



Red Hat Process Automation Manager 7.2

Managing and monitoring business processes
in Business Central

Red Hat Process Automation Manager 7.2 Managing and monitoring business processes in Business Central

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[®] is the registered trademark of Linus Torvalds in the United States and other countries.

Java[®] is a registered trademark of Oracle and/or its affiliates.

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

MySQL[®] is a registered trademark of MySQL AB in the United States, the European Union and other countries.

Node.js[®] 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[®] 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 explains how to manage and monitor your running business processes in Red Hat Process Automation Manager 7.2.

Table of Contents

PREFACE	3
CHAPTER 1. PROCESS MONITORING	4
CHAPTER 2. PROCESS DEFINITIONS	5
CHAPTER 3. STARTING A PROCESS INSTANCE FROM BUSINESS CENTRAL	6
3.1. STARTING A PROCESS INSTANCE FROM THE PROCESS DEFINITIONS PAGE	6
3.2. STARTING A PROCESS INSTANCE FROM THE PROCESS INSTANCES PAGE	6
CHAPTER 4. VIEW PROCESS INSTANCE DETAILS	7
CHAPTER 5. PROCESS INSTANCE FILTERING	9
5.1. SEARCHING PROCESS INSTANCES BASED ON BUSINESS DATA	12
5.2. CREATING A CUSTOM PROCESS INSTANCE LIST	13
5.3. ABORTING A PROCESS INSTANCE USING BUSINESS CENTRAL	14
5.4. SIGNALING PROCESS INSTANCES FROM BUSINESS CENTRAL	14
5.5. ASYNCHRONOUS SIGNAL EVENTS	15
5.5.1. Configuring asynchronous signals for intermediate events	15
5.5.2. Configuring asynchronous signals for end events	15
5.6. MANAGING TASKS	16
5.7. CREATING CUSTOM TASK FILTERS	17
5.8. TASK FILTERING	20
CHAPTER 6. EXECUTION ERROR MANAGEMENT	24
6.1. VIEW PROCESS EXECUTION ERRORS IN BUSINESS CENTRAL	24
6.2. MANAGE EXECUTION ERRORS	25
6.3. ERROR FILTERING	25
APPENDIX A. VERSIONING INFORMATION	29

PREFACE

As a process administrator, you can use Business Central in Red Hat Process Automation Manager to manage and monitor process instances and tasks running on a number of projects. From Business Central you can start a new process instance, verify the state of all process instances, and abort processes. You can view the list of jobs and tasks associated with your processes, as well as understand and communicate any process errors.

Prerequisites

- Installed Red Hat JBoss Enterprise Application Platform 7.1.0. See [Red Hat JBoss EAP 7.1.0 Installation Guide](#).
- Installed Red Hat Process Automation Manager. For more information, see [Planning a Red Hat Process Automation Manager installation](#).
- Red Hat Process Automation Manager is running and you can log in to Business Central with the **process-admin** role. For more information, see [Planning a Red Hat Process Automation Manager installation](#).

CHAPTER 1. PROCESS MONITORING

Red Hat Process Automation Manager provides real-time monitoring for your business processes and includes the following capabilities:

- Business managers can monitor processes in real time.
- Customers can monitor the current status of their requests.
- Administrators can easily monitor any errors related to process execution.

CHAPTER 2. PROCESS DEFINITIONS

After you have created, configured, and deployed your project that includes your business processes, you can view the list of all the process definitions in **Menu → Manage → Process Definitions**. You can refresh the list of deployed process definitions at any time by clicking the refresh button in the upper-right corner.

The process definition list shows all the available process definitions that are deployed into the platform. Click on any of the process definitions listed to show the corresponding process definition details. This displays information about the process definition, such as if there is a sub-process associated with it, or how many users and groups exist in the process definition.

You can also define the default pagination option for all users under Manage (Process Definition, Process Instances, Tasks, Jobs and Execution Errors) and Task Inbox menu. For more information, see [Configuring Business Central settings and properties](#).

In the process definition details section, you can click the **Diagram** tab to view associated BPMN2-based diagram of the process definition. You can also start a new process instance for the process definition by clicking the **New Process Instance** button in the upper-right corner.

CHAPTER 3. STARTING A PROCESS INSTANCE FROM BUSINESS CENTRAL

After a project has been deployed to the Process Server, you can start a new process instance from Business Central. You can start a new process instances in Business Central in two ways:

Prerequisite

- A project with a process definition has been deployed in Business Central.

3.1. STARTING A PROCESS INSTANCE FROM THE PROCESS DEFINITIONS PAGE

A process instance can be started from the **Manage Process Definitions** page. This is useful for environments where you are working with several projects or process definitions at the same time.

Procedure

1. Click **Menu** → **Manage** → **Process Definitions**.
2. Select the process definition for which you want to start a new process instance from the list. The details page of the definition opens.
3. Click the **New Process Instance** button in the upper-right corner to start a new process instance.
4. Provide any required information for the process instance.
5. Click **Submit** to create the process instance.
6. View the new process instance in the **Manage Process Instances** list under **Menu** → **Manage** → **Process Instances**.

3.2. STARTING A PROCESS INSTANCE FROM THE PROCESS INSTANCES PAGE

You can create new process instances or view the list of all the running process instances in the **Manage Process Instances** list under **Menu** → **Manage** → **Process Instances**.

1. Click **Menu** → **Manage** → **Process Instances**.
2. Click the **New Process Instance** button in the upper-right corner and select the process definition for which you want to start a new process instance from the drop-down list.
3. Provide any information required to start a new process instance.
4. Click **Start** to create the process instance.
The new process instance appears in the **Manage Process Instances** list.

After a process has been started, you can view the list of process instances running in your project in the **Manage Process Instances** page by clicking **Menu** → **Manage** → **Process Instances**.

CHAPTER 4. VIEW PROCESS INSTANCE DETAILS

Figure 4.1. Features in the Manage Process Instances page

The screenshot displays the 'Manage Process Instances' interface. On the left, there is a 'Filters' sidebar with sections for 'State' (Active, Aborted, Completed, Pending, Suspended) and 'Errors' (With errors, Without errors). Below this is a 'Filter By' section with a dropdown set to 'Id' and a search input 'Filter By Process Instance'. The main area is titled 'Manage Process Instances' and contains a table of process instances. The table has columns: Id, Name, Description, Version, Last update, Errors, and Actions. The data rows are:

Id	Name	Description	Version	Last update	Errors	Actions
4	Evaluation	Evaluation	1	30-May-2018 15:0...	0	⋮
3	Evaluation	Evaluation	1	30-May-2018 15:0...	0	⋮
2	MortgageApprova...	MortgageApprova...	1.0	30-May-2018 13:5...	0	⋮
1	MortgageApprova...	MortgageApprova...	1.0	30-May-2018 13:4...	0	⋮

At the bottom of the table, it indicates '10 Items' and '1-4 of 4'.

You can view all process instances under **Menu → Manage → Process Instances**. Each row in the **Manage Process Instances** list represents a process instance from a particular process definition. Each execution is differentiated from all the others by the internal state of the information that the process is manipulating.

In order to view this information, you can click on any one of the process instances and view the corresponding details.

The process instance page provides several tabs with run time information related to the process.

The screenshot shows the '4 - MortgageApprovalProcess' details page. At the top right, there are 'Signal' and 'Abort' buttons. Below the title bar, there are tabs for 'Instance Details', 'Process Variables', 'Documents', 'Logs', and 'Diagram'. The 'Instance Details' tab is selected and displays the following information:

- Definition Id: Mortgage_Process.MortgageApprovalProcess
- Instance State: Active
- Deployment: mortgage-process_1.0.0-SNAPSHOT
- Definition Version: 1.0
- SLA Compliance: N/A
- Correlation key: 4
- Parent Process Instance: No Parent Process Instance
- Active user tasks: Qualify (Ready) owner: ---
- Current Activities: Fri Jun 01 12:18:20 AEST 2018: 5 - Qualify (HumanTaskNode)

- The **Instance Details** tab: This gives you a quick overview about what is going on inside the process. It displays the current state of the instance and the current activity that is being executed.
- The **Process Variables** tab: This displays all of the process variables that are being manipulated by the instance, with the exception of the variables that contain documents. Additionally, you can edit the process variable value and view its history.

- The **Documents** tab: This displays process documents if the process contains a variable of the type `org.jbpm.Document`. This enables easy access, download, and manipulation of the attached documents.
- The **Logs** tab: This displays process instance logs for the respective end users. For more information, see [Interacting with processes and tasks](#).
- The **Diagram** tab: This tracks the progress of the process instance through the BPMN2 diagram. The node or nodes of the process flow that are in progress are highlighted in red.

For information on user credentials and conditions to be met to access Intelligent Process Server run time data, see [Planning a Red Hat Process Automation Manager installation](#).

CHAPTER 5. PROCESS INSTANCE FILTERING

Access the **Process Instances** list by clicking **Menu** → **Manage** → **Process Instances**.

Figure 5.1. Filtering Process Instances - Default View

Filters

- Active
- Aborted
- Completed
- Pending
- Suspended

Errors

- With errors
- Without errors

Filter By

Id

Filter By Process Instance Id...

Apply

Name

Select

Start Date

Start Date...

Last update

Last update...

[Advanced Filters](#)

Process instances can be filtered on the following attributes:

Id

Filter by process instance ID.

Input: **Numeric**

Initiator

Filter by the user ID of the process instance initiator.

The user ID is a unique value, and depends on the ID management system.

Input: **String**

Correlation key

Filter by correlation key.

Input: **String**

Description

Filter by process instance description.

Input: **String**

State

Filter by different states. You can select more than one status to display results that meet any of the selected states. Removing the status filter displays all processes, regardless of status.

The following filter states are available:

- Active
- Aborted
- Completed
- Pending
- Suspended

Errors

Filter by process instances with or without errors.

Name

Filter by project name.

Date and time filtering

Start Date

When the process was started.

Last Update

When the process was updated or modified.

Each of these filters have the following quick filter options:

- Last Hour
- Today

- Last 24 Hours
- Last 7 Days
- Last 30 Days
- Custom
Selecting **Custom** date and time filtering opens a calendar tool for selecting a date and time range.

Figure 5.2. Process Instances Search by Date Range

The screenshot shows a search interface for process instances. On the left, there are buttons for 'Last Hour', 'Today', 'Last 24 hours', 'Last 7 days', 'Last 30 days', 'Custom', 'Apply', and 'Cancel'. The 'Today' button is selected. In the center, there are two date and time pickers. The first picker is set to 'Aug 17, 2017 12:00 AM' with a dropdown for '12', a colon, a dropdown for '00', and a dropdown for 'AM'. The second picker is set to 'Aug 17, 2017 11:59 PM' with a dropdown for '11', a colon, a dropdown for '00', and a dropdown for 'PM'. Below these pickers is a calendar view showing July 2017 and August 2017. The calendar for August 2017 has the 17th highlighted in blue. The calendar grid is as follows:

July 2017							August 2017						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
25	26	27	28	29	30	1	30	31	1	2	3	4	5
2	3	4	5	6	7	8	6	7	8	9	10	11	12
9	10	11	12	13	14	15	13	14	15	16	17	18	19
16	17	18	19	20	21	22	20	21	22	23	24	25	26
23	24	25	26	27	28	29	27	28	29	30	31	1	2
30	31	1	2	3	4	5	3	4	5	6	7	8	9

5.1. SEARCHING PROCESS INSTANCES BASED ON BUSINESS DATA

You can add process variables as columns in the process instance list in order to enable flexible filtering of process instances based on business data:

1. Log in to Business Central and click **Menu** → **Manage** → **Process Instances**.
2. In the **Manage Process Instances** page, click the  button on the left to open the list of process instance filter options.
3. At the bottom of the **Filters** list, click **Advanced Filters**.
4. In the **New Process Instance List** dialog box, perform the following:
 - a. Provide the name and description for your search process instance list.
 - b. Add a new query filter:
 - i. Click **Add New**.
 - ii. From the list of filter values, select **processId** and **equalsTo**.
 - iii. Provide a valid **processId** value and click **Ok**.

A new filter is created and immediately applied to the process instances list. It is also saved in the **Saved Filters** list. You can access saved filters by clicking  on the left side of the **Manage Process Instances** page.

5.2. CREATING A CUSTOM PROCESS INSTANCE LIST

You can view the list of all the running process instances in the Process Instance List under **Menu → Manage → Process Instances**.

From this page, you can manage the instances during run time and monitor their execution. You can customize which columns are displayed, the number of rows displayed per page, and filter the results.

Use the following procedure to create a custom process instance list:

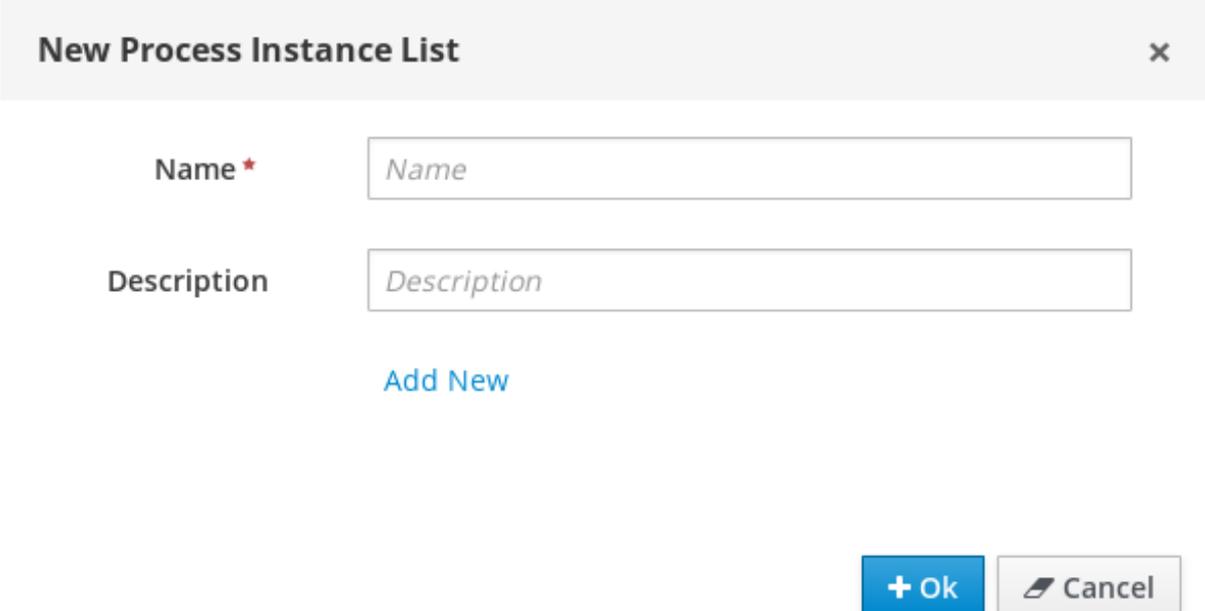
Prerequisite

- A project with a process definition has been deployed in Business Central.

Procedure

1. Log in to Business Central and click **Menu → Manage → Process Instances**.
2. In the **Manage Process Instances** page, click the  button on the left to open the list of process instance filter options.
3. At the bottom of the **Filters** list, click **Advanced Filters**.
The following **New Process Instance List** dialog box opens:

Figure 5.3. New Process Instance List



The dialog box titled "New Process Instance List" contains the following elements:

- Name ***: A text input field with the placeholder text "Name".
- Description**: A text input field with the placeholder text "Description".
- Add New**: A blue button located below the input fields.
- + Ok**: A blue button at the bottom right.
- Cancel**: A grey button at the bottom right.

4. In the **New Process Instance List** window, fill in the **Name** (this is the name of the saved filter).
5. Click **Add New**.

- a. From the list of filter values, select the appropriate filter condition and its value. You can add more filters by clicking **Add New**.
- b. Once you have specified all your filter conditions, click **Ok**.
A new filter is created and saved in the **Saved Filters** list. You can access saved filters by clicking  on the left side of the **Manage Process Instances** page.

5.3. ABORTING A PROCESS INSTANCE USING BUSINESS CENTRAL

Use the following procedure to abort a process instance from Business Central:

Procedure

1. Click **Menu** → **Manage** → **Process Instances** to view the list of available process instances.
2. Select the process instance you want to abort from the list.
3. In the process details page, click the **Abort** button in the upper-right corner.

5.4. SIGNALING PROCESS INSTANCES FROM BUSINESS CENTRAL

You can signal a process instance from Business Central.

Prerequisite

- A project with a process definition has been deployed in Business Central.

Procedure

1. In Business Central, click **Menu** → **Manage** → **Process Instances**.
2. Locate the required process instance, click the  button and select **Signal** from the drop-down menu.
3. Fill the following fields:
 - **Signal Name:** corresponds to the **SignalRef** or **MessageRef** attributes of the signal. This field is required.



NOTE

You can also send a **Message** event to the process. To do so, add the **Message-** prefix in front of the **MessageRef** value.

- **Signal Data:** corresponds to data accompanying the signal. This field is optional.



NOTE

When using the Business Central user interface, you can only signal Signal intermediate catch events.

5.5. ASYNCHRONOUS SIGNAL EVENTS

When several process instances from different process definitions are waiting for the same signal, they are executed sequentially in the same thread. But, if one of those process instances throws a runtime exception, all the other process instances are affected and usually result in a rolled back transaction. To avoid this situation, Red Hat Process Automation Manager supports using asynchronous signals events for:

- Throwing intermediate signal events
- End events

5.5.1. Configuring asynchronous signals for intermediate events

Intermediate events drive the flow of a business process. Intermediate events are used to either catch or throw an event during the execution of the business process. An intermediate event handles a particular situation that occurs during process execution. A throwing signal intermediate event produces a signal object based on the defined properties.

You can configure an asynchronous signal for intermediate events in Business Central.

Prerequisites

- You have created a project in Business Central and it contains at least one business process asset.
- A project with a process definition has been deployed in Business Central.

Procedure

1. Open a business process asset.
2. In the process designer canvas, drag and drop the **Intermediate Signal** from the left toolbar.
3. Click the **Properties** icon on the upper-right side of the screen to open the **Properties** panel.
4. Expand the **Data Assignments** section.
5. Click the box under the **Assignments** sub-section. The **Task Data I/O** dialog box opens.
6. Click **Add** next to **Data Inputs and Assignments**
7. Enter a name of the throw event as **async** in the **Name** field.
8. Leave the **Data Type** and **Source** fields blank.
9. Click **OK**.

It will automatically set the executor service on each session. This ensures that each process instance is signaled in a different transaction.

5.5.2. Configuring asynchronous signals for end events

End events indicate the completion of a business process. All end events, with the exception of the none and terminate end events, are throw events. A throwing signal end event is used to finish a process or subprocess flow. When the execution flow enters the element, the execution flow finishes and produces

a signal identified by its **SignalRef** property.

You can configure an asynchronous signal for end events in Business Central.

Prerequisites

- You have created a project in Business Central and it contains at least one business process asset.
- A project with a process definition has been deployed in Business Central.

Procedure

1. Open a business process asset.
2. In the process designer canvas, drag and drop the **End Signal** from the left toolbar.
3. Click the **Properties** icon on the upper-right side of the screen to open the **Properties** panel.
4. Expand the **Data Assignments** section.
5. Click the box under the **Assignments** sub-section. The **Task Data I/O** dialog box opens.
6. Click **Add** next to **Data Inputs and Assignments**
7. Enter a name of the throw event as **async** in the **Name** field.
8. Leave the **Data Type** and **Source** fields blank.
9. Click **OK**.

It will automatically set the executor service on each session. This ensures that each process instance is signaled in a different transaction.

5.6. MANAGING TASKS

The **Task Inbox** can be accessed in Business Central by clicking **Menu → Track → Task Inbox**. Tasks that are assigned to the current user appear in the **Task Inbox**. You can click on a task to open and begin working on it.

A user task can be assigned to a particular user, multiple users, or to a group. If assigned to multiple users or a group it appears in the task Lists of all assigned users and any of the possible actors can claim the task. When a task is assigned to another user it no longer appears in your the **Task Inbox**.

Task Inbox



Active filters:

Save Filters | Clear All

Task	Process Definition Id	Status	Created On	Actions
Self Evaluation	evaluation	Reserved	07-Jun-2018 08:08:49	⋮

10 Items

« < 1 of 1 > »

Business administrators can view and manage all user tasks from the **Tasks** page in Business Central, located under **Menu → Manage → Tasks**. Users with the **admin** or **process-admin** role can access the **Tasks** page but do not have access rights to view and manage tasks by default.

To manage all the tasks, a user must be specified as a process administrator by defining any of the following conditions:

- User is specified as **task admin user**. The default value is **Administrator**.
- User belongs to the task administrators group. The default value is **Administrators**.

You can configure the user and user group assignment with the **org.jbpm.ht.admin.user** and **org.jbpm.ht.admin.group** system properties.

You can open view and modify the details of a task, such as the due date, the priority or the task description, by clicking on a task in the list. The following tabs are available in the task page:

- **Work:** Displays basic details about the task and the task owner. You can click the **Claim** button to claim the task. To undo the claim process, click the **Release** button.
- **Details:** Displays information such as task description, status, and due date.
- **Assignments:** Displays the current owner of the task and allows you to delegate the task to another person or group.
- **Comments:** Displays comments added by task user(s). It allows you to delete an existing comment and add a new comment.
- **Logs:** Displays task logs containing task life cycle events (such as task started, claimed, completed), updates made to task fields (such as task due date and priority).

You can filter the tasks based on the filter parameters available by clicking the  on the left side of the page. For more information about filtering, see [Chapter 5, Process instance filtering](#).

In addition to these, you can create custom filters to filter tasks based on the query parameters you define. For further information about custom tasks filters, see [Section 5.7, "Creating custom task filters"](#).

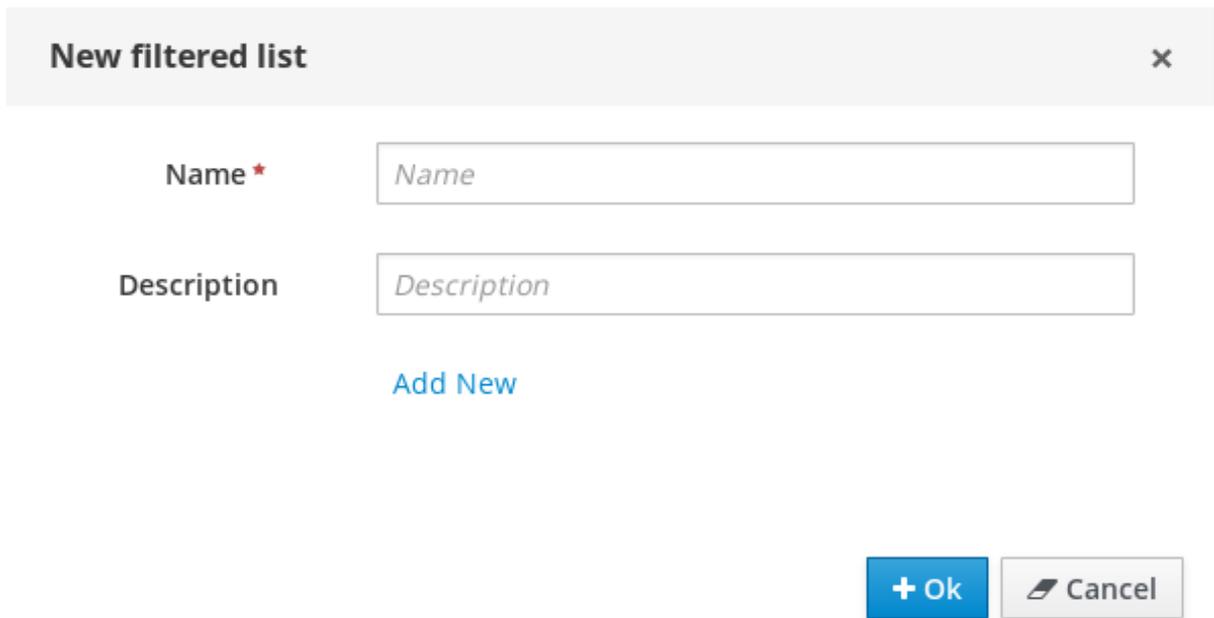
5.7. CREATING CUSTOM TASK FILTERS

You can create a custom task filter based on a provided query in the **Manage Tasks** page. To open this page, click **Menu → Manage → Tasks**.

The following procedure shows how to create a custom filter to be added to the list of saved filters.

Procedure: Filtering Tasks by Name

1. In Business Central, select **Menu → Manage → Tasks**
2. Click the  button on the left side of the **Manage Tasks** page.
3. Click **Advanced Filters** at the bottom of the filters list.
The **New filtered list** pop-up window is displayed.



New filtered list ×

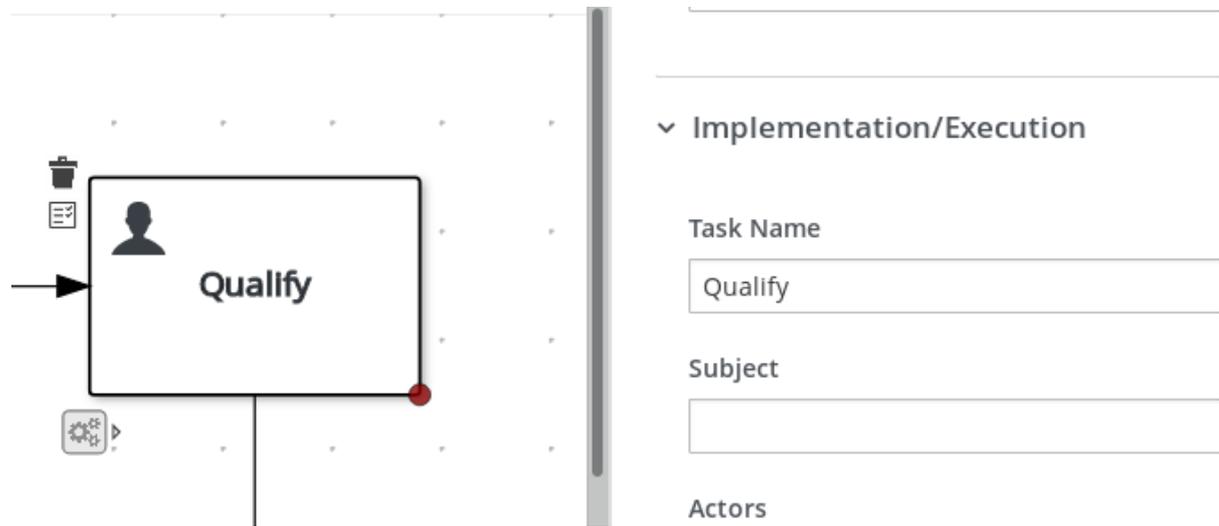
Name *

Description

[Add New](#)

+ Ok **Cancel**

4. Fill in the **Name** (this is the name of the saved filter).
5. Click **Add New**.
6. In the **Select column** drop-down menu, choose **name**.
The content of the drop-down menu changes to **name != value1**.
7. Click on the drop-down menu again and choose **equals to**.
8. Rewrite the value of the text field to the name of the task you want to filter. Note that the name must match the value defined in the business process. See the following screenshot:



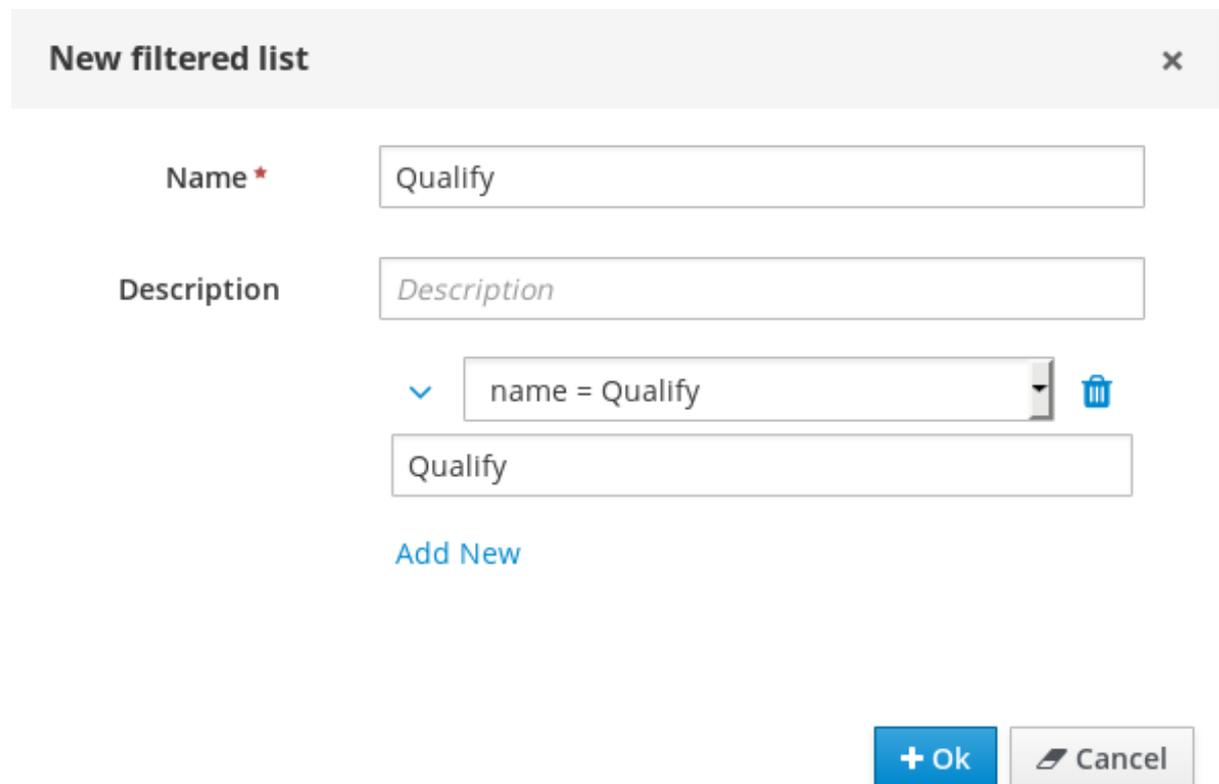
Implementation/Execution

Task Name
Qualify

Subject

Actors

9. Click Ok.



New filtered list ×

Name * Qualify

Description Description

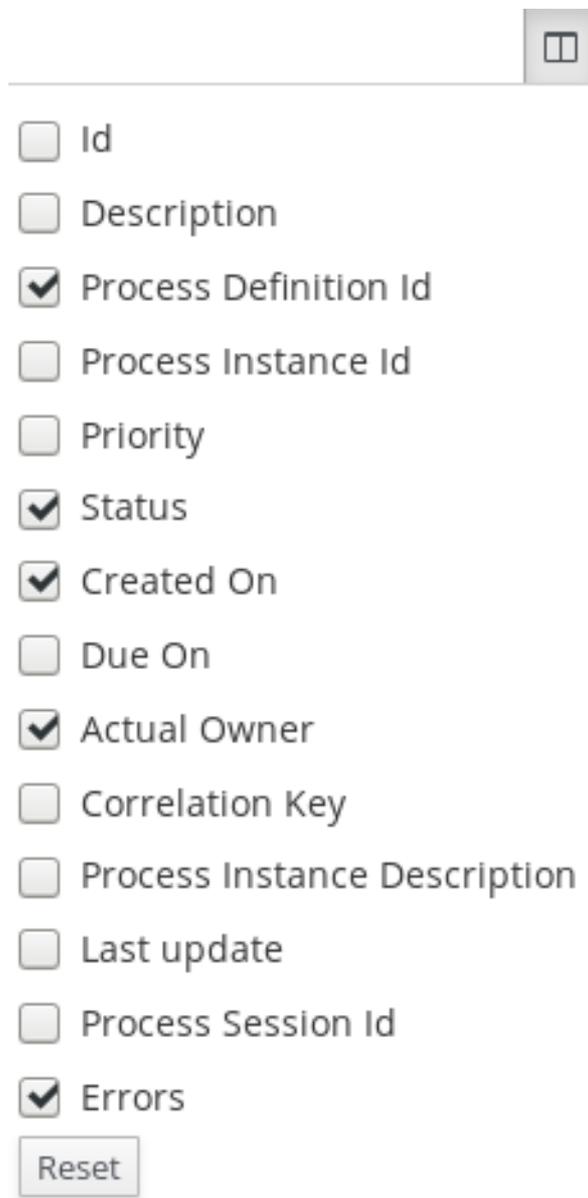
▼ name = Qualify 🗑️

Qualify

[Add New](#)

+ Ok Cancel

After the filter with a specified restriction is applied, the set of configurable columns is based on the specific custom task filter and contains the following column options:



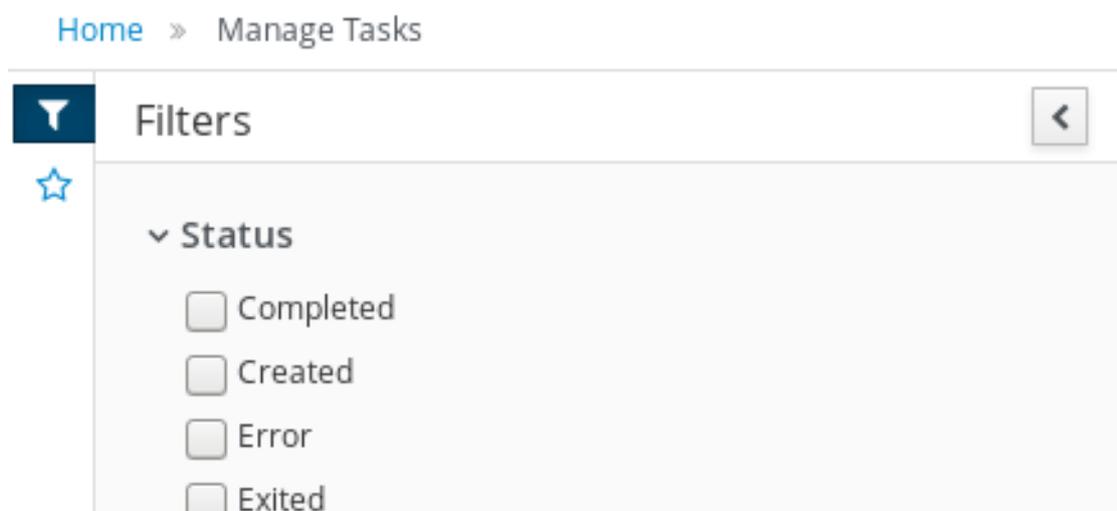
- Id
- Description
- Process Definition Id
- Process Instance Id
- Priority
- Status
- Created On
- Due On
- Actual Owner
- Correlation Key
- Process Instance Description
- Last update
- Process Session Id
- Errors

Reset

5.8. TASK FILTERING

Access the **Manage Tasks** list by clicking **Menu** → **Manage** → **Tasks**. This page provides a full list of tasks across all processes.

Figure 5.4. Filtering Tasks - Default View



[Home](#) > [Manage Tasks](#)

Filters

☆

▼ Status

- Created
- Completed
- Error
- Exited

Failed
 InProgress
 Obsolete
 Ready
 Reserved
 Suspended

Filter By

Id ▼

Filter By Id... ▲ ▼ ⓘ

Apply

Process Definition Id

Select ▼

Created On

Created On... 📅

Advanced Filters

The **Manage Tasks** page is only available to administrators and process administrators.

Tasks can be filtered on the following attributes:

Id

Filter by process instance ID.

Input: **Numeric**

Task

Filter by task name.

Input: **String**

Correlation key

Filter by correlation key.

Input: **String**

Actual Owner

Filter by the task owner.

The actual owner refers to the user responsible for executing the task. The search is based on user ID, which is a unique value and depends on the ID management system.

Input: **String**

Process Instance Description

Filter by process instance description.

Input: **String**

Status

Filter by task status. You can select more than one status to display results that meet any of the selected states. Removing the status filter displays all processes, regardless of status.

The following filter states are available:

- Completed
- Created
- Error
- Exited
- Failed
- InProgress
- Obsolete
- Ready
- Reserved
- Suspended

Process Name

Filter by process name.

Created On

Filtering by date or time.

This filter has the following quick filter options:

- Last Hour
- Today
- Last 24 Hours
- Last 7 Days

- Last 30 Days
- Custom
Selecting **Custom** date and time filtering opens a calendar tool for selecting a date and time range.

Figure 5.5. Search by Date

The interface displays a list of preset filters on the left: Last Hour, Today (selected), Last 24 hours, Last 7 days, Last 30 days, Custom, Apply, and Cancel. At the top, there are two date and time input fields. The first field is set to 'Aug 17, 2017 12:00 AM' and the second to 'Aug 17, 2017 11:59 PM'. Below these are time selection controls for hours (12 and 11), minutes (00), and AM/PM. The main area shows a calendar for July and August 2017. The date '17' in August is highlighted in blue.

July 2017							August 2017						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
25	26	27	28	29	30	1	30	31	1	2	3	4	5
2	3	4	5	6	7	8	6	7	8	9	10	11	12
9	10	11	12	13	14	15	13	14	15	16	17	18	19
16	17	18	19	20	21	22	20	21	22	23	24	25	26
23	24	25	26	27	28	29	27	28	29	30	31	1	2
30	31	1	2	3	4	5	3	4	5	6	7	8	9

CHAPTER 6. EXECUTION ERROR MANAGEMENT

When an execution error occurs the process stops and rolls back to the most recent stable state (the closest safe point) and continues its execution. If an error of any kind is not handled by the process the entire transaction rolls back, leaving the process instance in the previous wait state. Any trace of this is only visible in the logs, and usually displayed to the caller who sent the request to the process engine.

Users with process administrator (**process-admin**) or administrator (**admin**) roles are able to access error messages in Business Central, which has the following features:

- Better traceability
- Visibility in case of critical processes
- Reporting and analytics based on error situations
- External system error handling and compensation

Configurable error handling is responsible for receiving any technical errors thrown throughout the process engine execution (including task service). The following technical exceptions apply:

- Anything that extends **java.lang.Throwable**.
- Process level error handling and any other exceptions not previously handled.

There are several components that make up the error handling mechanism and allow a pluggable approach to extend its capabilities.

The process engine entry point for error handling is the **ExecutionErrorManager**. This is integrated with **RuntimeManager**, which is then responsible for providing it to underlying components - **KieSession** and **TaskService**. From the API point of view, **ExecutionErrorManager** gives access to:

- **ExecutionErrorHandler** - the primary mechanism for error handling.
- **ExecutionErrorStorage** - pluggable storage for execution error information.

6.1. VIEW PROCESS EXECUTION ERRORS IN BUSINESS CENTRAL

In Business Central, there are two pages where administrators are made aware of process errors: the **Manage Process Instances** page and the **Manage Execution Errors** page. These can be accessed using the following Business Central navigation:

- **Menu** → **Manage** → **Process Instances**.
- **Menu** → **Manage** → **Execution Errors**.

In the **Manage Process Instances** page, the **Errors** column displays the number of errors, if any, for the current process instance. Use the following process to view the error messages.

Prerequisite

An error has occurred while running a process in Business Central.

Procedure

1. In the **Process Instances** page, hover over the number shown in the **Errors** column.

2. Click on the number of errors shown in the **Errors** column to navigate to the **Manage Execution Errors** page.

The **Manage Execution Errors** page shows a list of errors for all process instances.

6.2. MANAGE EXECUTION ERRORS

By definition, every error that is caught and stored is unacknowledged, meaning that it is to be handled by someone or something (in case of automatic error recovery). Errors are filtered on the basis of whether or not they have been acknowledged. Acknowledging an error saves the user information and time stamp for traceability.

You can access the **Error Management** view at any time.

1. In Business Central, click **Menu** → **Manage** → **Execution Errors**.
2. Select an error from the list to open the **Details** tab. This displays information about the error or errors.
3. Click the **Acknowledge** button to acknowledge and clear the error. The error can still be viewed later by selecting **Yes** on the **Acknowledged** filter in the **Manage Execution Errors** page.
4. If the error was related to a task, a **Go to Task** button is displayed.
Click the **Go to Task** button to view the associated job information in the **Manage Tasks** page.

The **Manage Tasks** page allows you to restart, reschedule, or retry the corresponding task.

6.3. ERROR FILTERING

Access the **Execution Errors** List by clicking **Menu** → **Manage** → **Execution Errors**.

Figure 6.1. Filtering Errors - Default View

[Home](#) » Manage Execution Errors

Filters

▼

☆

▼ Type

- DB
- Task
- Process
- Job

Filter By

Process Instance ID ▼

Filter By Process Instance Id... ▲ ▼ ⓘ

Apply

Acknowledged

Select ▼

Error Date

Error Date... 📅

[Advanced Filters](#)

Execution errors can be filtered on the following attributes:

Type

Filter by errors by type. You can select multiple type filters. Removing the status filter displays all processes, regardless of status.

The following filter states are available:

- DB
- Task
- Process
- Job

Process Instance Id

Filter by process instance ID.

Input: **Numeric**

Job Id

Filter by job ID. The job id is created automatically when the job is created.

Input: **Numeric**

Id

Filter by process instance ID.

Input: **Numeric**

Acknowledged

Filter errors that have been or have not been acknowledged.

Error Date

Filtering by the date or time that the error occurred.

This filter has the following quick filter options:

- Last Hour
- Today
- Last 24 Hours
- Last 7 Days
- Last 30 Days
- Custom
Selecting **Custom** date and time filtering opens a calendar tool for selecting a date and time range.

Figure 6.2. Search by Date

Last Hour

Today

Last 24 hours

Last 7 days

Last 30 days

Custom

Apply

⌚ 12 : 00

AM

⌚ 11 : 00

PM

< July 2017

Su	Mo	Tu	We	Th	Fr	Sa
25	26	27	28	29	30	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

August 2017

Su	Mo	Tu	We	Th	Fr	Sa
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2
3	4	5	6	7	8	9

APPENDIX A. VERSIONING INFORMATION

Documentation last updated on Tuesday, May 28, 2019.