



# Red Hat Process Automation Manager 7.8

## Getting started with case management



# Red Hat Process Automation Manager 7.8 Getting started with case management

---

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

## Legal Notice

Copyright © 2020 Red Hat, Inc.

The text of and illustrations in this document are licensed by Red Hat under a Creative Commons Attribution–Share Alike 3.0 Unported license ("CC-BY-SA"). An explanation of CC-BY-SA is available at

<http://creativecommons.org/licenses/by-sa/3.0/>

. In accordance with CC-BY-SA, if you distribute this document or an adaptation of it, you must provide the URL for the original version.

Red Hat, as the licensor of this document, waives the right to enforce, and agrees not to assert, Section 4d of CC-BY-SA to the fullest extent permitted by applicable law.

Red Hat, Red Hat Enterprise Linux, the Shadowman logo, the Red Hat logo, JBoss, OpenShift, Fedora, the Infinity logo, and RHCE are trademarks of Red Hat, Inc., registered in the United States and other countries.

Linux<sup>®</sup> is the registered trademark of Linus Torvalds in the United States and other countries.

Java<sup>®</sup> is a registered trademark of Oracle and/or its affiliates.

XFS<sup>®</sup> is a trademark of Silicon Graphics International Corp. or its subsidiaries in the United States and/or other countries.

MySQL<sup>®</sup> is a registered trademark of MySQL AB in the United States, the European Union and other countries.

Node.js<sup>®</sup> is an official trademark of Joyent. Red Hat is not formally related to or endorsed by the official Joyent Node.js open source or commercial project.

The OpenStack<sup>®</sup> Word Mark and OpenStack logo are either registered trademarks/service marks or trademarks/service marks of the OpenStack Foundation, in the United States and other countries and are used with the OpenStack Foundation's permission. We are not affiliated with, endorsed or sponsored by the OpenStack Foundation, or the OpenStack community.

All other trademarks are the property of their respective owners.

## Abstract

This document describes how to create and test an example IT orders case project in Red Hat Process Automation Manager 7.8. The procedures in this document are based on the IT\_Orders sample case project included in Business Central.

---

## Table of Contents

<b>PREFACE</b> .....	<b>3</b>
<b>CHAPTER 1. REVIEWING THE IT_ORDERS SAMPLE PROJECT</b> .....	<b>4</b>
<b>CHAPTER 2. CREATING A NEW IT_ORDERS CASE PROJECT</b> .....	<b>6</b>
<b>CHAPTER 3. DATA OBJECTS</b> .....	<b>8</b>
3.1. CREATING THE ITORDERSERVICE DATA OBJECT	8
3.2. CREATING THE SURVEY DATA OBJECT	8
<b>CHAPTER 4. DESIGNING THE CASE DEFINITION</b> .....	<b>10</b>
4.1. CREATING THE PLACE ORDER SUBPROCESS	12
4.2. CREATING THE MANAGER APPROVAL BUSINESS PROCESS	16
<b>CHAPTER 5. MILESTONES</b> .....	<b>23</b>
5.1. CREATING THE HARDWARE SPEC READY MILESTONE	23
5.2. CREATING THE MANAGER DECISION MILESTONE	24
5.3. CREATING THE ORDER PLACED MILESTONE	25
5.4. CREATING THE ORDER SHIPPED MILESTONE	27
5.5. CREATING THE DELIVERED TO CUSTOMER MILESTONE	28
<b>CHAPTER 6. DEPLOYING AND TESTING THE IT ORDER CASE PROJECT</b> .....	<b>31</b>
<b>CHAPTER 7. ADDITIONAL RESOURCES</b> .....	<b>32</b>
<b>APPENDIX A. VERSIONING INFORMATION</b> .....	<b>33</b>



# PREFACE

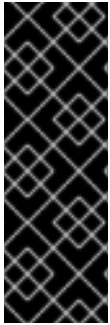
As a business rules and processes developer, you can use case management assets in Business Central to create unpredictable and ad hoc case processes. Case workers or process administrators can also use Business Central for case management and execution. Red Hat Process Automation Manager provides example projects with example business assets in Business Central as a reference. This document describes how to create and test an example IT orders project based on the **IT\_Orders** sample project included in Business Central.

## Prerequisites

- Red Hat JBoss Enterprise Application Platform 7.3 is installed. For installation information, see [Red Hat JBoss Enterprise Application Platform 7.3 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 7.3](#).
- Red Hat Process Automation Manager is running and you can log in to Business Central with the **kie-server**, **user**, and **admin** roles.
- You have reviewed the information in [Designing and building cases for case management](#) .

## CHAPTER 1. REVIEWING THE IT\_ORDERS SAMPLE PROJECT

Before you create your own case management project, review the existing **IT\_Orders** sample case management project in Business Central. This sample project contains predefined case management assets as a reference for your own case projects.



### IMPORTANT

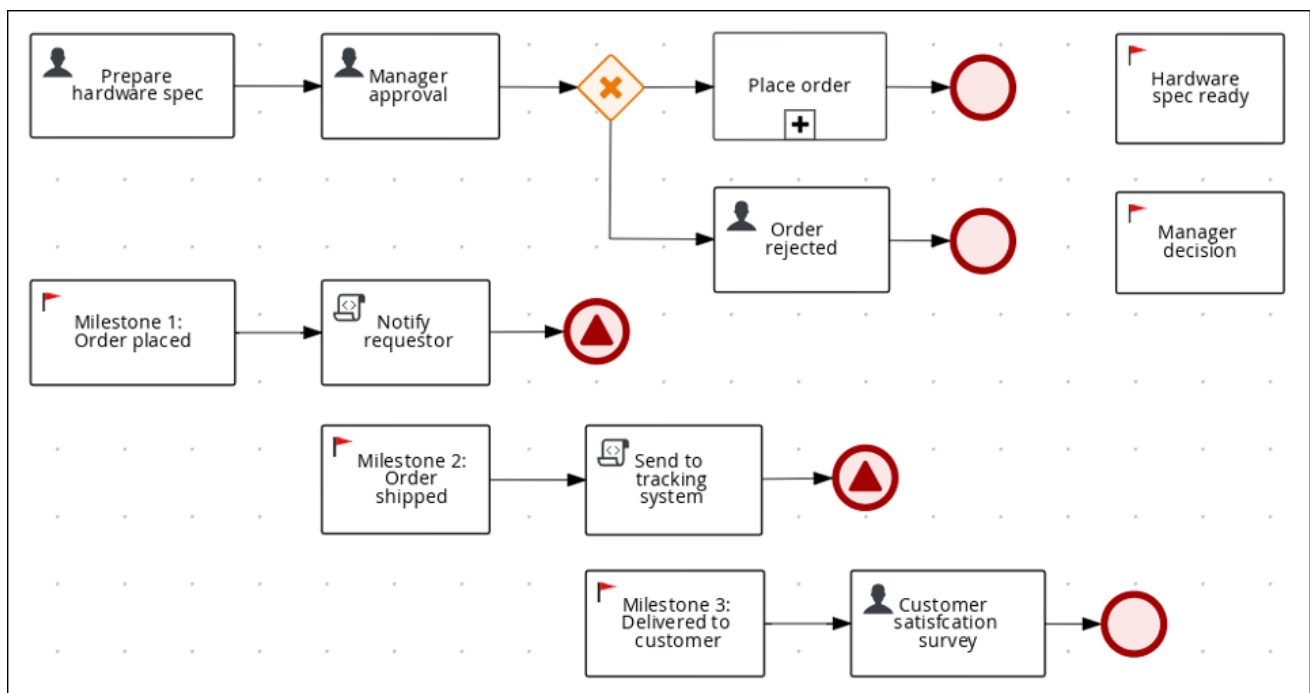
The business process application example includes features that are Technology Preview only. Technology Preview features are not supported with Red Hat production service level agreements (SLAs), might not be functionally complete, and are not recommended for production. These features provide early access to upcoming product features, enabling customers to test functionality and provide feedback during the development process. For more information about Red Hat Technology Preview support, see [Technology Preview Features Support Scope](#).

### Procedure

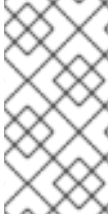
1. In Business Central, go to **Menu → Design → Projects**. If there are existing projects, you can access the samples by clicking the **MySpace** default space and selecting **Try Samples** from the **Add Project** pull-down menu. If there are no existing projects, click **Try samples**.
2. Select **IT\_Orders** and click **Ok**.

The **Assets** view of the project opens. Select each example asset to explore how the project is designed to achieve the specified goal or workflow.

Review the **orderhardware Business Processes** asset to help you understand the business process flow.





**NOTE**

The legacy process designer in Business Central is deprecated. The legacy process designer will not receive any new enhancements or features. Existing users of the legacy process designer are advised to migrate projects to the new designer. For information about migrating projects to the new designer, see [Managing projects in Business Central](#).

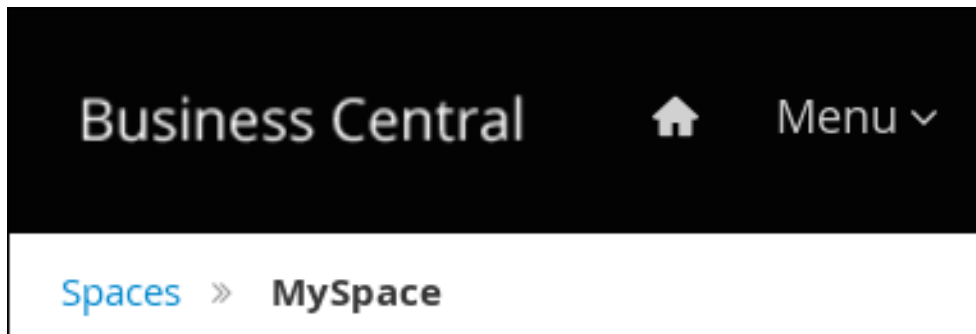
## CHAPTER 2. CREATING A NEW IT\_ORDERS CASE PROJECT

Create a new IT\_Orders project in Business Central to gain an understanding of all of the required assets and how they are used in the project.

### Procedure

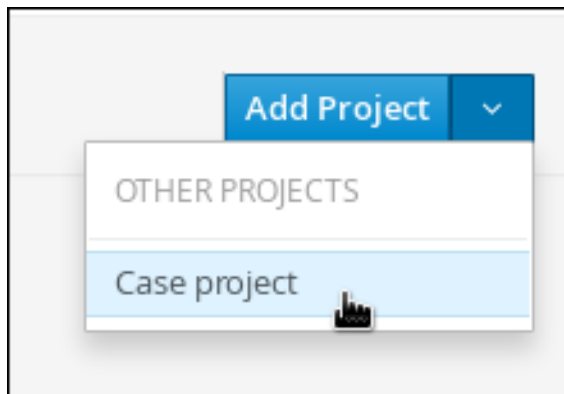
1. Log in to Business Central and go to **Menu** → **Design** → **Projects**.  
Business Central provides a default space called **MySpace**, as shown in the following image. You can use the default space to create and test example projects.

Figure 2.1. Default spaces



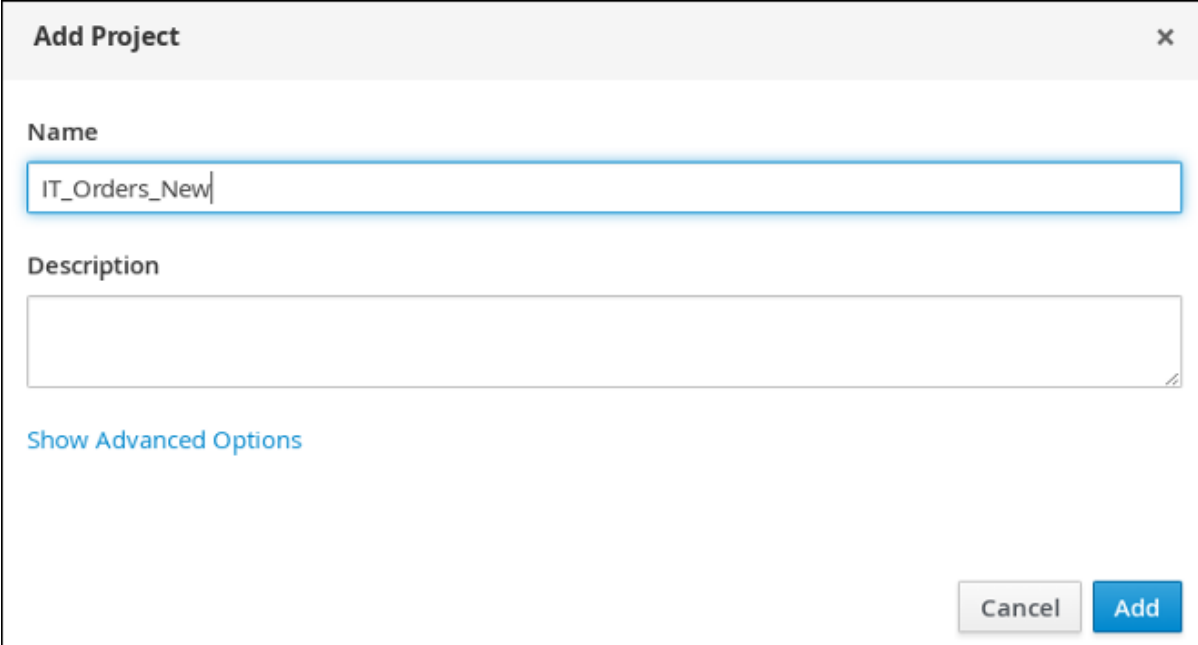
2. Click **Add Project** → **Case project**.

Figure 2.2. Case project menu



3. Enter **IT\_Orders\_New** in the **Name** field.
4. Click **Add**.

Figure 2.3. Add Project window



**Add Project** x

**Name**

IT\_Orders\_New

**Description**

[Show Advanced Options](#)

Cancel Add

The **Assets** view of the project opens.

## CHAPTER 3. DATA OBJECTS

Data objects are the building blocks for the rule assets that you create. Data objects are custom data types implemented as Java objects in specified packages of your project. For example, you might create a **Person** object with data fields **Name**, **Address**, and **DateOfBirth** to specify personal details for loan application rules. These custom data types determine what data your assets and your decision services are based on.


### 3.1. CREATING THE ITORDERSERVICE DATA OBJECT

The `ITOrderService` data object specifies the data type that will be used to define the IT Orders variables.

#### Prerequisites

- The `IT_Orders_New` project is created.

#### Procedure

1. Click **Add Asset** → **Data Object**.
2. In the Create new Data Object wizard, enter the following values:
  - Data Object: **ITOrderService**
  - Package: **com.myspace.it\_orders\_new**
3. Click **Ok**.
4. Click  next to the **Package** pull-down menu to specify a new package for the data object.
5. Input **org.jbpm.demo.it\_orders.services** and click **Add**.
6. Click **Save**, and then click **Yes, Move** to confirm your changes.

### 3.2. CREATING THE SURVEY DATA OBJECT

The Survey data object contains data fields, such as **deliveredOnTime** and **missingEquipment**. You will use the data and values when you design your case.

#### Prerequisites

- The `IT_Orders_New` project is created.

#### Procedure

1. In Business Central, go to **Menu** → **Design** → **Projects** and click `IT_Orders_New`.
2. Click **Add Asset** → **Data Object**.
3. In the **Create new Data Object** wizard, enter the following values:
  - Data Object: **Survey**

- Package: **com.myspace.it\_orders\_new**
4. Click **Ok**.
  5. Add the **Survey** data object constraints.
    - a. Click **add field**.
    - b. Enter the following values:
      - **Id: comment**
      - **Label:** Leave empty
      - **Type: String**
    - c. Click **Create and continue**, and then enter the following values:
      - **Id: deliveredOnTime**
      - **Label:** Leave empty
      - **Type: Boolean**
    - d. Click **Create and continue**, and then enter the following values:
      - **Id: missingEquipment**
      - **Label:** Leave empty
      - **Type: String**
    - e. Click **Create and continue**, and then enter the following values:
      - **Id: satisfied**
      - **Label:** Leave empty
      - **Type: Boolean**
    - f. Click **Create**.
  6. Click **Save** to confirm your changes.

**Figure 3.1. Survey data object details**

The screenshot shows the 'Survey' data object details in an IDE. The interface is divided into two main sections: a table of fields and a 'Survey' general properties panel.

**Fields Table:**

Identifier	Label	Type	
comment		String	Delete
deliveredOnTime		Boolean	Delete
missingEquipment		String	Delete
satisfied		Boolean	Delete

**'Survey'- general properties:**

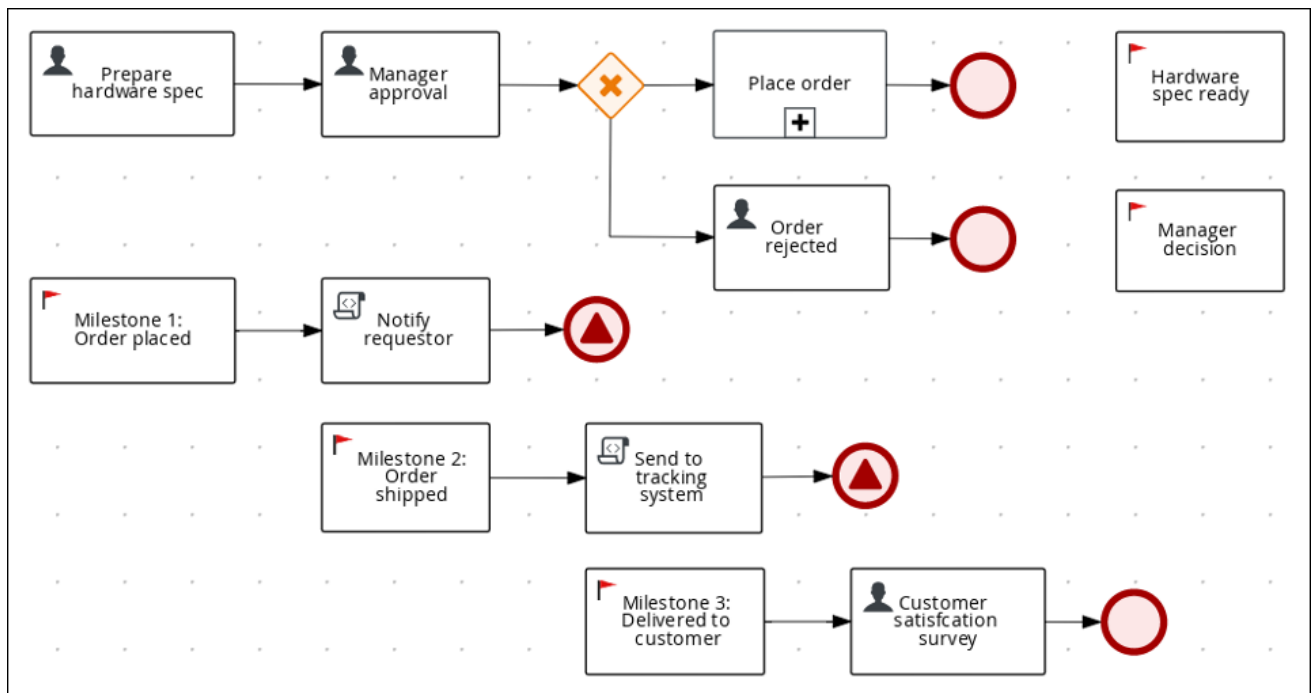
- Identifier: Survey
- Label: (empty)
- Description: (empty)
- Package: com.myspace.it\_orders\_new
- Superclass: java.lang.Object

## CHAPTER 4. DESIGNING THE CASE DEFINITION

You design cases using the process designer in Business Central. Case design is the basis of case management and sets the specific goals and tasks for each case. The case flow can be modified dynamically during run time by adding dynamic tasks or processes. In this procedure, you will create this same case definition to familiarize yourself with the case definition design process.

The **IT\_Orders** sample project in Business Central includes the following **orderhardware** business process case definition.

Figure 4.1. orderhardware business process case definition




### Prerequisites

- You have created a new case in Business Central. For more information, see [Chapter 2, Creating a new IT\\_Orders case project](#).
- You have created the data objects. For more information, see [Chapter 3, Data objects](#).

### Procedure

1. In Business Central, go to **Menu** → **Design** → **Projects** and click **IT\_Orders\_New**.
2. Click **Add Asset** → **Case Definition**.
3. In the **Create new Case definition** window, add the following required information:
  - **Case Definition:** Input **orderhardware**. This is usually the subject of the case or project that is being case managed.
  - **Package:** Select **com.myspace.it\_orders\_new** to specify the location that the case file is created in.
4. Click **Ok** to open the process designer.

5. Define values for the case file variables that are accessible to the subprocesses, subcases, and business rules used in the case.
  - a. In the upper-right corner, click the **Diagram properties**  icon.




- b. Scroll down and expand **Case Management**, click  in the **Case File Variables** section, and enter the following:

Figure 4.2. orderhardware case file variables

Case File Variables 		
Name	Data Type	
hwSpec	org.jbpm.docume ▼	
managerComment	String ▼	
supplierComment	String ▼	
managerDecision	Boolean ▼	
survey	Survey [org.jbpm. ▼	
shipped	Boolean ▼	
delivered	Boolean ▼	



#### NOTE

The following case file variables are custom data types:

- **hwSpec**: org.jbpm.document.Document (type in this value)
- **survey**: Survey [com.myspace.it\_orders\_new] (select this value)



6. Click **Save**.
7. Define the roles involved in the case.
  - a. In the upper-right corner, click the **Diagram properties**  icon.
  - b. Scroll down and expand **Case Management**, click  in the **Case Roles** section, and enter the following:

Figure 4.3. orderhardware case roles

Case Roles		
Name	Cardinality	+
owner	1	🗑️
manager	1	🗑️
supplier	2	🗑️

- **owner:** The employee who is making the hardware order request. The role cardinality is set to **1**, which means that only one person or group can be assigned to this role.
- **manager:** The employee's manager; the person who will approve or deny the requested hardware. The role cardinality is set to **1**, which means that only one person or group can be assigned to this role.
- **supplier:** The available suppliers of IT hardware in the system. The role cardinality is set to **2**, which means that more than one supplier can be assigned to this role.

8. Click **Save**.


## 4.1. CREATING THE PLACE ORDER SUBPROCESS

Create the Place order subprocess, which is a separate business process that is carried out by the supplier. This is a reusable process that occurs during the course of case execution as described in [Chapter 4, Designing the case definition](#).


### Prerequisites

- You have created a new case in Business Central. For more information, see [Chapter 2, Creating a new IT\\_Orders case project](#).
- You have created the data objects. For more information, see [Chapter 3, Data objects](#).

### Procedure

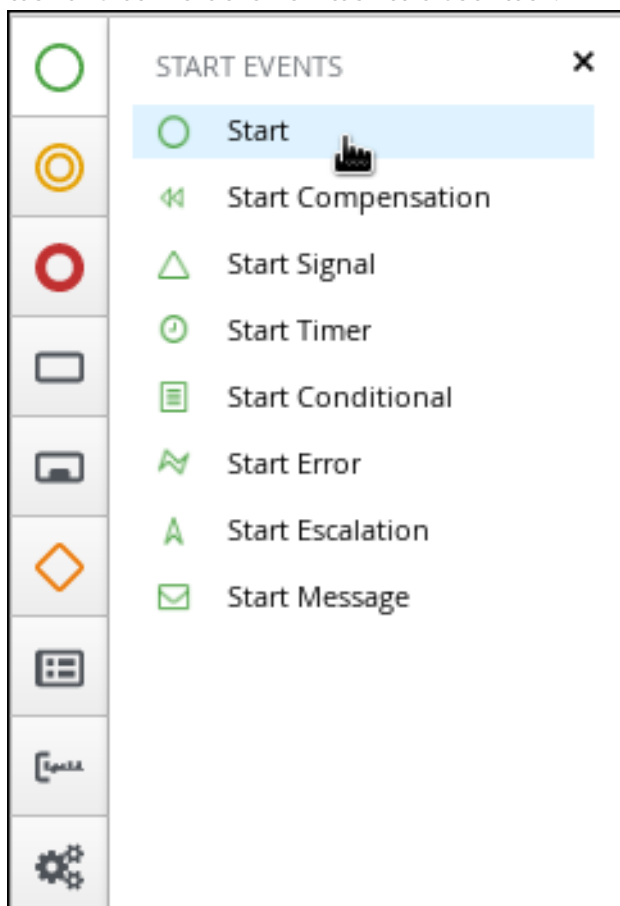
1. In Business Central, go to **Menu** → **Design** → **Projects** → **IT\_Orders\_New**.
2. From the project menu, click **Add Asset** → **Business Process**.
3. In the **Create new Business Process** wizard, enter the following values:
  - **Business Process:** **place-order**
  - **Package:** Select **com.myspace.it\_orders\_new**
4. Click **Ok**. The diagram editor opens.
5. Click an empty space in the canvas, and in the upper-right corner, click the **Diagram properties**  icon.

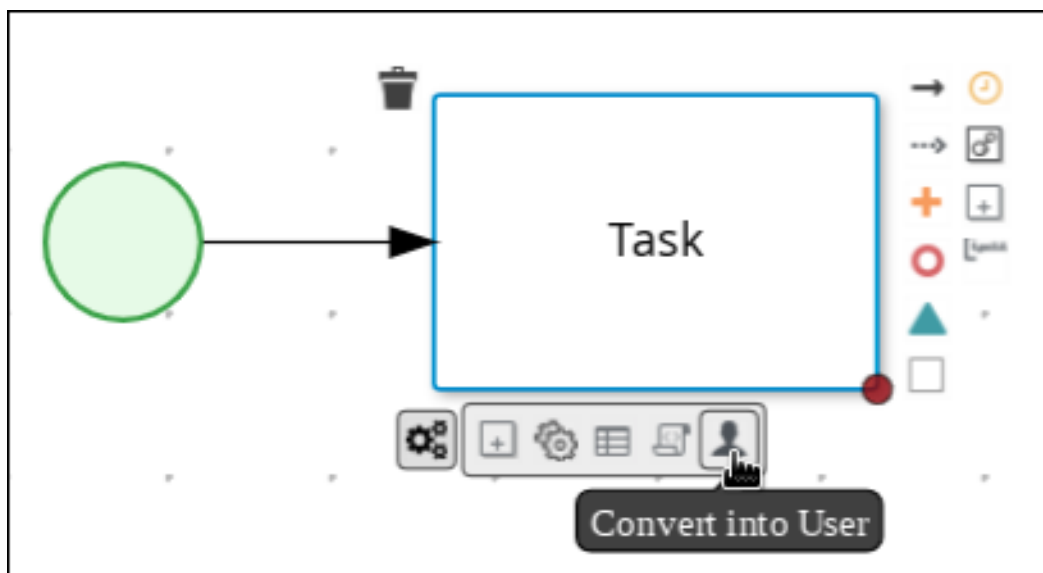
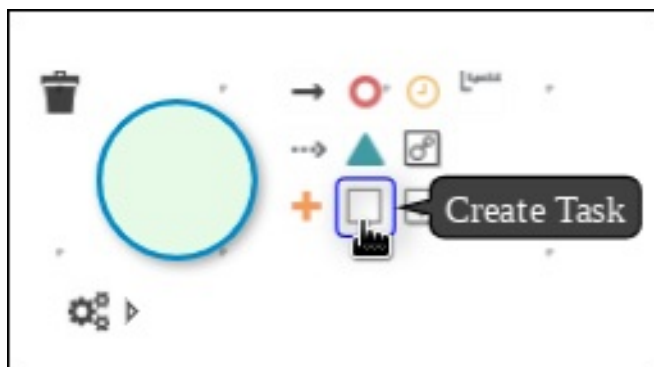



6. Scroll down and expand **Process Data** and click  in the **Process Variables** section and enter the following:

Process Data			
Process Variables			
Name	Data Type	KPI	+
Caseld	String	<input type="checkbox"/>	
Requestor	String	<input type="checkbox"/>	
_hwSpec	org.jbpm.doc	<input type="checkbox"/>	
ordered_	Boolean	<input type="checkbox"/>	
info_	String	<input type="checkbox"/>	
caseFile_hwSpec	org.jbpm.doc	<input type="checkbox"/>	
caseFile_ordered	Boolean	<input type="checkbox"/>	
caseFile_orderInt	String	<input type="checkbox"/>	

7. Click **Save**.
8. Drag a start event onto the canvas and create an outgoing connection from the start event to a task and convert the new task to a user task.





9. Click the user task and in the **Diagram properties** panel, input **Place order** in the **Name** field.
10. Expand **Implementation/Execution**, click **Add** below the **Groups** menu, click **Select** → **New**, and input **supplier**.
11. Click  in the **Assignments** field and add the following:

**Place order Data I/O**
✕

### Data Inputs and Assignments + Add

Name	Data Type	Source	
<input type="text" value="_hwSpec"/>	org.jbpm.documer ▼	caseFile_hwSpec ▼	
<input type="text" value="orderNumber"/>	String ▼	Caseld ▼	
<input type="text" value="requestor"/>	String ▼	Requestor ▼	

### Data Outputs and Assignments + Add

Name	Data Type	Target	
<input type="text" value="ordered_"/>	Boolean ▼	caseFile_ordered ▼	
<input type="text" value="info_"/>	String ▼	caseFile_orderInfo ▼	

Cancel Save

For the first input assignment, select **Custom** for the **Data Type** and input **org.jbpm.document.Document**.

12. Click **Save**.
13. Select the **Skippable** check box and enter the following text in the **Description** field:  
**Approved order #{Caseld} to be placed**

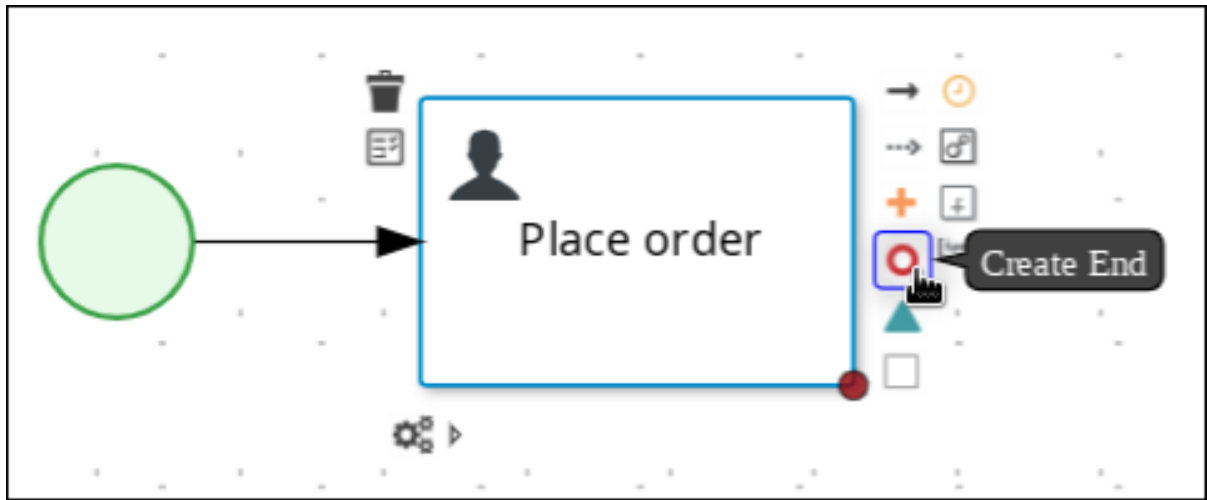
**Skippable**

**Priority**

**Description**

Approved order #{Caseld} to be placed

14. Create an outgoing connection from the **Place order** user task and connect it to an end event.




15. Click **Save** to confirm your changes.

## 4.2. CREATING THE MANAGER APPROVAL BUSINESS PROCESS

The manager approval process determines whether or not the order will be placed or rejected.

### Procedure



1. In Business Central, go to **Menu** → **Design** → **Projects** → **IT\_Orders\_New** → **orderhardware Business Processes**.
2. Create and configure the prepare hardware spec user task:
  - a. Drag a start event onto the canvas and create an outgoing connection from the start event to a task and convert the new task to a user task.
  - b. Click the new user task and in the upper-right corner click the **Properties**  icon.
  - c. Input **Prepare hardware spec** in the **Name** field.
  - d. Expand **Implementation/Execution**, click **Add** below the **Groups** menu, click **Select** → **New**, and input **supplier**.
  - e. Input **PrepareHardwareSpec** in the **Task Name** field.
  - f. Select the **Skippable** check box and enter the following text in the **Description** field:  
**Prepare hardware specification for #{initiator} (order number #{CaselId})**

- g. Click  in the **Assignments** field and add the following:



**Prepare hardware spec Data I/O** ×



---

**Data Inputs and Assignments** + Add

Name	Data Type	Source	
<input type="text" value="orderNumber"/>	String ▼	CaseId ▼	
<input type="text" value="requestor"/>	String ▼	initiator ▼	

**Data Outputs and Assignments** + Add

Name	Data Type	Target	
<input type="text" value="hwSpec_"/>	org.jbpm.documer ▼	caseFile_hwSpec ▼	
<input type="text" value="supplierComment_"/>	String ▼	caseFile_supplierC ▼	

- h. Click **Save**.
3. Create and configure the manager approval user task:
- a. Click the **Prepare hardware spec** user task and create a new user task.
  - b. Click the new user task and in the upper-right corner click the **Properties**  icon.
  - c. Click the user task and in the **Properties** panel input **Manager approval** in the **Name** field.
  - d. Expand **Implementation/Execution**, click **Add** below the **Actors** menu, click **Select** → **New**, and input **manager**.
  - e. Input **ManagerApproval** in the **Task Name** field.
  - f. Click  in the **Assignments** field and add the following:

**Manager approval Data I/O**
✕

**Data Inputs and Assignments** + Add

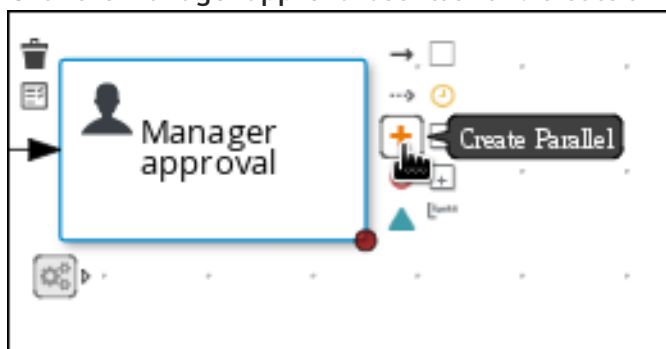
Name	Data Type	Source	
<input type="text" value="_hwSpec"/>	org.jbpm.docum ▼	caseFile_hwSpei ▼	
<input type="text" value="orderNumber"/>	String ▼	Caseld ▼	
<input type="text" value="requestor"/>	String ▼	initiator ▼	

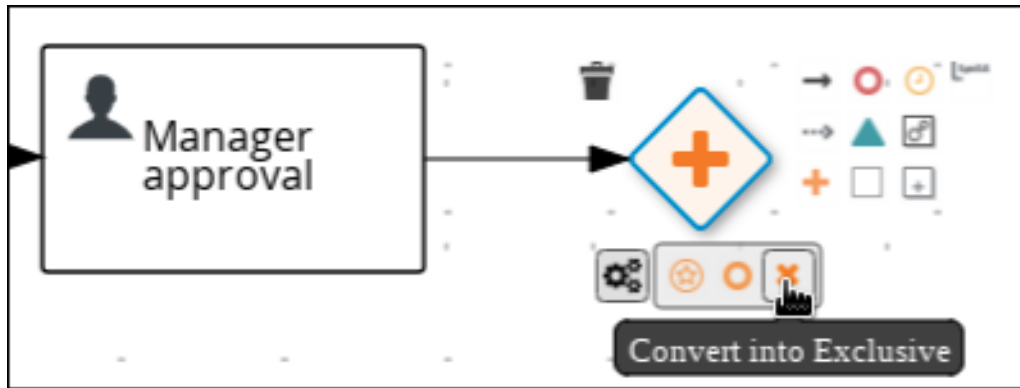
**Data Outputs and Assignments** + Add

Name	Data Type	Target	
<input type="text" value="approved_"/>	Boolean ▼	approved ▼	
<input type="text" value="managerComment_"/>	String ▼	caseFile_manag ▼	

Cancel Save

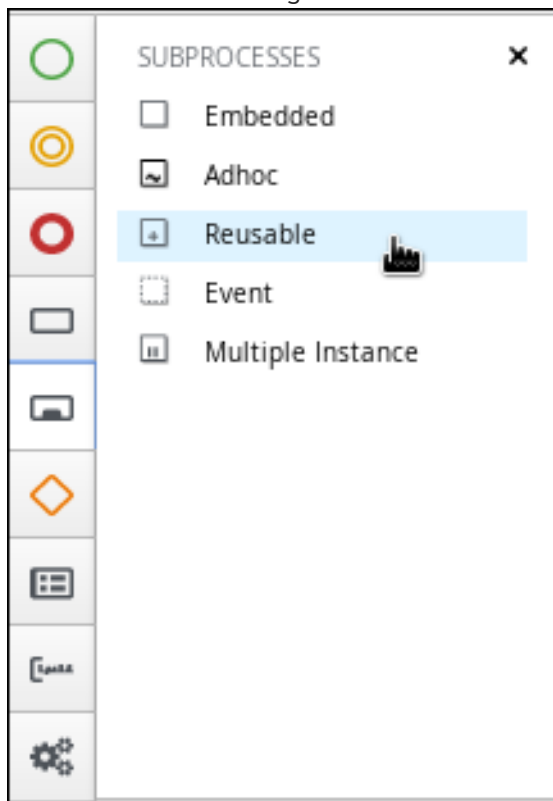
- g. Click **Save**.
  - h. Select the **Skippable** check box and enter the following text in the **Description** field:  
**Approval request for new hardware for #{initiator} (order number #{Caseld})**
  - i. Enter the following Java expression in the **On Exit Action** field:  
**kcontext.setVariable("caseFile\_managerDecision", approved);**
  - j. Click **Save**.
4. Click the **Manager approval** user task and create a Data-based Exclusive (XOR) gateway.



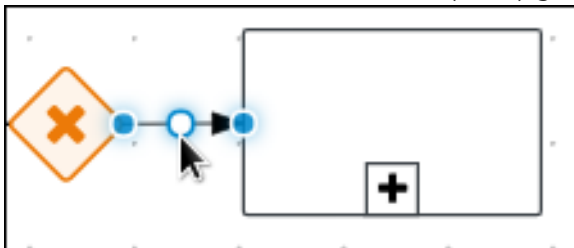


5. Create and configure the place order reusable subprocess:

- a. From the **Object Library**, expand **Subprocesses**, click **Reusable**, and drag the new element to the canvas on the right side of the Data-based Exclusive (XOR) gateway.



- b. Connect the Data-based Exclusive (XOR) gateway to the subprocess.



- c. Click the new sub task and in the upper-right corner click the **Properties**  icon.

- d. Input **Place order** in the **Name** field.

- e. Expand **Data Assignments** and click  in the **Assignments** field and add the following:


**Task Data I/O**
✕

**Data Inputs and Assignments** + Add

Name	Data Type	Source	
Caseld	String ▼	Caseld ▼	✕
Requestor	String ▼	initiator ▼	✕

**Data Outputs and Assignments** + Add

Cancel Save

- f. Click the connection from the Data-based Exclusive (XOR) gateway to the subprocess and click the **Properties**  icon.
- g. Expand **Implementation/Execution**, select **Condition**, and set the following condition expressions.

▼ **Implementation/Execution**

**Priority**

**Condition Expression**

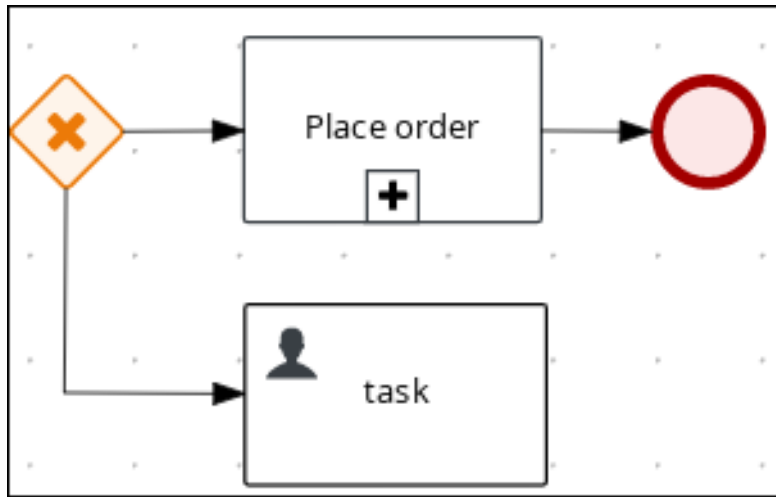
Condition  Expression



**Process Variable** i

**Condition** i

- h. Click the **Place order** user task and create an end event.
6. Create and configure the order rejected user task:
  - a. Click the Data-based Exclusive (XOR) gateway and create a new user task.
  - b. Drag the new task to align it below the **Place order** task.







- c. Click the new user task and in the upper-right corner click the **Properties**  icon.
- d. Input **Order rejected** in the **Name** field.
- e. Expand **Implementation/Execution** and input **OrderRejected** in the **Task Name** field.
- f. Click **Add** below the **Actors** menu, click **Select → New**, and input **owner**.
- g. Click  in the **Assignments** field and add the following:


**Order rejected Data I/O** ✕

---

**Data Inputs and Assignments** + Add

Name	Data Type	Source	
<input type="text" value="_reason"/>	String ▼	caseFile_managerC ▼	
<input type="text" value="_supplierComment"/>	String ▼	caseFile_supplierC ▼	

**Data Outputs and Assignments** + Add

- h. Click **Save**.
  - i. Select the **Skippable** check box and enter the following text in the **Description** field:  
**Order #{Caseld} has been rejected by manager**
  - j. Click the **Order rejected** user task and create an end event.
  - k. Click **Save**.
7. Click the connection from the Data-based Exclusive (XOR) gateway to the **Order rejected** user task and click the **Properties**  icon.

- Expand **Implementation/Execution**, select **Condition**, and set the following condition expressions.

Implementation/Execution

Priority

Condition Expression

Condition  Expression

Process Variable ⓘ

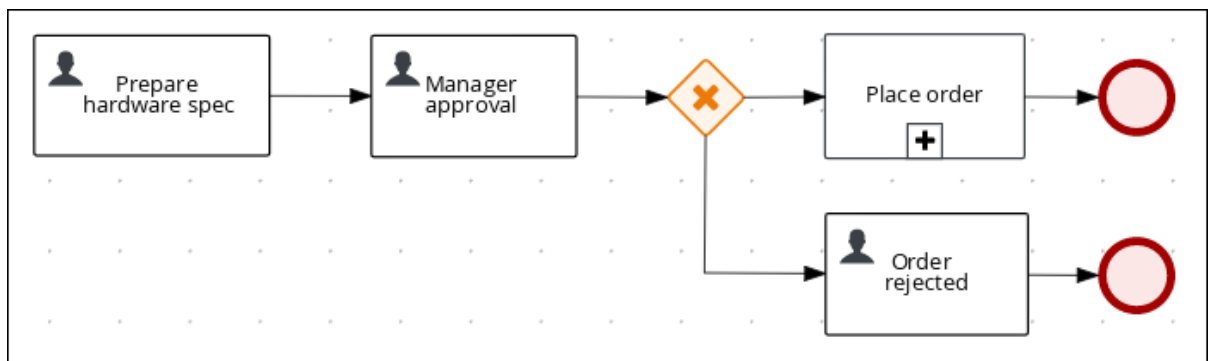
approved

Condition ⓘ

Is false

- Click **Save**.

Figure 4.4. Manager approval business process



## CHAPTER 5. MILESTONES

Milestones are a special service task that can be configured in the case definition designer by adding the milestone node to the process designer palette. When creating a new case definition, a milestone configured as **Adhoc autostart** is included on the design palette by default. Newly created milestones are not set to **Adhoc autostart** by default.

Case management milestones generally occur at the end of a stage, but they can also be the result of achieving other milestones. A milestone always requires a condition to be defined in order to track progress. Milestones react to case file data when data is added to a case. A milestone represents a single point of achievement within the case instance. It can be used to flag certain events, which can be useful for Key Performance Indicator (KPI) tracking or identifying the tasks that are still to be completed.

Milestones can be in any of the following states during case execution:



- **Active** - The condition has been defined on the milestone but it has not been met.
- **Completed** - The milestone condition has been met, the milestone has been achieved, and the case can proceed to the next task.
- **Terminated** - The milestone is no longer a part of the case process and is no longer required.

While a milestone is available or completed it can be triggered manually by a signal or automatically if **Adhoc autostart** is configured when a case instance starts. Milestones can be triggered as many times as required, however, it is directly achieved when the condition is met.

### 5.1. CREATING THE HARDWARE SPEC READY MILESTONE

Create a **HardwareSpecReady** milestone that is reached when the required hardware specification document is completed.

#### Procedure

1. In the process designer, expand **Milestone** in the **Object Library** and drag a new milestone on the canvas and place it on the right side of the **Place order** end event.
2. Click the new milestone and in the upper-right corner click the **Properties**  icon.
3. Input **Hardware spec ready** in the **Name** field.
4. Expand **Implementation/Execution** and select **Adhoc Autostart**.
5. Expand **Data Assignments**, click  in the **Assignments** field, and add the following:

**Hardware spec ready Data I/O** [Close]

Data Inputs and Assignments [Add]

Name	Data Type	Source	
Condition	String	"org.kie.ap..."	[Delete]

Data Outputs and Assignments [Add]

[Cancel] [Save]



Click the **Source** column drop-down, select **Constant**, and input **org.kie.api.runtime.process.CaseData(data.get("hwSpec")) != null**.

6. Click **Save**.

## 5.2. CREATING THE MANAGER DECISION MILESTONE

This milestone is reached when the **managerDecision** variable has been given a response.

### Procedure

1. In the process designer, expand **Milestone** in the **Object Library** and drag a new milestone on to the canvas below the **HardwareSpecReady** milestone.
2. Click the new milestone and in the upper-right corner click the **Properties**  icon.
3. Input **Manager decision** in the **Name** field.
4. Expand **Implementation/Execution** and select **Adhoc Autostart**.
5. Expand **Data Assignments** and click  in the **Assignments** field and add the following:

**Manager decision Data I/O** [Close]

Data Inputs and Assignments [Add]

Name	Data Type	Source	
Condition	String	"org.kie.ap..."	[Delete]

Data Outputs and Assignments [Add]

[Cancel] [Save]



Click the **Source** column drop-down, select **Constant**, and input **org.kie.api.runtime.process.CaseData(data.get("managerDecision") != null)**.

6. Click **Save**.

### 5.3. CREATING THE ORDER PLACED MILESTONE


This milestone is reached when the **ordered** variable, which is part of the **Place order** sub-process, has been given a response.

#### Procedure

1. In the process designer, expand **Milestone** in the **Object Library** and drag a new milestone on the canvas below the **Prepare hardware specuser** task.
2. Click the new milestone and in the upper-right corner click the **Properties**  icon.
3. Input **Milestone 1: Order placed** in the **Name** field.
4. Expand **Implementation/Execution** and select **Adhoc Autostart**.
5. Expand **Data Assignments**, click  in the **Assignments** field, and add the following:

**Milestone 1: Order placed Data I/O** x

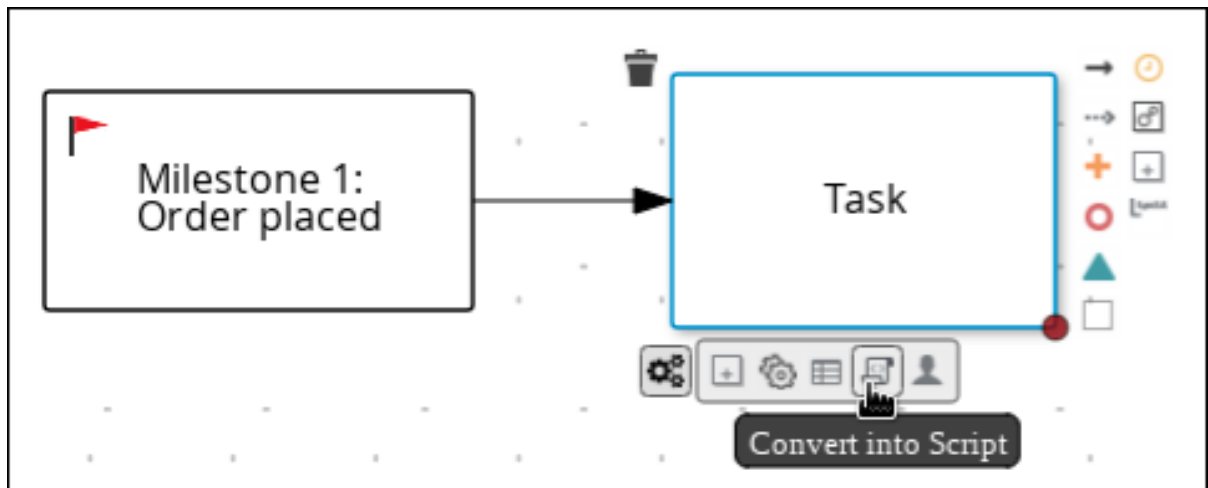
Data Inputs and Assignments + Add

Name	Data Type	Source	
<input type="text" value="Condition"/>	<input style="border: none; border-bottom: 1px solid #ccc;" type="text" value="String"/> ▼	<input style="border: none; border-bottom: 1px solid #ccc;" type="text" value="org.kie.ap..."/> ▼	

Data Outputs and Assignments + Add

Click the **Source** column drop-down, select **Constant**, and input **org.kie.api.runtime.process.CaseData(data.get("ordered") == true)**. This means that a case variable named **ordered** exists with the value **true**.

6. Click **Save**.
7. Click **Milestone 1: Order placed** and create a new script task.





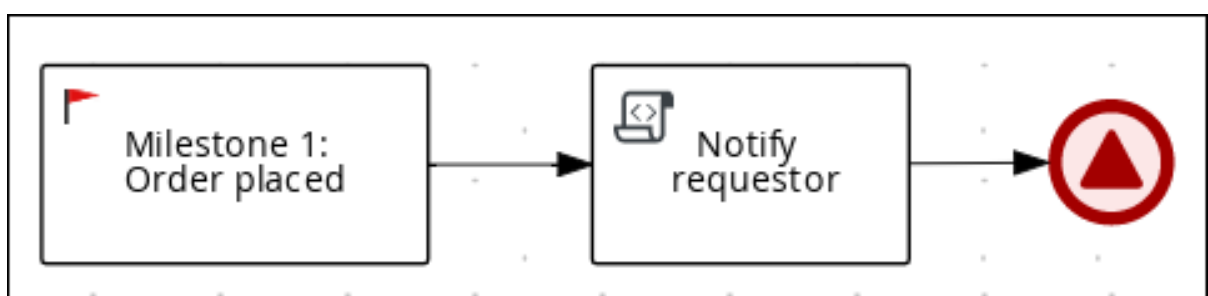
8. Click the new script task and in the upper-right corner click the **Properties**  icon.
9. Input **Notify requestor** in the **Name** field.
10. Expand **Implementation/Execution** and input **System.out.println("Notification::Order placed");**.
11. Click the **Notify requestor** script task and create a signal end event.
12. Click the signal event and in the upper-right corner click the **Properties**  icon.
13. Expand **Implementation/Execution**, click the down arrow in the **Signal** field, and select **New**.
14. Input **Milestone 2: Order shipped**.
15. Click the down arrow in the **Signal Scope** field, select **Process Instance**.
16. Click **Save**.



Figure 5.1. Order placed milestone



## 5.4. CREATING THE ORDER SHIPPED MILESTONE

The condition for this milestone is that a case file variable named **shipped** is **true**. **Adhoc autostart** is not enabled for this milestone. Instead, it is triggered by a signal event when the order is ready to be sent.

### Procedure

1. In the process designer, expand **Milestone** in the **Object Library** and drag a new milestone on the canvas below the **Notify requestor** script task.
2. Click the new milestone and in the upper-right corner click the **Properties**  icon.
3. Input **Milestone 2: Order shipped** in the **Name** field.
4. Expand **Implementation/Execution** and ensure that **Adhoc Autostart** is not selected.
5. Expand **Data Assignments**, click  in the **Assignments** field, and add the following:

**Milestone 2: Order shipped Data I/O** ✕



Data Inputs and Assignments + Add

Name	Data Type	Source	
Condition	String ▼	"org.kie.ap..." ▼	✕

Data Outputs and Assignments + Add

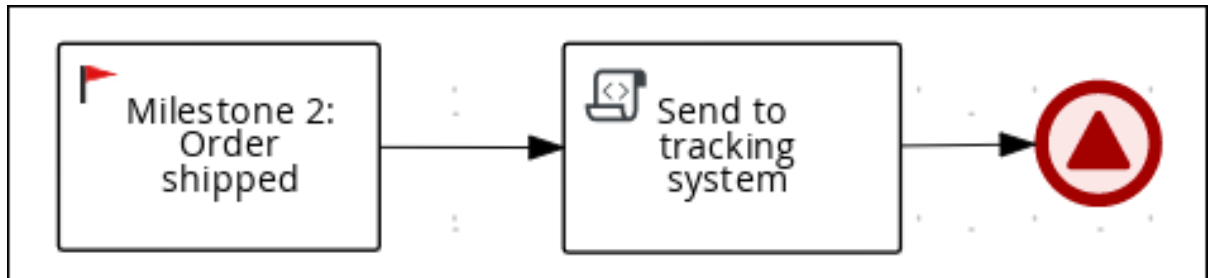
Cancel Save

Click the **Source** column drop-down, select **Constant**, and input **org.kie.api.runtime.process.CaseData(data.get("shipped")) == true**. This means that a case variable named **shipped** exists with the value **true**.

6. Click **Save**.
7. Click **Milestone 2: Order shipped** and create a new script task.
8. Click the new script task and in the upper-right corner click the **Properties**  icon.
9. Input **Send to tracking system** in the **Name** field.
10. Expand **Implementation/Execution** and input **System.out.println("Order added to tracking system");**
11. Click the **Send to tracking systems** script task and create a signal end event.
12. Click the signal event and in the upper-right corner click the **Properties**.  icon.

13. Expand **Implementation/Execution**, click the down arrow in the **Signal** field, and select **New**.
14. Input **Milestone 3: Delivered to customer**.
15. Click the down arrow in the **Signal Scope** field, select **Process Instance**.
16. Click **Save**.



Figure 5.2. Order shipped milestone



## 5.5. CREATING THE DELIVERED TO CUSTOMER MILESTONE

The condition for this milestone is that a case file variable named **delivered** is **true**. **Adhoc autostart** is not enabled for this milestone. Instead, it is triggered by a signal event after the order has successfully shipped to the customer.

### Procedure

1. In the process designer, expand **Milestone** in the **Object Library** and drag a new milestone on the canvas below the **Send to tracking systems** script task.
2. Click the new milestone and in the upper-right corner click the **Properties**  icon.
3. Input **Milestone 3: Delivered to customer** in the **Name** field.
4. Expand **Implementation/Execution** and ensure that **Adhoc Autostart** is not selected.
5. Expand **Data Assignments**, click  in the **Assignments** field, and add the following:

**Milestone 3: Delivered to customer Data I/O** ✕

Data Inputs and Assignments + Add



Name	Data Type	Source	
Condition	String ▼	"org.kie.ap..." ▼	✕

Data Outputs and Assignments + Add

Cancel Save



Click the **Source** column drop-down, select **Constant**, and input **org.kie.api.runtime.process.CaseData(data.get("delivered") == true)**. This means that a case variable named **delivered** exists with the value **true**.

6. Click **Save**.
7. Click **Milestone 3: Delivered to customer** and create a new user task.
  - a. Click the new user task and in the upper-right corner click the **Properties**  icon.
  - b. Input **Customer satisfaction survey** in the **Name** field.
  - c. Expand **Implementation/Execution**, click **Add** below the **Actors** menu, click **Select** → **New**, and input **owner**.
  - d. Input **CustomerSurvey** in the **Task Name** field.
  - e. Select the **Skippable** check box and enter the following text in the in the **Description** field: **Satisfaction survey for order #{CaseId}**
  - f. Click  in the **Assignments** field and add the following:

**Customer satisfaction survey Data I/O** ✕

Data Inputs and Assignments + Add

Name	Data Type	Source	
orderNumber	String ▼	CaseId ▼	✕

Data Outputs and Assignments + Add

Name	Data Type	Target	
survey_	Survey [org.jbpm.c ▼	caseFile_survey ▼	✕

Cancel
Save

- g. Click **Save**.
8. Click the **Customer satisfaction survey** user task and create an end event.
9. Click **Save** to confirm your changes.

Figure 5.3. Delivered to customer milestone



The IT Orders case can be closed after all milestone sequences are completed. However, due to the ad hoc nature of cases, the case could be reopened if, for example, the order was never received by the customer or the item is faulty. Tasks can be re-triggered or added to the case definition as required, even during run time.

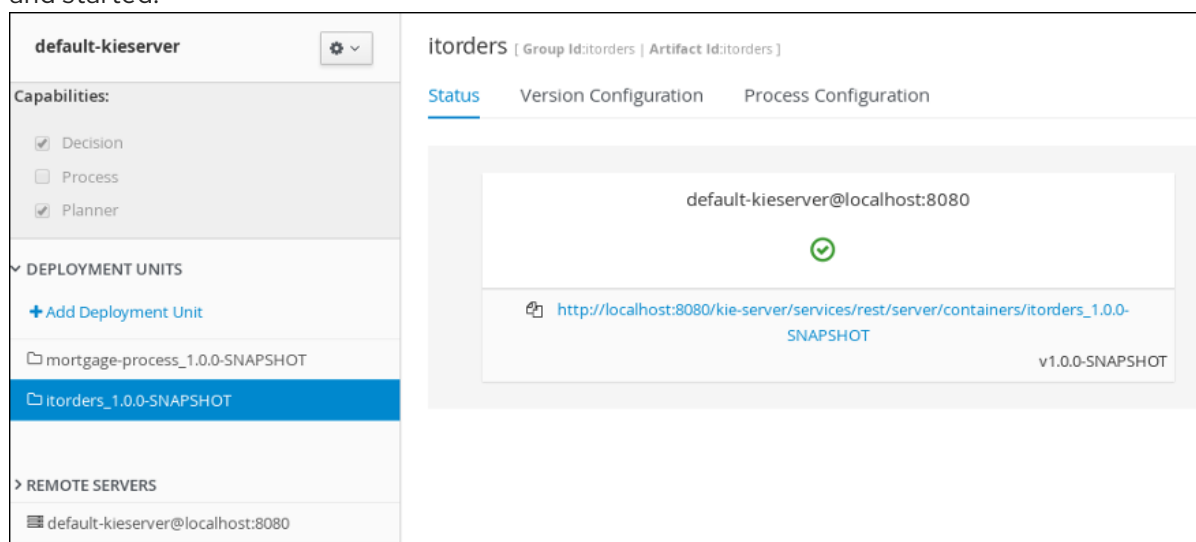
# CHAPTER 6. DEPLOYING AND TESTING THE IT ORDER CASE PROJECT

## Prerequisites

- You have a running KIE Server instance connected to Business Central. For more information see [Installing and configuring Red Hat Process Automation Manager on Red Hat JBoss EAP 7.3](#).
- You have created a new case in Business Central. For more information, see [Chapter 2, Creating a new IT\\_Orders case project](#).
- You have created the data objects. For more information, see [Chapter 3, Data objects](#).
- You have created the Place order subprocess. For more information, see [Section 4.1, "Creating the Place order subprocess"](#).
- You have designed the Order for IT hardware case. For more information, see [Chapter 4, Designing the case definition](#).

## Procedure

1. In Business Central, go to **Menu** → **Design** → **Projects** and click **IT\_Orders\_New**.
2. Click **Deploy**.
3. Go to **Menu** → **Manage** → **Process Definitions** → **Manage Process Instances** → **New Process Instance**.
4. Go to **Menu** → **Deploy** and click **Execution Servers** and verify that a new container is deployed and started.



5. Use the Case Management Showcase application to start a new case instance. For instructions about using the Showcase application, see [Using the Showcase application for case management](#).

## CHAPTER 7. ADDITIONAL RESOURCES

- [\*Designing and building cases for case management\*](#)
- [\*Using the Showcase application for case management\*](#)
- [\*Getting started with business processes\*](#)

## APPENDIX A. VERSIONING INFORMATION

Documentation last updated on Thursday, September 08, 2020.