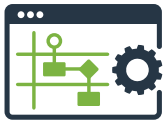

BPA
Platform

Technical Overview

Call Stored Procedure (OLEDB) Tool

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Contents

Introduction

The **Call Stored Procedure (OLEDB)** tool executes database stored procedures and functions to provide read, write, and automated data processing.

If a procedure generates a recordset, the task step can return this to other steps for further processing. Conversely, the task step can consume a recordset to enable multiple procedure calls or execute a single procedure. Procedure calls can be passed static or dynamic parameters to control the precise nature of the call being made.

The features provided by the **Call Stored Procedure (OLEDB)** tool mean that it may be used as a Data Connector, Input, Output, or Execute type step within a task.

The tool supports any RDBMS with a functional OLEDB provider, enabling native support for a multitude of data sources.

Features

- Calls stored procedures from a multitude of data sources
- Allows manual or dynamic inputting of procedure parameters
- Contains memory features to memorise task data created at run-time

Technical Summary

Working with Other Tools

The **Call Stored Procedure (OLEDB)** tool can interact directly with the following tools, whether by exposing information to it or consuming information from it:

Consuming from Other Tools

The **Call Stored Procedure (OLEDB)** tool can consume output from the following tools:

Icon	Tool Name	Tool Category
	Import Flat File	Input
	Convert XML to Recordset	Format
	Create Workflow Job	Format
	Format as Flat File	Format
	Format as HTML	Format
	Format as HTML Pro	Format
	Format as Text	Format
	Run Crystal Report	Format
	Run Microsoft Reporting Services	Format
	Run Microsoft Word (Merge)	Format
	Filter Data	General

Objects Consumed

The following objects can be consumed by a **Call Stored Procedure (OLEDB)** step:

- **Recordset** — Tabular data from any BPA Platform tool capable of exposing such data (see above)
- **Variables (Text)** — Textual data is extracted from selected Variables
- **Documents (Text)** — Plain text documents
- **Documents (HTML)** — Standalone HTML pages
- **Documents (Paged HTML)** — Paginated HTML files
- **Documents (PDF)** — One or multiple PDF documents
- **Documents (RTF)** — Rich text documents
- **Document (XML)** — One or multiple XML documents
- **Documents (CSV)** — Output from a **Run Crystal Report** step

Exposing to Other Tools

The following tools can consume output from a **Call Stored Procedure (OLEDB)** task step. Note that the below depends whether recordsets, variables, or XML is outputted.

Icon	Tool Name	Tool Category
	**Convert Recordset to XML**	Format
	**Convert XML to Recordset**	Format
	**Create Workflow Job**	Format
	**Transfer File (FTP)**	Output
	**Run External Program**	Execute
	**Filter Data**	General

Objects Exposed

The following objects, exposed by the **Call Stored Procedure (OLEDB)** step, 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
- **DocumentSource** — If a **Document Source** has been selected (see *General tab*), this contains the data in the document as recordset columns
- **Memory Definitions** — If configured, this is a list of **Memory Definitions** created for the step and the recordset columns to be memorised for each one
- **Step Properties** — Standard step properties are available allowing you to use statistical data of the tool

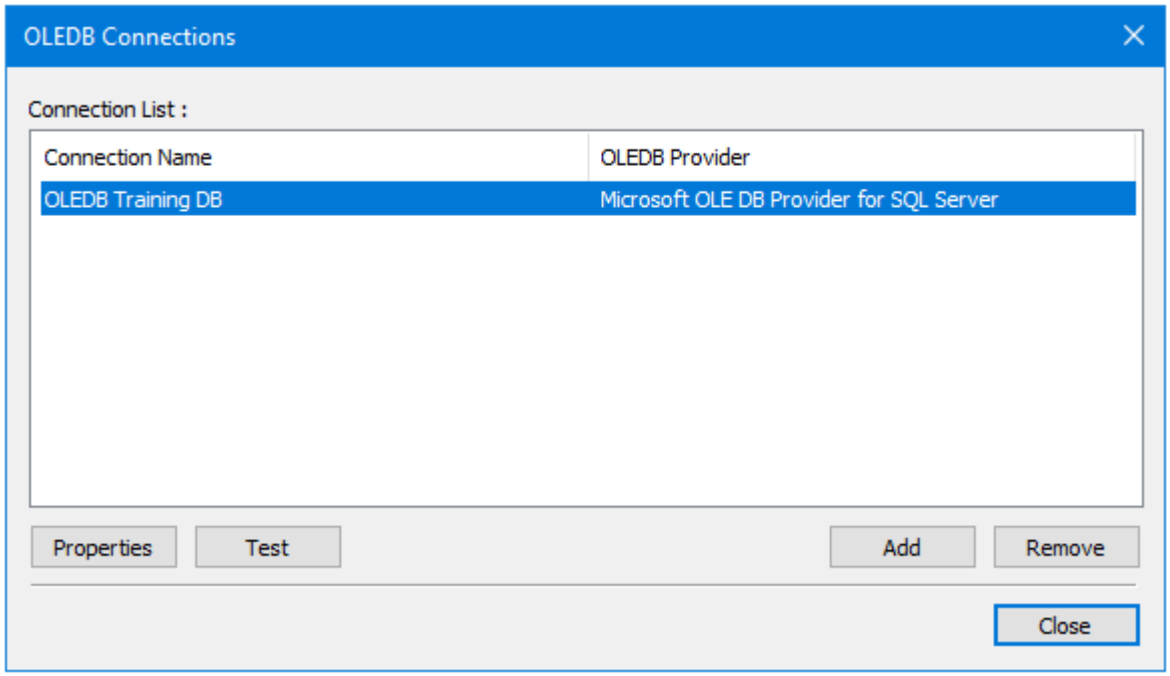
Prerequisites

The **Call Stored Procedure (OLEDB)** tool requires the following:

- Functional OLEDB provider which can expose procedures and or functions — see *Adding OLEDB Connections*

Adding OLEDB Connections

Before adding the **Call Stored Procedure (OLEDB)** tool to a task, connections to OLEDB data sources must be configured. Once configured, all connections can be used by any **Call Stored Procedure (OLEDB)** step.



You open this interface from the resources tree — expand ***System*** **>** ***Tools*** **>** ***Input***, ***Data Connectors***, ***Output***, or ***Execute*** and double-click ***Call Stored Procedure (OLEDB)*** in the items list.

> **NOTE:** It doesn't matter which tool category you select the **Call Stored Procedure (OLEDB)** tool from, the same interface is opened.

Use **Properties** to edit an existing connection, **Remove** to delete an existing connection, and **Test** to ensure the highlighted connection can be successfully made.

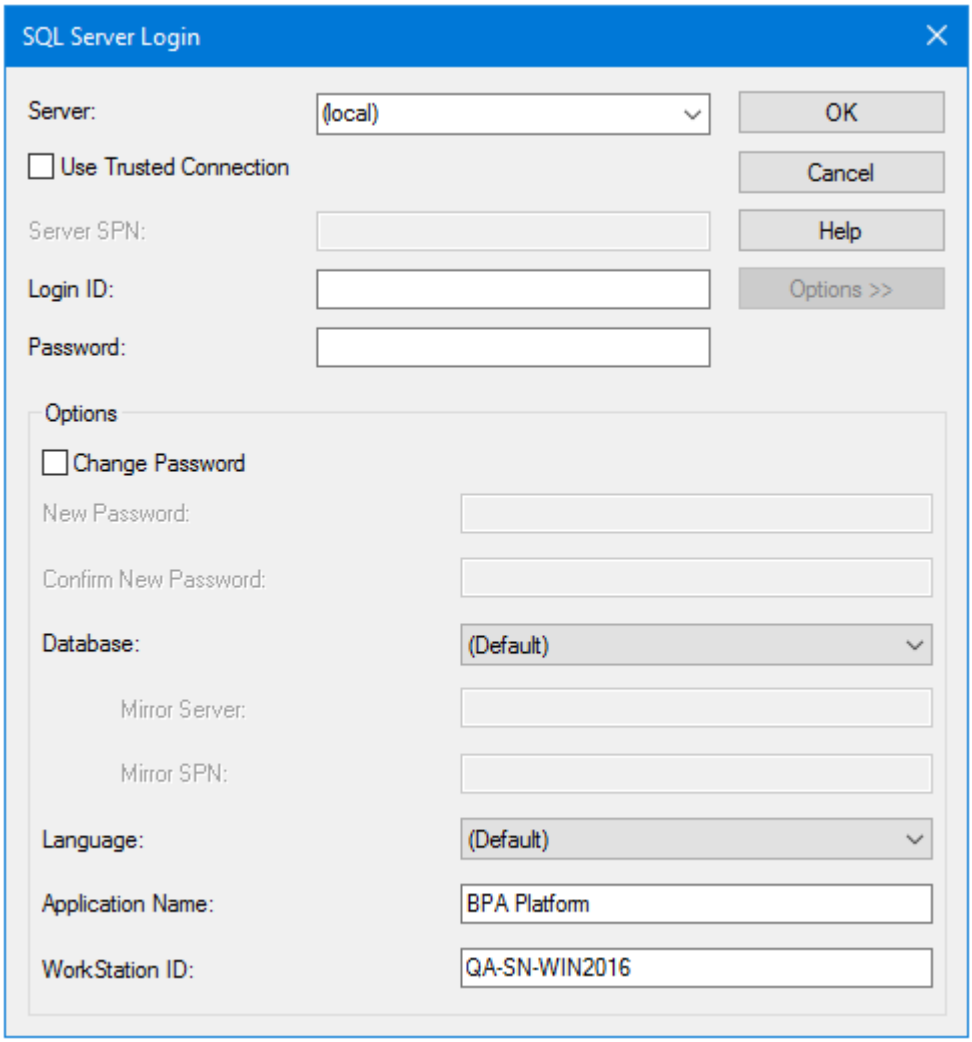
Click **Add** to create a new connection; select the required OLEDB driver or data source.

> **NOTE:** You may be restricted as to the number of OLEDB connections you can create. For more information, or consult your Codeless Platforms account manager or partner.

Selecting an OLEDB Driver

NOTE: Any machine hosting a BPA Platform client that runs tasks using this connection, including the BPA Platform server, must have the selected driver installed on the machine. Without the driver, the task will fail.

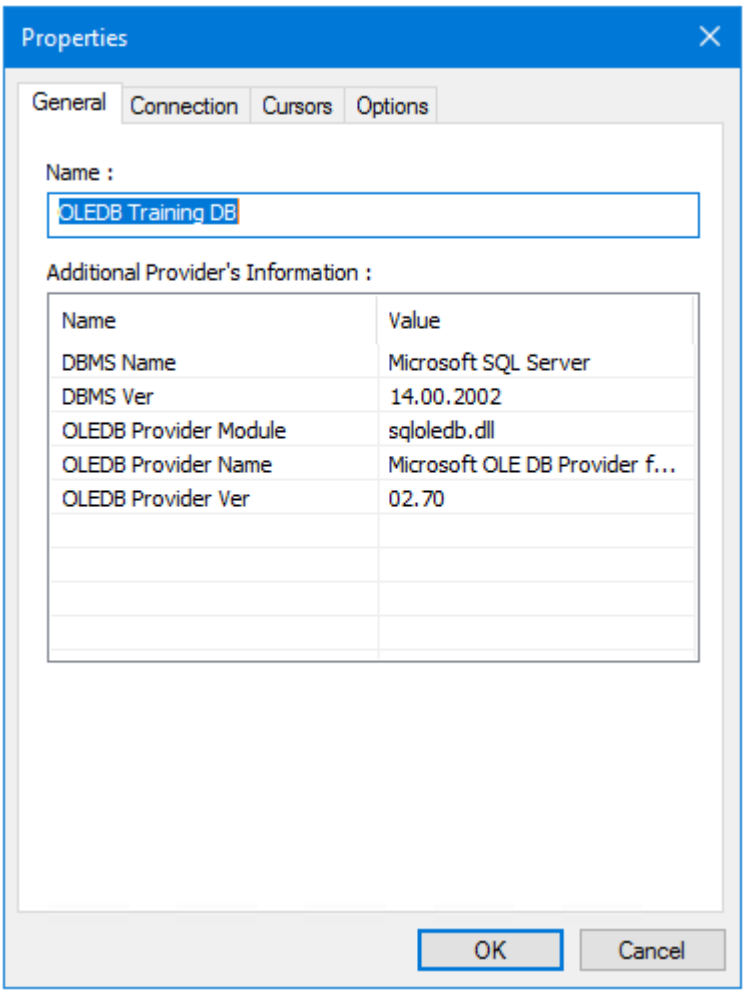
Once a driver has been selected, add the connection details to the database. The configuration interface is different for every driver available; the following example is shown when an SQL Server Native Client driver has been selected:



Editing OLEDB Connection Properties

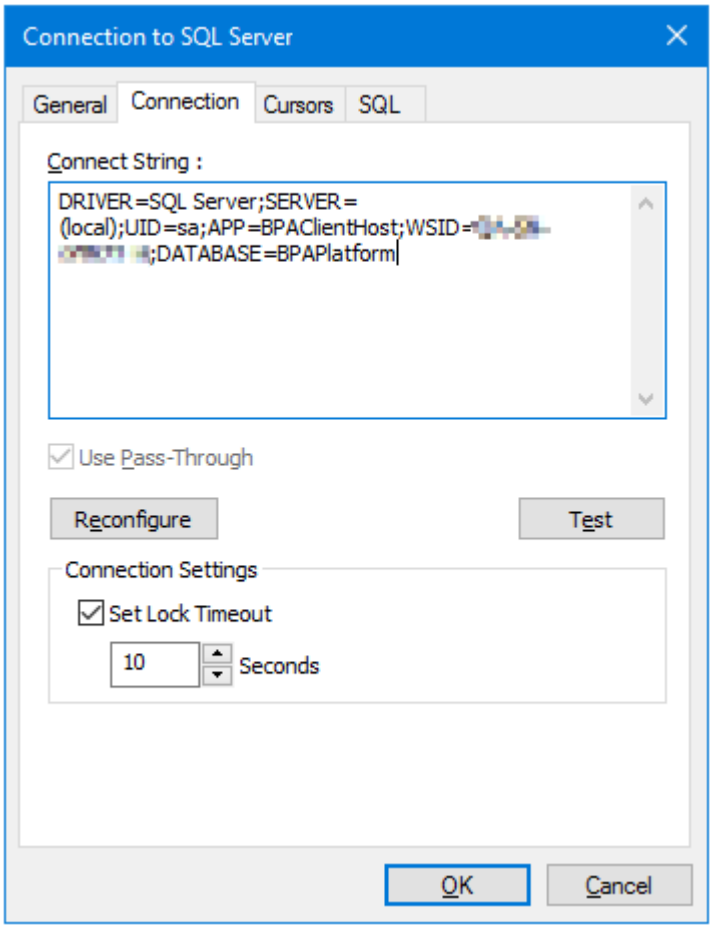
After establishing the basic connection to the relevant OLEDB driver or data source, you can add more advanced configuration, if required. Highlight the relevant connection and click **Properties**.

General Tab Properties



- **Name** — The connection name
- **Additional Providers Information** — Where available, additional information for the connection is displayed

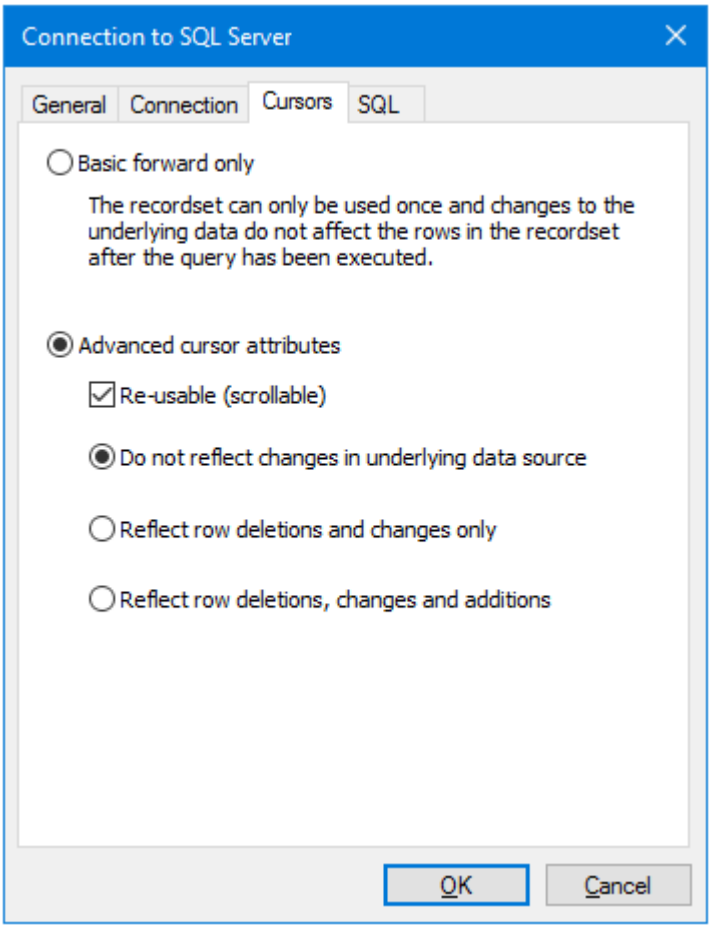
Connection Tab Properties



- **Connection String** — Contains the full connection string.
- **Use Pass-Through** — This property is only available with some drivers. You can choose to make the connection directly to the driver (enabled), or use the Microsoft Data Access Objects (DAO) API to make the connection to the driver.
- **Reconfigure** — If any changes are required, use **Reconfigure** to open the configuration interface.
- **Test** — Tests the connection to the database.
- **Connection Settings** — If required, you can set a time-out period for connecting to the database in **Seconds**.

Cursors Tab Properties

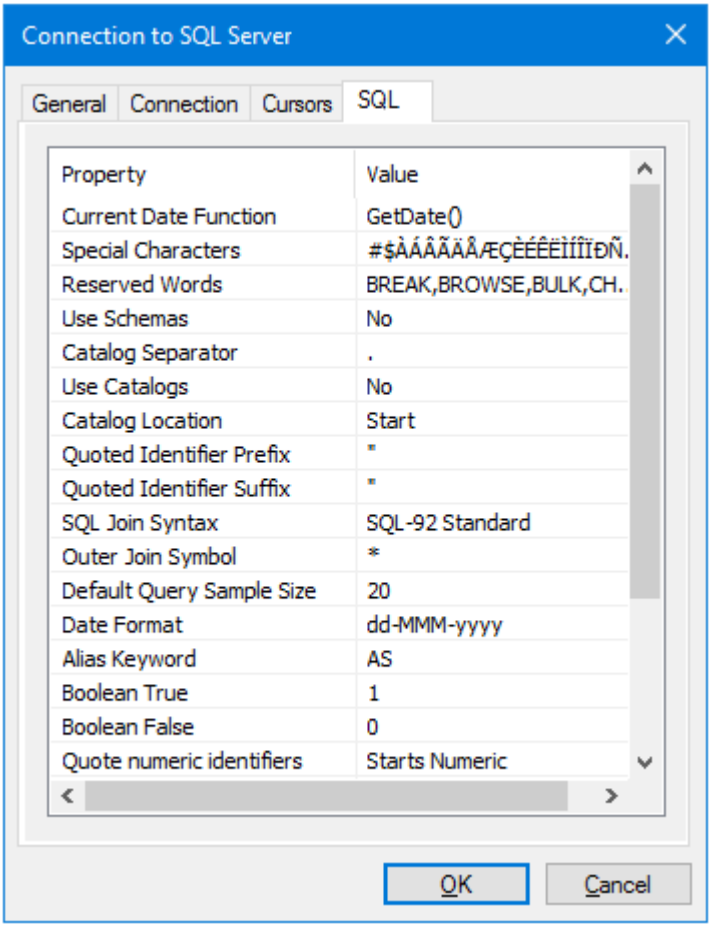
Use the properties in the **Cursors** tab to change the type of database cursor used when executing queries.



- **Basic forward only** — Use this option where you expect the task to only use the results from the **Call Stored Procedure (OLEDB)** step once. The result set from the queried rows can only be read top-to-bottom. The cursor cannot be reset so the query cannot be re-used. All drivers support this mode.
- **Advanced cursor attributes**
  - **Re-usable (scrollable)** — This property allows the cursor to move backwards and forwards through the result set, thus the **Call Stored Procedure (OLEDB)** output can be consumed by multiple steps in the same task.
  - **Do not reflect changes in underlying data source** — The rows returned by a query are cached independently at the time the query is executed. When the result set is actually read, any changes made to the source data since the query was executed are not reflected in the result set.
  - **Reflect row deletions and changes only** — Any changes made to the source data since the query was first executed (updates and deletes to rows in the result set only) are reflected.
  - **Reflect row deletion, changes and additions** — Any changes made to the source data since the query was first executed (updates, inserts, and deletes) are reflected in the result set.

SQL Tab Properties

The properties available in the **SQL** tab set the supported rules for the selected OLEDB driver for the SQL statements.



For more information, refer to your OLEDB driver documentation.

Step Configuration

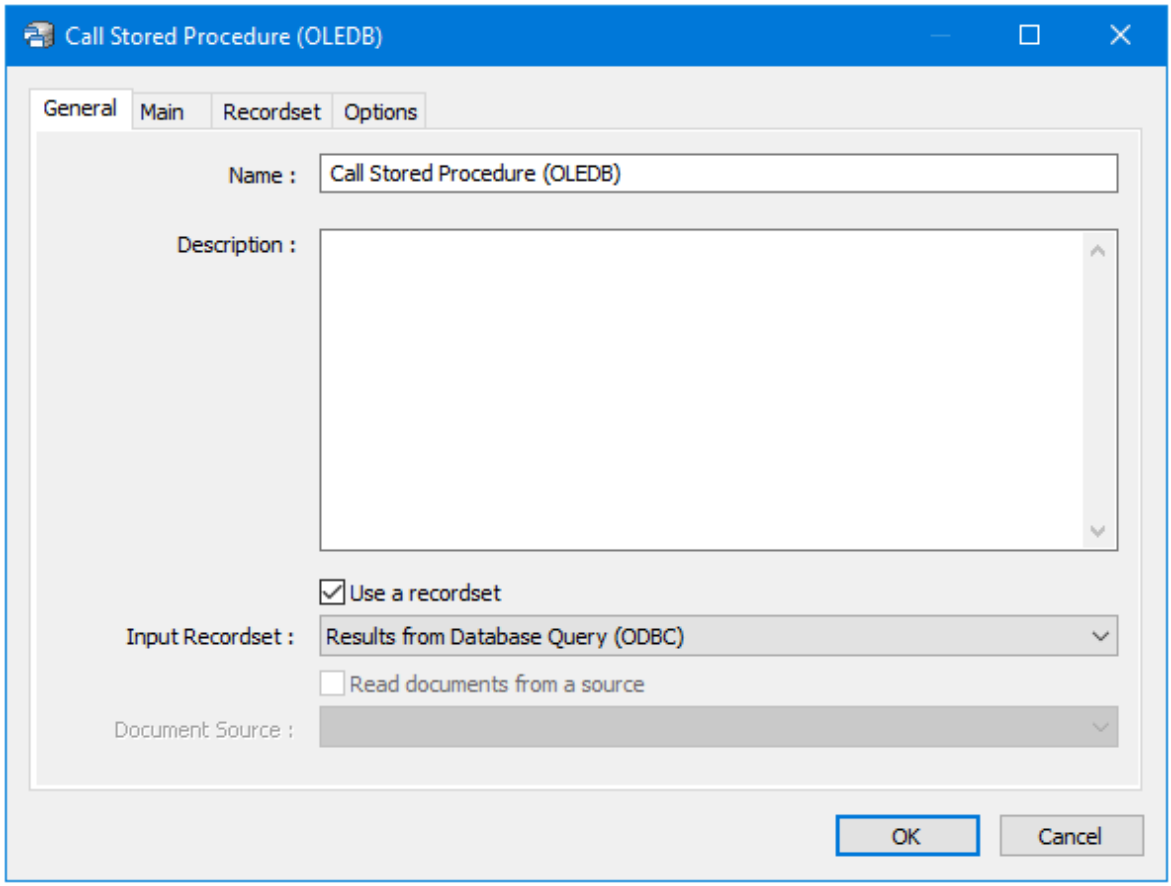
Even though the **Call Stored Procedure (OLEDB)** tool is found under three different tool categories, using one category over another does not affect the functionality of the tool.

To add a new **Call Stored Procedure (OLEDB)** step to an existing task, you either:

- Click and drag the **Call Stored Procedure (OLEDB)** icon from the **Task Browser** to the task **Design** area.
- From the task's **Design** tab, right-click on empty space and select ***New > then either Data Connectors > Call Stored Procedure (OLEDB), Execute > Call Stored Procedure (OLEDB), Input > Call Stored Procedure (OLEDB), or Output > Call Stored Procedure (OLEDB).***

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

About the General Tab



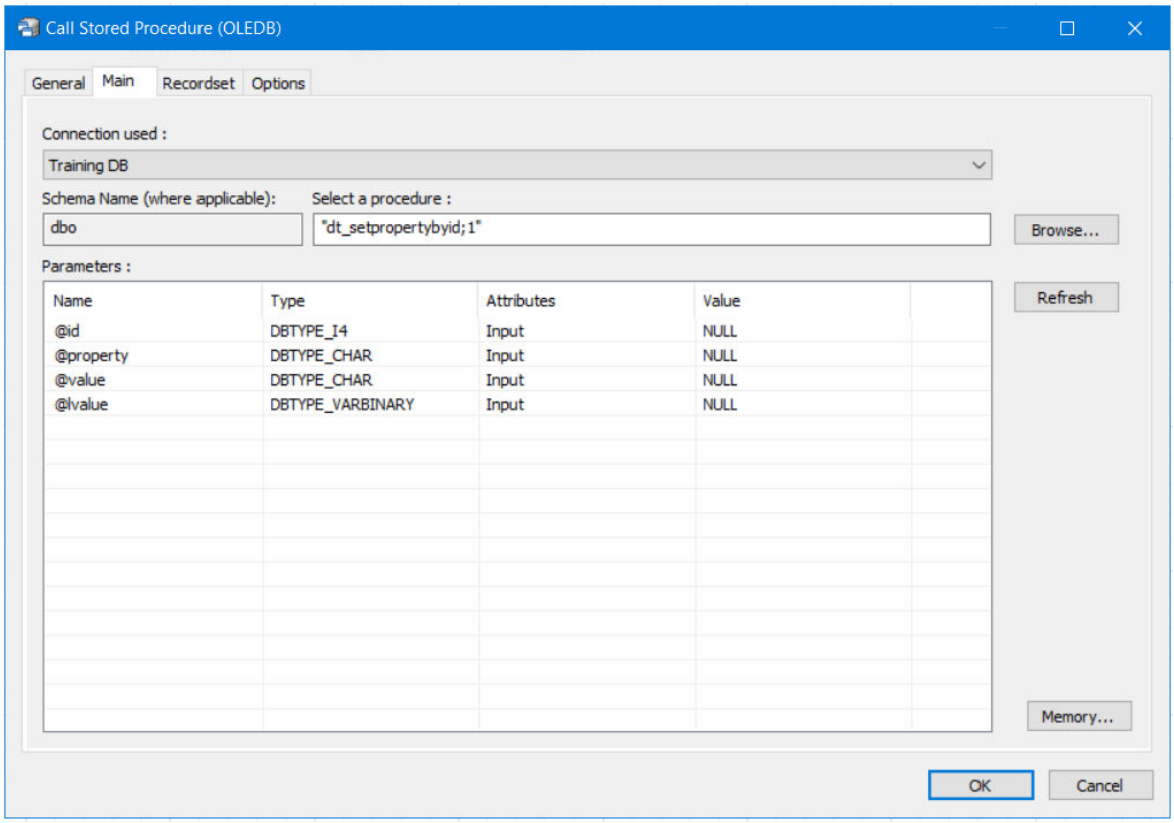
The **General** tab is used to **Name** and describe (**Description**) this task step.

> **TIP:** If this task instance makes use of two or more **Call Stored Procedure (OLEDB)** 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 when executing the stored procedure
  - **Input Recordset** — Contains all available recordsets from steps previously created in the task
- **Read documents from a source** — Enable this parameter if document data from a Format task step is required when executing the stored procedure
  - **Document Source** — Contains all available documents from Format steps previously created in the task; note that the document format is displayed after the step name.

About the Main Tab

Use the **Main** tab to choose the relevant stored procedure for this task step.



Choose the OLEDB **Connection used** for this task step— these are the connections created in the *global configuration*.

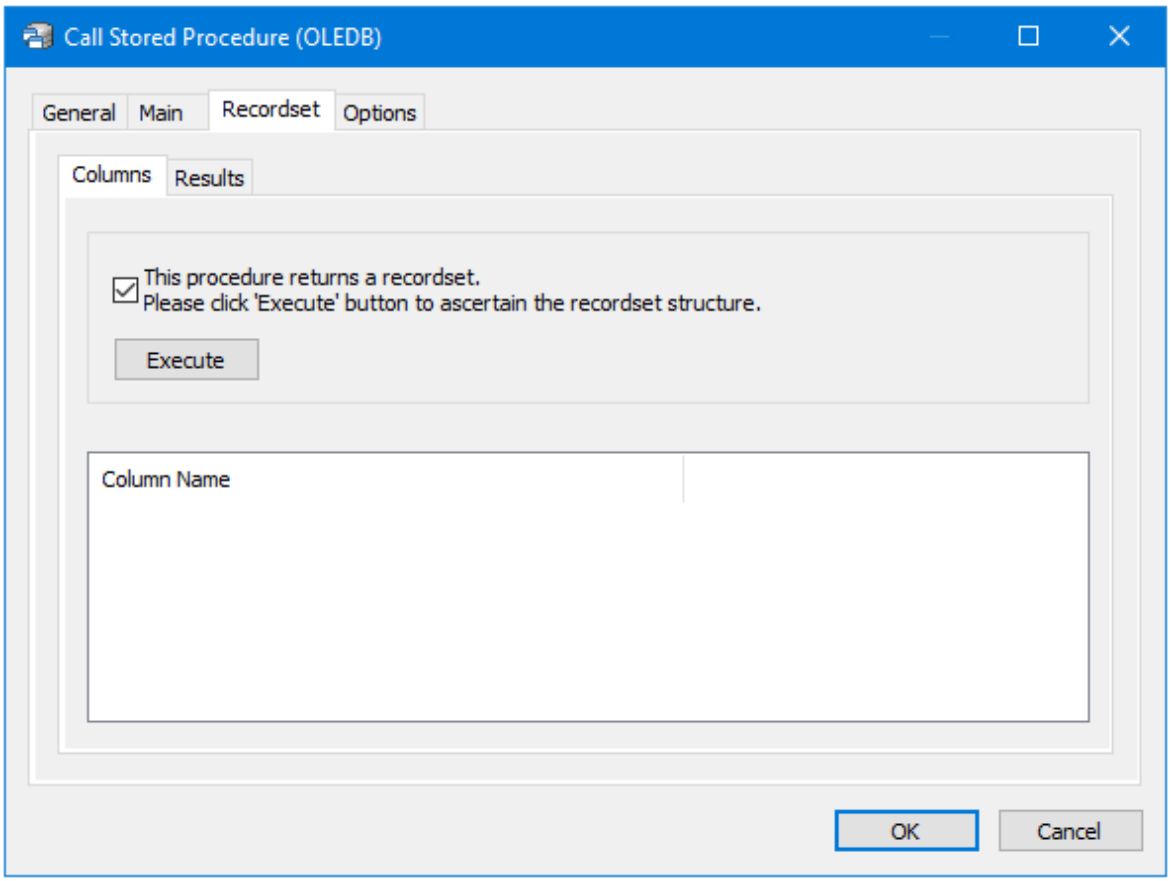
The **Call Stored Procedure (OLEDB)** tool queries the database and retrieves all available stored procedures— click **Browse** to choose the required procedure. Where applicable, the database **Schema Name** of the selected stored procedure will be displayed.

Parameters associated with the procedure are displayed in this table. Drag-and-drop variables, recordset columns, or step properties to the **Value** column to map to the procedure parameters at task run-time. If any new parameters were added since the **Call Stored Procedure (OLEDB)** step was first added to the task, click **Refresh** to pull those into this task step.

Use **Memory** to memorise some or all of the step output for use in other task steps. This is particularly useful when the **Call Stored Procedure (OLEDB)** step is called multiple times — use **Memory** to compare the record or document previously processed to the new record or document currently being processed to avoid duplicates.

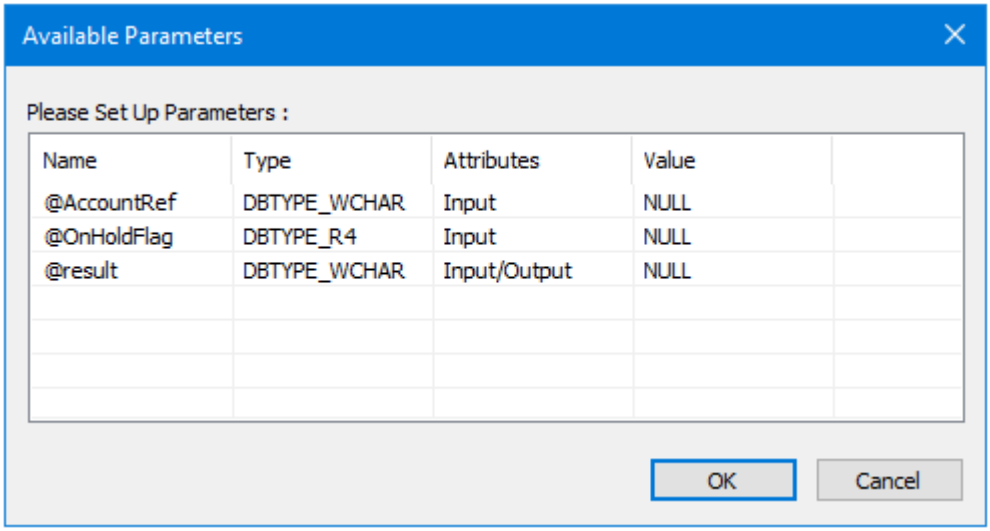
About the Recordset Tab

If the stored procedure selected in the *Main tab* only writes data to the database, the parameters in this tab can be ignored. If the stored procedure reads data, use this tab to check the recordset structure created by the **Call Stored Procedure (OLEDB)** tool:

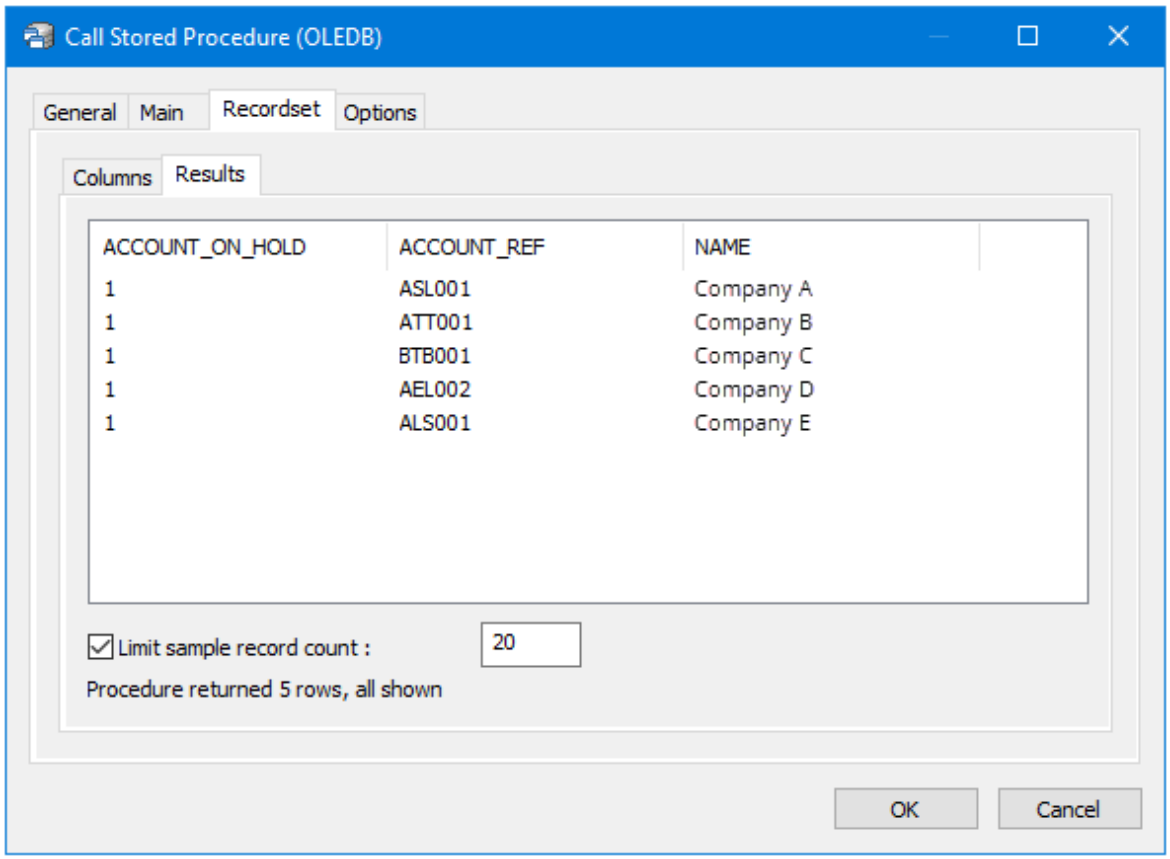


Enable **This procedure returns a recordset** and click **Execute**. You are prompted for confirmation to execute the procedure; click **Yes**.

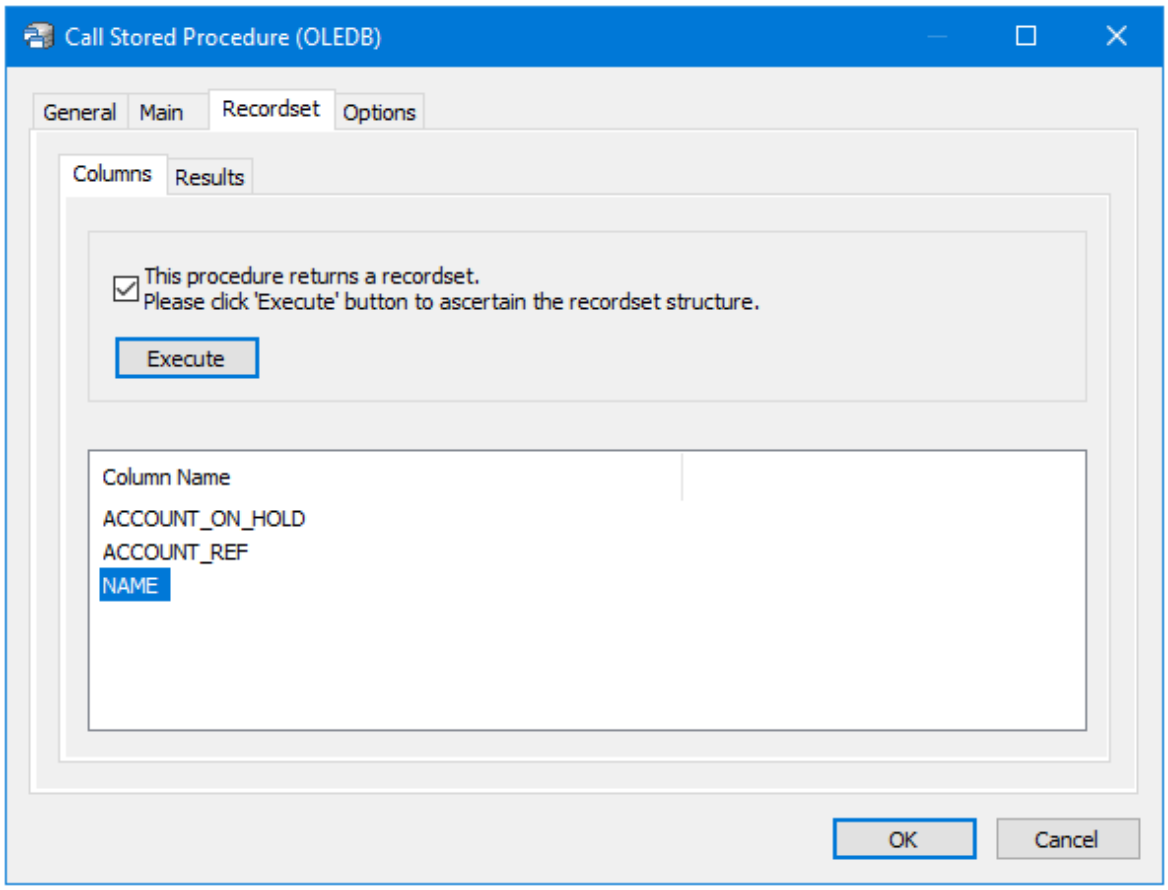
If the stored procedure requires parameter values to execute the procedure, you are prompted to enter them:



At this point, you cannot use variables, recordset columns, or step properties. In **Value**, type in the test parameter values where required. The procedure is executed and the results displayed in the **Results** tab:



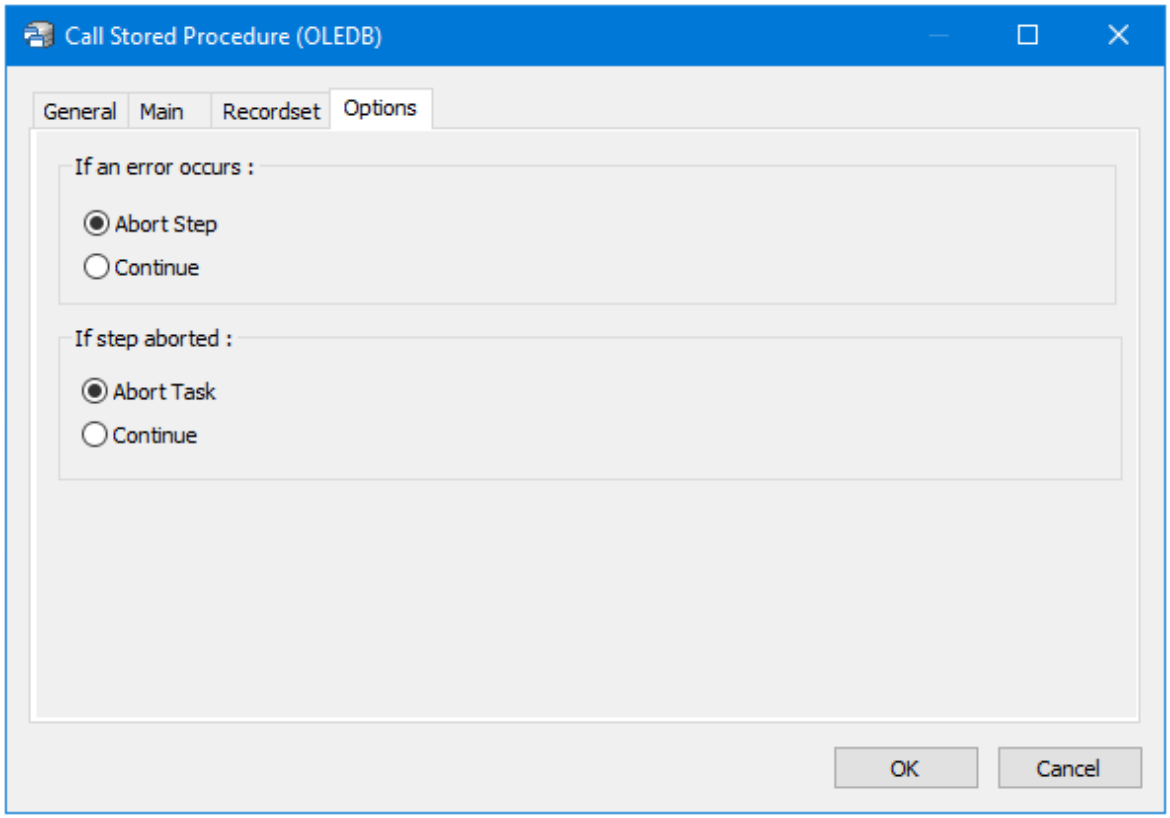
with the **Columns** tab showing the returned recordset columns:



TIP: If querying a large database table or set of database tables, go to the **Results** tab first before executing and adjust **Limit sample record count**. This does not affect the number of records returned during actual task run-time.

About the Options Tab

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



If an error occurs, you can decide whether the step should **Continue** processing, or terminate the step immediately (**Abort Step**).

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**).

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