



BPA
Platform

Technical Overview

Run Crystal Report Tool

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Introduction

The **Run Crystal Report** tool automates the execution of SAP® Crystal Reports®. Recordsets and variables from other task steps can be consumed to dynamically populate the report at runtime. In addition, where the report requires access to a database, security credentials can be passed from in the **Run Crystal Report** step.

New Crystal Reports are imported at task design time, but can be edited through the task step if the Crystal Reports Designer is installed locally.

Features

- ▶ Crystal Reports accessed via interface within BPA Platform
- ▶ All the power of the Crystal Reporting engine at your disposal
- ▶ Import and use existing Crystal reports
- ▶ Map dynamic data to the report and any nested sub reports as run-time parameters
- ▶ Report Preview in Crystal Reports
- ▶ Data security parameters passed to the report at run-time







Technical Summary

Working with Other Tools

The **Run Crystal Report** tool can directly interact with the following tools:

Consumed from Other Tools

The **Run Crystal Report** tool can consume objects outputted by the following tools:

Icon	Tool Name	Tool Category
	Database Query (ODBC)	Input and Data Connectors
	Database Query (OLEDB)	Input and Data Connectors
	Database Query (HANA)	Input and Data Connectors
	Import Flat File	Input
	Convert XML to Recordset	Format
	Filter Data	General








Objects Consumed

The following objects, outputted by the above tools, can be directly consumed by the **Run Crystal Report** tool:

- ▶ **Recordset** — Tabular data from any BPA Platform tool capable of exposing such data (see above)

Exposed to Other Tools

The Run Crystal Report tool's output can be directly consumed by the following tools:

Icon	Tool Name	Tool Category
	Print Document	Output
	Save File	Output
	Send Email (SMTP)	Output
	Send Text Message	Output
	Transfer File (FTP)	Output
	Call COM Object	Execute
	Run External Program	Execute

Objects Exposed

The Run Crystal Report tool outputs the following objects which can be consumed by the above tools:

- ▶ **RecordSource** — If an **Input Recordset** has been selected (see [General tab](#)), this contains the columns included in the recordset
- ▶ **<type>Data** — All available output data types that Crystal Reports support:
 - **FormatData** — Single HTML 3.2 output
 - **PagedData** — Paginated HTML 3.2 output
 - **FormatData4** — Single HTML 4.0 output
 - **PagedData4** — Paginated HTML 4.0 output
 - **PrintData**
 - **PDFData**
 - **RichTextData**
 - **CSVData**
 - **TabSepData**
 - **RecordStyleData**

- **ExcelData**
- **WinWordData**
- **XMLData**

- ▶ **Step Properties** — Standard step properties are available allowing you to use statistical data of the tool

Global Configuration

The **Run Crystal Report** tool does not require any global configuration. However, the following must be met before you can use the tool in a task:

- ▶ Crystal Reports Runtime version 13.0.30 must be installed — use the Configurator to download and install

NOTE: BPA Platform must be licensed for Crystal Reports to be able to download the runtimes — refer to your account manager or business partner if you're unsure about your licensed features.

- ▶ Reports created in Crystal Reports version 10, 11, 12, 2008, 2011, 2013, 2016, or 2020 are accepted

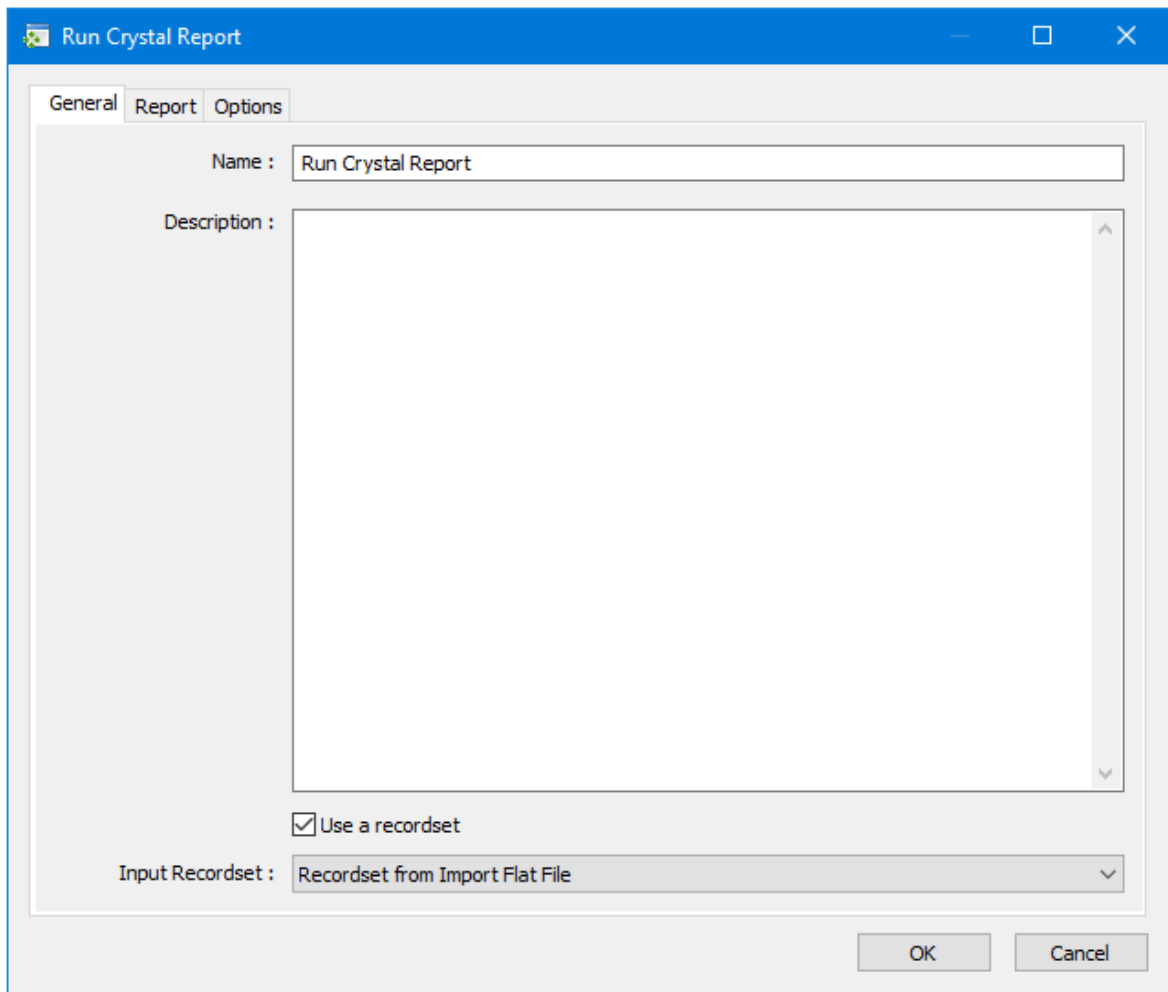
Step Configuration

To add a new **Run Crystal Report** step to an existing task, you either:

- ▶ Click and drag the **Run Crystal Report** icon from the **Task Browser** to the task **Design** area.
- ▶ From the task's **Design** tab, right-click on empty space and select **New > Format > Run Crystal Report**.

For a detailed description of how to create new tasks, refer to the product help.

About the General Tab



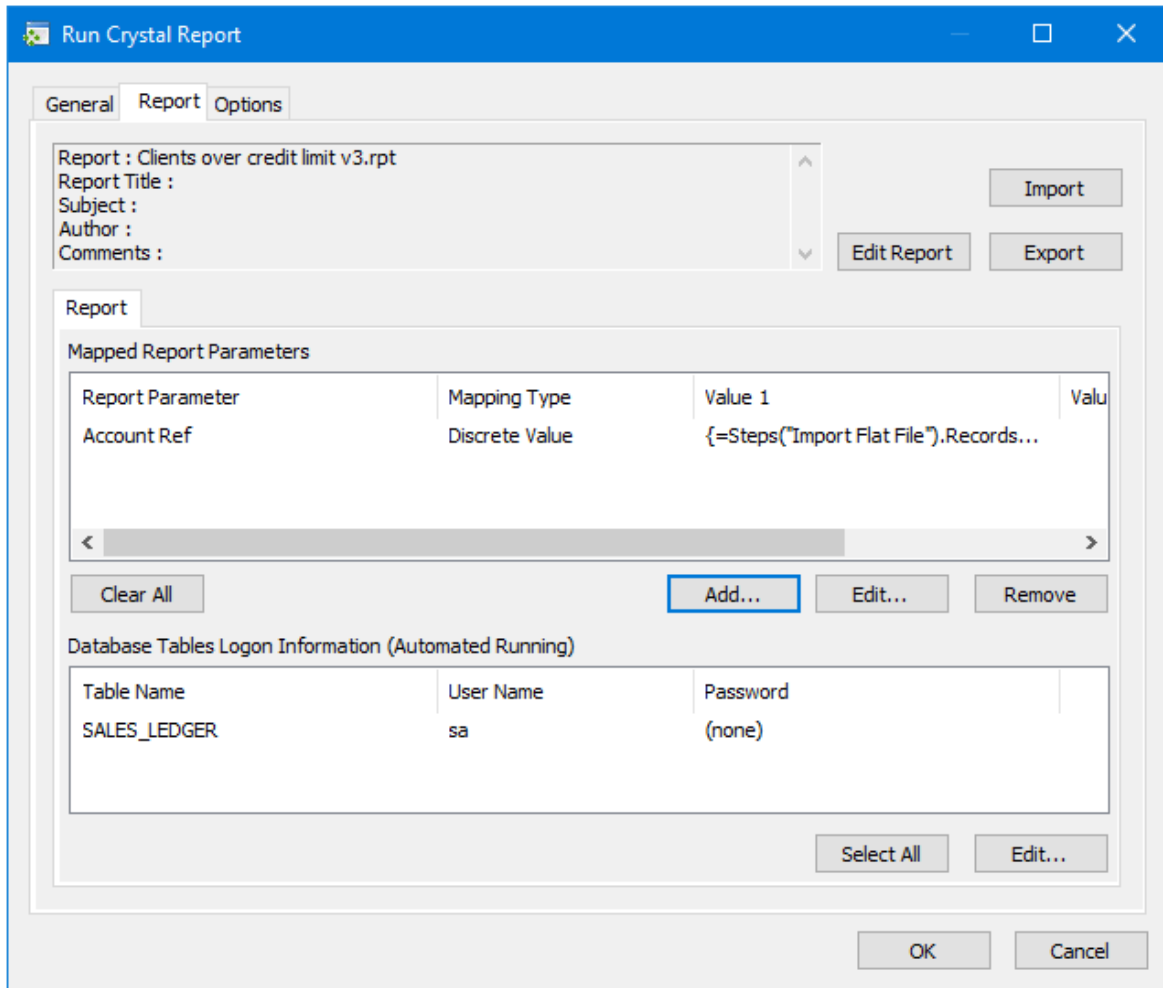
The **General** tab is used to **Name** and describe (**Description**) this task step.

TIP: If this task instance makes use of two or more **Run Crystal Report** steps, ensure the **Name** used is unique for each individual step.

- ▶ **Use a Recordset** — Enable this parameter if recordset data from a previous task step is required to map to report parameters
 - **Input Recordset** — Contains all available recordsets from steps previously created in the task

About the Report Tab

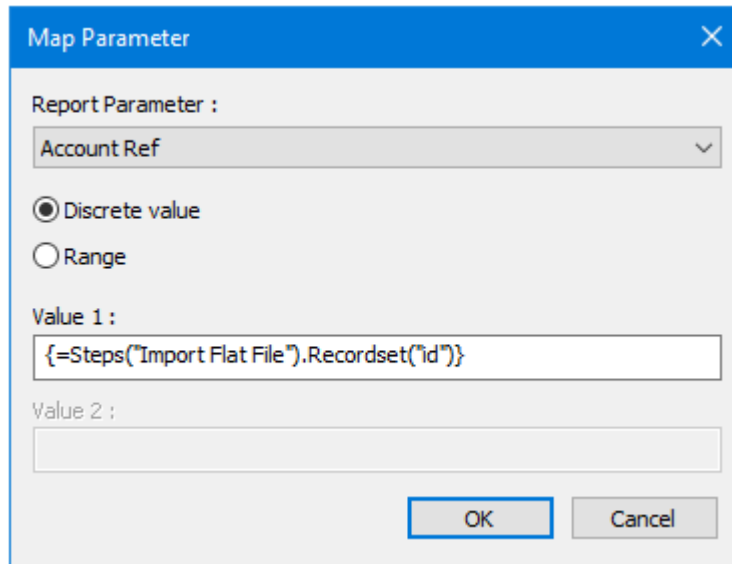
Use the **Report** tab to select and setup the Crystal Report template for this step.



Click **Import** to import an existing Crystal Report template. The report properties — **Title**, **Author**, and so on — are displayed after a successful import. To make any changes to the report template, click **Edit Report** — the Crystal Reports Designer is launched. Note that any changes made in the Designer means that you must re-import the saved template. Use **Export** to create another copy of the imported report template.

Mapping Report Parameters

When building Crystal Report templates, you can add placeholders (report parameters) for where BPA Platform data should appear. If your template makes use of such report parameters, you must map the relevant BPA Platform task data to it. From the **Mapped Report Parameters** panel, click **Add**.



Report Parameter displays those placeholders in the report template.

Choose the **Mapping Type**:

- ▶ **Discrete value** maps what is specified in **Value 1**. If required, drag-and-drop recordset data, variables, or step properties to create a dynamic mapping based on task run-time data.
- ▶ **Range** maps the range between what is specified in **Value 1** and **Value 2**. If required, drag-and-drop recordset data, variables, or step properties to create a dynamic mapping based on task run-time data.

Database Tables Logon Information

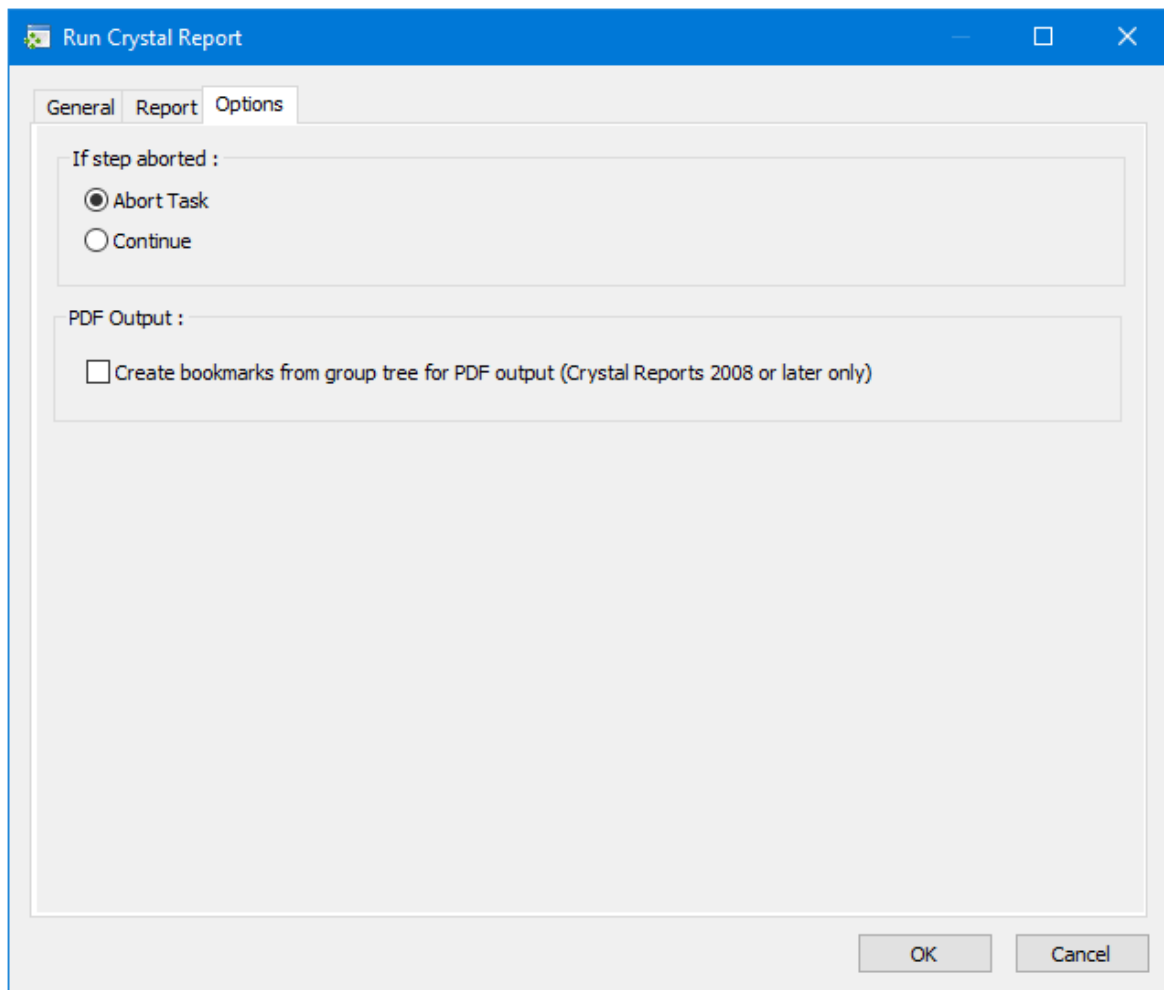
The **Run Crystal Report** step cannot use the database connection from previous task steps to populate report fields. Instead, it relies on its own isolated database connection, referenced in the Crystal Reports Designer. If this connection requires authentication, you must enter the security credentials here. All database connection in this report template are shown in the **Database Tables Logon Information (Automated Running)** panel. Highlight each connection in turn and click **Edit** to enter the relevant security credentials.

Embedded Reports

Should the report template have embedded sub-reports these are displayed in their own **Report** tab. You must complete the configuration for each sub-report (as above).

About the Options Tab

The **Options** tab allows you to define how errors in this step are handled at task runtime.



If the step is aborted, you can choose to **Continue** processing onto the next step in the task, or terminate the whole task immediately (**Abort Task**).

If the **Run Crystal Report** tool detects Crystal Reports Developer Edition 2008 or later installed locally, you can choose whether to **Create bookmarks from group tree for PDF output**. With this option enabled, the PDF file available in the **PDFData** task browser property creates bookmarks for each report template's group header.

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