



BPA
Platform

Technical Overview

SAP Business One Integration Tool Pack v3.12

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Head Office:

Codeless Platforms

Suite 1 & 2 Bourne Gate

25 Bourne Valley Road

Poole

BH12 1DY

United Kingdom

Tel: +44 (0) 330 99 88 700

Email: enquiries@codelessplatforms.com

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Introduction

The **SAP Business One Integration Tool Pack** allows you to automate the management of your SAP Business One company data.

You can carry out tasks such as retrieving information from a company or executing an operation to automatically **ADD**, **UPDATE**, or **DELETE** items such as invoices, sales orders, or business partners. Company objects and fields can be mapped to BPA Platform data at runtime.

When combined with other tools of BPA Platform , the **SAP Business One Integration Tool Pack** can also provide a method of synchronising data between two systems that do not naturally talk to each other; for example, your SAP Business One system and a web shop such as Magento.

The SAP Business One Integration Tool Pack Contents

The tool pack consists of:

- ▶ SAP Business One Event Agent — see [About the SAP Business One Event Agent](#)
- ▶ SAP Business One Trigger tool — see [About the SAP Business One Trigger Tool](#)
- ▶ SAP Business One (DI-API) Integration Agent — see [About the SAP Business One \(DI-API\) Integration Agent](#)
- ▶ SAP Business One (DI-API) Integration tool — see [About the SAP Business One \(DI-API\) Integration Tool](#)
- ▶ SAP Business One (SL) Integration Agent — see [About the SAP Business One \(SL\) Integration Agent](#)
- ▶ SAP Business One (SL) Integration tool — see [About the SAP Business One \(SL\) Integration Tool](#)

Features

- ▶ On-premise and cloud (both Public and Private Cloud) installations of SAP Business One supported.
- ▶ Support for user defined tables and fields within objects and sub-objects.
- ▶ Allows you to maintain the synchronisation of data between one SAP company database and another. For example, if a record changes in one company it will be reflected in the other.
- ▶ Allows data to be synchronised between SAP Business One and third-party systems.

- ▶ Dynamic provision of API metadata enabling changes to objects & operations to be rolled out independently of the tool pack (**SAP Business One (DIAPI) Integration** tool only).
- ▶ Memory support for ODBC, OLEDB, Call Store Procedure, and internal repositories (**SAP Business One (DIAPI) Integration** tool only).

System Requirements

All aspects of the **SAP Business One Integration Tool Pack** require BPA Platform (formerly known as "TaskCentre") 2020 Update 1 (build 6466) or above.

For a detailed description of the supported architecture for BPA Platform v. SAP Business One configurations, see [Architecture](#).

The supported versions of SAP Business One are as follows:

Version	Supported with SQL Server	Supported with SAP HANA
SAP Business One 8.82	✓	✗
SAP Business One 9.0	✓	✗
SAP Business One 9.1	✓	✓
SAP Business One 9.2	✓	✓
SAP Business One 9.3	✓	✓
SAP Business One 10.0	✓	✓

For more information about SAP Business One compatibility, refer to your Codeless Platforms partner or account manager.

Architecture

The following diagrams demonstrate the possible architectures when using the **SAP Business One Integration Tool Pack** with either an SQL Server or SAP HANA configuration. The following combinations of tool pack components are valid:

- ▶ **SAP Business One (DIAPI) Integration Agent and tool**
- ▶ **SAP Business One (SL) Integration Agent and tool**
- ▶ **SAP Business One (DIAPI) Integration Agent and tool and the SAP Business One (SL) Integration Agent and tool**

- ▶ SAP Business One Event Agent, SAP Business One Trigger tool, and SAP Business One (DI-API) Integration Agent and tool
- ▶ All six components

SAP Business One On-Premise Configurations

The following diagrams provide an architectural overview of supported SAP Business One Integration Tool Pack components in an SAP Business One on-premise environment.

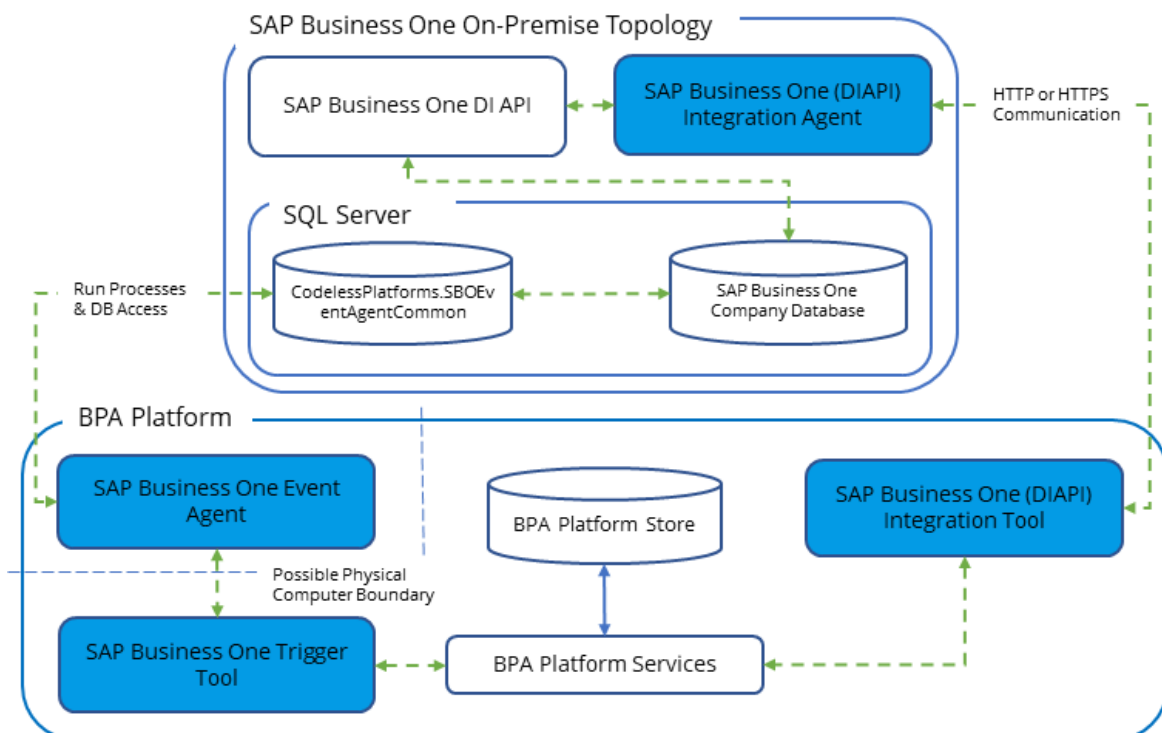
Using a Microsoft SQL Server Configuration

NOTE: For ease of viewing, the below assumes all relevant **Tool Pack** components are in use, with all SAP Business One elements grouped together rather than residing in their respective silos. Other configurations exist and may be supported — for more information, contact your Codeless Platforms partner or account manager.

To monitor SAP Business One events, the **SAP Business One Event Agent** can be located on the same computer hosting the required company database instance — remote installations are supported.

However, the **SAP Business One (DI-API) Integration Agent** must always be located on the same computer hosting the SAP Business One Data Interface (DI) API; remote installations are not supported for this **Agent**.

Both the **SAP Business One Trigger** and **SAP Business One (DI-API) Integration** tools must be installed on the BPA Platform server, and also on any remote BPA Platform client computers (not shown) that run SAP Business One tasks.

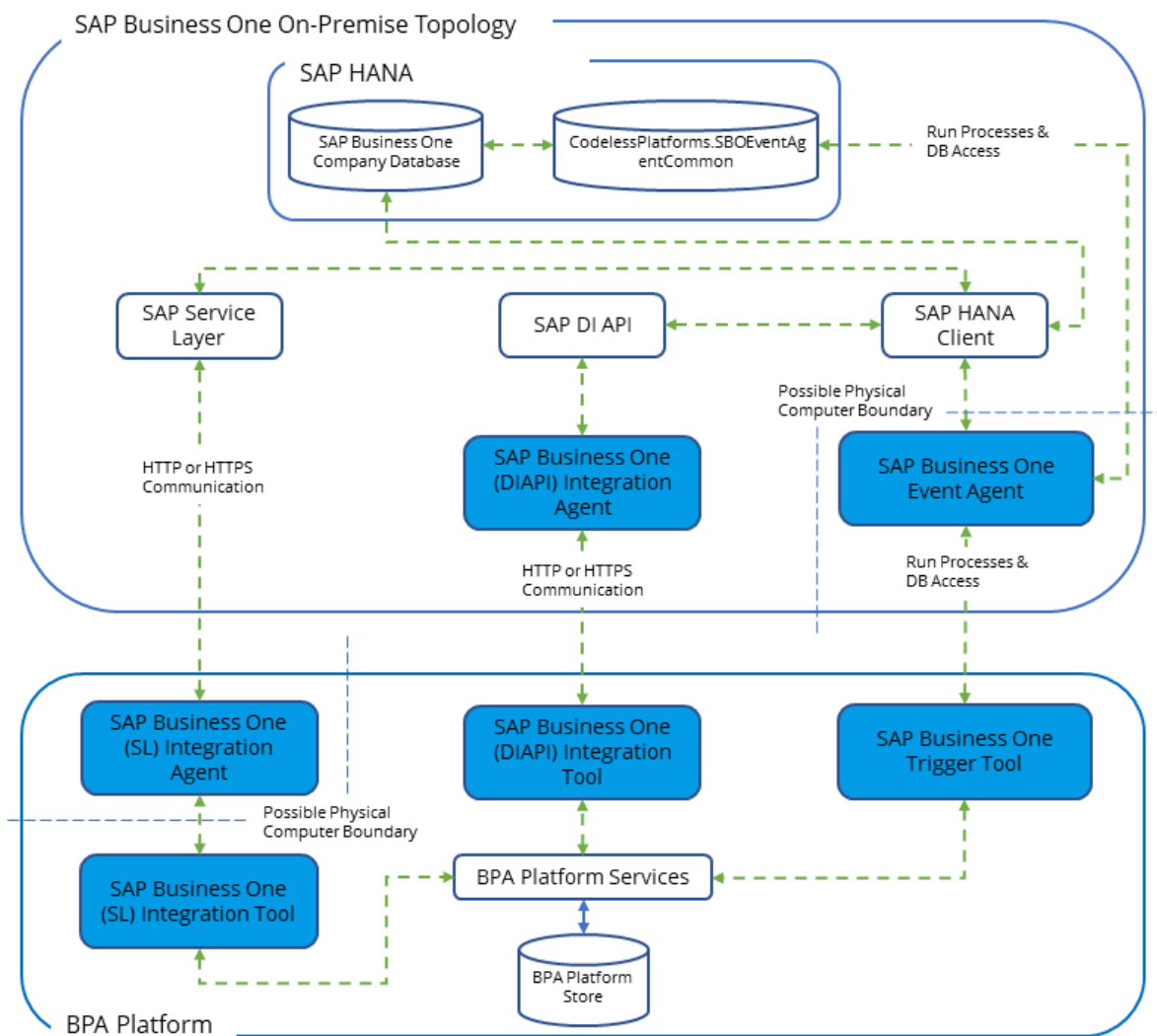


Using an SAP HANA Configuration

NOTE: For ease of viewing, the below assumes all relevant **Tool Pack** components are in use, with all SAP Business One elements grouped together rather than residing in their respective silos. Other configurations exist and may be supported — for more information, contact your Codeless Platforms partner or account manager.

As before, all **Agents** can be located on the same computer hosting the connecting service with the exception of the **SAP Business One (DI-API) Integration Agent** which must be located local to the DI-API service.

The **SAP Business One Trigger**, **SAP Business One (DI-API) Integration**, and **SAP Business One (SL) Integration** tools must be installed on the BPA Platform server, and also on any remote BPA Platform client computers that run SAP Business One tasks.



SAP Business One Cloud Configurations

The following diagrams provide an architectural overview of supported **SAP Business One Integration Tool Pack** components with SAP Cloud.

SAP Private Cloud with Microsoft SQL Server

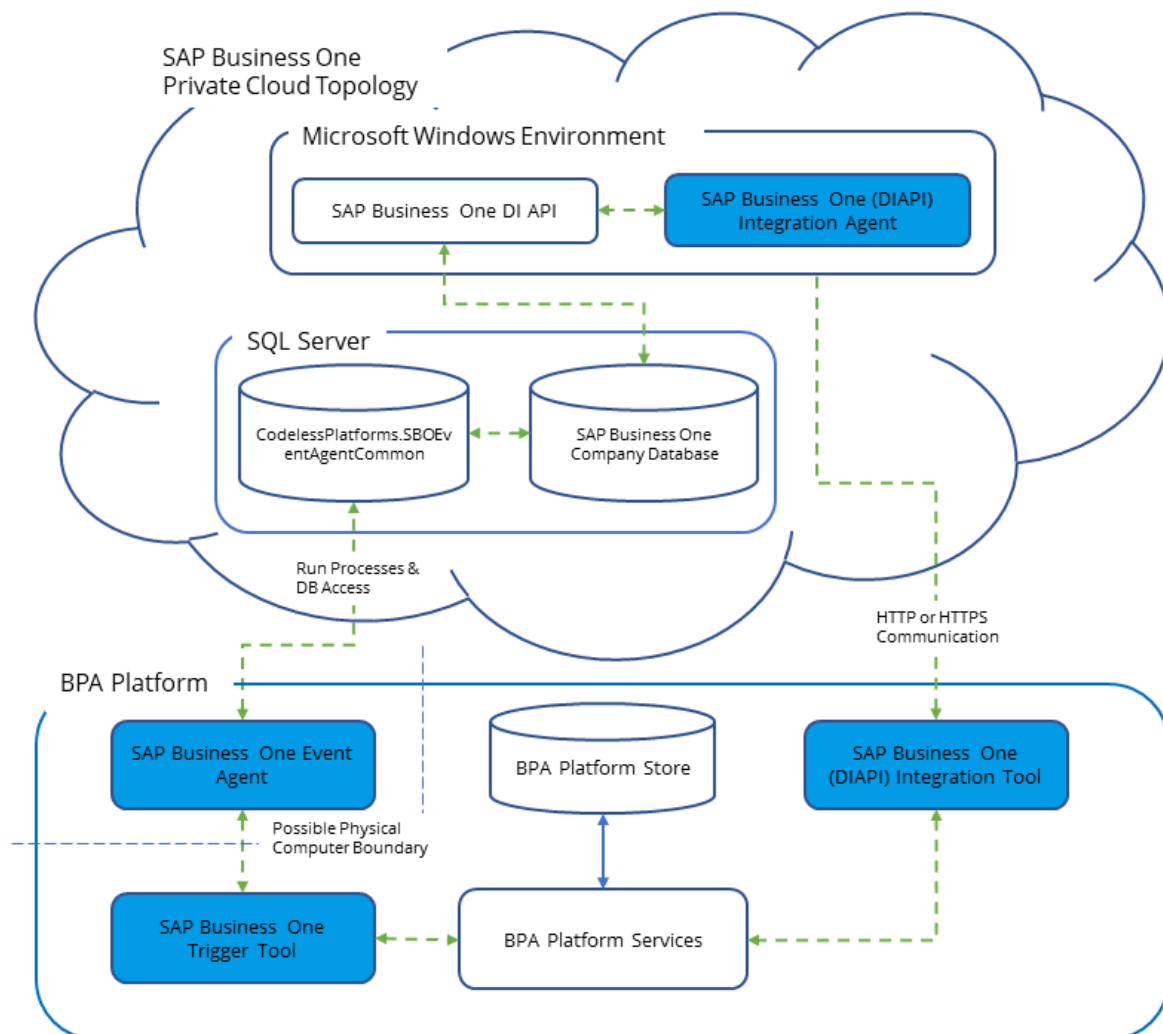
NOTE: For ease of viewing, the below assumes all relevant **Tool Pack** components are in use, with all SAP Business One elements grouped together rather than residing in their respective silos. Other configurations exist and may be supported — for more information, contact your Codeless Platforms partner or account manager.

The BPA Platform server must be installed on a computer which is in the same secure domain and has access to the SAP Presentation Server, for example an Application Server, or on the Presentation Server itself.

The **SAP Business One Event Agent** can be installed on the same computer as the BPA Platform server, or on any remote computer in the same secure domain which has access to both BPA Platform and the relevant SAP Business One company database in the Private Cloud environment.

The **SAP Business One (DI-API) Integration Agent**, however, must be installed along-side the SAP DI API therefore the cloud environment must make a computer available for both components.

Both the **SAP Business One Trigger** and **SAP Business One (DI-API) Integration** tools must be installed on the BPA Platform server, and also on any remote BPA Platform client computers (not shown) that run SAP Business One tasks.



SAP Private Cloud with SAP HANA

NOTE: For ease of viewing, the below assumes all relevant **Tool Pack** components are in use, with all SAP Business One elements grouped together rather than residing in their respective silos. Other configurations exist and may be supported — for more information, contact your Codeless Platforms partner or account manager.

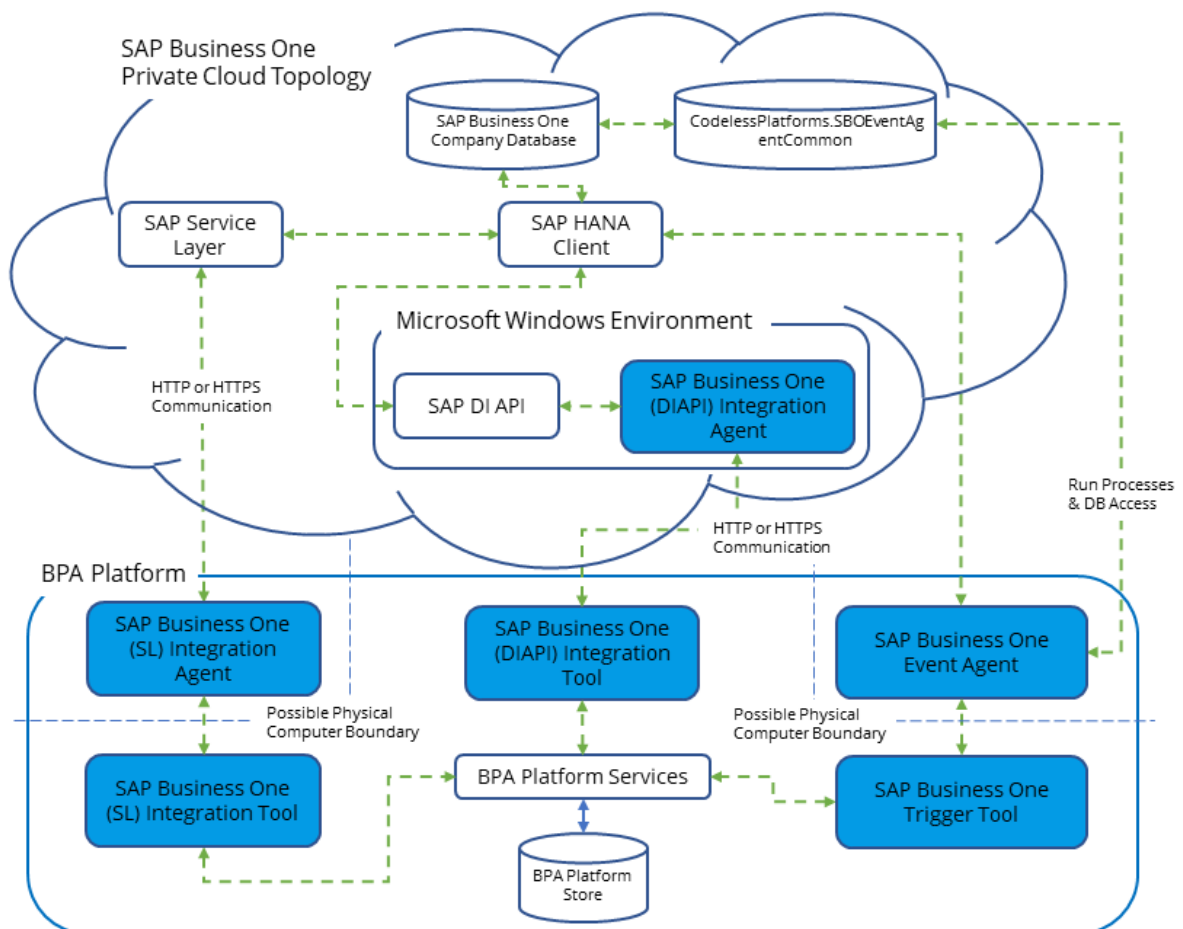
The BPA Platform server must be installed on a computer which is in the same secure domain and has access to the SAP Presentation Server, for example an Application Server, or on the Presentation Server itself.

The **SAP Business One (SL) Integration Agent** can be installed along-side the BPA Platform server or a remote computer (in the same secure domain) that has access to both BPA Platform and the Service Layer.

The **SAP Business One Event Agent** can also be installed on the BPA Platform server or a remote computer but must have access to the SAP HANA client.

The **SAP Business One (DI-API) Integration Agent**, however, must be installed along-side the SAP DI-API cloud environment must make a computer available for both components.

The **SAP Business One Trigger**, **SAP Business One (DI-API) Integration**, and **SAP Business One (SL) Integration** tools must be installed on the BPA Platform server, and also on any remote BPA Platform client computers that run SAP Business One tasks.



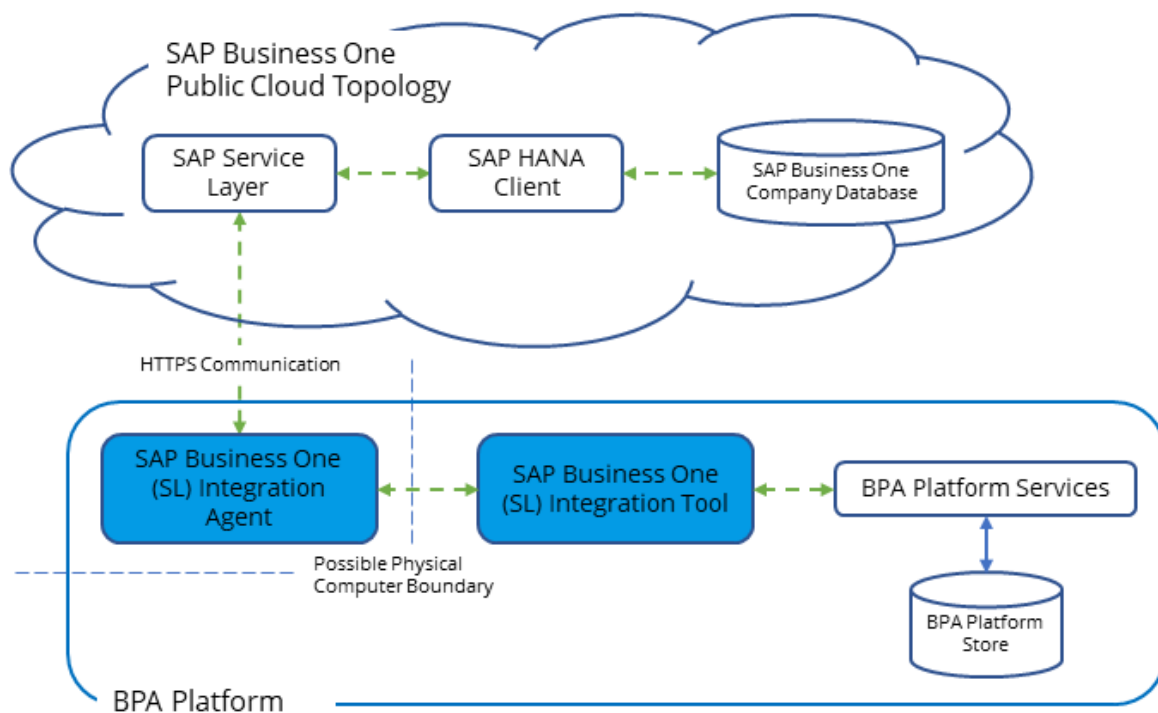
SAP Public Cloud

NOTE: For ease of viewing, the below assumes all relevant **Tool Pack** components are in use, with all SAP Business One elements grouped together rather than residing in their respective silos. Other configurations exist and may be supported — for more information, contact your Codeless Platforms partner or account manager.

With a SAP Public Cloud environment, only a **SAP Business One (SL) Integration Agent** and tool deployment is supported. The **SAP Business One Event Agent** cannot be deployed in this environment as triggers are not permitted by SAP Business One. All communication is over HTTPS.

The BPA Platform server must be installed on a computer which is in the same secure domain and has access to the SAP Presentation Server, for example an Application Server, or on the Presentation Server itself.

The **SAP Business One (SL) Integration Agent** can be installed along-side the BPA Platform server or a remote computer (in the same secure domain) that has access to both BPA Platform and the Service Layer.



About the SAP Business One Trigger Tool

The **SAP Business One Trigger** tool is used to trigger a task when the contents of a SAP Business One database are modified, monitored by the **SAP Business One Event Agent**.

You can select which object to trigger on and also define when the trigger will fire based on the type of event the object receives, that is, an **ADD**, **UPDATE**, **DELETE**, **CANCEL**, or **CLOSE**.

You can even restrict an **UPDATE** trigger to an event that occurs to a field of an object instead of having a task trigger when any field receives an event (only if the object type supports history data).

Variables are used in the tool to capture any data being inserted, removed, or updated. This data can then be passed to other steps in the task for processing.

Additionally, where an update is being applied to a field, you can choose to capture the before and after values which can also be passed to subsequent steps in the task (only if the object type supports history data).

About the SAP Business One Event Agent

The **SAP Business One Event Agent** is a service that monitors a SAP Business One company database for specific events. Once an event has been detected, it notifies the **SAP Business One Trigger** tool to trigger a task sequence. You configure the triggering event types in the tool itself — see [About the Main Tab](#).

The location of the **SAP Business One Event Agent** installation depends on the database environment:

- ▶ If installing to a Microsoft SQL Server environment, the **SAP Business One Event Agent** is typically located on the same server running the SAP Business One company database instance it is monitoring — see [Using a Microsoft SQL Server Configuration](#). This is the recommended installation.

However, remote **SAP Business One Event Agents** (where it is installed on a separate computer to the company database) are supported, particularly where the company database is hosted in a cloud environment— see [SAP Private Cloud with Microsoft SQL Server](#).

- ▶ If installing to a SAP HANA environment, the **SAP Business One Event Agent** must be located on the same server hosting the SAP HANA Client instance for the company database it is monitoring. Installing the **Event Agent** directly onto the SAP HANA Server is not supported. For more information, go to [Using an SAP HANA Configuration](#).

Again, remote installations of the **Event Agent** are supported, particularly in cloud environments — see [SAP Private Cloud with SAP HANA](#).

When registered, the **Event Agent** creates its own database table, `CodelessPlatforms.SBOEventAgentCommon`, containing records of the events which the **SAP Business One Trigger** tool then reads. Specific user credentials are required for this — see [SAP Business One Database User Credentials](#) refer to the product help.

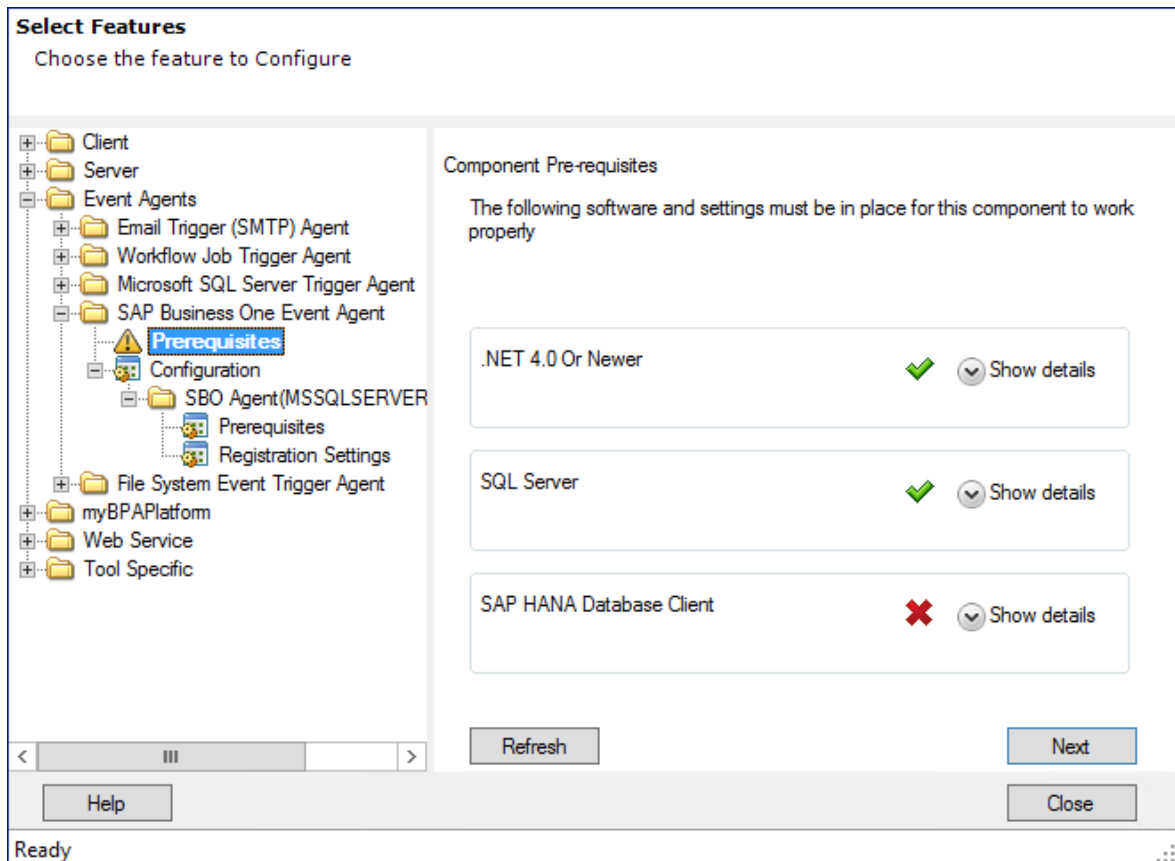
After the installation has completed, the BPA Platform Configurator is launched for immediate configuration — refer to the product help.

Technical Summary

Global Configuration for the SAP Business One Trigger Tool

No global configuration is required for the SAP Business One Trigger tool.

Instead, you create a connection to the SAP Business One Event Agent then to the SAP Business One company database through the BPA Platform Configurator.



For a detailed description of how to use the Configurator and how to create the connection, refer to the product help.

Working with Other Tools

The SAP Business One Trigger tool is independent of any other steps used in a task.

Objects Consumed

Because the SAP Business One Trigger tool starts tasks, it does not consume any objects exposed by other task steps.

Objects Exposed

The **SAP Business One Trigger** step exposes the following objects, which can be used by other task steps:

- ▶ **Step Properties** — Standard step properties are exposed allowing you to use statistical data of the **SAP Business One Trigger** step.

Step Configuration

When creating new tasks, the **SAP Business One Trigger** tool is located under **Event** of the Task Browser.

To add a new **SAP Business One Trigger** step to an existing task, do the following:

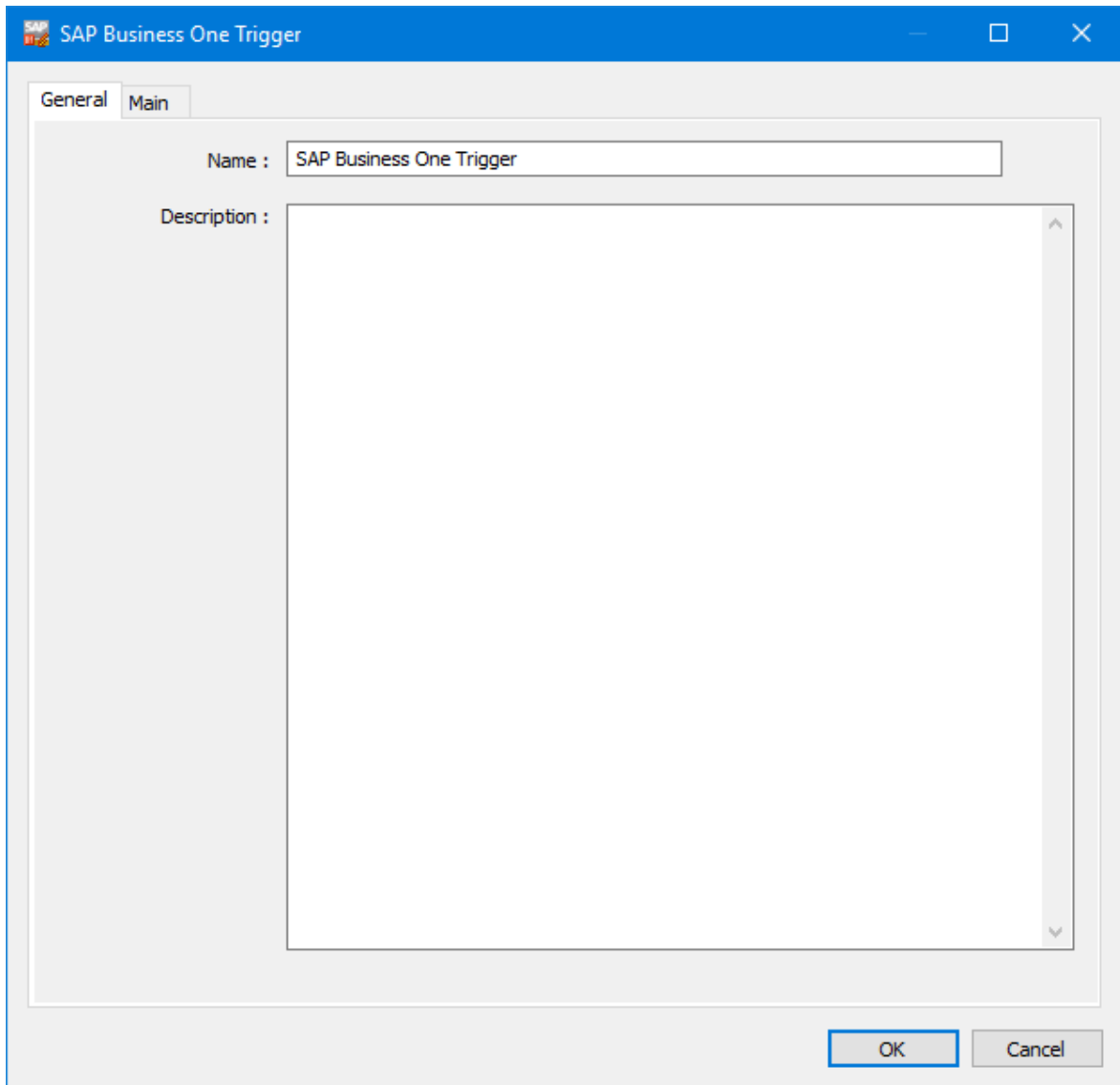
From the relevant task, either:

- ▶ Click and drag the **SAP Business One Trigger** icon from the **Task Browser** to the task **Design** area.
- ▶ From the task's **Design** tab, right-click on empty space and select **New > Event > SAP Business One Trigger**.

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.



The screenshot shows a dialog box titled "SAP Business One Trigger" with a blue header bar. It has two tabs: "General" (selected) and "Main". The "General" tab contains a "Name" field with the text "SAP Business One Trigger" and a "Description" field which is a large empty text area. At the bottom right, there are "OK" and "Cancel" buttons.

TIP: If this task instance makes use of two or more **SAP Business One Trigger** steps, ensure the **Name** used is unique for each individual step.

About the Main Tab

The **Main** tab is used to select the SAP Business One database to monitor and the criteria required to trigger the task to run.

The screenshot shows the 'SAP Business One Trigger' dialog box with the 'Main' tab selected. The 'Agent' dropdown is set to 'SAP Business One Agent' and the 'Object' dropdown is set to 'Goods Issue (OIGE)'. The 'Event type' section has 'Update' checked. The 'Trigger task on change of' list includes 'CANCELED' checked. The 'Mapping' table shows a mapping for 'cancelled' with Type 'Variant', Attributes '[in,out]', and Parameter 'OwnerCode'.

Name	Type	Attributes	Parameter
cancelled	Variant	[in,out]	OwnerCode

From the **Agent** drop-down list, select the relevant **SAP Business One Event Agent** monitoring the company database. If multiple **Agents** are registered with this instance of BPA Platform, the monitored company database is also shown.

The **Object** drop-down list is populated with the SAP Business One objects from the monitored company database. From the drop-down list, select the object used as the trigger.

Choose the **Event Type** used as the trigger (multiple **Event Types** can be selected):

- ▶ **Add** — The step is triggered when a new record is added to the **Object**
- ▶ **Delete** — The step is triggered when an existing record is deleted

- ▶ **Close** — The step is triggered when an existing record is closed
- ▶ **Cancel** — The step is triggered when an existing record is cancelled
- ▶ **Update** — The step is triggered when an update occurs for an existing record

You can also create **Update** triggers on a specific field for an object. Either:

- Select the relevant field(s) to trigger on
- Click **All** to trigger when all fields for that object are updated

Use **None** to clear the selection of all fields. Having no fields selected means the step triggers when *ANY* field is updated for that **Object**.

Use **Toggle** to switch between all fields selected and none.

For a list of those objects that expose fields for use with **Update** triggering, refer to the product helpsee [Supported Objects](#).

TIP: You can capture the "before" values of a field (before the **Update** event was triggered) using variable mapping. To capture the before value, map a variable to the `previousValue` field. Note that only those objects that provide history data have the `previousValue` field.

Use the **Mapping** panel to map parameter-type task variables to an **Object** field. These variables can then be used in another task step. All relevant variables are shown under **Name**. Use the **Parameter** drop-down to map to the relevant field.

Supported Objects

At the time of writing, you can place triggers on the following objects. Those objects that allow **Update** triggers to be placed on their fields are also indicated:

SAP B1 Objects	Update Trigger Allowed?	Comments
Account Segmentation (OASG)		US SAP only
Account Segmentation Category (OASC)		US SAP only
Activity (OCLG)		
Activity Location (OCLO)		
Activity Status (OCLA)		
Activity Type (OCLT)		
Additional Expenses (OEXD)		

SAP B1 Objects	Update Trigger Allowed?	Comments
Admin info		SAP 9.1 only
Alerts (OALT)		
Alternative Catalogue Number (OSCN)		
Alternative Items (OALI)		
Asset Documents (OACQ)		
Attachments (OATC)		
Bank Code (ODSC)		
Bank Pages (OBNK)		
Bank Statements (OBNH)		
Bar Codes (OBCE)		Not supported in 8.82
Batch Number Details (OBTN)		
Bill of Exchange Transaction (OBOT)		
Bill of Materials (OITT)	✓	
Bin Location Attributes		Not supported in 8.82
Bin Location Fields		Not supported in 8.82
Bin Locations		Not supported in 8.82
Blanket Agreement (OOAT)		
BP Priority (OBPP)		
Budget (OBGT)		
Budget Distribution (OBGD)		
Budget Scenario (OBGS)		
Business Partner (OCRD)	✓	
Business Partner Group (OCRG)		
Campaigns (OCPN)		
Chart of Account (OACT)		
Checks for Payment (OCHO)	✓	
Choose From List (OCHF)		

SAP B1 Objects	Update Trigger Allowed?	Comments
Closing Date Procedure (OCDP)		
Commission Group (OCOQ)		
Contract Template (OCTT)		
Correction Invoice (OCSI)	✓	
Correction Invoice Reversal (OCSV)	✓	
Cost Centre (OPRC)	✓	
Credit Card (OCRC)		
Credit Card Payment (OCDT)		
Credit Note (ORIN)	✓	
Credit Payment Method (OCRP)		
Currencies (OCRN)		
Currency Exchange Rate		SAP 9.1 only
Customer Equipment Card (OINS)	✓	
Customs Group (OARG)		
Deduction Tax Group (ODDG)		
Deduction Tax Hierarchy (ODDT)		
Delivery Note (ODLN)	✓	
Draft Document (ODRF)		
Dunning Letter (ODUN)		
Employee Info (OHEM)		
Factoring Indicator (OIDC)		
Fiscal Registry ID (OCNA)		
Form 1099 (OTNN)		
Goods Issue (OIGE)	✓	
Goods Receipt (OIGN)	✓	
House Bank Account (DSC1)		
Incoming Payment (ORCT)		

SAP B1 Objects	Update Trigger Allowed?	Comments
Industry (OOND)		
Inventory Countings (OINC)	✓	
Inventory Cycle (OCYC)		
Inventory Postings (OIQR)	✓	
Inventory Transfer Request (OWTQ)		
Invoice (OINV)	✓	
Item (OITM)	✓	
Item Group (OITB)	✓	
Journal Entry (OJDT)	✓	
Journal Voucher (OBDT)	✓	
Knowledge Base Solution (OSLT)		
Landed Costs (OIPF)		
Length Unit (OLGT)		
Loaded Expenses (OALC)		
Manufacturer (OMRC)		
Material Revaluation (OMRV)	✓	
Messages		
Multi-Language Translation (OMLT)		
Outgoing Payments (OVPM)		
Packages Type (OPKG)		
Partners Setup (OPRT)		
Payment Draft (OPDF)		
Payment Methods for Payment Wizard (OPYM)		
Payment Results (OPEX)		
Payment Term (OCTG)		
Pick List (OPKL)	✓	
Predefined Text		

SAP B1 Objects	Update Trigger Allowed?	Comments
Price List		
Production Order (OWOR)		
Project (OPR)		
Project Management (OPMG)	✓	
Project Management Time Sheet (OTSH)	✓	
Purchase Correction Invoice (OCPI)	✓	
Purchase Correction Invoice Reversal (OCPV)	✓	
Purchase Credit Notes (ORPC)	✓	
Purchase Delivery Notes (OPDN)	✓	
Purchase Down Payment (ODPO)	✓	
Purchase Invoice (OPCH)	✓	
Purchase Order (OPOR)	✓	
Purchase Quotations (OPQT)	✓	
Purchase Request (OPRQ)	✓	
Purchase Return (ORPD)	✓	
Purchase Tax Invoice (OTPI)		Russian SAP only
Query Category (OQCN)		
Queue (OQUE)		
Quotation (OQUT)	✓	
Relationship (OORL)		
Return (ORDN)	✓	
Sales Down Payment (ODPI)	✓	
Sales Forecast (OFCT)		
Sales Opportunity (OOPR)		
Sales Order (ORDR)	✓	
Sales Person (OSLP)		
Sales Stage (OOST)		

SAP B1 Objects	Update Trigger Allowed?	Comments
Sales Tax Authorities Type (OSTT)		
Sales Tax Authority (OSTA)		
Sales Tax Code (OSTC)		
Sales Tax Invoice (OTSI)		Russian SAP only
Service Call (OSCL)	✓	
Service Contract (OCTR)		
Shipping Type (OSHP)9		
Special Price (OSPP)		
Stock Transfer (OWTR)9		
Stock Transfer Draft (ODRF)		
Target Groups (OTGG)		
Team (OHTM)		
Territory (OTER)		
Unit of Measurement Groups (OUGP)		Not supported in 8.82
Unit of Measurements (OUOM)		Not supported in 8.82
User (OUSR)	✓	
User Default (OUDG)		
User Fields (CUFD)		
User Query (OUQR)		
User Tables (OUTB)		Not supported in 8.82 or 9.0
VAT Groups (OVTG)		
Warehouse (OWHS)	✓	
Warehouse Location (OLCT)		
Warehouse Sublevel Codes (OWHS)		Not supported in 8.82
Weight Measure (OWGT)		
Withholding Tax Codes (OWHT)		

About the SAP Business One (DI-API) Integration Tool

The **SAP Business One (DI-API) Integration** tool is used to communicate with a SAP Business One server over the Data Interface (DI) API. When used in a task, the step exposes the objects and fields of a single company database allowing operations such as **GET**, **ADD**, **UPDATE**, **DELETE**, **SEARCH**, and in some circumstances, **CANCEL**, or **CLOSE**.

The **SAP Business One (DI-API) Integration** tool can consume an XML or recordset data source and output XML for subsequent task steps to consume. Before you use the **SAP Business One (DI-API) Integration** tool in a task, a global connection to SAP Business One must be established — see [Global Configuration](#).

About the SAP Business One (DI-API) Integration Agent







In order to communicate with the SAP Business One DI API service, you must install the **SAP Business One (DI-API) Integration Agent**. This acts as a "go-between" between the SAP Business One server and the **SAP Business One (DI-API) Integration** tool, and runs as a service on the installed computer. Note that it is necessary to install the **Agent** on the same computer hosting the DI API service — see [Architecture](#).






Working with Other Tools

The **SAP Business One (DI-API) Integration** tool can directly interact with the following tools:

Consuming from Other Tools

The **SAP Business One (DI-API) Integration** tool can consume output from the following tools:

Icon	Tool Name	Tool Category
	Call Stored Procedure (OLEDB)	Input, Data Connectors, Output, and Execute
	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
	Import XML Document	Input

Icon	Tool Name	Tool Category
	Retrieve Text Message	Input
	Convert Recordset to XML	Format
	Convert XML to Recordset	Format
	SAP Business One (DI-API) Integration	Data Connectors
	SAP Business One (SL) Integration	Data Connectors








Objects Consumed

The **SAP Business One (DI-API) Integration** tool consumes the following objects exposed by other steps:

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

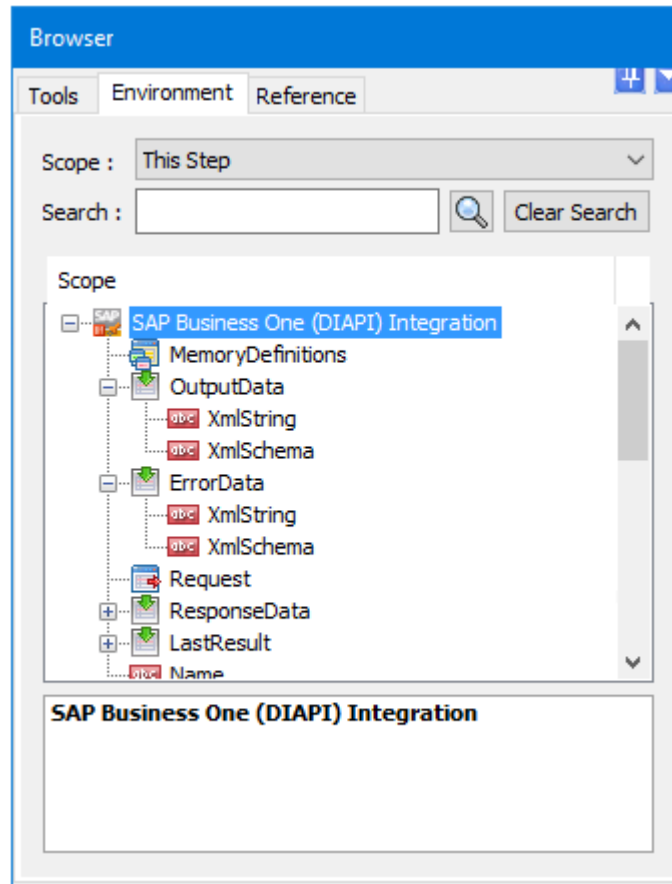
Exposing to Other Tools

The following tools can directly consume output from the **SAP Business One (DI-API) Integration** tool:

Icon	Tool Name	Tool Category
	Retrieve Text Message	Input
	Convert XML to Recordset	Format
	Run Microsoft Reporting Services	Format
	Save File	Output
	Web Service Connector	Data Connectors
	SAP Business One (DI-API) Integration	Data Connectors
	SAP Business One (SL) Integration	Data Connectors

Objects Exposed

The SAP Business One (DI-API) Integration tool outputs the following objects which can be consumed by other tools:



▶ **InputData**

The **InputData** document is only available if a recordset is the consumed **Data Source** (see [About the General Tab](#)). This contains the recordset data available for the task run.

▶ **OutputData**

The **OutputData** object contains two sub-objects:

- ❑ **XmlString** — This is the XML document produced by the tool, containing data returned from SAP Business One for all operations. Also included are the key fields for the mapped elements affected by the used operation — for example, if using an **ADD** operation, the key fields for the top-level object instances that are created are returned — and a **SupplementaryReference** field for task auditing purposes.

The mapped fields in the **Mapping** tab (see [About the Mapping Tab](#)) define the structure of this XML document.

- ❑ **XmlSchema** — This contains the output schema in XSD format.

▶ **ErrorData**

The **ErrorData** object also contains two sub-objects:

- **XmlString** — This contains any error data reported by SAP Business One

`<Error>` — All errors are created as an `<Error>` node, with the following sub-nodes:

`<Object />` — The name of the requested object

`<CODE />` — The error code returned by SAP Business One

`<MESSAGE />` — The corresponding error message

`<EXTENDEDINFO />` — A string containing additional information about the error

`<INPUTDATA />` — The header input data (excluding child nodes) mapped for the object, plus all data contained in `SupplementaryReference`

`</Error>`

- **XmlSchema** — This contains the output schema in XSD format.

▶ **Request**

This object exposes the mapped object's fields for use in **Memory** definitions.

▶ **ResponseData**

This property is only for use when using a first generation tool — see [First Generation Tool Compatibility Options](#)

▶ **LastResult**

This property is only for use when using a first generation tool — see [First Generation Tool Compatibility Options](#)

▶ **Step Properties**

Standard step properties are also available allowing you to use statistical data of the **SAP Business One (DI-API) Integration** step.

Where Can the XML Output be Used?


The incoming XML is translated into the XML format for the object and operation selected in the configuration. The data for the linked fields is brought across into the output XML — only those fields that are linked are brought across. The XML is passed to the **Connector**, which then:

- ▶ Processes the data
- ▶ Performs the operation requested
- ▶ Receives an XML document containing the response

Both the `OutputData` and `ErrorData` documents can be directly used by succeeding task steps that can consume XML data, as part of an application integration or synchronisation process. To use the documents in a non-XML consuming tool, use a **Convert XML to Recordset** step first to create a recordset copy of the XML data.

The XML documents are also available as consumable objects from the BPA Platform Browser (`XmlString`). When used in a task step, such as **Format as Text** or **Save File**, this exposes the actual XML string.

Error Handling

Errors are written to the BPA Platform Event Log (**Tasks** toolbar > **Event Log** ). You define how errors are handled in the **Options** tab of the tool.

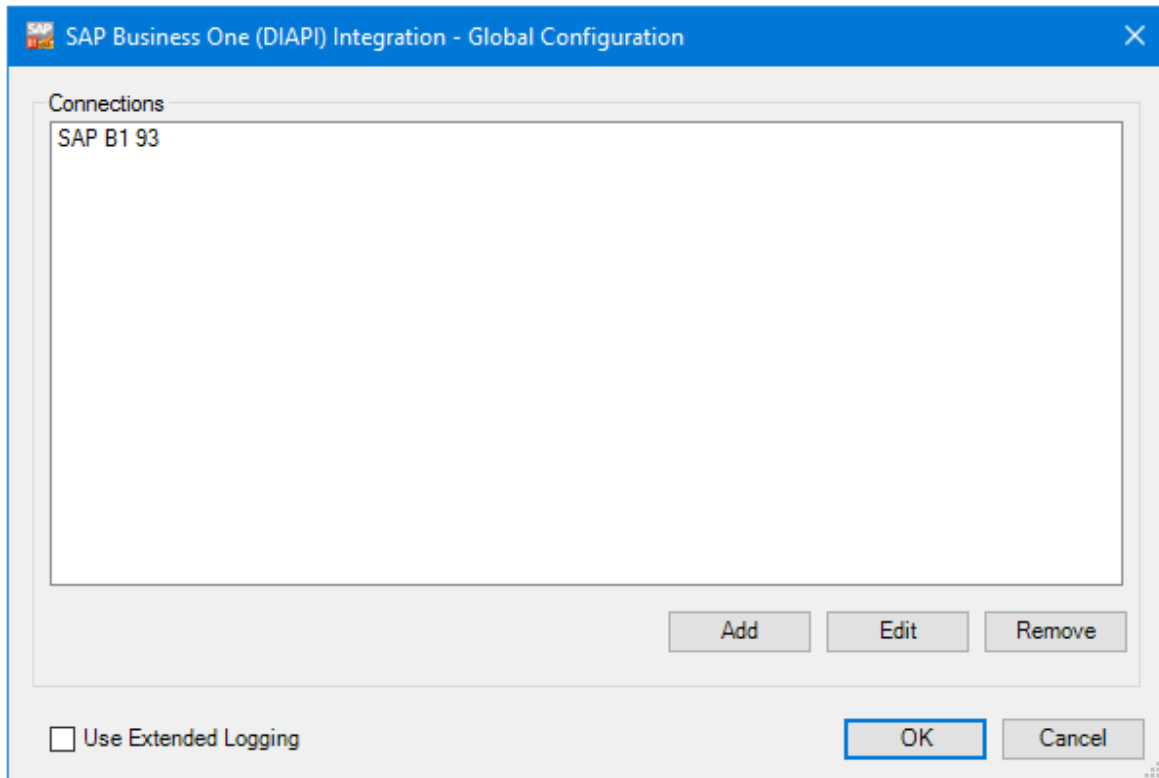
Reasons for the errors could include:

- ▶ Web service connection errors
- ▶ User privilege errors
- ▶ Errors from the API
- ▶ Warnings and messages from the API

Global Configuration

The global configuration for this tool is used to create connections to a SAP Business One company database.

You open this interface from the resources tree — expand **System > Tools > Data Connectors** and double-click **SAP Business One (DI-API) Integration** in the items list.



When a connection is made, the available objects and operations are retrieved.

Before you can use the **SAP Business One (DI-API) Integration** tool in a task step, you must create the connection to SAP Business One first. Click **Add**.

NOTE: You may be restricted as to the number of SAP Business One company database connections you can create. For more information, refer to the BPA Platform product help or consult your Codeless Platforms account manager or partner.

Using Extended Logging

Enabling this option exposes the XML parsed between the **SAP Business One (DI-API) Integration** tool and SAP Business One.

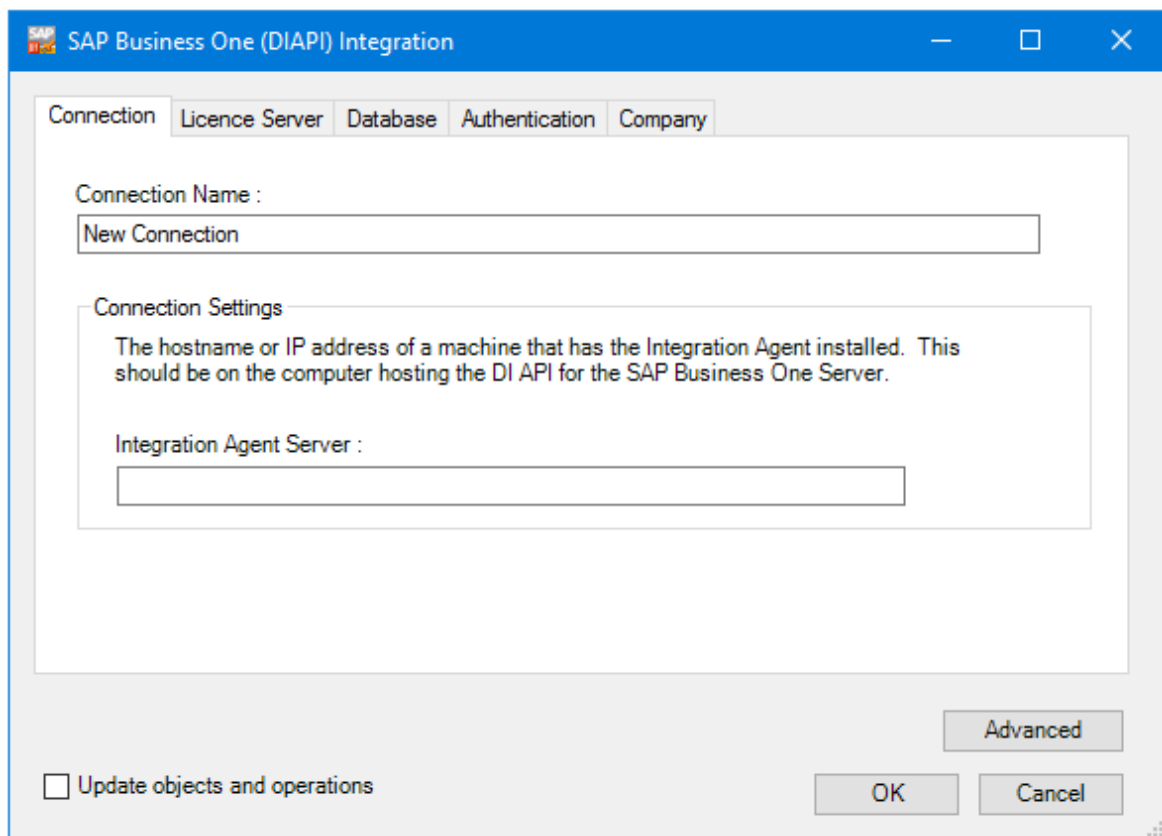
TIP: The Event Log database table may grow substantially large as extended logging adds additional rows for each call made to and from the **Connector**. To manage this, adjust the maintenance routine for the Event Log — refer to the BPA Platform product help.

Without extended logging, the Event Log only contains start and end of transaction messages, plus any error messages encountered at runtime.

You can view the extended log in the BPA Platform Event Log (**Tasks** toolbar > **Event Log** ).

About the Connection Tab

The **Connection** tab requires you to specify where the **Integration Agent** has been installed so communication can be established with SAP Business One.



The screenshot shows a dialog box titled "SAP Business One (DI-API) Integration". It has a tabbed interface with the "Connection" tab selected. Other tabs include "Licence Server", "Database", "Authentication", and "Company". The "Connection Name" field contains "New Connection". Below it, the "Connection Settings" section contains a text box with the instruction: "The hostname or IP address of a machine that has the Integration Agent installed. This should be on the computer hosting the DI API for the SAP Business One Server." The "Integration Agent Server" field is empty. At the bottom, there is a checkbox for "Update objects and operations" (unchecked), an "Advanced" button, and "OK" and "Cancel" buttons.

Enter a meaningful **Connection Name** for this **Agent** connection; this is the name displayed when adding task steps for SAP Business One.

Specify the **Integration Agent Server**name — as hostname, IP address, or URL. This should be the machine also hosting the DI API for SAP Business One.

By default, the connection to the **Agent** is over HTTP on TCP port **4205**. Use the **Advanced** button to either **Set a Custom Port Number** if **4205** is already in use in your network, or to **Use HTTPS** to communicate to the **Agent**. This feature is particularly important if your SAP Business One instance is behind a firewall and makes use of Network

Address Translation (NAT) — in this scenario, add the exposed port number here instead of the SAP instance port number.

About the Licence Server Tab

NOTE: The configuration found in the **Licence Server** tab is only required if connecting to SAP Business One v9.3 or earlier or for those running the SAP Business One Integration Tool Pack v3.11 or earlier. Connections to SAP Business One v10 or higher can skip this tab.

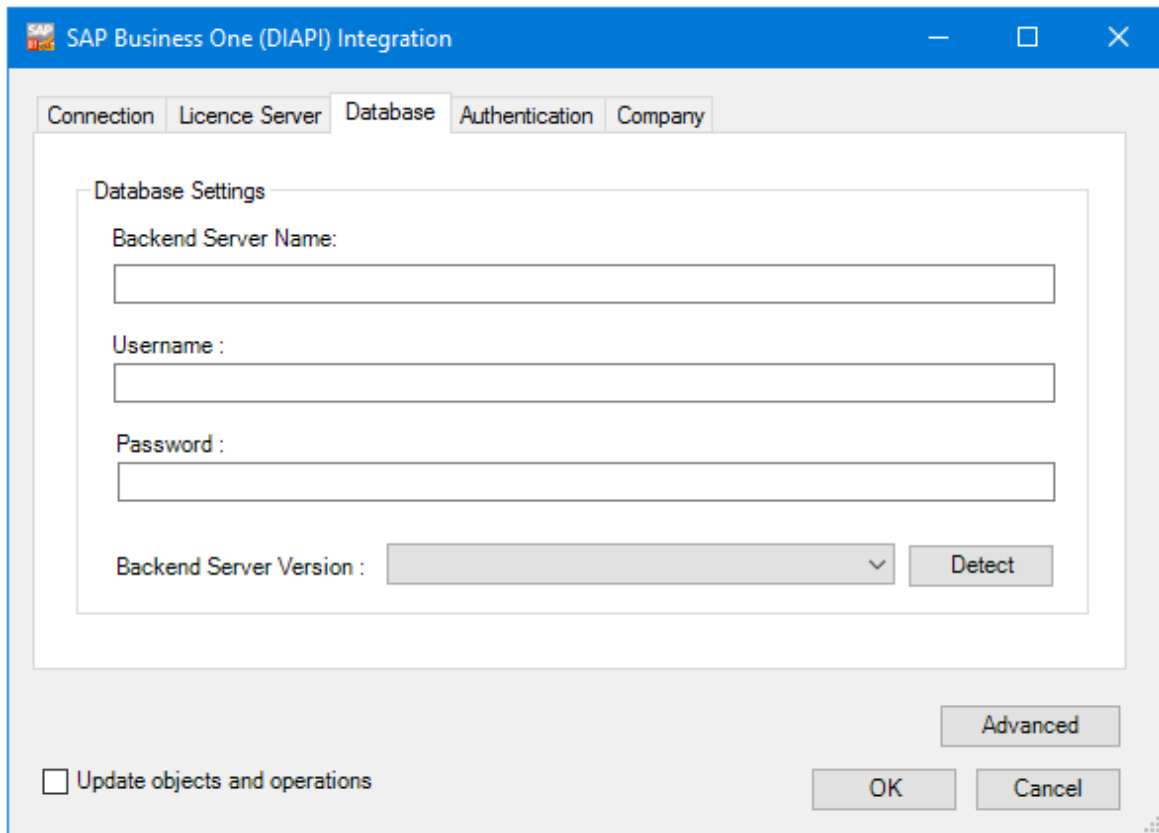
The screenshot shows a dialog box titled "SAP Business One (DI-API) Integration" with a blue header bar. Below the header are five tabs: "Connection", "Licence Server", "Database", "Authentication", and "Company". The "Licence Server" tab is selected. Inside the dialog, there is a section titled "Connection Details" with the instruction "Enter here the name and port for the SAP Business One Licence Server". Below this is a checkbox labeled "Specify Licence Server Details". If checked, it reveals two input fields: "Licence Server :" and "Port Number :". At the bottom of the dialog, there is a checkbox labeled "Update objects and operations", an "Advanced" button, and "OK" and "Cancel" buttons.

If connecting to SAP Business One v9.3 or earlier, select **Specify Licence Server Details** and enter the following for the SAP Business One License Manager Server; the License Manager Server must be the one managing the SAP Business One user account assigned to this **Agent** (see [About the Authentication Tab](#)):

- ▶ **Licence Server** — Hostname, IP address, or URL
- ▶ **Port Number**

About the Database Tab

The **Database** tab requires the location of your SAP Business One company databases along with the credentials of an account with access to the database specified.



The screenshot shows the 'SAP Business One (DIAP) Integration' dialog box with the 'Database' tab selected. The dialog has five tabs: 'Connection', 'Licence Server', 'Database', 'Authentication', and 'Company'. The 'Database Settings' section contains the following fields:

- Backend Server Name:** A text input field.
- Username:** A text input field.
- Password:** A text input field.
- Backend Server Version:** A dropdown menu with a 'Detect' button next to it.

At the bottom of the dialog, there is a checkbox labeled 'Update objects and operations', an 'Advanced' button, and 'OK' and 'Cancel' buttons.

Enter the **Backend Server Name** for the SAP Business One database instance; for SAP HANA databases, this is the name you have registered this server with in the SAP Landscape Directory (SLD). This field is case-sensitive and must match the name exactly. Use the following formats:

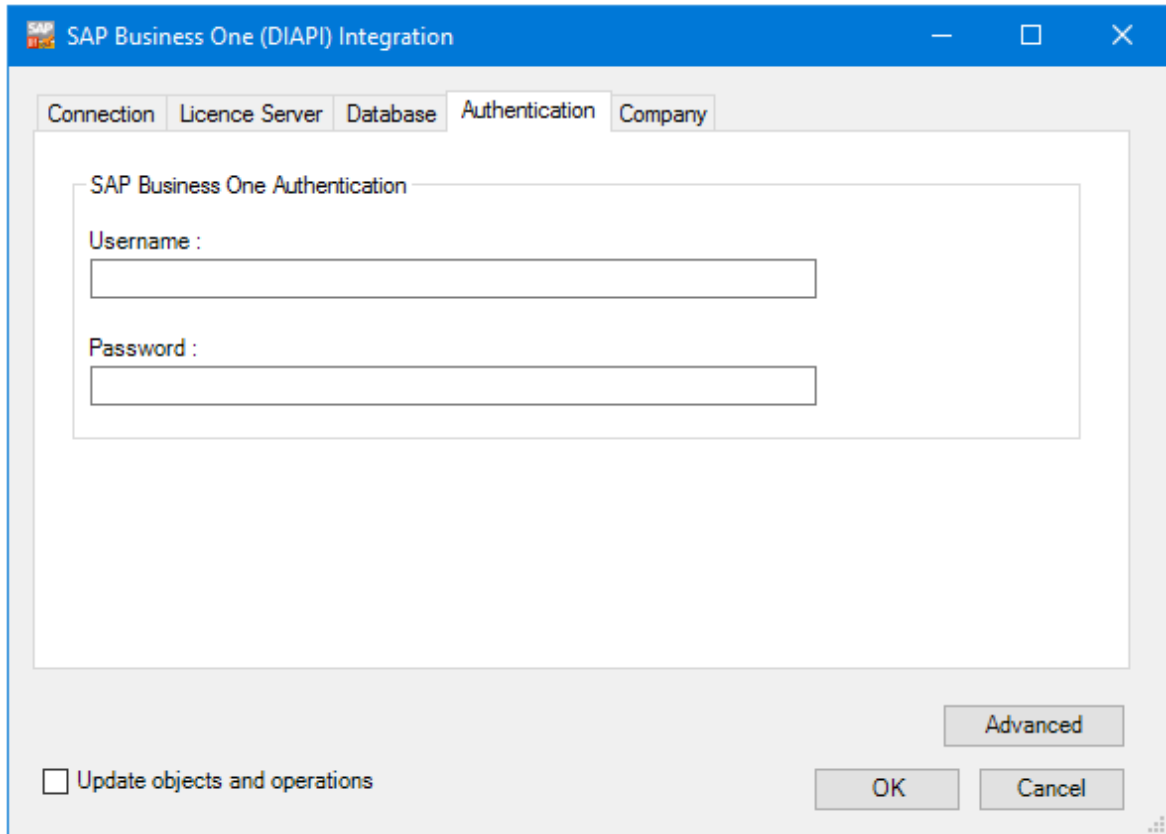
- For SQL Server connections, all SAP Business One versions — `<hostname_or_URL>`
Use of the IP address for SQL Server connections is not supported by SAP Business One
- For HANA v9.3 or earlier — `<hostname_or_IP_address>:<port>`
For example, `SAP93-1:30015`
- For HANA v10.0 or higher — `<hostname_or_IP_address_or_URL>:<port>`
For example, `SAP10-1:30015`
- For HANA v10.0 or higher, with multi-tenancy — `<tenant>@<hostname_or_IP_address_or_URL>:<port>`
For example, `HDB@SAP10-1:30013`

Provide the credentials for the above database, in the form of the administrator's **Username** and **Password**. This user must have read and write access to the relevant tenant's company database.

It is recommended you use the **Detect** button to accurately detect the **Backend Server Version**, rather than selecting from the drop-down. This is used to validate the supplied information, and to detect the available SAP Business One company databases.

About the Authentication Tab

The **Authentication** tab requires the credentials of a SAP Business One user account used to access the database specified in the [Database tab](#).

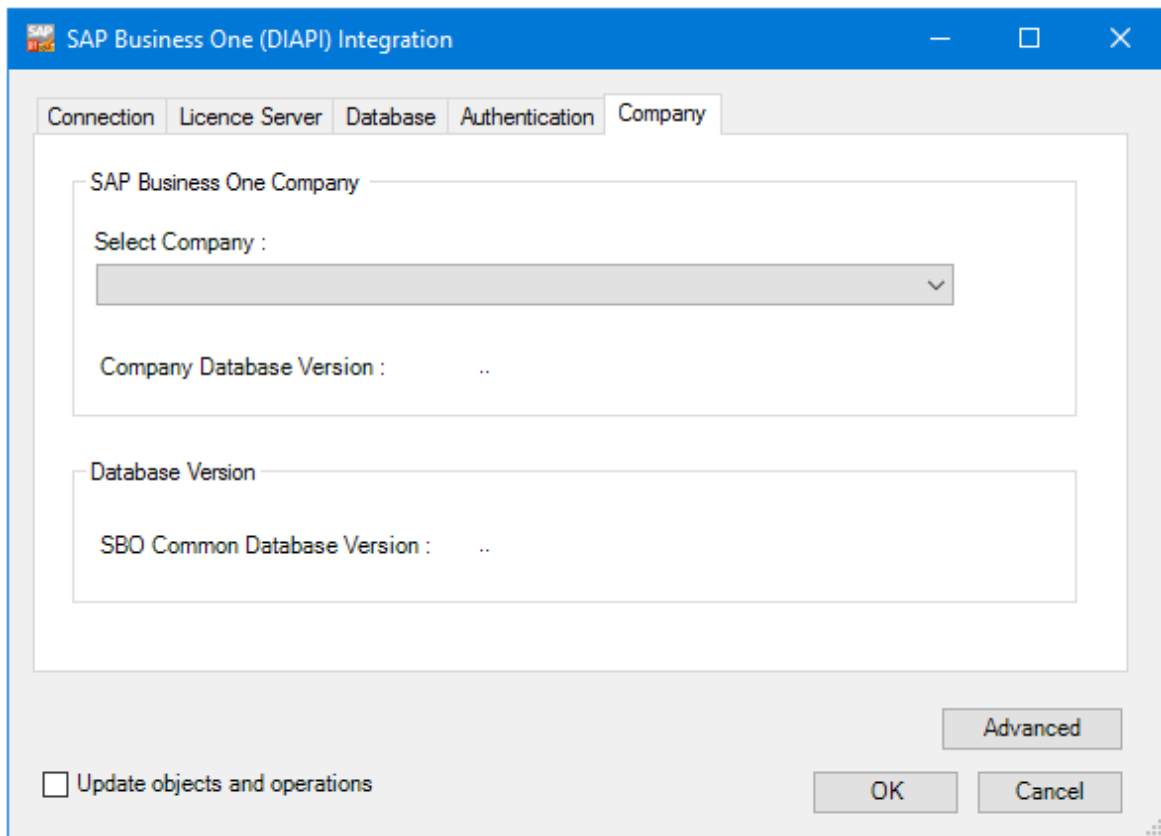


The screenshot shows a dialog box titled "SAP Business One (DI-API) Integration" with a blue header bar. The dialog has five tabs: "Connection", "Licence Server", "Database", "Authentication", and "Company". The "Authentication" tab is selected and active. Inside the dialog, there is a section titled "SAP Business One Authentication" containing two input fields: "Username :" and "Password :". Below this section, there is a checkbox labeled "Update objects and operations" which is currently unchecked. At the bottom right of the dialog, there are three buttons: "Advanced", "OK", and "Cancel".

Enter the **Username** and **Password** for BPA Platform to use when accessing the SAP Business One company database.

About the Company Tab

Once the database location and authentication has been provided the **Company** tab will provide a list of all available SAP Business One company databases.



Using the **Select Company** drop-down list, you select the company (database) to use as the data source.

Update Objects and Operations

Enabling **Update Objects and Operations** allows the SAP Business One schema in BPA Platform to be refreshed every time an update is made in SAP Business One itself.

Should you also upgrade SAP Business One to a newer, compatible version, all related schemas within BPA Platform must be refreshed.

The schemas are refreshed when this selection and change has been saved. You must repeat this for each existing connection you have defined.

NOTE: After enabling **Update Objects and Operations**, you must refresh the schema in each **SAP Business One (DIAPI) Integration** task step. You do this in the **Mapping** tab (**Schema Refresh**) — see [About the Mapping Tab](#).

Step Configuration

When creating new tasks, the **SAP Business One (DIAPI) Integration** tool is located under **Data Connectors** of the Task Browser.

To add a new **SAP Business One (DIAPI) Integration** step to an existing task, do the following:

From the relevant task, either:

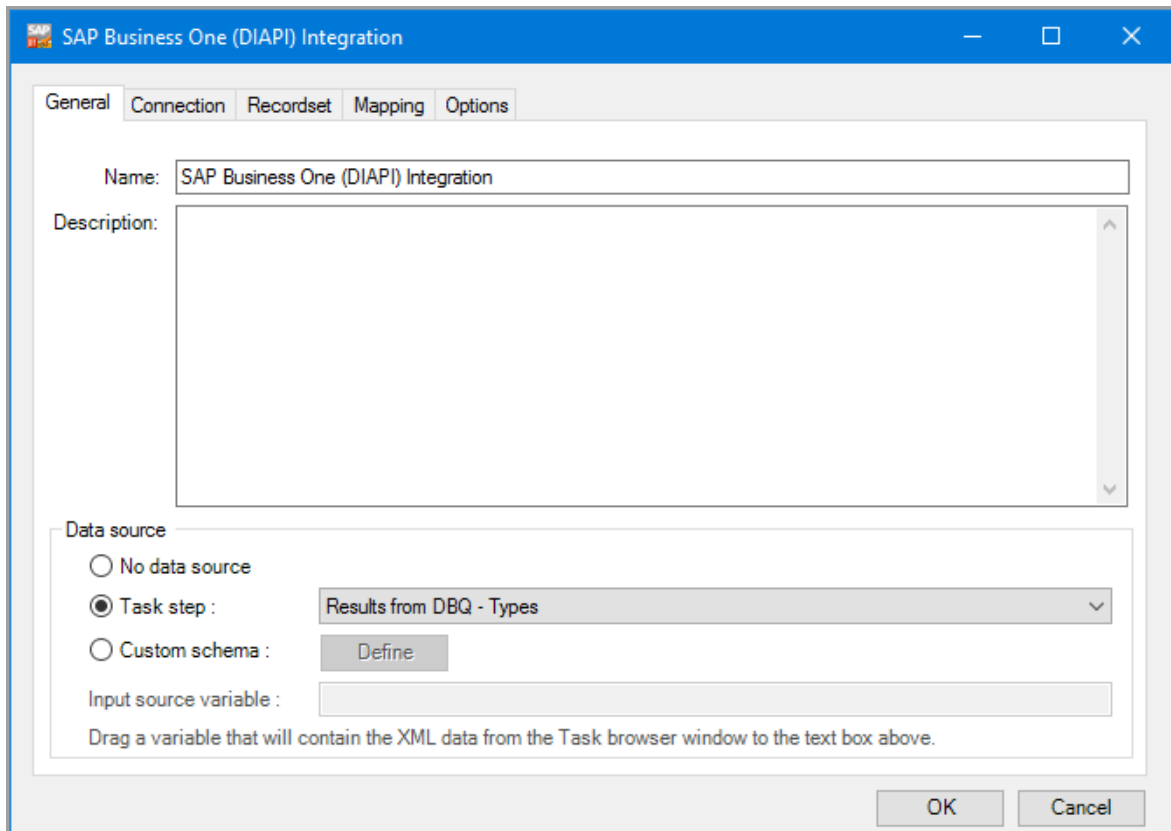
- ▶ Click and drag the **SAP Business One (DIAPI) Integration** icon from the **Task Browser** to the task **Design** area.
- ▶ From the task's **Design** tab, right-click on empty space and select **New > Data Connectors > SAP Business One (DIAPI) Integration**.

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

NOTE: It is not possible to add the tool into the task until at least one connection to a company database has been defined in the tool's Global Configuration — see [Global Configuration](#).

About the General Tab

Use the **General** tab to choose the BPA Platform data source to be mapped to the SAP Business One objects. You can map data source objects from either an XML or recordset source.



Provide a meaningful **Name** and **Description** for this step.

TIP: If this task instance makes use of two or more **SAP Business One (DI-API) Integration** steps, ensure the **Name** used is unique for each individual step.

Data source can either be:

- ▶ **No data source** — If you don't make use of a dedicated XML or recordset input source, select this option to use BPA Platform variables in place of the XML or recordset objects' fields.

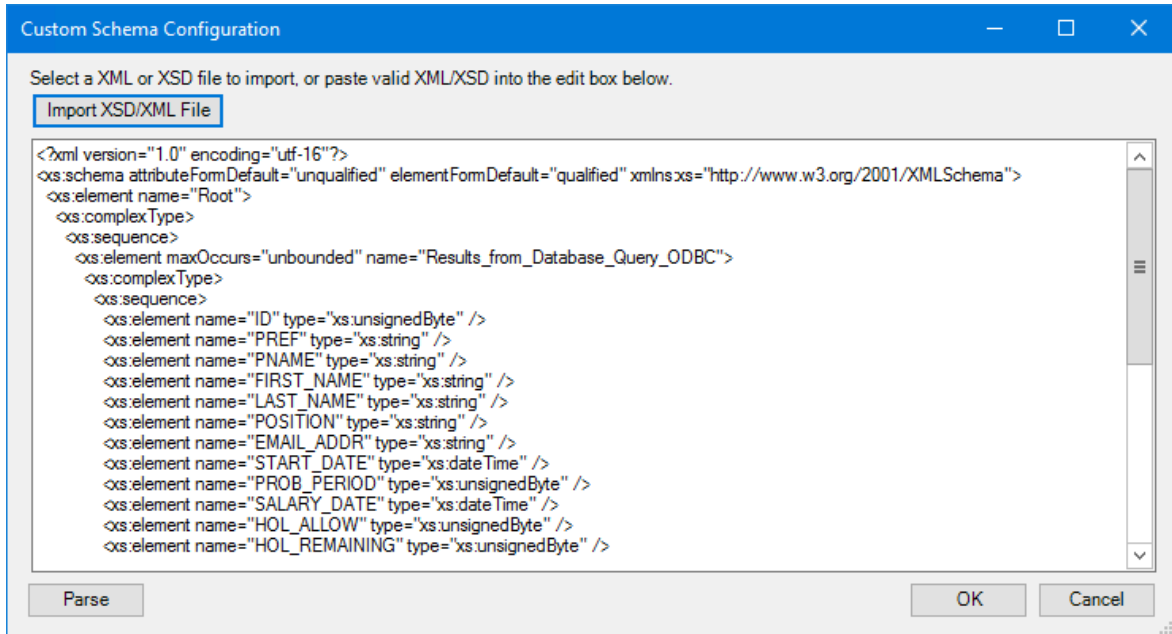
For example, you can extract various bits of information from an email and store them in BPA Platform variables. The variables are mapped to SAP Business One operational objects and fields to store in the database for later use.

- ▶ **Task step** — The data source can be set to an available BPA Platform XML or recordset data source.

Only those steps that are capable of natively exposing an XML document or recordset at runtime are listed. This may be another **SAP Business One (DI-API) Integration** step, or a tool such as **Retrieve Text Message** or **Database Query (ODBC)**.

Custom schema — If using a recordset input data source, this option does not apply. An XML schema defines the structure of the parsed XML: what tags are present, and the nesting of the tags. You **Define** the schema of the XML that is used as the input data source for this step. The **SAP Business One (DI-API) Integration tool** uses the industry standard XSD format. Any XML processed by this step must conform to this schema else an error will be reported.

If the XSD schema is available, either import it into the **Custom Schema Configuration** (use the **Import XSD/XML File** button), or copy and paste it into the configuration box.

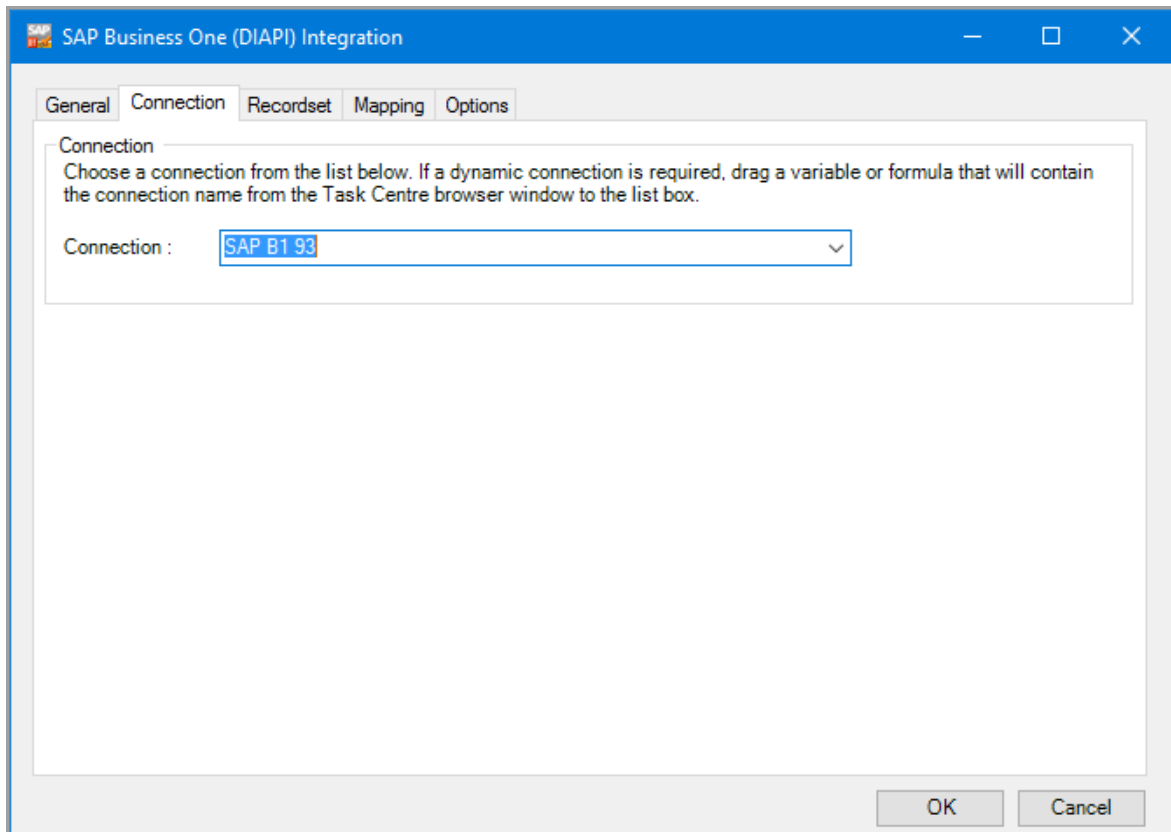


If the XSD schema is not available, you can import an example of the runtime XML (**Import XSD/XML File**), or copy and paste it into the configuration box. Use the **Parse** button to create the schema.

- Input source variable** — If using a recordset input data source, this option does not apply. As well as defining the schema, specify the BPA Platform variable that contains the XML data at runtime.

About the Connection Tab

You specify the SAP Business One **Connection** this step must use.



All connections created in the global configuration window are presented here.

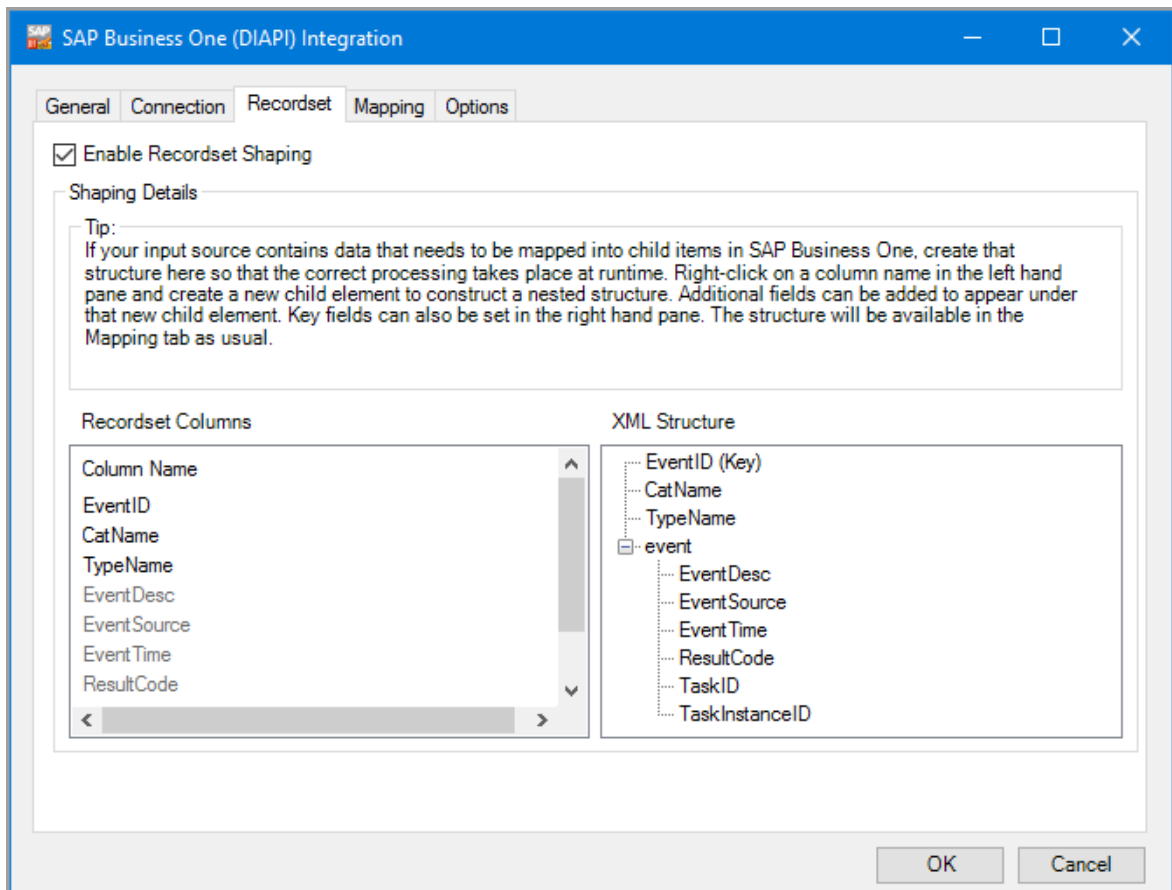
Alternatively, you can use a BPA Platform variable or formula to create a dynamic connection, where the connection used is determined by runtime circumstances. At runtime, the contents of the variable must match the name of one of the Global Configuration connections — this is case-sensitive.

About the Recordset Tab

The **Recordset** tab is only available when a recordset is chosen as the **Data Source** in the **General** tab. SAP Business One only accepts XML from the **SAP Business One (DI-API) Integration** tool, therefore you must use this tab to create the XML structure expected by the **Mapping** tab based on the parent and child relationships of an SAP Business One object.

NOTE: Grand-parenting, that is, having an XML depth of more than one level, is not permitted.

An additional feature is that you can create an XML structure to enable looping on child elements of an object — for example, adding multiple addresses and contact details to a single business partner. For such a case, you would create the structure with a parent **Key** element which determine when a new header is found. For more information, refer to our knowledge base article, [The recommended SQL structure to generate multiple child records](#).



The **Recordset Columns** pane displays the recordset columns as a flat list; the XML Structure pane displays the XML as you build it.

Select **Enable Recordset Shaping** to map recordset data to an XML structure. However, if your recordset data is of a simple structure, that is the recordset columns map to a flat XML structure, skip directly to the **Mapping** tab.

The **SAP Business One (DI-API) Integration** tool creates a basic XML structure based on the recordset data source. To set an XML element as the key, right-click on the XML element (right-hand pane) and select **Set as Key**.

TIP: If the XML structure you are creating contains multiple child elements, remove the XML elements from the XML structure now (right-click on the field and select **Remove**) to ensure you don't create duplicate elements.

To create a new child element, right-click on the required recordset column name and select **Add new child element**.

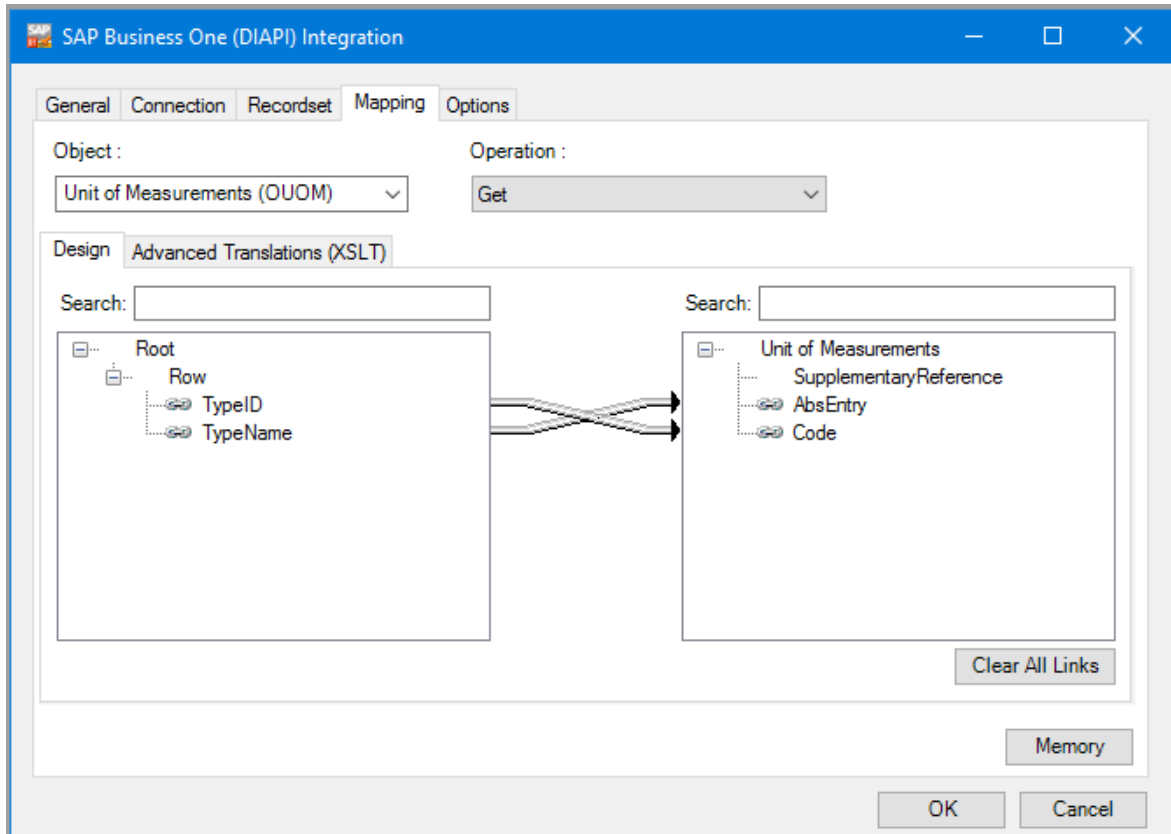
Provide a **Name** for the child element. This has a maximum of 64 characters and uses XML-supported characters only. The new child element appears in the **XML Structure** pane with the chosen recordset column as a field.

To add a recordset column to the new child node, right-click on the relevant column name and select **Add to**. Repeat until the child element has been built.

To remove a field from a child element, right-click on the field in the **XML Structure** pane and select **Remove**. To remove a child element in its entirety, you must remove each field first. Removing the final field removes the child element.

About the Mapping Tab

The **Mapping** tab is used to define links between the incoming XML or recordset data source, and the outgoing data that is to be sent to SAP Business One. Variables can also be included as an additional source for passing data across.



The **Object** drop-down shows the SAP Business One objects. If exposed, user-defined [fields](#), [objects](#), and [tables](#) are also made available for selection here. The **Operations** drop-down shows the operations available for the selected **Object**.

Further down, the left-hand XML tree structure shows those data source fields available for mapping. The right-hand XML tree structure displays those input fields for the selected **Object** and **Operation**.

TIP: If you have selected **No data source** in the **General** tab, you must add BPA Platform formulas and variables to the left-hand data source XML tree structure before mapping.

Creating Mappings

Create links by dragging and dropping a data source field (left) onto its corresponding SAP Business One (DI-API) **Integration** input field (right). Only linked fields are used in the output XML.

BPA Platform formulas and variables can be included in the source data even when using a **Task step** or **Custom schema** — drag them from the BPA Platform Browser to the data source's XML; these can then be linked to the relevant input fields. BPA Platform recordsets must first be converted to XML using either the **Convert Recordset to XML** or **Transform Data** tool before they can be used here.

Each operation has an additional field, **SupplementaryReference**, which allows for traceability when transferring data from one place to another. When mapped, the data resides locally at runtime. It is added to the output, and creates a record for reference purposes only — you can choose to map any field to **SupplementaryReference** to assist with checking where the data originated from or at what time the data transfer occurred, for example.

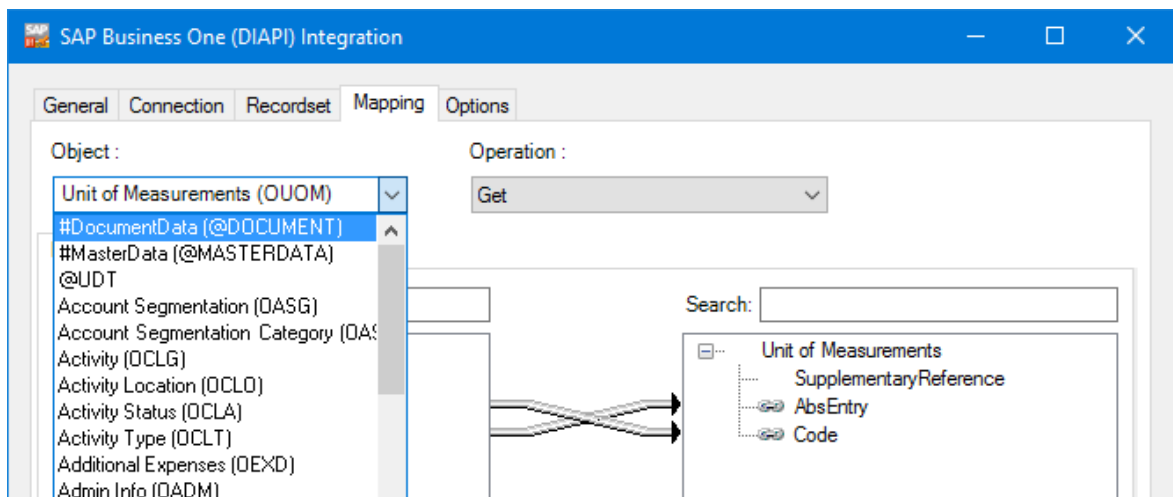
The **SAP Business One (DIAP) Integration** tool uses eXtensible Stylesheet Language Transformations (XSLT) to translate the received XML. The **Advanced Translations (XSLT)** tab shows the XSLT generated for the links created for the object and operation. Use **Enable Free Type Mode** to directly edit the XSLT — this is particularly useful when translating a non-standard requirement.

Refreshing the SAP Business One (DIAP) Integration's Schema

If new fields, objects, and operations have been added to your SAP Business One company database after this task step was originally created, use **Schema Refresh** to make the latest API metadata available for use.

About User-Defined Objects

The **SAP Business One (DIAP) Integration** tool supports the use of user-defined objects, whether created manually or imported from an external source into SAP. User-defined objects are exposed in the tool via the **Object** drop-down. They appear at the top of the list and are prefixed with a # symbol.



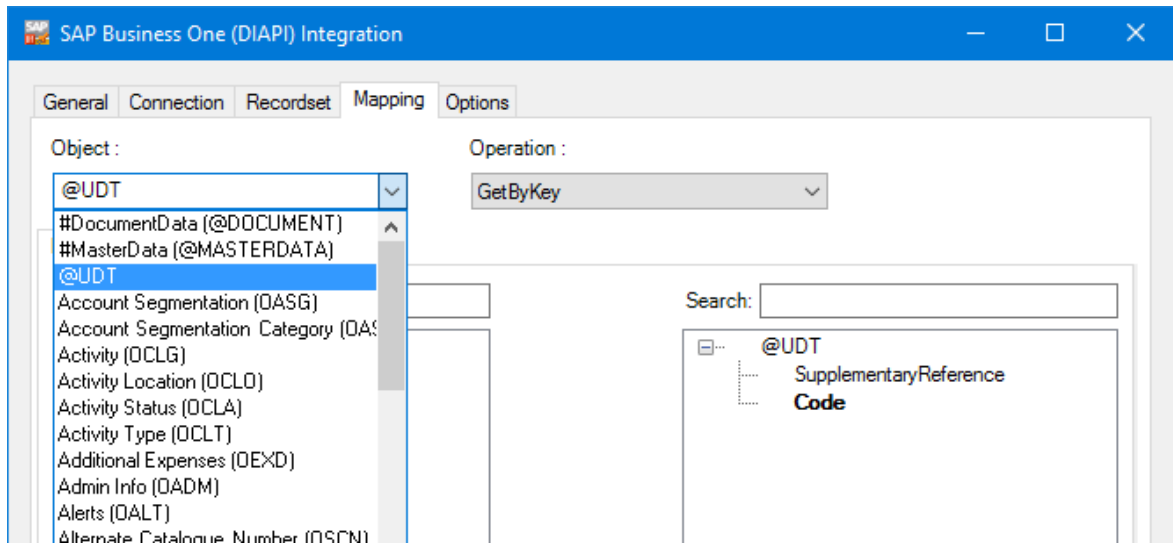
Each user-defined object contains the mandatory operations **Add** and **Update**, along with any other operation defined during its creation.

Any user-defined object that has the **Log** option enabled in SAP Business One has access to history data. Using the **SAP Business One (DIAP) Integration** tool, you can retrieve the previous value of a field after an update occurs by mapping a variable to it.

NOTE: Newly defined objects are not automatically available for mapping. You must restart the **SAP Business One (DIAP) Integration** Agent service for that company database, and ensure **Update objects and operations** is selected in the Global Configuration interface (see [Update Objects and Operations](#)) to make them available.

About User-Defined Tables

The SAP Business One (DIAPI) Integration tool supports the use of user-defined tables. A user-defined table is exposed in the tool via the **Object** drop-down. It appears at the top of the list and is prefixed with an @ symbol.

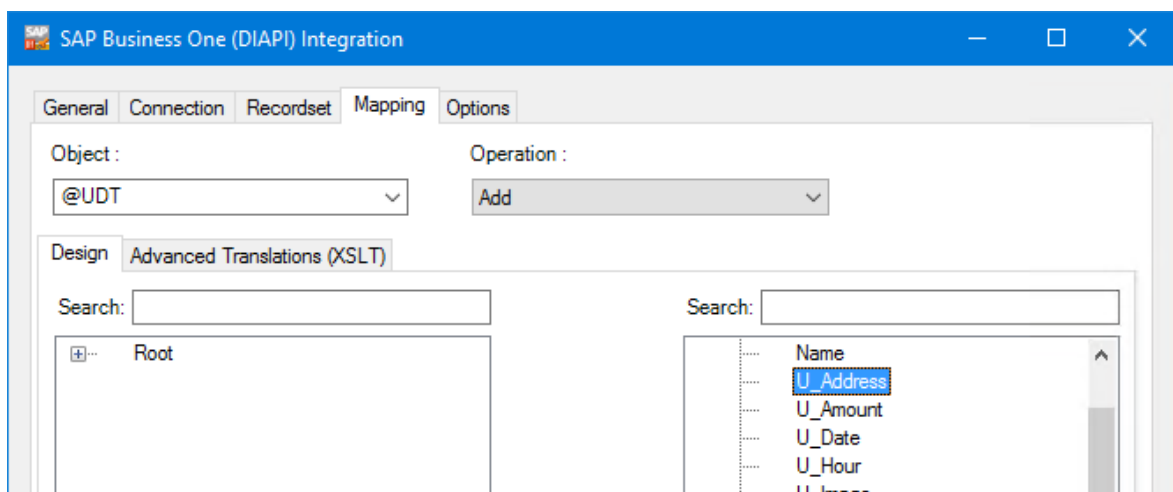


Selecting the table followed by an operation presents your custom fields within the right-hand pane.

NOTE: Newly defined tables are not automatically available for mapping. You must restart the **SAP Business One (DIAPI) Integration Agent** service for that company database, and ensure **Update objects and operations** is selected in the Global Configuration interface (see [Update Objects and Operations](#)) to make them available.

About User-Defined Fields

The SAP Business One (DIAPI) Integration tool supports the use of user-defined fields. A user-defined field that has been inserted into an existing object or sub-object is exposed in the XML structure of the right-hand pane, after the object has been selected. The field is prefixed with **U_**.



About Using Memory

The **Memory** button allows one of the following memory types to be added to the step:

- ▶ OLEDB Memory
- ▶ ODBC Memory
- ▶ Call Stored Procedure Memory
- ▶ Internal Memory

Memory definitions can be used to specify data to be memorised when processed by a **SAP Business One (DIAP)** **Integration** step at runtime. The captured data is then passed into the relevant destination location, whether that is a defined SQL Server database table or an internal repository within BPA Platform.

ODBC Memory

Memory Options

Name: ODBC Memory

ODBC Data Source: Connection to SQL Server

Table: EventLog Browse...

Columns:

Name	Value	Key
EventID	(not mapped)	<input type="checkbox"/>
EventCategory	(not mapped)	<input type="checkbox"/>
EventType	{=ThisStep.InputData("TypeID")}	<input checked="" type="checkbox"/>
EventDesc	(not mapped)	<input type="checkbox"/>
EventSource	(not mapped)	<input type="checkbox"/>
EventTime	(not mapped)	<input type="checkbox"/>
ResultCode	(not mapped)	<input type="checkbox"/>
StepID	(not mapped)	<input type="checkbox"/>
TaskID	(not mapped)	<input type="checkbox"/>
TaskInstanceID	(not mapped)	<input type="checkbox"/>

Edit SQL... Clear

OK Cancel

With the **SAP Business One (DIAPI) Integration** tool it is possible to memorise inputs to the tool step, as well as the following outputs relating to the response from the call to SAP Business One:

Output	Description
<code>ObjectCode</code>	Not returned on failure Not returned for <code>Search</code> or <code>GetList</code> operations
<code>RequestFailed</code>	Returns <code>0</code> on success Returns <code>-1</code> on failure
<code>ErrorMessage</code>	Blank on success
<code>ErrorMessageExtended</code>	Blank on success
<code>ErrorCode</code>	Blank on success

Use of the **Memory** option in the **SAP Business One (DIAPI) Integration** tool alters the processing method of the step at runtime. By default, the **SAP Business One (DIAPI) Integration** step submits its data to SAP Business One in a single XML request; when the **Memory** option is defined, each record is processed on a row by row basis.

NOTE: If using both **SAP Business One (DIAPI) Integration** inputs and outputs within **Memory**, the SAP Business One request is sent BEFORE Memory processing starts. This is because it must make the call in order to obtain the response data to be used in the Memory processing. If a Memory failure subsequently occurs at runtime, then this can result in the rows included in that call still being processed within SAP Business One.

If inputs alone are used in **Memory**, then the Memory processing starts first, and if successful, then the request to SAP Business One is sent.

Supported Objects

The objects and operations currently available are shown in the table below, where:

Key for Standard Operations

A — Add	GK — GetByKey
Cl — Close	GL — GetList
Ca — Cancel	S — Search
DR — Delete / Remove	U — Update
G — Get	

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

SAP B1 Objects	Standard Operations									Comments
	G	GK	GL	A	U	DR	S	Ca	CI	
Account Segmentation (OASG)		✓		✓	✓	✓	✓			US SAP only
Account Segmentation Category (OASC)		✓		✓	✓	✓	✓			US SAP only
Activity (OCLG)		✓		✓	✓		✓			
Activity Location (OCLO)		✓		✓	✓		✓			
Activity Status (OCLA)		✓		✓	✓		✓			
Activity Type (OCLT)		✓		✓	✓		✓			
Additional Expenses (OEXD)		✓		✓	✓	✓	✓			
Admin Info (OADM)										Supported operations: GetAdminInfo UpdateAdminInfo
Alerts (OALT)										Supported operations: GetAlertManagement UpdateAlertManagement AddAlertManagement GetAlertManagementList
Alternative Catalogue Number (OSCN)		✓		✓	✓	✓	✓			
Alternative Items (OALI)					✓					Additional supported operations: AddItem DeleteItem GetItem

SAP B1 Objects	Standard Operations									Comments
	G	GK	GL	A	U	DR	S	Ca	CI	
Asset Documents (OACQ)	✓	✓	✓	✓	✓	✓		✓		
Attachments (OATC)		✓		✓	✓		✓			
Bank Code (ODSC)		✓		✓	✓	✓	✓			
Bank Pages (OBNK)		✓		✓	✓	✓	✓			
Bank Statements (OBNH)					✓					Additional supported operations: AddBankStatement DeleteBankStatement GetBankStatement GetBankStatementList
Bar Codes (OBCE)	✓		✓	✓	✓	✓				Not supported in 8.82
Batch Number Details (OBTN)		✓			✓					
Bill of Exchange Transaction (OBOT)		✓		✓			✓			
Bill of Materials (OITT)		✓		✓	✓	✓	✓			
Bin Location Attributes (OBAT)	✓		✓	✓	✓	✓				Not supported in 8.82
Bin Location Fields (OBFC)	✓		✓		✓					Not supported in 8.82
Bin Locations (OBIN)	✓		✓	✓	✓	✓				Not supported in 8.82

SAP B1 Objects	Standard Operations									Comments
	G	GK	GL	A	U	DR	S	Ca	CI	
Blanket Agreement (OOAT)					✓					Additional supported operations: AddBlanketAgreement GetBlanketAgreement GetBlanketAgreementList
BP Priority (OBPP)		✓		✓	✓	✓	✓			
Budget (OBGT)		✓		✓	✓	✓	✓			
Budget Distribution (OBGD)		✓		✓	✓	✓	✓	✓		
Budget Scenario (OBGS)		✓		✓	✓	✓	✓	✓		
Business Partner (OCRD)		✓		✓	✓	✓	✓			
Business Partner Group (OCRG)		✓		✓	✓	✓	✓			
Campaigns (OCPN)	✓		✓	✓	✓	✓				
Chart of Account (OACT)	✓			✓	✓		✓			
Checks for Payment (OCHO)		✓		✓	✓	✓	✓	✓	✓	
Choose From List (OCHF)		✓		✓	✓	✓	✓			
Closing Date Procedure (OCDP)		✓					✓			

SAP B1 Objects	Standard Operations									Comments
	G	GK	GL	A	U	DR	S	Ca	CI	
Commission Group (OCOG)		✓		✓	✓	✓	✓			
Contract Template (OCTT)		✓		✓	✓		✓			
Correction Invoice (OCSI)		✓		✓	✓		✓			
Correction Invoice Reversal (OCSV)		✓		✓	✓		✓			
Cost Centre (OPRC)										Supported operations: AddProfitCenter UpdateProfitCenter DeleteProfitCenter GetProfitCenter GetProfitCenterList
Credit Card (OCRC)		✓		✓	✓		✓			
Credit Card Payment (OCDT)		✓		✓	✓	✓	✓			
Credit Note (ORIN)		✓		✓	✓		✓	✓		
Credit Payment Method (OCRP)		✓		✓	✓	✓	✓			
Currencies (OCRN)		✓		✓	✓	✓	✓			
Currency Exchange Rate	✓			✓	✓					SAP 9.1 only
Customer Equipment Card (OINS)		✓		✓	✓	✓	✓			

SAP B1 Objects	Standard Operations									Comments
	G	GK	GL	A	U	DR	S	Ca	CI	
Customs Group (OARG)		✓		✓	✓		✓			
Deduction Tax Group (ODDG)		✓		✓	✓		✓			
Deduction Tax Hierarchy (ODDT)		✓		✓	✓		✓			
Delivery Note (ODLN)		✓		✓	✓		✓		✓	
Deposits Service										Supported operations: GetDeposit AddDeposit UpdateDeposit CancelDeposit GetDepositList CancelCheckRow CancelDepositbyCurrentSystemDate CancelCheckRowbyCurrentSystemDate
Draft Document (ODRF)		✓		✓	✓	✓	✓			
Dunning Letter (ODUN)		✓		✓	✓	✓	✓			
Employee Info (OHEM)		✓		✓	✓	✓	✓			
Factoring Indicator (OIDC)		✓		✓	✓		✓			
Fiscal Registry ID (OCNA)		✓		✓	✓	✓	✓			
Form 1099 (OTNN)		✓		✓	✓	✓	✓			

SAP B1 Objects	Standard Operations									Comments
	G	GK	GL	A	U	DR	S	Ca	CI	
Goods Issue (OIGE)		✓		✓	✓		✓			
Goods Receipt (OIGN)		✓		✓	✓		✓			
House Bank Account (DSC1)		✓		✓	✓	✓	✓			
Incoming Payment (ORCT)		✓		✓	✓		✓	✓		
Industry (OOND)		✓		✓	✓		✓			
Inventory Countings (OINC)	✓		✓	✓	✓					
Inventory Cycle (OCYC)		✓		✓	✓	✓	✓			
Inventory Postings (OIQR)	✓		✓	✓	✓					SAP 9.1 supports only GetList
Inventory Transfer Request (OWTQ)		✓		✓	✓		✓		✓	
Invoice (OINV)		✓		✓	✓		✓			
Item (OITM)		✓		✓	✓	✓	✓	✓		
Item Group (OITB)		✓		✓	✓	✓	✓			
Journal Entry (OJDT)		✓		✓	✓		✓			
Journal Voucher (OBTD)				✓						

SAP B1 Objects	Standard Operations									Comments
	G	GK	GL	A	U	DR	S	Ca	CI	
Knowledge Base Solution (OSLT)		✓		✓	✓	✓	✓			
Landed Costs (OIPF)										Supported operations are: AddLandedCost UpdateLandedCost GetLandedCost GetLandedCostList CloseLandedCost CancelLandedCost SAP 9.1 supports only GetList
Length Unit (OLGT)		✓		✓	✓	✓	✓			
Loaded Expenses (OALC)		✓		✓	✓		✓			
Manufacturer (OMRC)		✓		✓	✓		✓			
Material Revaluation (OMRV)		✓		✓	✓		✓			SAP 9.1 supports only GetList
Material Revaluation FIFO										Single supported operation: GetMaterialRevaluationFIFO
Messages										Supported operations: GetInbox GetOutbox GetSentMessages GetMessage SendMessage
Multi-Language Translation (OMLT)		✓		✓	✓	✓	✓			

SAP B1 Objects	Standard Operations									Comments
	G	GK	GL	A	U	DR	S	Ca	CI	
Outgoing Payments (OVPM)		✓		✓	✓		✓	✓		
Packages Type (OPKG)		✓		✓	✓	✓	✓			
Partners Setup (OPRT)	✓		✓	✓	✓	✓				
Payment Draft (OPDF)		✓		✓		✓	✓	✓		
Payment Methods for Payment Wizard (OPYM)		✓		✓	✓	✓	✓			
Payment Results (OPEX)		✓					✓			
Payment Term (OCTG)		✓		✓	✓	✓	✓			
Pick List (OPKL)		✓		✓	✓		✓		✓	
Predefined Text (OPDT)					✓					Additional supported operations: AddPredefinedText DeletePredefinedText GetPredefinedText GetPredefinedTextList
Price List (OPLN)		✓		✓	✓		✓			
Production Order (OWOR)	✓			✓	✓		✓	✓		
Project (OPRJ)	✓				✓					

SAP B1 Objects	Standard Operations									Comments
	G	GK	GL	A	U	DR	S	Ca	CI	
Project Management (OPMG)										Supported operations: GetProject AddProject UpdateProject CancelProject GetSubProjectList GetSubProject AddSubProject UpdateSubProject DeleteSubProject
Project Management Configuration										Supported operations: GetSubprojectTypes AddSubprojectTypes UpdateSubProjectTypes DeleteSubProjectTypes GetStageTypes AddStageTypes UpdateStageTypes DeleteStageTypes GetAreas AddAreas UpdateAreas DeleteAreas GetPriorities AddPriorities UpdatePriorities DeletePriorities GetActivities AddActivities UpdateActivities DeleteActivities GetTasks AddTasks UpdateTasks DeleteTasks

SAP B1 Objects	Standard Operations									Comments
	G	GK	GL	A	U	DR	S	Ca	CI	
Project Management Time Sheet (OTSH)										Supported operations: AddTimesheet UpdateTimesheet DeleteTimesheet GetTimesheet
Purchase Correction Invoice (OCPI)		✓		✓	✓		✓			
Purchase Correction Invoice Reversal (OCPV)		✓		✓	✓		✓			
Purchase Credit Notes (ORPC)		✓		✓	✓		✓			
Purchase Delivery Notes (OPDN)		✓		✓	✓		✓		✓	
Purchase Down Payment (ODPO)		✓		✓	✓		✓			
Purchase Invoice (OPCH)		✓		✓	✓		✓			
Purchase Order (OPOR)		✓		✓	✓		✓	✓	✓	
Purchase Quotations (OPQT)		✓		✓	✓		✓	✓	✓	
Purchase Request (OPRQ)		✓		✓	✓		✓	✓	✓	
Purchase Return (ORPD)		✓		✓	✓		✓		✓	

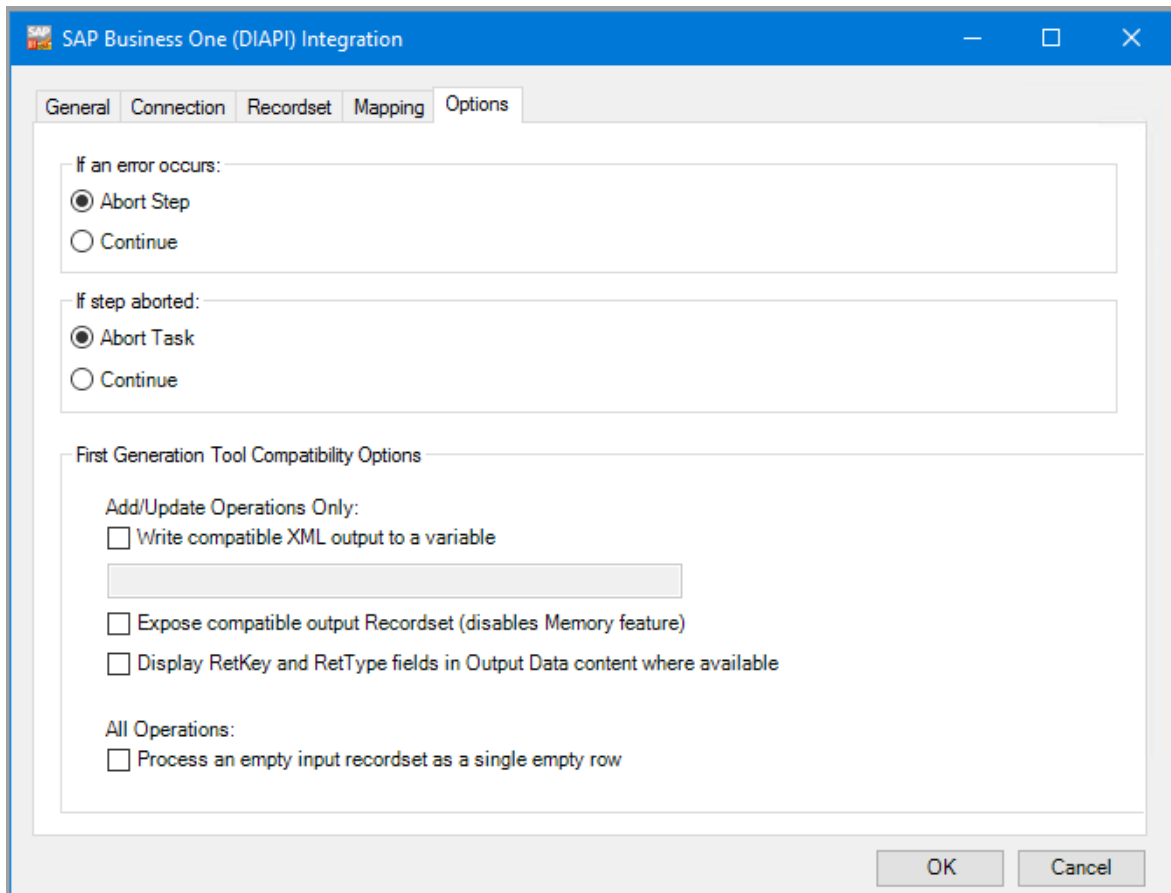
SAP B1 Objects	Standard Operations									Comments
	G	GK	GL	A	U	DR	S	Ca	CI	
Purchase Tax Invoice (OTPI)		✓		✓	✓		✓	✓		Russian SAP only
Query Category (OQCN)		✓		✓	✓		✓			
Queue (OQUE)		✓		✓	✓		✓			
Quotation (OQUT)		✓		✓	✓		✓	✓	✓	
Relationship (OORL)		✓		✓	✓	✓	✓			
Return (ORDN)		✓		✓	✓		✓		✓	
Sales Down Payment (ODPI)		✓		✓	✓		✓			
Sales Forecast (OFCT)		✓		✓	✓	✓	✓			
Sales Opportunity (OOPR)		✓		✓	✓	✓	✓			
Sales Order (ORDR)		✓		✓	✓		✓	✓	✓	
Sales Person (OSLP)		✓		✓	✓	✓	✓			
Sales Stage (OOST)		✓		✓	✓		✓			
Sales Tax Authorities Type (OSTT)		✓		✓	✓		✓			
Sales Tax Authority (OSTA)		✓		✓	✓		✓			

SAP B1 Objects	Standard Operations									Comments
	G	GK	GL	A	U	DR	S	Ca	CI	
Sales Tax Code (OSTC)		✓		✓	✓		✓			
Sales Tax Invoice (OTSI)		✓		✓	✓		✓	✓		Russian SAP only
Serial Numbers (OSRN)	✓				✓					
Service Call (OSCL)		✓		✓	✓		✓			
Service Contract (OCTR)		✓		✓	✓		✓			
Shipping Type (OSHP)		✓		✓	✓		✓			
Special Price (OSPP)		✓		✓	✓	✓	✓			
Stock Transfer (OWTR)		✓		✓	✓		✓	✓		
Stock Transfer Draft (ODRF)		✓		✓	✓		✓	✓		
Target Groups (OTGG)	✓		✓	✓	✓	✓				
Team (OHTM)		✓		✓	✓	✓	✓			
Territory (OTER)		✓		✓	✓	✓	✓			
Unit of Measurement Groups (OUGP)	✓		✓	✓	✓	✓				Not supported in 8.82
Unit of Measurements (OUOM)	✓		✓	✓	✓	✓				Not supported in 8.82

SAP B1 Objects	Standard Operations									Comments
	G	GK	GL	A	U	DR	S	Ca	CI	
User Tables (OUTB)		✓		✓	✓	✓	✓			Not supported in 8.82 or 9.0
User (OUSR)		✓		✓	✓	✓	✓			
User Default (OUDG)		✓		✓	✓	✓	✓			
User Fields (CUFD)		✓		✓	✓	✓	✓			
User Query (OUQR)		✓		✓	✓	✓	✓			
VAT Groups (OVTG)		✓		✓	✓	✓	✓			
Warehouse (OWHS)		✓		✓	✓	✓	✓			
Warehouse Location (OLCT)		✓		✓	✓		✓			
Warehouse Sublevel Codes (OWHS)	✓		✓	✓	✓	✓				Not supported in 8.82
Weight Measure (OWGT)		✓		✓	✓	✓	✓			
Withholding Tax Codes (OWHT)		✓		✓	✓	✓	✓			

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**). By allowing the task to **Continue**, you can use the error XML received back in a **Save File** step for investigation purposes, for example.

First Generation Tool Compatibility Options

The configuration under the **First Generation Tool Compatibility Options** panel is only required when converting from older generation tools. For more information, refer to your account manager or business partner.

The parameters are grouped according to SAP Business One operations:

▶ **Add / Update Operations Only**

- Write compatible XML output to a variable** — Select this option if you want to write the output from an **ADD** or **UPDATE** operation to a task variable. This variable cannot be a **Datfile** or **Password** type (for more information, refer to the BPA Platform product help).
- Expose compatible output Recordset (disables Memory feature)** — Typically, output from the SAP Business One (DI-API) Integration tool is in XML form. Selecting this option also exposes a BPA

Platform recordset version for use in later task steps. This is only for **ADD** or **UPDATE** operations. Note that the **Memory** feature does not work if outputting to recordset as well (for more information, refer to the BPA Platform product help).

- Display RetKey and RetType fields in Output Data content where available** — Select to include the **Return Key** and **Return Type** fields (note that these may not be available for every object) in the output XML for **ADD** and **UPDATE** operations only.

▶ **All Operations**

- Process an empty input recordset as a single empty row** — If the input data source (see [About the General Tab](#)) doesn't return a recordset, for example, a **Database Query (ODBC)** step returning no rows, you can choose whether to send a single empty row.

About the SAP Business One (SL) Integration Tool

The **SAP Business One (SL) Integration** tool is used to communicate with a SAP Business One server over the Service Layer. When used in a task, the step exposes the objects and fields of a single company database allowing operations such as **ADD**, **UPDATE**, **DELETE**, **SEARCH**, and in some circumstances, **CANCEL**, or **CLOSE**.

The **SAP Business One (SL) Integration** tool can consume an XML or recordset data source and output XML for subsequent task steps to consume. Before you use the **SAP Business One (SL) Integration** tool in a task, a global connection to SAP Business One must be established — see [Global Configuration](#).

About the SAP Business One (SL) Integration Agent







In order to communicate with the SAP Business One Service Layer, you must install the **SAP Business One (SL) Integration Agent**. This acts as a "go-between" between the SAP Business One server and the **SAP Business One (SL) Integration** tool, and runs as a service on the installed computer. Note that it is not necessary to install the **Agent** on the BPA Platform server — see [Architecture](#).






Working with Other Tools

The **SAP Business One (SL) Integration** tool can directly interact with the following tools:

Consuming from Other Tools

The **SAP Business One (SL) Integration** tool can consume output from the following tools:

Icon	Tool Name	Tool Category
	Call Stored Procedure (OLEDB)	Input, Data Connectors, Output, and Execute
	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
	Import XML Document	Input

Icon	Tool Name	Tool Category
	Retrieve Text Message	Input
	Convert Recordset to XML	Format
	Convert XML to Recordset	Format
	SAP Business One (DI-API) Integration	Data Connectors
	SAP Business One (SL) Integration	Data Connectors








Objects Consumed

The **SAP Business One (SL) Integration** tool consumes the following objects exposed by other steps:

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

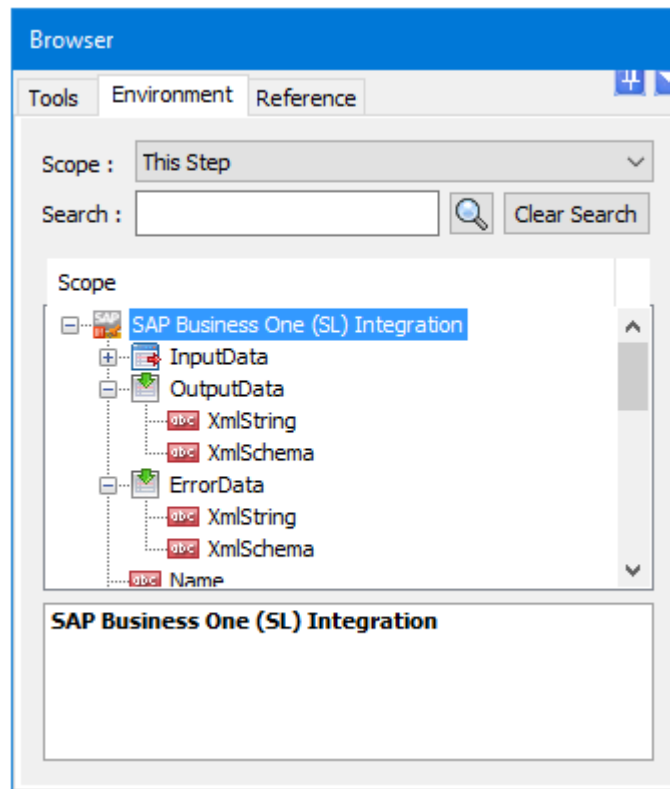
Exposing to Other Tools

The following tools can directly consume output from the **SAP Business One (SL) Integration** tool:

Icon	Tool Name	Tool Category
	Retrieve Text Message	Input
	Convert XML to Recordset	Format
	Run Microsoft Reporting Services	Format
	Save File	Output
	Web Service Connector	Data Connectors
	SAP Business One (DI-API) Integration	Data Connectors
	SAP Business One (SL) Integration	Data Connectors

Objects Exposed

The SAP Business One (SL) Integration tool outputs the following objects which can be consumed by other tools:



▶ **InputData**

The **InputData** document is only available if a recordset is the consumed **Data Source** (see [About the General Tab](#)). This contains the recordset data available for the task run.

▶ **OutputData**

The **OutputData** object contains two sub-objects:

- XmlString** — This is the XML document produced by the tool, containing data returned from SAP Business One for all operations. Also included are the key fields for the mapped elements affected by the used operation — for example, if using an **ADD** operation, the key fields for the top-level object instances that are created are returned — and a **SupplementaryReference** field for task auditing purposes.

The mapped fields in the **Mapping** tab (see [About the Mapping Tab](#)) define the structure of this XML document.

- XmlSchema** — This contains the output schema in XSD format.

▶ **ErrorData**

The **ErrorData** object also contains two sub-objects:

- XmlString** — This contains any error data reported by SAP Business One

<Error> — All errors are created as an **<Error>** node, with the following sub-nodes:

`<Object />` — The name of the requested object

`<CODE />` — The error code returned by SAP Business One

`<MESSAGE />` — The corresponding error message

`<EXTENDEDINFO />` — A string containing additional information about the error

`<INPUTDATA />` — The header input data (excluding child nodes) mapped for the object, plus all data contained in `SupplementaryReference`

`</Error>`

XmlSchema — This contains the output schema in XSD format.

▶ **Step Properties**

Standard step properties are also available allowing you to use statistical data of the **SAP Business One (SL) Integration** step.

Where Can the XML Output be Used?


The incoming XML is translated into the XML format for the object and operation selected in the configuration. The data for the linked fields is brought across into the output XML — only those fields that are linked are brought across. The XML is passed to the **Connector**, which then:

- ▶ Processes the data
- ▶ Performs the operation requested
- ▶ Receives an XML document containing the response

Both the `OutputData` and `ErrorData` documents can be directly used by succeeding task steps that can consume XML data, as part of an application integration or synchronisation process. To use the documents in a non-XML consuming tool, use a **Convert XML to Recordset** step first to create a recordset copy of the XML data.

The XML documents are also available as consumable objects from the BPA Platform Browser (`XmlString`). When used in a task step, such as **Format as Text** or **Save File**, this exposes the actual XML string.

Error Handling

Errors are written to the BPA Platform Event Log (**Tasks** toolbar > **Event Log** )). You define how errors are handled in the **Options** tab of the tool.

Reasons for the errors could include:

- ▶ Web service connection errors
- ▶ User privilege errors
- ▶ Errors from the API

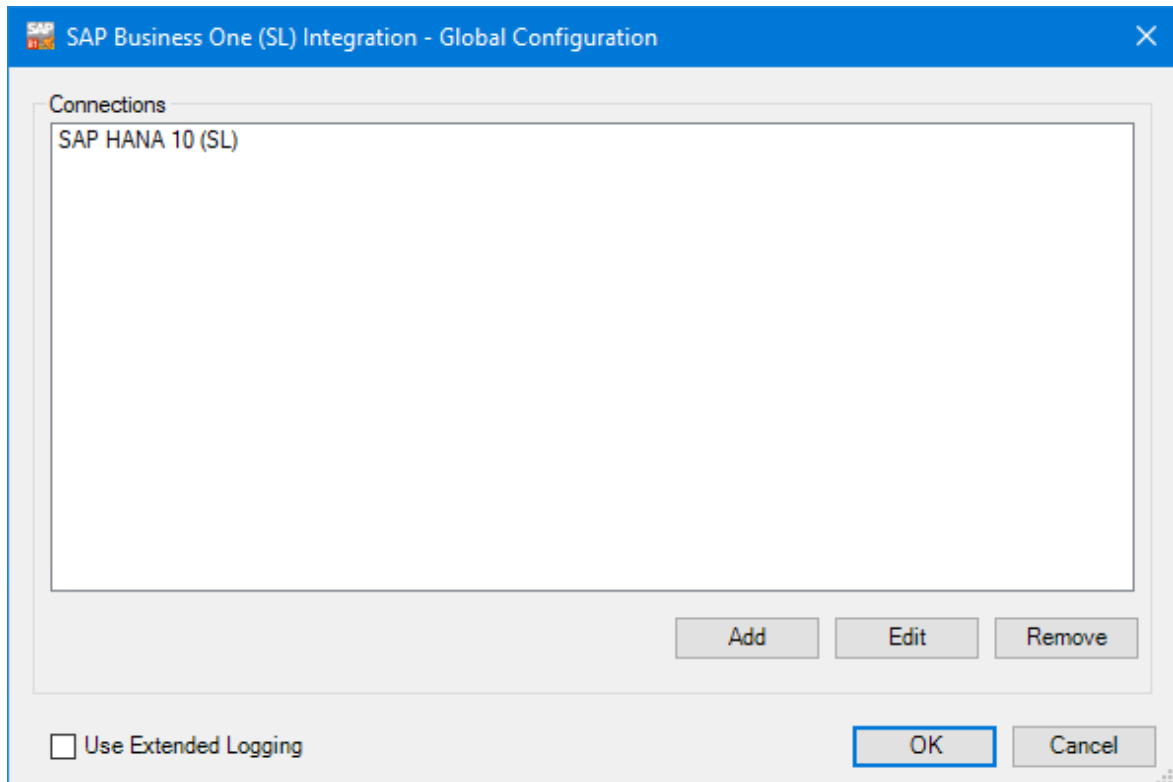
- ▶ Warnings and messages from the API

Global Configuration

The global configuration for this tool is used to create connections to a SAP Business One company database.

You access the **SAP Business One (SL) Integration – Global Configuration** window by either:

You open this interface from the resources tree — expand **System > Tools > Data Connectors** and double-click **SAP Business One (SL) Integration** in the items list.



When a connection is made, the available objects and operations are retrieved.

Before you can use the **SAP Business One (SL) Integration** tool in a task step, you must create the connection to SAP Business One first. Click **Add**.

NOTE: You may be restricted as to the number of SAP Business One company database connections you can create. For more information, refer to the BPA Platform product help or consult your Codeless Platforms account manager or partner.

Using Extended Logging

Enabling this option exposes the XML parsed between the **SAP Business One (SL) Integration** tool and SAP Business One.

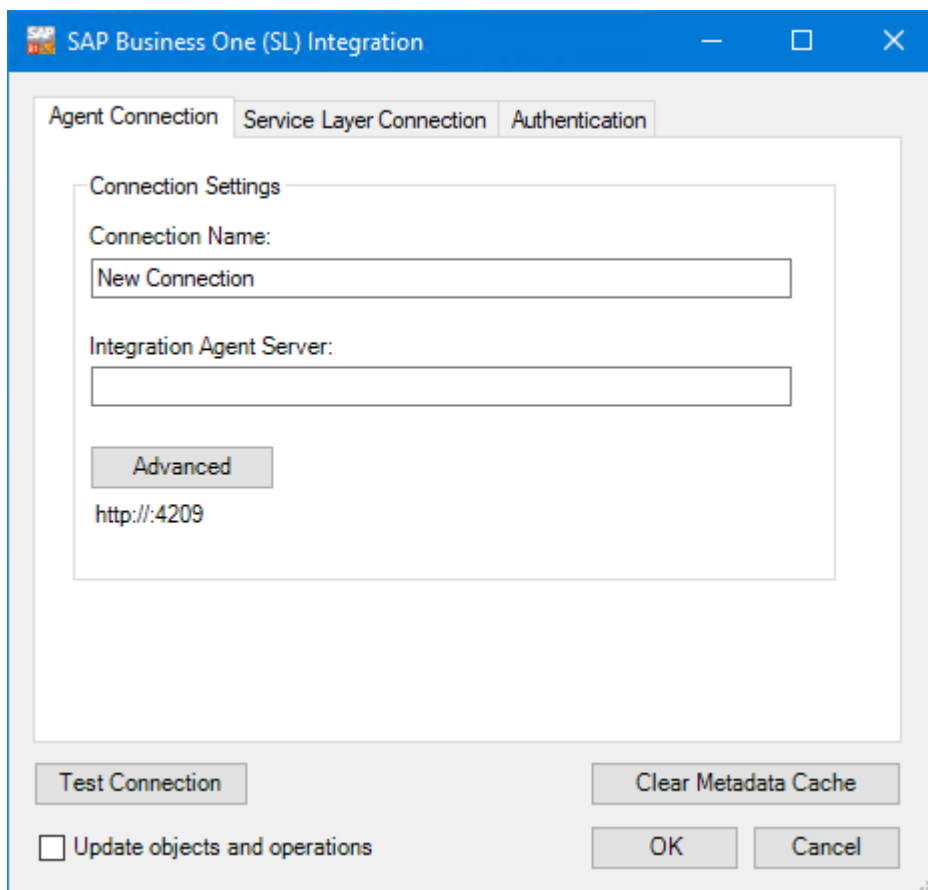
TIP: The Event Log database table may grow substantially large as extended logging adds additional rows for each call made to and from the **Connector**. To manage this, adjust the maintenance routine for the Event Log — refer to the BPA Platform product help.

Without extended logging, the Event Log only contains start and end of transaction messages, plus any error messages encountered at runtime.

You can view the extended log in the BPA Platform Event Log (**Tasks** toolbar > **Event Log** ).

About the Agent Connection Tab

The **Agent Connection** tab requires you to specify where the Integration agent has been installed so communication can be established with SAP Business One.



The screenshot shows a dialog box titled "SAP Business One (SL) Integration" with three tabs: "Agent Connection", "Service Layer Connection", and "Authentication". The "Agent Connection" tab is active. It contains a "Connection Settings" section with a "Connection Name:" label and a text box containing "New Connection". Below that is an "Integration Agent Server:" label and an empty text box. An "Advanced" button is located below the text boxes. Underneath the "Advanced" button, the text "http://:4209" is displayed. At the bottom of the dialog, there are four buttons: "Test Connection", "Clear Metadata Cache", "Update objects and operations" (with an unchecked checkbox), "OK", and "Cancel".

Enter a meaningful **Connection Name** for this agent connection; this is the name displayed when adding task steps for SAP Business One.

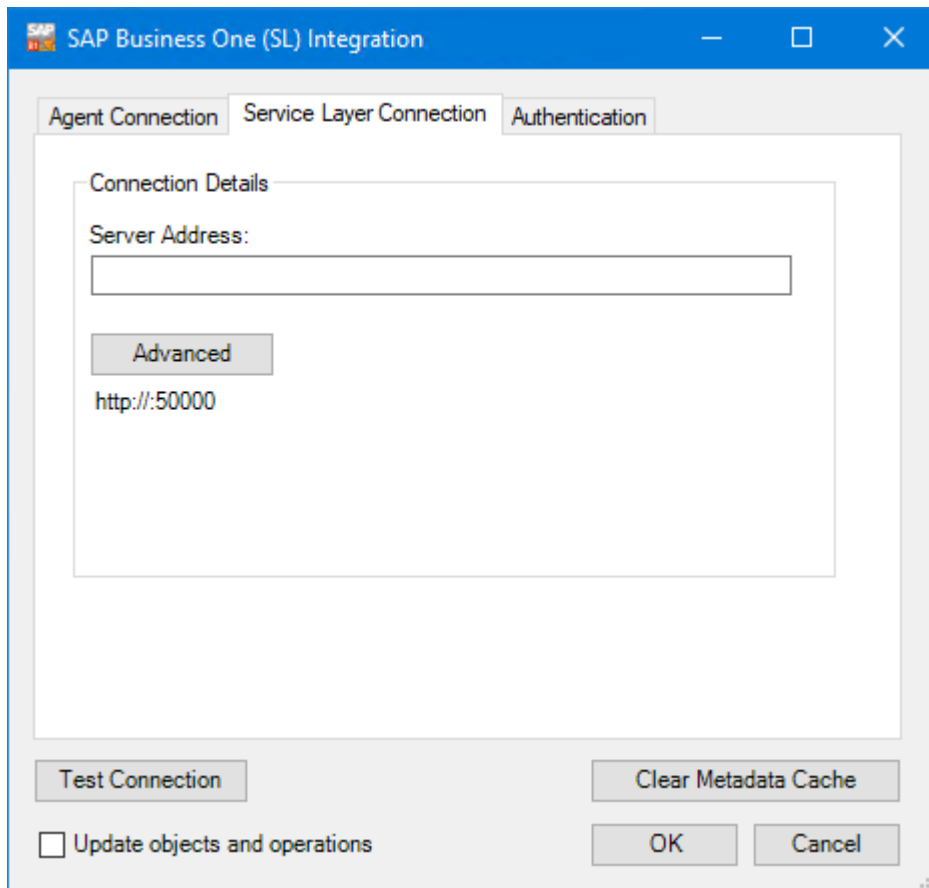
Specify the **Integration Agent Server** as hostname, IP address, or URL. Typically, this is the BPA Platform server but remote installations are also supported. Note that you cannot install the **Agent** into the same machine hosting the Service Layer for SAP HANA as this is a Linux machine.

By default, the connection to the **Agent** is over HTTP on TCP port **4209**. Use the **Advanced** button to either **Set a Custom Port Number** if **4209** is already in use in your network, or to **Use HTTPS** to communicate to the **Agent**. This

feature is particularly important if your SAP Business One instance is behind a firewall and makes use of Network Address Translation (NAT) — in this scenario, add the exposed port number here instead of the SAP instance port number.

About the Service Layer Tab

The **Service Layer** tab requires the location of the SAP Service Layer.

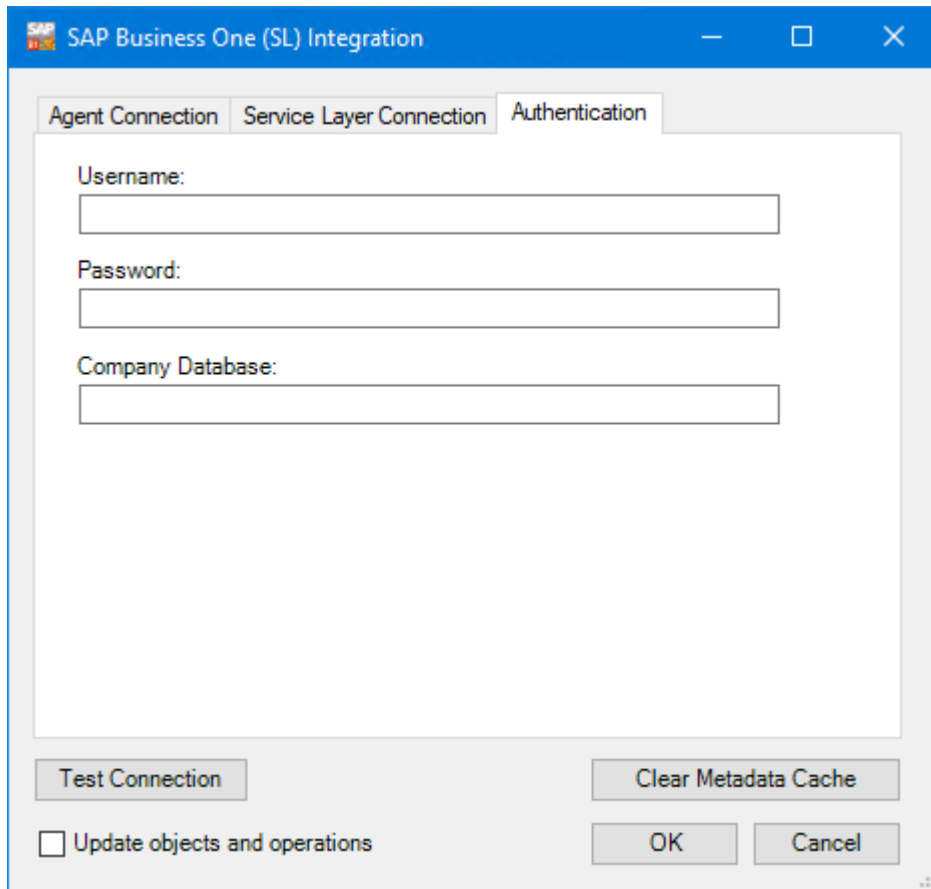


Specify **Server Address** as hostname, IP address, or URL.

By default, the connection is over HTTP on TCP port **50000**. Use the **Advanced** button to either **Set a Custom Port Number** if **50000** is already in use in your network, or to **Use HTTPS** to communicate to the **Agent**. This feature is particularly important if your Service Layer machine is behind a firewall and makes use of Network Address Translation (NAT) — in this scenario, add the exposed port number here instead of the SAP instance port number.

About the Authentication Tab

The **Authentication** tab requires the credentials of a SAP Business One user account used to access the company database.



The screenshot shows a dialog box titled "SAP Business One (SL) Integration" with three tabs: "Agent Connection", "Service Layer Connection", and "Authentication". The "Authentication" tab is active and contains three text input fields labeled "Username:", "Password:", and "Company Database:". Below the fields are four buttons: "Test Connection", "Clear Metadata Cache", "Update objects and operations" (with an unchecked checkbox), and "OK" and "Cancel".

Enter the **Username** and **Password** for BPA Platform to use when accessing the SAP Business One company database.

Enter the **Company Database** this instance of the **SAP Business One (SL) Integration** tool interacts with. Note that this is case-sensitive.

Test Connection

Use **Test Connection** to ensure all entered details are correct and a connection to the various aspects of SAP Business One can be established.

Update Objects and Operations

Enabling **Update Objects and Operations** allows the SAP Business One schema in BPA Platform to be refreshed every time an update is made in SAP Business One itself.

Should you also upgrade SAP Business One to a newer, compatible version, all related schemas within BPA Platform must be refreshed.

The schemas are refreshed when this selection and change has been saved. You must repeat this for each existing connection you have defined.

NOTE: After enabling **Update Objects and Operations**, you must refresh the schema in each **SAP Business One (SL) Integration** task step. You do this in the **Mapping** tab (**Schema Refresh**) — see [About the Mapping Tab](#).

Clear Metadata Cache

For each object mapped, the metadata is requested and downloaded from the SAP Business One Service Layer. This is cached locally to the **SAP Business One (SL) Integration Agent** in **C:\Program Files (x86)\SAP Business One (SL) Integration Agent\MetadataCache** (unless a custom folder was specified at installation time). This allows the SAP Business One (SL) Integration tool to quickly populate its **Objects** list and input fields when the step is opened, rather than pulling down from the Service Layer each time.

If user-defined fields (UDF), objects (UDO), or tables (UDT) are added to a mapped SAP Business One object, they won't appear until the cache is reset (**Clear Metadata Cache**) even if you enable **Update Object and Operations**.

Step Configuration

When creating new tasks, the **SAP Business One (SL) Integration** tool is located under **Data Connectors** of the Task Browser.

To add a new **SAP Business One (SL) Integration** step to an existing task, do the following:

From the relevant task, either:

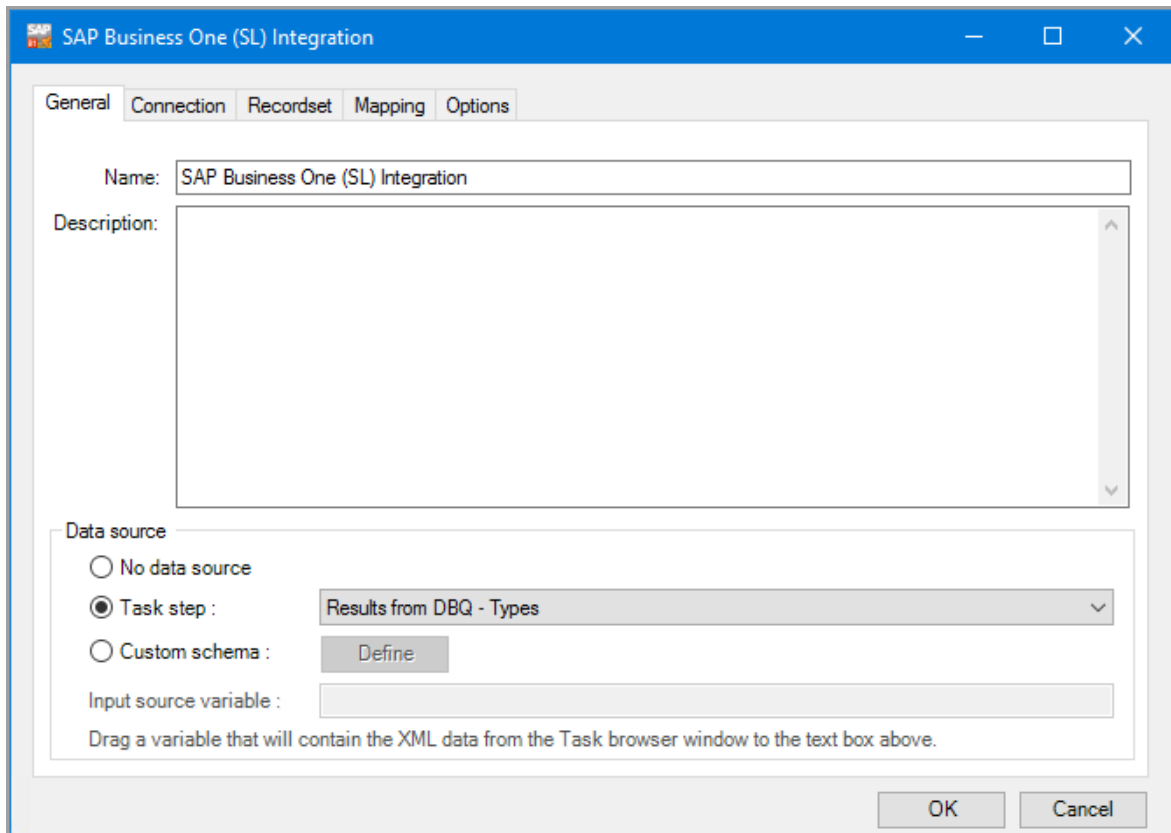
- ▶ Click and drag the **SAP Business One (SL) Integration** icon from the **Task Browser** to the task **Design** area.
- ▶ From the task's **Design** tab, right-click on empty space and select **New > Data Connectors > SAP Business One (SL) Integration**.

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

NOTE: It is not possible to add the tool into the task until at least one connection to a company database has been defined in the tool's Global Configuration — see [Global Configuration](#).

About the General Tab

Use the **General** tab to choose the BPA Platform data source to be mapped to the SAP Business One objects. You can map data source objects from either an XML or recordset source.



Provide a meaningful **Name** and **Description** for this step.

TIP: If this task instance makes use of two or more **SAP Business One (SL) Integration** steps, ensure the **Name** used is unique for each individual step.

Data source can either be:

- ▶ **No data source** — If you don't make use of a dedicated XML or recordset input source, select this option to use BPA Platform variables in place of the XML or recordset objects' fields.

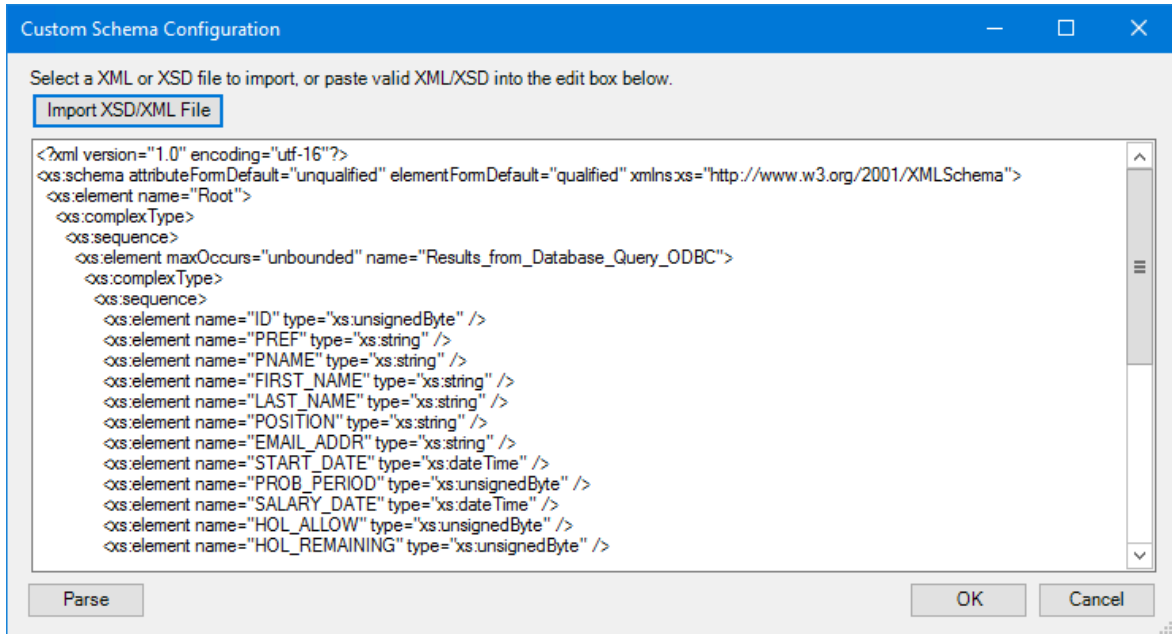
For example, you can extract various bits of information from an email and store them in BPA Platform variables. The variables are mapped to SAP Business One operational objects and fields to store in the database for later use.

- ▶ **Task step** — The data source can be set to an available BPA Platform XML or recordset data source.

Only those steps that are capable of natively exposing an XML document or recordset at runtime are listed. This may be another **SAP Business One (SL) Integration** step, or a tool such as **Retrieve Text Message** or **Database Query (ODBC)**.

Custom schema — If using a recordset input data source, this option does not apply. An XML schema defines the structure of the parsed XML: what tags are present, and the nesting of the tags. You **Define** the schema of the XML that is used as the input data source for this step. The **SAP Business One (SL) Integration** tool uses the industry standard XSD format. Any XML processed by this step must conform to this schema else an error will be reported.

If the XSD schema is available, either import it into the **Custom Schema Configuration** (use the **Import XSD/XML File** button), or copy and paste it into the configuration box.

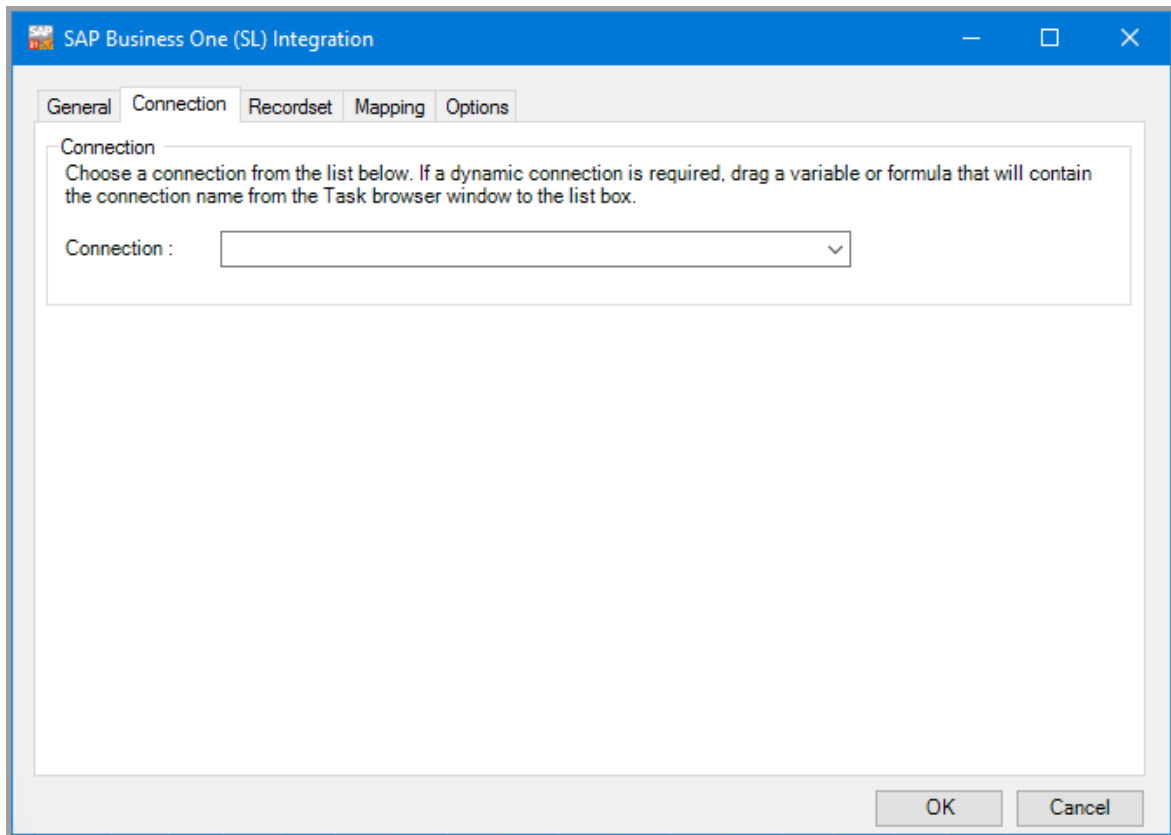


If the XSD schema is not available, you can import an example of the runtime XML (**Import XSD/XML File**), or copy and paste it into the configuration box. Use the **Parse** button to create the schema.

- Input source variable** — If using a recordset input data source, this option does not apply. As well as defining the schema, specify the BPA Platform variable that contains the XML data at runtime.

About the Connection Tab

You specify the SAP Business One **Connection** this step must use.



All connections created in the global configuration window are presented here.

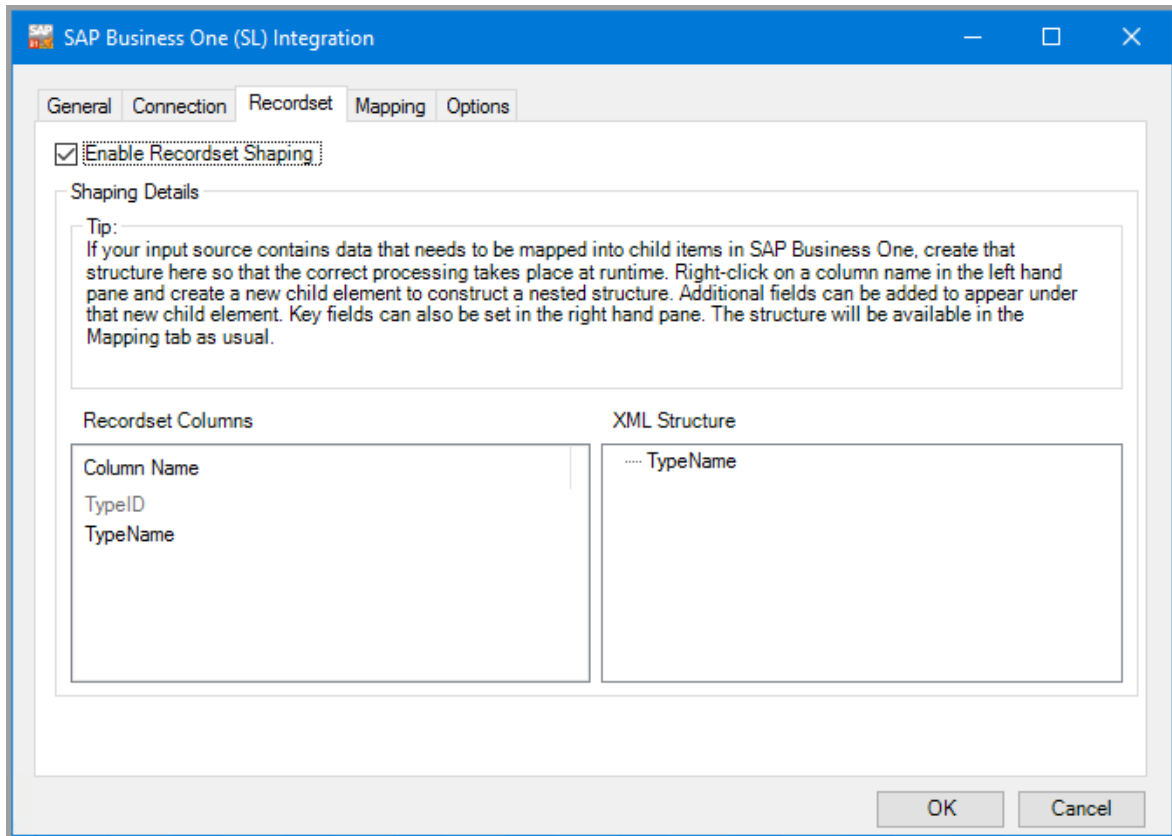
Alternatively, you can use a BPA Platform variable or formula to create a dynamic connection, where the connection used is determined by runtime circumstances. At runtime, the contents of the variable must match the name of one of the Global Configuration connections — this is case-sensitive.

About the Recordset Tab

The **Recordset** tab is only available when a recordset is chosen as the **Data Source** in the **General** tab . SAP Business One only accepts XML from the **SAP Business One (SL) Integration** tool, therefore you must use this tab to create the XML structure expected by the **Mapping** tab based on the parent and child relationships of an SAP Business One object.

NOTE: Grand-parenting, that is, having an XML depth of more than one level, is not permitted.

An additional feature is that you can create an XML structure to enable looping on child elements of an object — for example, adding multiple addresses and contact details to a single business partner. For such a case, you would create the structure with a parent **Key** element which determine when a new header is found. For more information, refer to our knowledge base article, [The recommended SQL structure to generate multiple child records](#).



The **Recordset Columns** pane displays the recordset columns as a flat list; the XML Structure pane displays the XML as you build it.

Select **Enable Recordset Shaping** to map recordset data to an XML structure. However, if your recordset data is of a simple structure, that is the recordset columns map to a flat XML structure, skip directly to the **Mapping** tab.

The **SAP Business One (SL) Integration** tool creates a basic XML structure based on the recordset data source. To set an XML element as the key, right-click on the XML element (right-hand pane) and select **Set as Key**.

TIP: If the XML structure you are creating contains multiple child elements, remove the XML elements from the XML structure now (right-click on the field and select **Remove**) to ensure you don't create duplicate elements.

To create a new child element, right-click on the required recordset column name and select **Add new child element**.

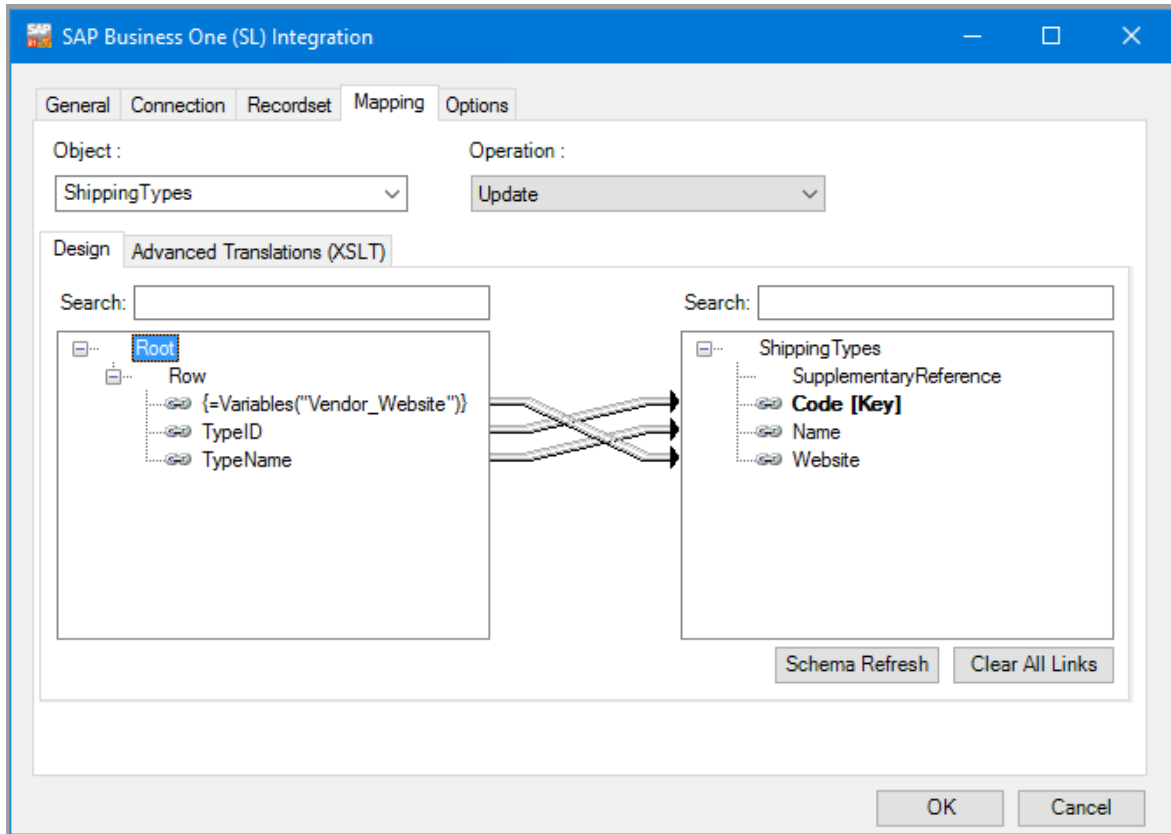
Provide a **Name** for the child element. This has a maximum of 64 characters and uses XML-supported characters only. The new child element appears in the **XML Structure** pane with the chosen recordset column as a field.

To add a recordset column to the new child node, right-click on the relevant column name and select **Add to**. Repeat until the child element has been built.

To remove a field from a child element, right-click on the field in the **XML Structure** pane and select **Remove**. To remove a child element in its entirety, you must remove each field first. Removing the final field removes the child element.

About the Mapping Tab

The **Mapping** tab is used to define links between the incoming XML or recordset data source, and the outgoing data that is to be sent to SAP Business One. Variables can also be included as an additional source for passing data across.



The **Object** drop-down shows the SAP Business One objects. If exposed, user-defined *fields* and *objects* are also made available for selection here. The **Operations** drop-down shows the operations available for the selected **Object**

Further down, the left-hand XML tree structure shows those data source fields available for mapping. The right-hand XML tree structure displays those input fields for the selected **Object** and **Operation**.

TIP: If you have selected **No data source** in the **General** tab, you must add BPA Platform formulas and variables to the left-hand data source XML tree structure before mapping.

Creating Mappings

Create links by dragging and dropping a data source field (left) onto its corresponding SAP Business One (SL) **Integration** input field (right). Only linked fields are used in the output XML.

BPA Platform formulas and variables can be included in the source data even when using a **Task step** or **Custom schema** — drag them from the BPA Platform Browser to the data source's XML; these can then be linked to the relevant input fields. BPA Platform recordsets must first be converted to XML using either the **Convert Recordset to XML** or **Transform Data** tool before they can be used here.

Each operation has an additional field, `SupplementaryReference`, which allows for traceability when transferring data from one place to another. When mapped, the data resides locally at runtime. It is added to the output, and creates a record for reference purposes only — you can choose to map any field to `SupplementaryReference` to assist with checking where the data originated from or at what time the data transfer occurred, for example.

The **SAP Business One (SL) Integration** tool uses eXtensible Stylesheet Language Transformations (XSLT) to translate the received XML. The **Advanced Translations (XSLT)** tab shows the XSLT generated for the links created for the object and operation. Use **Enable Free Type Mode** to directly edit the XSLT — this is particularly useful when translating a non-standard requirement.

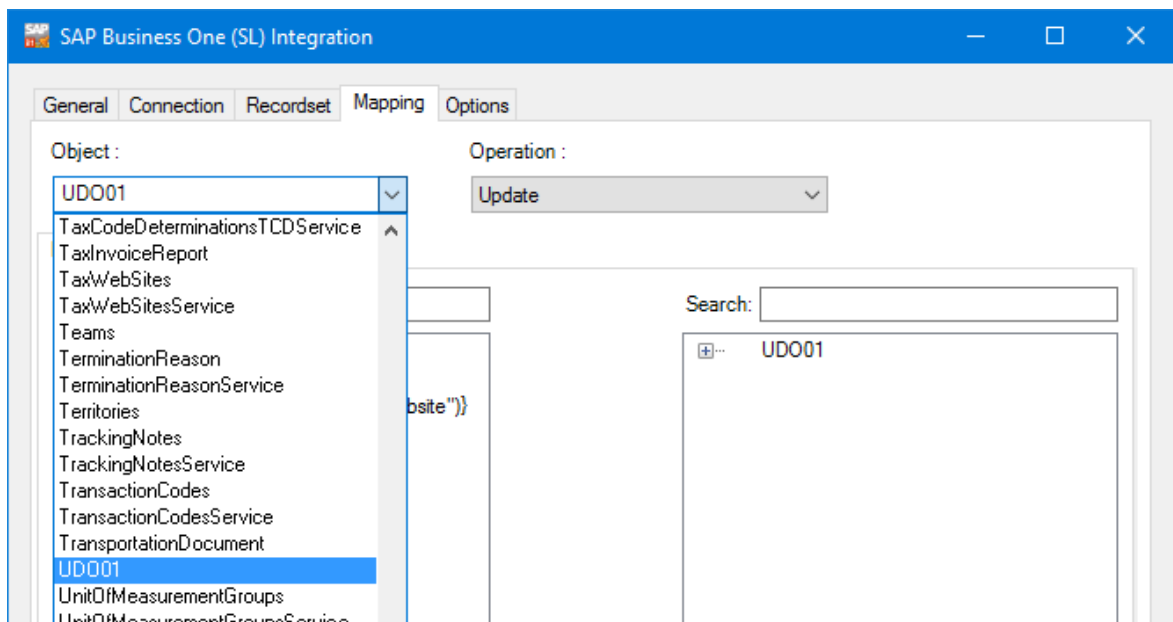
Refreshing the SAP Business One (SL) Integration's Schema

If new fields, objects, and operations have been added to your SAP Business One company database after this task step was originally created, use **Schema Refresh** to make the latest API metadata available for use.

NOTE: Newly defined fields and objects, whether user-defined or added by SAP Business One, are not automatically available for mapping. Use **Schema Refresh** underneath the input field pane to download any updates from the SAP Business One schema. If that doesn't work, you must reset the **SAP Business One (SL) Integration** tool's local cache — see [Update Objects and Operations](#) and [Clear Metadata Cache](#) — before performing the **Schema Refresh**.

About User-Defined Objects

The **SAP Business One (SL) Integration** tool supports the use of user-defined objects, whether created manually or imported from an external source into SAP. User-defined objects are exposed in the tool via the **Object** drop-down.



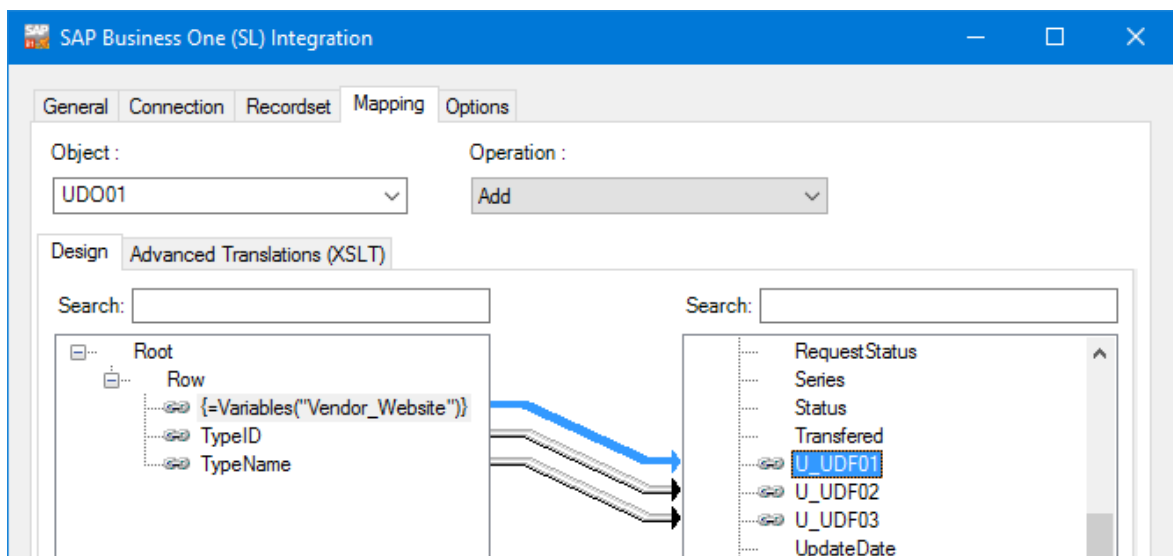
Each user-defined object contains the mandatory operations `Add` and `Update`, along with any other operation defined during its creation.

Any user-defined object that has the **Log** option enabled in SAP Business One has access to history data. Using the **SAP Business One (SL) Integration** tool, you can retrieve the previous value of a field after an update occurs by mapping a variable to it.

NOTE: Newly defined fields and objects, whether user-defined or added by SAP Business One, are not automatically available for mapping. Use **Schema Refresh** underneath the input field pane to download any updates from the SAP Business One schema. If that doesn't work, you must reset the **SAP Business One (SL) Integration** tool's local cache — see [Update Objects and Operations](#) and [Clear Metadata Cache](#) — before performing the **Schema Refresh**.

About User-Defined Fields

The **SAP Business One (SL) Integration** tool supports the use of user-defined fields in both objects and sub-objects. The field is prefixed with `U_`.



NOTE: Newly defined fields and objects, whether user-defined or added by SAP Business One, are not automatically available for mapping. Use **Schema Refresh** underneath the input field pane to download any updates from the SAP Business One schema. If that doesn't work, you must reset the **SAP Business One (SL) Integration** tool's local cache — see [Update Objects and Operations](#) and [Clear Metadata Cache](#) — before performing the **Schema Refresh**.

Supported Objects

NOTE: The following information is referenced from SAP Business One version 10.0. If your instance of SAP Business One is on a different version, you may find fields, objects, and operations differ slightly.

The objects and operations currently available are shown in the table below, where:

Key for Standard Operations

A — Add	GK — GetByKey
Ca — Cancel	GL — GetList
Cl — Close	S — Search
D — Delete	U — Update

WARNING: The SAP Business One Service Layer exposes the objects and operations via ODATA. At the time of writing, all objects are exposed irrespective of the region your SAP Business One instance is configured for or the patch level. Additionally, unless otherwise stated, all standard operations are available for every object, again irrespective of your region and patch level. Care must be taken when creating your mappings — ensure you do not map to objects and operations not supported by your region or patch level. If you are unsure about this, refer to your SAP Business One documentation.

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	Cl	
AccountCategory	✓	✓	✓		✓	✓			
AccountCategoryService									Single supported operation: GetCategoryList
AccountSegmentationCategories	✓	✓	✓		✓	✓			
AccountSegmentations	✓	✓	✓		✓	✓			
AccountsService									Single supported operation: CreateOpenBalance
AccrualTypes	✓	✓	✓		✓	✓			

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	Cl	
AccrualTypesService									Single supported operation: GetAccrualTypeList
Activities	✓	✓	✓		✓	✓			
ActivitiesService									Supported operations: DeleteSingleInstanceFromSeries GetActivityList GetListByAttendUser GetSingleInstanceFromSeries GetTopNActivityInstances InitData UpdateSingleInstanceInSeries
ActivityLocations	✓	✓	✓		✓	✓			
ActivityRecipientsLists	✓	✓	✓		✓	✓			
ActivityRecipientsListsService				✓					
ActivityStatuses	✓	✓	✓		✓	✓			
ActivitySubjects	✓	✓	✓		✓	✓			
ActivitySubjectService									Supported operations: GetActivitySubjectList GetListByTypeCode
ActivityTypes	✓	✓	✓		✓	✓			
AdditionalExpenses	✓	✓	✓		✓	✓			
AlertManagements	✓	✓	✓		✓	✓			Additional supported operation: GetAlertManagementList
AlternateCatNum	✓	✓	✓		✓	✓			
AlternativItemsService									Supported operations: AddItem DeleteItem GetItem UpdateItem
ApprovalRequests	✓	✓	✓		✓	✓			Additional supported operations: CancelApprovalRequest RestoreApprovalRequest

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
ApprovalRequestsService									Supported operations: GetAllApprovalRequestsList GetApprovalRequestList GetOpenApprovalRequestList
ApprovalStages	✓	✓	✓		✓	✓			
ApprovalStagesService									Single supported operation: GetApprovalStageList
ApprovalTemplates	✓	✓	✓		✓	✓			
ApprovalTemplatesService									Single supported operation: GetApprovalTemplateList
AssetCapitalization	✓	✓	✓		✓	✓			
AssetCapitalizationCreditMemo	✓	✓	✓		✓	✓			
AssetCapitalizationCreditMemoService				✓			✓		
AssetCapitalizationService				✓			✓		
AssetClasses	✓	✓	✓		✓	✓			
AssetClassesService				✓					
AssetDepreciationGroups	✓	✓	✓		✓	✓			
AssetDepreciationGroupsService				✓					
AssetGroups	✓	✓	✓		✓	✓			
AssetGroupsService				✓					
AssetManualDepreciation	✓	✓	✓		✓	✓			
AssetManualDepreciationService				✓			✓		
AssetRetirement	✓	✓	✓		✓	✓			
AssetRetirement				✓			✓		
AssetTransfer	✓	✓	✓		✓	✓			
AssetTransferService				✓			✓		
Attachments2	✓	✓	✓		✓	✓			

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	Cl	
AttributeGroups	✓	✓	✓		✓	✓			
AttributeGroupsService				✓					
B1Sessions	✓	✓	✓		✓	✓			
BankChargesAllocationCodes	✓	✓	✓		✓	✓			Additional supported operation: SetDefaultBankChargesAllocationCode
BankChargesAllocationCodesServices									Single supported operation: GetBankChargesAllocationCodeList
BankPages	✓	✓	✓		✓	✓			
Banks	✓	✓	✓		✓	✓			
BankStatements	✓	✓	✓		✓	✓			
BanksStatementsService									Single supported operation: GetBankStatementList
BarCodes	✓	✓	✓		✓	✓			
BarCodesService				✓					
BatchNumberDetails	✓	✓	✓		✓	✓			
BillOfExchangeTransactions	✓	✓	✓		✓	✓			
BinLocationAttributes	✓	✓	✓		✓	✓			
BinLocationAttributesService				✓					
BinLocationFields	✓	✓	✓		✓	✓			
BinLocationFieldsService				✓					
BinLocations	✓	✓	✓		✓	✓			
BinLocationsService				✓					
BlanketAgreements	✓	✓	✓		✓	✓			Additional supported operations: CancelBlanketAgreement GetRelatedDocuments
BlanketAgreementsService									Single supported operation: GetBlanketAgreementList

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
BOEDoumentTypes	✓	✓	✓		✓	✓			
BOEDoumentTypesService									Single supported operation: GetBOEDocumentTypeList
BOEInstructions	✓	✓	✓		✓	✓			
BOEInstructionsService									Single supported operation: GetBOEInstructionList
BOELinesService									Single supported operation: GetBOELine
BOEPortfolios	✓	✓	✓		✓	✓			
BOEPortfoliosService									Single supported operation: GetBOEPortfolioList
BPOpeningBalanceService									Single supported operation: CreateOpenBalance
BPPriorities	✓	✓	✓		✓	✓			
Branches	✓	✓	✓		✓	✓			
BranchesService									Single supported operation: GetBranchList
BrazilBeverageIndexers	✓	✓	✓		✓	✓			
BrazilBeverageIndexersService				✓					
BrazilFuelIndexers	✓	✓	✓		✓	✓			
BrazilFuelIndexersServices				✓					
BrazilMultiIndexers	✓	✓	✓		✓	✓			Additional supported operation: GetIndexerTypeList
BrazilNumericIndexers	✓	✓	✓		✓	✓			Additional supported operation: GetIndexerTypeList
BrazilStringIndexers	✓	✓	✓		✓	✓			Additional supported operation: GetIndexerTypeList
BudgetDistributions	✓	✓	✓		✓	✓			
Budgets	✓	✓	✓		✓	✓			

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	Cl	
BudgetScenarios	✓	✓	✓		✓	✓			
BusinessPartnerGroups	✓	✓	✓		✓	✓			
BusinessPartnerProperties	✓	✓	✓		✓	✓			
BusinessPartnerPropertiesService									Single supported operation: GetBusinessPartnerPropertyList
BusinessPartners	✓	✓	✓		✓	✓			
BusinessPartnersService									Supported operations: CreateOpenBalance InitData
BusinessPlaces	✓	✓	✓		✓	✓			
CampaignResponseType	✓	✓	✓		✓	✓			
CampaignResponseTypeService									Single supported operation: GetResponseTypeList
Campaigns	✓	✓	✓		✓	✓	✓		
CampaignsService				✓					
CashDiscounts	✓	✓	✓		✓	✓			
CashDiscountsService									Single supported operation: GetCashDiscountList
CashFlowLineItems	✓	✓	✓		✓	✓			
CashFlowLineItemsService									Single supported operation: GetCashFlowLineItemList
CertificateSeries	✓	✓	✓		✓	✓			
CertificateSeriesService									Single supported operation: GetCertificateSeriesList
ChangeLogsService									Supported operations: GetChangeLog GetChangeLogDifferences
ChartOfAccounts	✓	✓	✓		✓	✓			

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
CheckLinesService									Supported operations: GetCheckLine GetValidCheckLineList
ChecksforPayment	✓	✓	✓		✓	✓			
ChooseFromList	✓	✓	✓		✓	✓			
Cockpits	✓	✓	✓		✓	✓			
CockpitsService									Supported operations: GetCockpitList GetTemplateCockpitList GetUserCockpitList PublishCockpit
CommissionGroups	✓	✓	✓		✓	✓			
CompanyService									Supported operations: CreatePeriod CreatePeriodWithFinanceParams GetAdminInfo GetAdvancedGLAccount GetCompanyInfo GetFeaturesStatus GetFinancePeriod GetFinancePeriods GetItemPrice GetPathAdmin GetPeriod GetPeriods RemoveFinancePeriod RoundDecimal UpdateAdminInfo UpdateCompanyInfo UpdateFinancePeriod UpdatePathAdmin UpdatePeriod
Contacts	✓	✓	✓		✓	✓			
ContractTemplates	✓	✓	✓		✓	✓			

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
CorrectionInvoice	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen
CorrectionInvoiceReversal	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen
CorrectionInvoiceReversalService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
CorrectionInvoiceService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
CorrectionPurchaseInvoice	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen
CorrectionPurchaseInvoiceReversal	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen
CorrectionPurchaseInvoiceReversalService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
CorrectionPurchaseInvoiceService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
CostCenterTypes	✓	✓	✓		✓	✓			
CostCenterTypesService									Single supported operation: GetCostCenterTypeList

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
CostElements	✓	✓	✓		✓	✓			
CostElementsService									Single supported operation: <code>GetCostElementList</code>
Countries	✓	✓	✓		✓	✓			
CountriesService									Single supported operation: <code>GetCountryList</code>
CreditCardPayments	✓	✓	✓		✓	✓			
CreditCards	✓	✓	✓		✓	✓			
CreditLinesService									Supported operations: <code>GetCreditLine</code> <code>GetValidCreditLineList</code>
CreditNotes	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: <code>CreateCancellationDocument</code> <code>Reopen</code>
CreditNotesService									Supported operations: <code>ExportEWayBill</code> <code>GetApprovalTemplates</code> <code>HandleApprovalRequest</code> <code>InitData</code> <code>RequestApproveCancellation</code>
CreditPaymentMethods	✓	✓	✓		✓	✓			
Currencies	✓	✓	✓		✓	✓			
CustomerEquipmentCards	✓	✓	✓		✓	✓			
CustomsDeclaration	✓	✓	✓		✓	✓			
CustomsGroups	✓	✓	✓		✓	✓			
CycleCountDetermines	✓	✓	✓		✓	✓			
CycleCountDeterminesService				✓					
DashboardPackagesService									Single supported operation: <code>ImportDashboardPackage</code>
DeductionTaxGroups	✓	✓	✓		✓	✓			

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	Cl	
DeductionTaxHierarchies	✓	✓	✓		✓	✓			
DeductionTaxSubGroups	✓	✓	✓		✓	✓			
DeductionTaxSubGroupsService									Single supported operation: GetDeductionTaxSubGroupList
DefaultElementsforCR	✓	✓	✓		✓	✓			
DeliveryNotes	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen
DeliveryNotesService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
Departments	✓	✓	✓		✓	✓			
DepartmentsService									Single supported operation: GetDepartmentList
Deposits	✓	✓	✓		✓	✓			Additional supported operations: CancelDeposit CancelDepositbyCurrentSystemDate
DepositsService									Supported operations: CancelCheckRow CancelCheckRowbyCurrentSystemDate GetDepositList
DepreciationAreas	✓	✓	✓		✓	✓			
DepreciationAreasService				✓					
DepreciationTypePools	✓	✓	✓		✓	✓			
DepreciationTypePoolsService				✓					
DepreciationTypes	✓	✓	✓		✓	✓			
DepreciationTypesService				✓					

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
DeterminationCriterias	✓	✓	✓		✓	✓			
DeterminationCriteriasService				✓					
Dimensions	✓	✓	✓		✓	✓			
DimensionsService									Single supported operation: GetDimensionList
DistributionRules	✓	✓	✓		✓	✓			
DistributionRulesService									Single supported operation: GetDistributionRuleList
DNFCodeSetup	✓	✓	✓		✓	✓			
DNFCodeSetupService									Single supported operation: GetDNFCodeSetupList
DownPayments	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen
DownPaymentsService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
Drafts	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen
DraftsService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData SaveDraftToDocument
DunningLetters	✓	✓	✓		✓	✓			
DunningTerms	✓	✓	✓		✓	✓			
DunningTermsService									Single supported operation: GetDunningTermList

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	Cl	
DynamicSystemsString	✓	✓	✓		✓	✓			
ElectronicCommunicationActionService									Supported operations: ConfirmSuccessOfCommunication GetAction ReportErrorAndContinue ReportErrorAndStop UpdateAction
ElectronicCommunicationActionsService									Supported operations: AddEcmAction AddEcmActionLog DeleteEcmAction GetEcmAction GetEcmActionByDoc GetEcmActionLog GetEcmActionLogList UpdateEcmAction
ElectronicDocuments	✓	✓	✓		✓	✓			Additional supported operation: GetProtocolParameters
ElectronicDocumentService									Supported operations: AddLog ExportEntryLog GetEntry GetEntryList GetLastLog GetLogs GetProtocols UpdateEntry
ElectronicFileFormats	✓	✓	✓		✓	✓			
ElectronicFileFormatsService									Single supported operation: GetElectronicFileFormatList
EmailGroups	✓	✓	✓		✓	✓			
EmailGroupsService				✓					
EmployeeIDType	✓	✓	✓		✓	✓			
EmployeeIDTypeService				✓					

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
EmployeePosition	✓	✓	✓		✓	✓			
EmployeePositionService				✓					
EmployeeRolesSetup	✓	✓	✓		✓	✓			
EmployeeRolesSetupService									Single supported operation: GetEmployeeRoleSetupList
EmployeesInfo	✓	✓	✓		✓	✓	✓	✓	
EmployeeStatus	✓	✓	✓		✓	✓			
EmployeeStatusService				✓					
EmployeeTransfers	✓	✓	✓		✓	✓			
EmployeeTransfersService									Single supported operation: GetEmployeeTransferList
EnhancedDiscountGroups	✓	✓	✓		✓	✓			
EnhancedDiscountGroupsService				✓					
EWBTransports	✓	✓	✓		✓	✓			
EWBTransporterService									Single supported operation: GetEWBTransporterList
ExpenseTypes	✓	✓	✓		✓	✓			
ExtendedTranslations	✓	✓	✓		✓	✓			
ExtendedTranslationsService									Single supported operation: GetExtendedTranslationList
ExternalCallsService									Supported operations: GetCall SendCall UpdateCall
ExternalReconciliationsService									Supported operations: CancelReconciliation GetReconciliation GetReconciliationList Reconcile
FAAccountDeterminations	✓	✓	✓		✓	✓			

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	Cl	
FAAccountDeterminationsService				✓					
FactoringIndicators	✓	✓	✓		✓	✓			
FinancialYears	✓	✓	✓		✓	✓			
FinancialYearsService									Single supported operation: GetFinancialYearList
FiscalPrinter	✓	✓	✓		✓	✓			
FiscalPrinterService									Single supported operation: GetFiscalPrinterList
FixedAssetItemsService									Supported operations: GetAssetEndBalance GetAssetValuesList UpdateAssetEndBalance
FormattedSearches	✓	✓	✓		✓	✓			
FormPreferences	✓	✓	✓		✓	✓			
Forms1099	✓	✓	✓		✓	✓			
GLAccountAdvancedRules	✓	✓	✓		✓	✓			
GLAccountAdvancedRulesService				✓					
GoodsReturnRequest	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen
GoodsReturnRequestService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
GovPayCodes	✓	✓	✓		✓	✓			
GovPayCodesService				✓					
GTIsService									Single supported operation: Import
HouseBankAccounts	✓	✓	✓		✓	✓			

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
IncomingPayments	✓	✓	✓		✓	✓	✓		Additional supported operations: CancelbyCurrentSystemDate GetApprovalTemplates SaveDraftToDocument
IndiaSacCode	✓	✓	✓		✓	✓			
IndiaSacCodeService				✓					
Industries	✓	✓	✓		✓	✓			
IntegrationPackagesConfigure	✓	✓	✓		✓	✓			
IntegrationPackagesConfigureService				✓					
InternalReconciliations	✓	✓	✓		✓	✓	✓		Additional supported operation: RequestApproveCancellation
InternalReconciliationsService									Single supported operation: GetOpenTransactions
IntrastatConfiguration	✓	✓	✓		✓	✓			
IntrastatConfigurationService				✓					
InventoryCountings	✓	✓	✓		✓	✓		✓	
InventoryCountingsService				✓					
InventoryCycles	✓	✓	✓		✓	✓			
InventoryGenEntries	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen
InventoryGenEntriesService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
InventoryGenExits	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	Cl	
InventoryGenExitService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
InventoryOpeningBalances	✓	✓	✓		✓	✓			
InventoryOpeningBalancesService				✓					
InventoryPostings	✓	✓	✓		✓	✓			
InventoryPostingsService				✓					Additional supported operation: SetCopyOption
InventoryTransferRequests	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: SaveDraftToDocument
InventoryTransferRequestsService									Supported operations: GetApprovalTemplates HandleApprovalRequest
Invoices	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen
InvoicesService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
ItemGroups	✓	✓	✓		✓	✓			
ItemImages	✓	✓	✓		✓	✓			
ItemProperties	✓	✓	✓		✓	✓			
Items	✓	✓	✓		✓	✓	✓		
ItemService									Single supported operation: InitData
JournalEntries	✓	✓	✓		✓	✓	✓		
JournalEntryDocumentTypes	✓	✓	✓		✓	✓			

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
JournalEntryDocumentTypeService				✓					
JournalVouchersService	✓								
KnowledgeBaseSolutions	✓	✓	✓		✓	✓			
KPIs	✓	✓	✓		✓	✓			
KPIsService				✓					
LandedCosts	✓	✓	✓		✓	✓			Additional supported operations: CancelLandedCost CloseLandedCost
LandedCostsCodes	✓	✓	✓		✓	✓			
LandedCostsService									Single supported operation: GetLandedCostList
LegalData	✓	✓	✓		✓	✓			
LengthMeasures	✓	✓	✓		✓	✓			
LicenseService									Single supported operation: GetInstallationNumber
LocalEra	✓	✓	✓		✓	✓			
Manufacturers	✓	✓	✓		✓	✓			
MaterialGroups	✓	✓	✓		✓	✓			
MaterialGroupsService									Single supported operation: GetMaterialGroupList
MaterialRevaluation	✓	✓	✓		✓	✓	✓	✓	
MaterialRevaluationFIFOService									Single supported operation: GetMaterialRevaluationFIFO
MaterialRevaluationSNBService	✓			✓					
Messages	✓	✓	✓		✓	✓			
MessagesService									Supported operations: GetInbox GetOutbox GetSentMessages

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	Cl	
MobileAddOnSetting	✓	✓	✓		✓	✓			
MobileAddOnSettingService									Single supported operation: GetMobileAddOnSettingList
MobileAddService									Supported operations: GetCurrentServerDateTime GetDppChangeParams[SIC] GetEmployeeFullNames GetSalesAppSetting GetServiceAppReport GetServiceAppReportContent GetTechnicianSchedulings GetTechnicianSettings GetTechnicianSettingsGroup UpdateSalesAppSetting UpdateServiceAppReport UpdateServiceAppReportContent UpdateTechnicianSettings UpdateTechnicianSettingsGroup
MultiLanguageTranslations	✓	✓	✓		✓	✓			
NatureOfAssesseees	✓	✓	✓		✓	✓			
NatureOfAssesseeesService									Single supported operation: GetNatureOfAssesseeList
NCMCodeSetup	✓	✓	✓		✓	✓			
NCMCodeSetupService									Single supported operation: GetNCMCodeSetupList
NFModels	✓	✓	✓		✓	✓			
NFModelsService				✓					
NFTaxCategories	✓	✓	✓		✓	✓			
NFTaxCategoriesServices				✓					
OccurrenceCodes	✓	✓	✓		✓	✓			
OccurrenceCodesService				✓					

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
Orders	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen
OrdersService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData Preview
PackagesTypes	✓	✓	✓		✓	✓			
PartnersSetups	✓	✓	✓		✓	✓			
PartnersSetupsService				✓					
PaymentBlocks	✓	✓	✓		✓	✓			
PaymentBlocksService									Single supported operation: GetPaymentBlockList
PaymentCalculationService									Single supported operation: GetPaymentAmount
PaymentDrafts	✓	✓	✓		✓	✓	✓		Additional supported operations: CancelbyCurrentSystemsDate GetApprovalTemplates RequestApproveCancellation SaveDraftToDocument
PaymentRunExport	✓	✓	✓		✓	✓			
PaymentTermsTypes	✓	✓	✓		✓	✓		✓	
PaymentTermsTypesService									Single supported operation: UpdateWithBPs
PickLists	✓	✓	✓		✓	✓			Additional supported operation: GetReleasedAllocation
PickListsService								✓	Additional supported operation: UpdateReleasedAllocation
POSDailySummary	✓	✓	✓		✓	✓			
PostingTemplates	✓	✓	✓		✓	✓			

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	Cl	
PostingTemplatesService				✓					
PredefinedTexts	✓	✓	✓		✓	✓			
PredefinedTextsService									Single supported operation: GetPredefinedTextList
PriceLists	✓	✓	✓		✓	✓			
ProductionOrders	✓	✓	✓		✓	✓	✓		
ProductTrees	✓	✓	✓		✓	✓			
ProfitCenters	✓	✓	✓		✓	✓			
ProfitCentersService									Single supported operation: GetProfitCenterList
ProjectManagementConfigurationService									Supported operations: AddActivities AddAreas AddPriorities AddStageTypes AddSubprojectTypes AddTasks DeleteActivities DeleteAreas DeletePriorities DeleteStageTypes DeleteSubprojectTypes DeleteTasks GetActivities GetAreas GetPriorities GetStageTypes GetSubprojectTypes GetTasks UpdateActivities UpdateAreas UpdatePriorities UpdateStageTypes UpdateSubprojectTypes UpdateTasks

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
ProjectManagements	✓	✓	✓		✓	✓			Additional supported object: <i>CancelProject</i>
ProjectManagementsService									Supported operations: <i>AddSubproject</i> <i>DeleteSubproject</i> <i>GetSubproject</i> <i>GetSubprojectsList</i> <i>UpdateSubproject</i>
ProjectManagementTimeSheet	✓	✓	✓		✓	✓			
Projects	✓	✓	✓		✓	✓			
ProjectsService									Single supported operation: <i>GetProjectList</i>
PurchaseCreditNotes	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: <i>CreateCancellationDocument</i> <i>Reopen</i>
PurchaseCreditNotesService									Supported operations: <i>ExportEWayBill</i> <i>GetApprovalTemplates</i> <i>HandleApprovalRequest</i> <i>InitData</i>
PurchaseDeliveryNotes	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: <i>CreateCancellationDocument</i> <i>Reopen</i>
PurchaseDeliveryNotesService									Supported operations: <i>ExportEWayBill</i> <i>GetApprovalTemplates</i> <i>HandleApprovalRequest</i> <i>InitData</i>
PurchaseDownPayments	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: <i>CreateCancellationDocument</i> <i>Reopen</i>

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	Cl	
PurchaseDownPaymentsService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
PurchaseInvoices	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen
PurchaseInvoicesService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
PurchaseOrders	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen
PurchaseOrdersService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
PurchaseQuotations	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen
PurchaseQuotationsService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
PurchaseRequests	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
PurchaseRequestsService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
PurchaseReturns	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen
PurchaseReturnsService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
PurchaseTaxInvoices	✓	✓	✓		✓	✓			
QRCodeService									Single supported operation: AddOrUpdateQRCode
QueryAuthGroups	✓	✓	✓		✓	✓			
QueryAuthGroupsService									Single supported operation: GetQueryAuthGroupList
QueryCategories	✓	✓	✓		✓	✓			
QueryService									Single supported operation: PostQuery
Queue	✓	✓	✓		✓	✓			
Quotations	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: CreateCancellationDocument Reopen
QuotationsService									Supported operations: ExportEWayBill GetApprovalTemplates HandleApprovalRequest InitData
RecurringPostings	✓	✓	✓		✓	✓			
RecurringPostingsService				✓					

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
RecurringTransactionService									Supported operations: DeleteRecurringTransactions ExecuteRecurringTransactions GetAvailableRecurringTransactions GetRecurringTransactions
Relationships	✓	✓	✓		✓	✓			
ReportFilter	✓	✓	✓		✓	✓			
ReportFilterService									Single supported operation: GetTaxReportFilterList
ReportLayoutsService									Supported operations: AddReportLayout AddReportLayoutToMenu DeleteReportLayout DeleteReportLayoutAndMenu GetDefaultReport GetDefaultReportLayout GetReportLayout GetReportLayoutList SetDefaultReport UpdateLanguageReport UpdatePrinterSettings
ReportTypes	✓	✓	✓		✓	✓			
ReportTypesService									Single supported operation: GetReportTypeList
ResourceCapabilities	✓	✓	✓		✓	✓			
ResourceCapabilitiesService				✓					Additional supported operation: GetListWithFilter
ResourceGroups	✓	✓	✓		✓	✓			
ResourceGroupsService				✓					
ResourceProperties	✓	✓	✓		✓	✓			
ResourcePropertiesService				✓					

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
Resources	✓	✓	✓		✓	✓			Additional supported operation: <i>CreateLinkedItem</i>
ResourcesService				✓					
RetornoCodes	✓	✓	✓		✓	✓			
RetornoCodesService				✓					
ReturnRequest	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: <i>CreateCancellationDocument</i> <i>Reopen</i>
ReturnRequestService									Supported operations: <i>ExportEWayBill</i> <i>GetApprovalTemplates</i> <i>HandleApprovalRequest</i> <i>InitData</i>
Returns	✓	✓	✓		✓	✓	✓	✓	Additional supported operations: <i>CreateCancellationDocument</i> <i>Reopen</i>
ReturnsService									Supported operations: <i>ExportEWayBill</i> <i>GetApprovalTemplates</i> <i>HandleApprovalRequest</i> <i>InitData</i>
RouteStages	✓	✓	✓		✓	✓			
RouteStagesService				✓					
RoutingDataCalculationService									Single supported operation: <i>Calculate</i>
SalesForecast	✓	✓	✓		✓	✓			
SalesOpportunities	✓	✓	✓		✓	✓		✓	
SalesOpportunityCompetitorsSetup	✓	✓	✓		✓	✓			
SalesOpportunityCompetitorsSetupService									Single supported operation: <i>GetSalesOpportunityCompetitorSetupList</i>

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	Cl	
SalesOpportunityInterestsSetup	✓	✓	✓		✓	✓			
SalesOpportunityInterestsSetupService									Single supported operation: <code>GetSalesOpportunityInterestSetupList</code>
SalesOpportunityReasonsSetup	✓	✓	✓		✓	✓			
SalesOpportunityReasonsSetupService									Single supported operation: <code>GetSalesOpportunityReasonsSetupList</code>
SalesOpportunitySourcesSetup	✓	✓	✓		✓	✓			
SalesOpportunitySourcesSetupService									Single supported operation: <code>GetSalesOpportunitySourceSetupList</code>
SalesPersons	✓	✓	✓		✓	✓			
SalesStages	✓	✓	✓		✓	✓			
SalesTaxAuthorities	✓	✓	✓		✓	✓			
SalesTaxAuthoritiesTypes	✓	✓	✓		✓	✓			
SalesTaxCodes	✓	✓	✓		✓	✓			
SalesTaxInvoices	✓	✓	✓		✓	✓			
SBOBobService									Supported operations: <code>MoneyToString</code> <code>GetCurrencyRate</code> <code>GetDueDate</code> <code>GetIndexRate</code> <code>GetLocalCurrency</code> <code>GetSystemCurrency</code> <code>GetSystemPermission</code> <code>SetCurrencyRate</code>
Sections	✓	✓	✓		✓	✓			
SectionsService									Single supported operation: <code>GetSectionList</code>

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
SensitiveDataAccessService									Supported operations: Access IsDataSensitive
SerialNumberDetails	✓	✓	✓		✓	✓			
SeriesService									Supported operations: AddElectronicSeries AddSeries AttachSeriesToDocument ChangeDocumentMenuName GetDefaultElectronicSeries GetDefaultSeries GetDocumentChangedMenuName GetDocumentSeries GetElectronicSeries GetSeries RemoveElectronicSeries RemoveSeries SetDefaultElectronicSeries SetDefaultSeriesForAllUsers SetDefaultSeriesForCurrentUser SetDefaultSeriesForUser UnattachSeriesFromDocument UpdateElectronicSeries UpdateSeries
ServiceCallOrigins	✓	✓	✓		✓	✓			
ServiceCallOriginsService									Single supported operation: GetServiceCallOriginList
ServiceCallProblemSubTypes	✓	✓	✓		✓	✓			
ServiceCallProblemSubTypeService									Single supported operation: GetServiceCallProblemSubTypeList
ServiceCallProblemTypes	✓	✓	✓		✓	✓			
ServiceCallProblemTypesService									Single supported operation: GetServiceCallProblemTypeList
ServiceCalls	✓	✓	✓		✓	✓		✓	

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
ServiceCallSolutionStatus	✓	✓	✓		✓	✓			
ServiceCallSolutionStatusService									Single supported operation: GetServiceCallSolutionStatusList
ServiceCallStatus	✓	✓	✓		✓	✓			
ServiceCallStatusService									Single supported operation: GetServiceCallStatusList
ServiceCallTypes	✓	✓	✓		✓	✓			
ServiceCallTypesService									Single supported operation: GetServiceCallTypeList
ServiceContracts	✓	✓	✓		✓	✓	✓	✓	
ServiceGlobalActions									Supported operations: Login Logout
ServiceGroups	✓	✓	✓		✓	✓			
ServiceGroupsService									Single supported operation: GetServiceGroupList
ServiceTaxPostingService									Supported operations: GetTaxableDeliveries PostServiceTax
ShippingTypes	✓	✓	✓		✓	✓			
SingleUserConnections	✓	✓	✓		✓	✓			
SpecialPrices	✓	✓	✓		✓	✓			
SQLViews	✓	✓	✓		✓	✓			Additional supported operations: Expose Unexpose
States	✓	✓	✓		✓	✓			
StatesService									Single supported operation: GetStateList
StockTakings	✓	✓	✓		✓	✓			

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
StockTransferDrafts	✓	✓	✓		✓	✓	✓	✓	Additional supported operation: SaveDraftToDocument
StockTransferDraftsService									Supported operations: GetApprovalTemplates HandleApprovalRequest
StockTransfers	✓	✓	✓		✓	✓	✓	✓	Additional supported operation: SaveDraftToDocument
StockTransferService									Supported operations: GetApprovalTemplates HandleApprovalRequest
TargetGroups	✓	✓	✓		✓	✓			
TargetGroupsService				✓					
TaxCodeDeterminations	✓	✓	✓		✓	✓			
TaxCodeDeterminationsService									Single supported operation: GetTaxCodeDeterminationList
TaxCodeDeterminationsTCD	✓	✓	✓		✓	✓			
TaxCodeDeterminationsTCDService									Single supported operation: GetTaxCodeDeterminationTCDList
TaxInvoiceReport	✓	✓	✓		✓	✓			Additional supported operation: CancelTaxInvoiceReport
TaxWebSites	✓	✓	✓		✓	✓			Additional supported operation: SetAsDefault
TaxWebSitesService									Supported operations: GetDefaultWebSite GetTaxWebSiteList
Teams	✓	✓	✓		✓	✓			
TerminationReason	✓	✓	✓		✓	✓			
TerminationReasonService				✓					
Territories	✓	✓	✓		✓	✓			
TrackingNotes	✓	✓	✓		✓	✓			

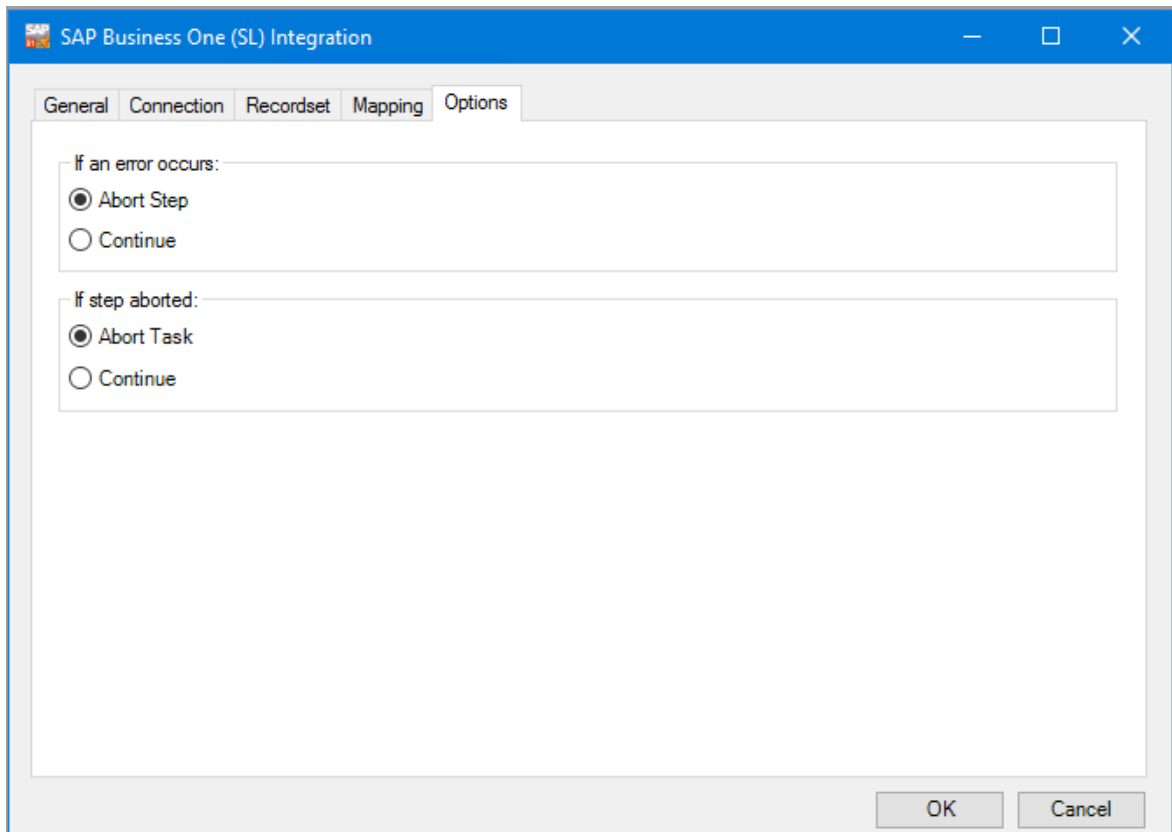
SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	Cl	
TrackingNotesService				✓					
TransactionCodes	✓	✓	✓		✓	✓			
TransactionCodesService				✓					
TransportationDocument	✓	✓	✓		✓	✓			Additional supported operation: CancelTransportationDocument
UnitOfMeasurementGroups	✓	✓	✓		✓	✓			
UnitOfMeasurementGroupsService				✓					
UnitOfMeasurements	✓	✓	✓		✓	✓			
UnitOfMeasurementsService				✓					
UserDefaultGroups	✓	✓	✓		✓	✓			
UserFieldsMD	✓	✓	✓		✓	✓			
UserGroups	✓	✓	✓		✓	✓			
UserGroupsService									Single supported operation: GetUserGroupList
UserKeysMD	✓	✓	✓		✓	✓			
UserLanguages	✓	✓	✓		✓	✓			
UserMenuService									Supported operations: GetCurrentUserMenu GetUserMenu UpdateCurrentUserMenu UpdateUserMenu
UserObjectsMD	✓	✓	✓		✓	✓			
UserPermissionTree	✓	✓	✓		✓	✓			
UserQueries	✓	✓	✓		✓	✓			
Users	✓	✓	✓		✓	✓		✓	
UserTablesMD	✓	✓	✓		✓	✓			
ValueMapping	✓	✓	✓		✓	✓			

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	CI	
ValueMappingCommunication	✓	✓	✓		✓	✓			
ValueMappingService									Supported operations: GetMappedB1Vlaue GetThirdPartyValuesForB1Value RemovedMappedValue
VatGroups	✓	✓	✓		✓	✓			
VendorPayments	✓	✓	✓		✓	✓	✓		Additional supported operations: CancelbyCurrentSystemDate GetApprovalTemplates RequestApproveCancellation SaveDraftToDocument
WarehouseLocations	✓	✓	✓		✓	✓			
Warehouses	✓	✓	✓		✓	✓			
WarehouseSublevelCodes	✓	✓	✓		✓	✓			
WarehouseSublevelCodesService				✓					
WebClientBookmarkTiles	✓	✓	✓		✓	✓			
WebClientBookmarkTilesService				✓					
WebClientDashboards	✓	✓	✓		✓	✓			
WebClientDashboardService				✓					
WebClientFormSettings	✓	✓	✓		✓	✓			
WebClientFormSettingService				✓					
WebClientLaunchpads	✓	✓	✓		✓	✓			
WebClientLaunchpadService				✓					
WebClientListviewFilters	✓	✓	✓		✓	✓			
WebClientListviewFilterService				✓					
WebClientNotifications	✓	✓	✓		✓	✓			
WebClientNotificationService				✓					
WebClientPreferences	✓	✓	✓		✓	✓			

SAP B1 Objects	Standard Operations								Comments
	A	U	GK	GL	D	S	Ca	Cl	
WebClientPreferenceService				✓					
WebClientRecentActivities	✓	✓	✓		✓	✓			
WebClientRecentActivityServices				✓					
WebClientVariantGroups	✓	✓	✓		✓	✓			
WebClientVariantGroupService				✓					
WebClientVariants	✓	✓	✓		✓	✓			
WebClientVariantService				✓					
WeightMeasures	✓	✓	✓		✓	✓			
WithholdingTaxCodes	✓	✓	✓		✓	✓			
WithholdingTaxDefinition ^[SIC]	✓	✓	✓		✓	✓			
WizardPaymentMethods	✓	✓	✓		✓	✓			
WorkflowTaskService									Supported operations: Complete GetApprovalTaskList

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**). By allowing the task to **Continue**, you can use the error XML received back in a **Save File** step for investigation purposes, for example.

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+44 (0) 330 99 88 700



enquiries@codelessplatforms.com



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