Design → Projects**.

2. Select or create the space into which you want to import the projects. The default space is **MySpace**.

3. In the upper-right corner of the screen, click the arrow next to **Add Project** and select **Import Project**.

4. In the **Import Project** window, enter the URL and credentials for the Git repository that contains the project that you want to import and click **Import**. The **Import Projects** page is displayed.

5. Optional: To import master and specific branches, do the following tasks:

   a. On the **Import Projects** page, click the branches icon.

   b. In the **Branches to be imported** window, select branches from the list.

   > **NOTE**
   >
   > You must select the master branch as a minimum.

   c. Click **Ok**.

6. On the **Import Projects** page, ensure the project is highlighted and click **Ok**.

CHAPTER 6. REVISING PROJECT VERSIONS

You can revise the version number of a project in Red Hat Process Automation Manager before you build and deploy a new instance of the project. Creating a new version of a project preserves the old version in case there is a problem with the new one and you need to revert back.

Prerequisites

- KIE Server is deployed and connected to Business Central.

Procedure

1. In Business Central, go to **Menu → Design → Projects**.

2. Click the project you want to deploy, for example **Mortgage_Process**.

3. Click **Deploy**.

   - If there is no container with the project name, a container with default values is automatically created.

   - If an older version of the project is already deployed, go to the project settings and change the project version. When finished, save the change and click **Deploy**. This will deploy a new version of the same project with the latest changes in place, alongside the older version(s).

   > **NOTE**
   >
   > You can also select the **Build & Install** option to build the project and publish the KJAR file to the configured Maven repository without deploying to a KIE Server. In a development environment, you can click **Deploy** to deploy the built KJAR file to a KIE Server without stopping any running instances (if applicable), or click **Redeploy** to deploy the built KJAR file and replace all instances. The next time you deploy or redeploy the built KJAR, the previous deployment unit (KIE container) is automatically updated in the same target KIE Server. In a production environment, the **Redeploy** option is disabled and you can click **Deploy** only to deploy the built KJAR file to a new deployment unit (KIE container) on a KIE Server.
   >
   > To configure the KIE Server environment mode, set the **org.kie.server.mode** system property to **org.kie.server.mode=development** or **org.kie.server.mode=production**. To configure the deployment behavior for a corresponding project in Business Central, go to project **Settings → General Settings → Version** and toggle the **Development Mode** option. By default, KIE Server and all new projects in Business Central are in development mode. You cannot deploy a project with **Development Mode** turned on or with a manually added **SNAPSHOT** version suffix to a KIE Server that is in production mode.

4. To review project deployment details, click **View deployment details** in the deployment banner at the top of the screen or in the **Deploy** drop-down menu. This option directs you to the **Menu → Deploy → Execution Servers** page.

5. To verify process definitions, click **Menu → Manage → Process Definitions**, and click 🔄 .

6. Click ⋮ in the **Actions** column and select **Start** to start a new instance of the process.

CHAPTER 7. CONFIGURING PROJECT SETTINGS

Starting with Red Hat Process Automation Manager 7.7, Business Central contains additional project setting categories in the new process designer.

Prerequisites

- You have created a Business Central project.

Procedure

1. To access the project **Settings** tab, in Business Central go to **Menu → Design → Projects**.

2. Click the project name.

3. Click **Settings** to view or modify the following project settings:

   - **General Settings** - Enables users to set the project's **Name**, **Description**, **Group ID**, **Artifact ID**, **Version** (GAV), and **Development Mode** attributes. It also includes the following options:

     - **URL** – Use to specify a read-only URL for cloning a project as a git repository.

     - **Disable GAV conflict check** – Determines whether to enable or disable the GAV conflict check. Disabling this feature enables projects to have the same GAV values.

     - **Allow child GAV edition** – Allows GAV editions for sub-projects.

   - **Dependencies** – Used to add dependencies either manually, by entering the **Group ID**, **Artifact ID**, and **Version** or from a repository project in Business Central. For each dependency, set select **All** or **None** for the **Package white list** option.

   - **KIE Bases** – The new name for what was previously called **Knowledge bases**. You must specify a KIE base as the default. Provide the following details to add a Kie base:

     - **Name**

     - **Included KIE bases**

     - **Package**

     - **Equal Behavior** – **Identity** or **Equality**

     - **Event Processing Model** – **Stream** or **Cloud**

     - **KIE sessions**

   - **External Data Objects** – Data objects are not explicitly defined within a project or project dependencies that a rule author may require. External data objects are usually provided by the Java runtime, for example, **java.util.List**.

   - **Validation** – Maven repositories that are used to check the uniqueness of a project's GAV when creating a new project or module or when installing or deploying a project to a Maven repository.

   - **Service Tasks** – The following service tasks can be added to a project:

- **BusinessRuleTask** – Execute a business rule task

- **Decision Task** – Execute a DMN decision task

- **Email** – Send email

- **JMSSendTask** – Send JMS Message

- **Rest** – Perform a Rest call

- **ServiceTask** – Execute a service task

- **WebService** – Perform a web service call

- **Deployments** – Deployments are divided in to the following categories:

  - **General Settings** – **Runtime Strategy**, **Persistence Unit Name**, **Persistence Mode**, **Audit Persistence Unit Name**, and **Audit Mode**

  - **Marshalling strategies**

  - **Global**

  - **Event listeners**

  - **Required roles**

  - **Remoteable classes**

  - **Task event listeners**

  - **Configuration**

  - **Environment entries**

  - **Work item handlers**

- **Persistence** – Persistence is divided in to the following categories:

  - **Persistence Unit**

  - **Persistence Provider**

  - **Data Source**

  - **Properties** – Used to set values for the following properties and also to create new properties:

    - **hibernate.dialect**

    - **hibernate.max_fetch_depth**

    - **hibernate.hbm2ddl.auto**

    - **hibernate.show_sql**

    - **hibernate.id.new_generator_mappings**

    - **hibernate.transaction.jta.platform**

- Project Persistable Data Objects

- **Branch Management** – Provides branch role access based on the branch name and assigned user roles.

4. Click **Save**.

CHAPTER 8. MULTIPLE BRANCHES IN BUSINESS CENTRAL

CHAPTER 8. MULTIPLE BRANCHES IN BUSINESS CENTRAL

Multiple branches support in Business Central provides the ability to create a new branch based on an existing one, including all of its assets. All new, imported, and sample projects open in the default **master** branch. You can create as many branches as you need and can work on multiple branches interchangeably without impacting the original project on the **master** branch.

Red Hat Process Automation Manager 7.7 includes support for persisting branches, which means that Business Central remembers the last branch used and will open in that branch when you log back in.

8.1. CREATING BRANCHES

You can create new branches in Business Central and name them whatever you like. Initially, you will only have the default **master** branch. When you create a new branch for a project, you are making a copy of the selected branch. You can make changes to the project on the new branch without impacting the original **master** branch version.

Procedure

1. In Business Central, go to **Menu → Design → Projects**.

2. Click the project to create the new branch, for example the **Mortgage_Process** sample project.

3. Click **master → Add Branch**.

   Figure 8.1. Create the new branch menu
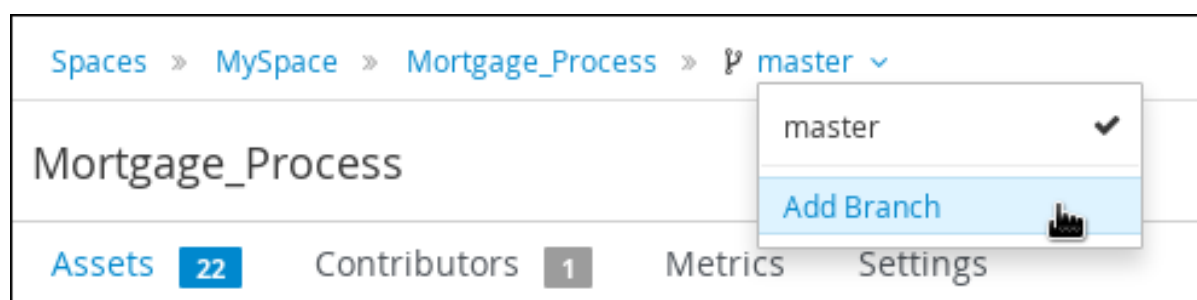
4. Type **testBranch1** in the **Name** field and select **master** from the **Add Branch** window. Where **testBranch1** is any name that you want to name the new branch.

5. Select the branch that will be the base for the new branch from the **Add Branch** window. This can be any existing branch.

6. Click **Add**.

17

Figure 8.2. Add the new branch window

After adding the new branch, you will be redirected to it, and it will contain all of the assets that you had in your project in the **master** branch.
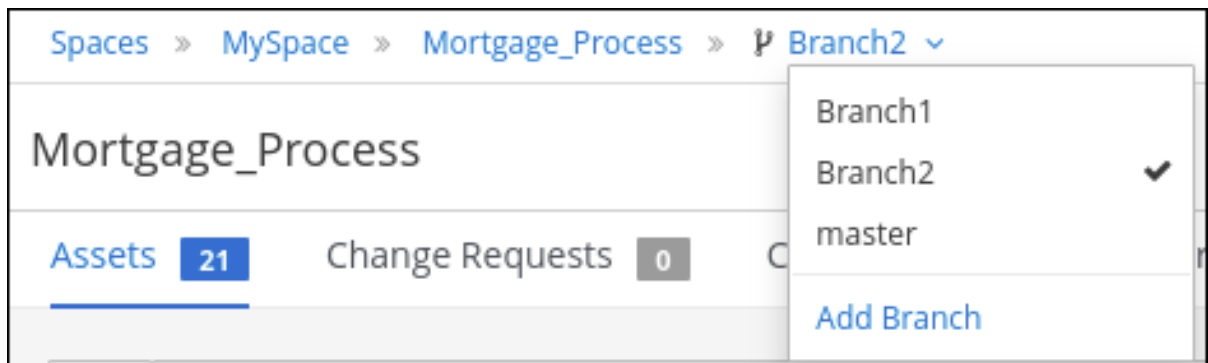
8.2. SELECTING BRANCHES

You can switch between branches to make modifications to project assets and test the revised functionality.

Procedure

1. Click the current branch name and select the desired project branch from the drop-down list.

Figure 8.3. Select a branch menu

After selecting the branch, you are redirected to that branch containing the project and all of the assets that you had defined.

8.3. DELETING BRANCHES

You can delete any branch except for the **master** branch. Business Central does not allow you to delete the **master** branch to avoid corrupting your environment. You must be in any branch other than **master** for the following procedure to work.
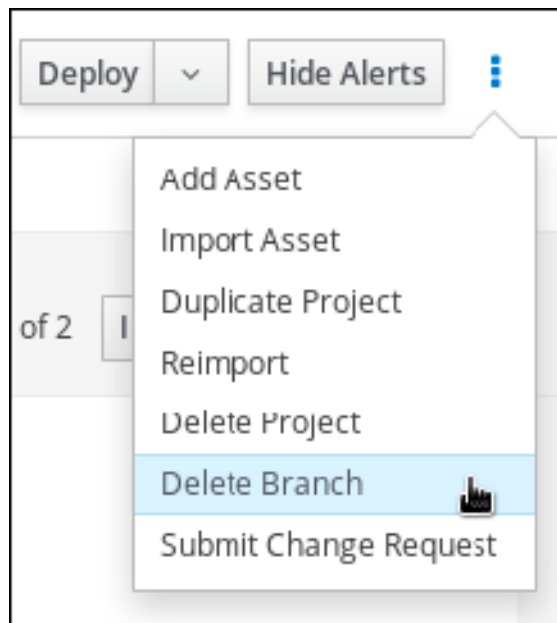
Procedure

1. Click ⋮ in the upper-right corner of the screen and select **Delete Branch**.
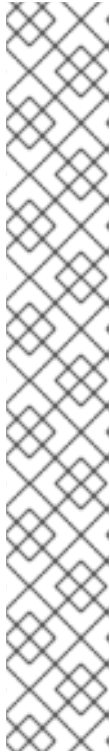
   Figure 8.4. Delete a branch

2. In the **Delete Branch** window, enter the name of the branch you want to delete.

3. Click **Delete Branch**. The branch is deleted and the project branch switches to the master branch.

8.4. BUILDING AND DEPLOYING PROJECTS

After your project is developed, you can build the project from the specified branch in Business Central and deploy it to the configured KIE Server.

Procedure

1. In Business Central, go to **Menu → Design → Projects** and click the project name.

2. In the upper-right corner, click **Deploy** to build the project and deploy it to KIE Server.

NOTE

You can also select the **Build & Install** option to build the project and publish the KJAR file to the configured Maven repository without deploying to a KIE Server. In a development environment, you can click **Deploy** to deploy the built KJAR file to a KIE Server without stopping any running instances (if applicable), or click **Redeploy** to deploy the built KJAR file and replace all instances. The next time you deploy or redeploy the built KJAR, the previous deployment unit (KIE container) is automatically updated in the same target KIE Server. In a production environment, the **Redeploy** option is disabled and you can click **Deploy** only to deploy the built KJAR file to a new deployment unit (KIE container) on a KIE Server.

To configure the KIE Server environment mode, set the **org.kie.server.mode** system property to **org.kie.server.mode=development** or **org.kie.server.mode=production**. To configure the deployment behavior for a corresponding project in Business Central, go to project **Settings → General Settings → Version** and toggle the **Development Mode** option. By default, KIE Server and all new projects in Business Central are in development mode. You cannot deploy a project with **Development Mode** turned on or with a manually added **SNAPSHOT** version suffix to a KIE Server that is in production mode.

If the build fails, address any problems described in the **Alerts** panel at the bottom of the screen.

To review project deployment details, click **View deployment details** in the deployment banner at the top of the screen or in the **Deploy** drop-down menu. This option directs you to the **Menu → Deploy → Execution Servers** page.

For more information about project deployment options, see *Packaging and deploying a Red Hat Process Automation Manager project*.

CHAPTER 9. CHANGE REQUESTS IN BUSINESS CENTRAL

If you have more than one branch in a Business Central project and you make a change in a branch that you want to merge to another branch, you can create a change request. Any user with permission to view the target branch, usually the **master** branch, can see the change request.

9.1. CREATING CHANGE REQUESTS

You can create a change request in a Business Central project after you have made a change in your project, for example after you have added or deleted an attribute to an asset.

Prerequisites

- You have more than one branch of a Business Central project.

- You made a change in one branch that you want to merge to another branch.

Procedure

1. In Business Central, go to **Menu → Design → Projects** and select the space and project that contains the change that you want to merge.

2. On the project page, select the branch that contains the change.

   Figure 9.1. Select a branch menu
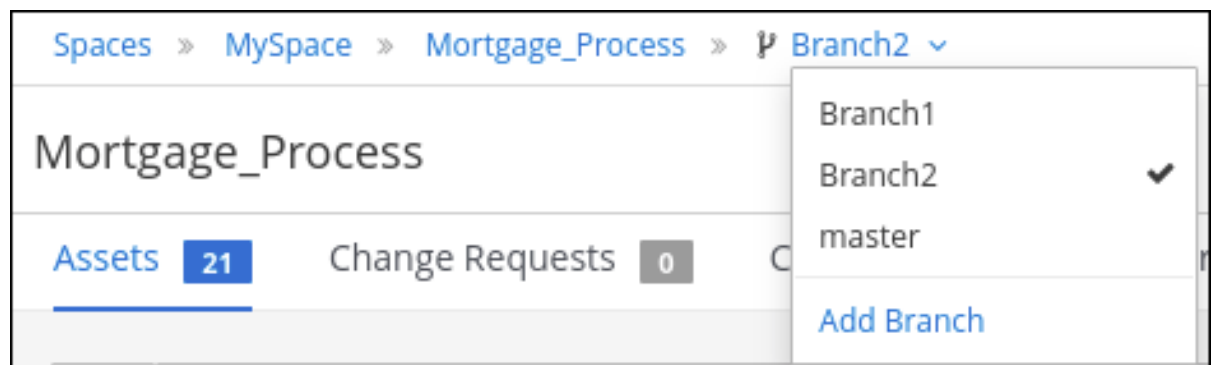
3. Do one of the following tasks to submit the change request:

   - Click [icon] in the upper-right corner of the screen and select **Submit Change Request**.

   - Click the **Change Requests** tab and then click **Submit Change Request**.
     The **Submit Change Request** window appears.

4. Enter a summary and a description, select the target branch, and click **Submit**. The target branch is the branch where the change will be merged. After you click **Submit**, the change request window appears.

9.2. WORKING WITH CHANGE REQUESTS

You can view change requests for any branch that you have access to. You must have administrator permissions to accept a change request.

Prerequisites

- You have more than one branch of a Business Central project.

Procedure

1. In Business Central, go to **Menu → Design → Projects** and select a space and project.

2. On the project page, verify that you are on the correct branch.
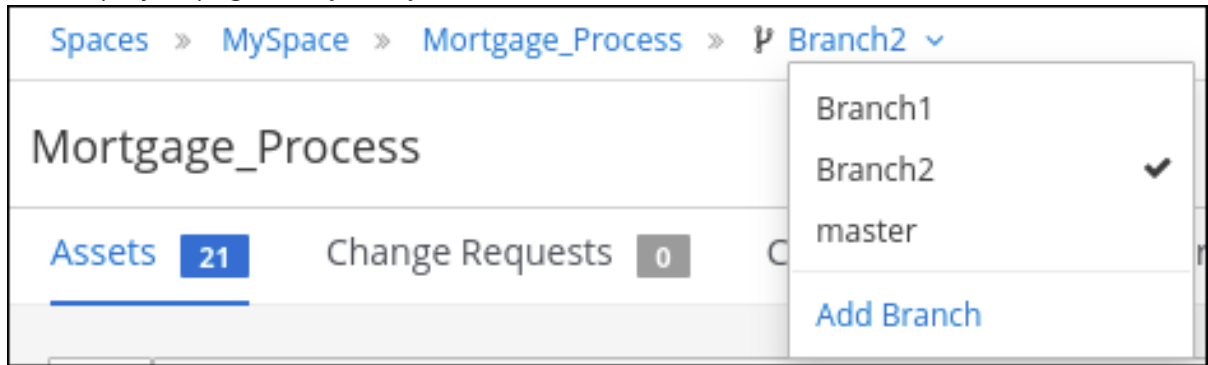
3. Click the **Change Requests** tab. A list of pending change requests appears.

4. To filter change requests, select **Open**, **Closed**, or **All** to the left of the **Search** box.

5. To search for specific change requests, enter an ID or text in the **Search** box and click the magnifying glass.

6. To view the change request details, click the summary link. The change request window has two tabs:

   a. Review the **Overview** tab for general information about the change request.

   b. Click the **Changed Files** tab and expand a file to review the proposed changes.

7. Click a button in the top right corner.

   - Click **Squash and Merge** to squash all commits into a single commit and merge the commit to the target branch.

   - Click **Merge** to merge the changes into the target branch.

   - Click **Reject** to reject the changes and leave the target branch unchanged.

   - Click **Close** to close the change request without rejecting or accepting it. Note that only the user who created the submitted the change request can close it.

   - Click **Cancel** to return to the project window without making any changes.

APPENDIX A. VERSIONING INFORMATION

Documentation last updated on Wednesday, July 08, 2020.