

BPA
Platform

Technical Overview

HubSpot Integration Tool v1.0.1

codeless
PLATFORMS

Copyright

The copyright in this document is owned by Orbis Software Ltd T/A Codeless Platforms 2022. All rights reserved.

This publication may not, in whole or part, be reproduced, transmitted, transcribed, stored in a retrieval system or translated into any language in any form or by any means without the prior written consent of Orbis Software Ltd T/A Codeless Platforms.

Head Office:

Codeless Platforms
Suite 2 Bourne Gate
25 Bourne Valley Road
Poole
BH12 1DY
United Kingdom
Tel: +44 (0) 330 99 88 700
Email: enquiries@codelessplatforms.com

Trademarks

Orbis Software Ltd T/A Codeless Platforms owns the registered trademark TaskCentre®.

All other Trademarks used within this documentation are acknowledged as the property of their respective owners.

The information provided in this publication may contain errors, omissions, or typographical errors or may be out of date. Orbis Software Ltd T/A Codeless Platforms may change, delete, or update any published information at any time and without prior notice. The information published in this document is provided for informational purposes only and is not binding on Orbis Software Ltd T/A Codeless Platforms in any way except to the extent that it is specifically indicated to be so.

Contents

Introduction **1**
The HubSpot Integration Tool Pack 1
System Requirements 1

Architecture **2**

About the HubSpot Integration Tool **3**
Global Configuration 3
HubSpot Connection Tab 4
Options Tab 5
Step Configuration 6
General Tab 6
Connection Tab 7
Mapping Tab 8
Options Tab 9

Working with Other Tools **10**
Consuming XML from Other Tools 10
Exposing XML to Other Tools 10
XML Output 11
OutputData XML Document 11
ErrorData XML Document 11

Supported Objects **12**

Runtime **13**

Error Handling **13**

HubSpot Account Security **13**

Introduction

The **HubSpot Integration** tool provides BPA Platform with easy-to-use connectivity to and from a HubSpot® company database. All communications use XML. You use the Integration tool to map BPA Platform data to HubSpot objects and operations. Operations such as, `ADD`, `UPDATE`, `GET`, and `DELETE`, are supported for a variety of business objects, such as, `Sales` and `Contacts` — for a detailed list, see **SUPPORTED OBJECTS ON PAGE 12**.

The XML responses received back from the HubSpot API can be saved to file or passed to another BPA Platform tool for further processing. The responses can include details of the object requested, any errors from the provider, or the values of any automatically generated ID fields. For example, you can use **HubSpot Integration** to provide an indirect link between systems that do not typically synchronise data with each other, such as synchronising products from HubSpot to an e-commerce platform, or even to provide reports containing data from both systems.

The HubSpot Integration Tool Pack

The tool pack consists of:

- **HubSpot Integration** — The Integration tool must be installed on the BPA Platform server, and on any BPA Platform client machines. It is this that provides the translation between BPA Platform data and the HubSpot object and operation.

> **NOTE:** This tool pack has been developed by Orbis Software Benelux BV and has been certified for use with BPA Platform by Orbis Software Ltd T/A Codeless Platforms.

System Requirements

The **HubSpot Integration** tool requires BPA Platform 4.6 (build 1944) or above.

Architecture

The diagram below provides a high-level system architecture overview of the **HubSpot Integration** tool pack, with BPA Platform and the HubSpot REST API:

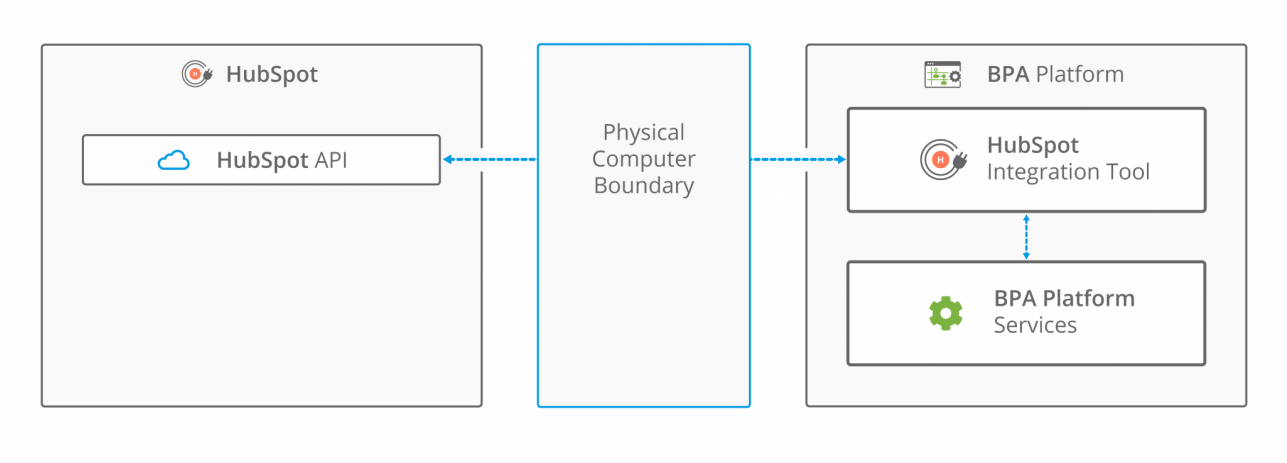


Figure 1— High-level system architecture of the HubSpot Integration

About the HubSpot Integration Tool

Global Configuration

The global configuration for this tool is used to create connections to HubSpot.

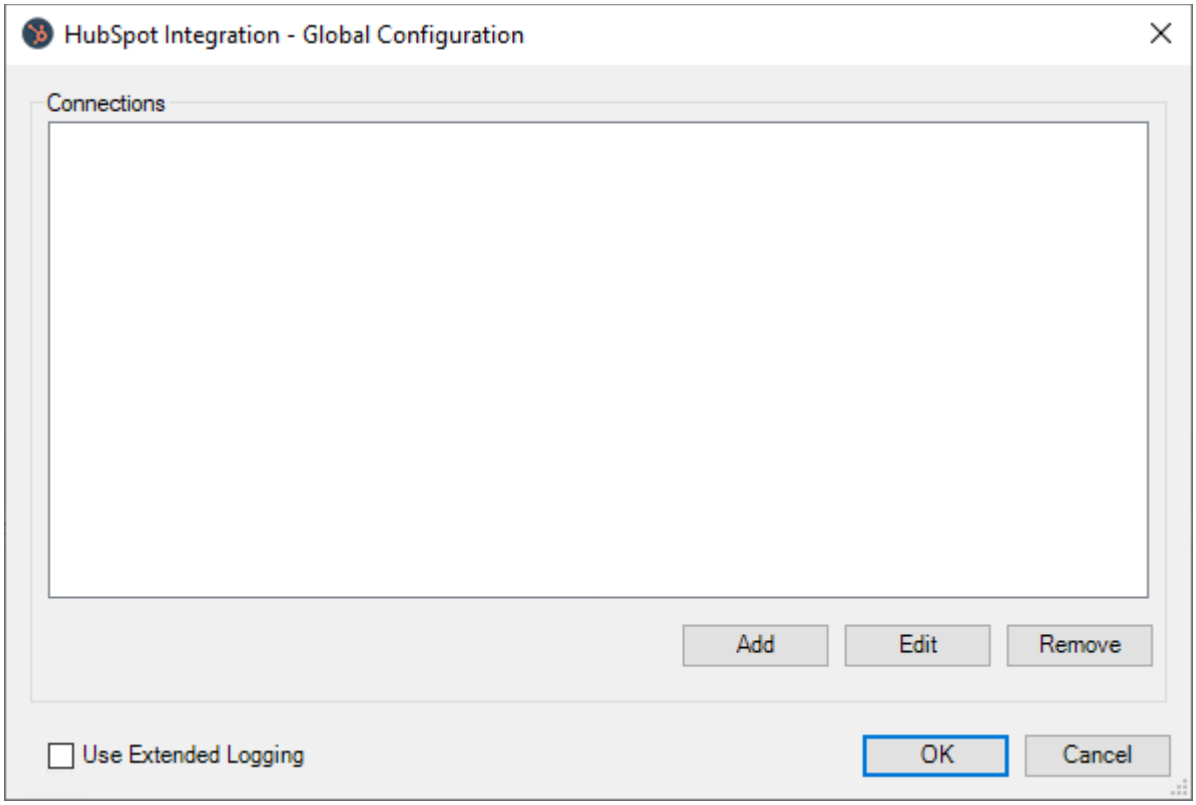


Figure 2 — HubSpot Integration - Global Configuration dialog

Click **Add** to create a connection to HubSpot.

Use Extended Logging

Selecting this option exposes the full XML parsed between the **HubSpot Integration** tool and the HubSpot API.

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***).

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.

HubSpot Connection Tab

You configure the connection to HubSpot here.

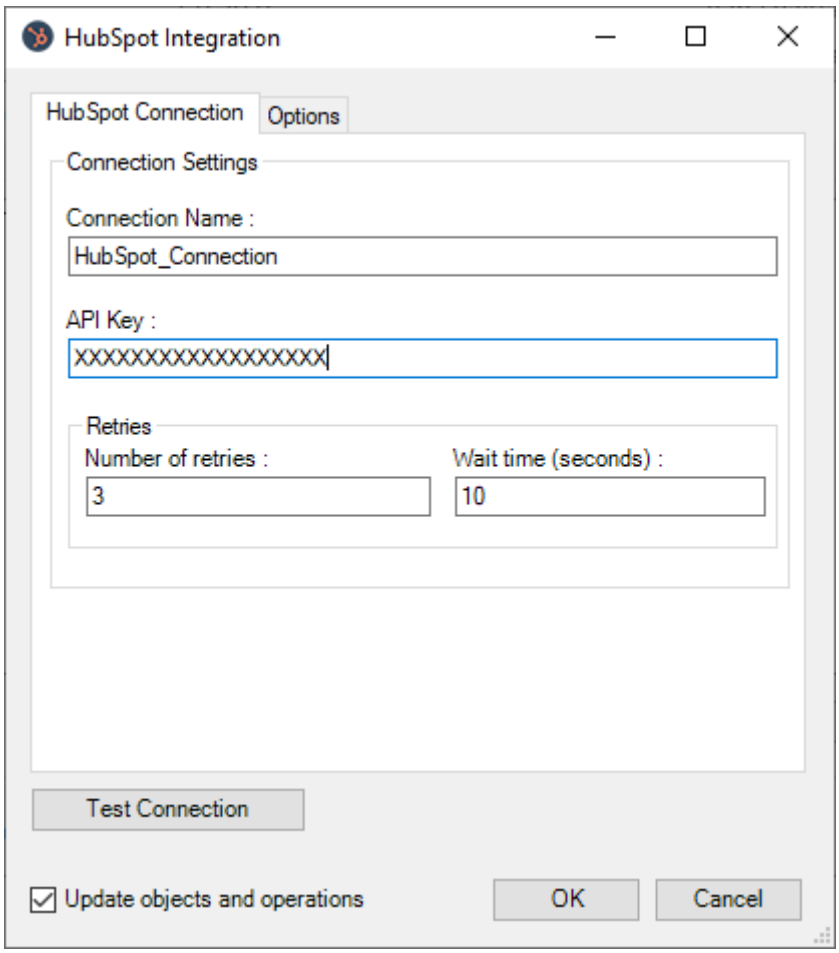


Figure 3— HubSpot Integration – HubSpot Connection Tab

Enter a meaningful **Connection Name** for this connection; this is the name displayed when adding tasks for HubSpot.

Enter the account **API Key** to allow access through HubSpot's API.

> **NOTE**: Your HubSpot API key can be generated or accessed by logging into your HubSpot account.

Configuring Connection Retries

Number of retries - Specifies the number of retries that will be attempted to establish a connection with the HubSpot upon a failure to connect.

Wait time (seconds) – On connection failure, the pause period, in seconds, before a further attempt is made to establish a connection with the HubSpot.

Options Tab

Select the required **Module** to be use for this connection. When no module is selected here, all objects are made available within the Tool step, see **MAPPING TAB ON PAGE 8**.

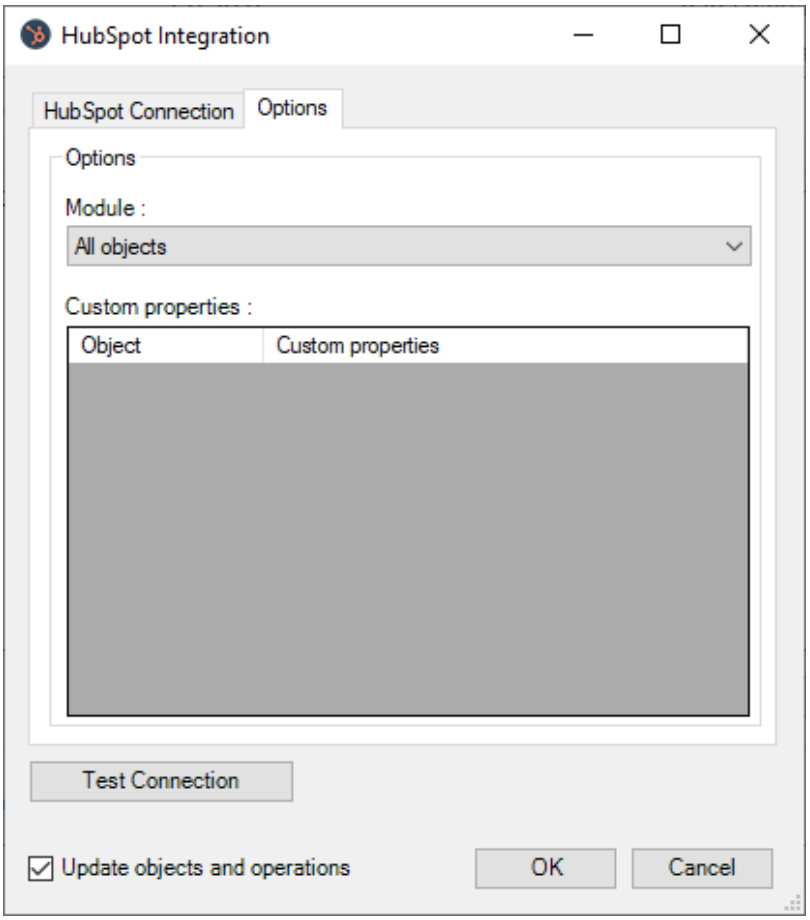


Figure 4 — HubSpot Integration - Options tab

Review Custom Properties

The **Custom properties** panel allows you to view custom properties previously defined on HubSpot's CRM platform.

Test Connection

Using the **Test Connection** button allows you to test the connection to the HubSpot API.

Update Objects and Operations

Enabling the **Update objects and operations** option, allows the HubSpot Integration schema within BPA Platform to be refreshed.

If you have installed an updated version of the **HubSpot Integration** tool which comes with new objects and operations, you must refresh the connection's schema for these updates to be made available within an existing connection.

NOTE: Existing task steps using the HubSpot connection must be refreshed in order to use the latest schema.

Step Configuration

When creating new tasks, the **HubSpot Integration** tool is located under **Data Connectors** in the **Tools** Browser.

> **NOTE:** It is not possible to add the connector tool to the task until at least one connection to HubSpot has been defined in the global configuration.

General Tab

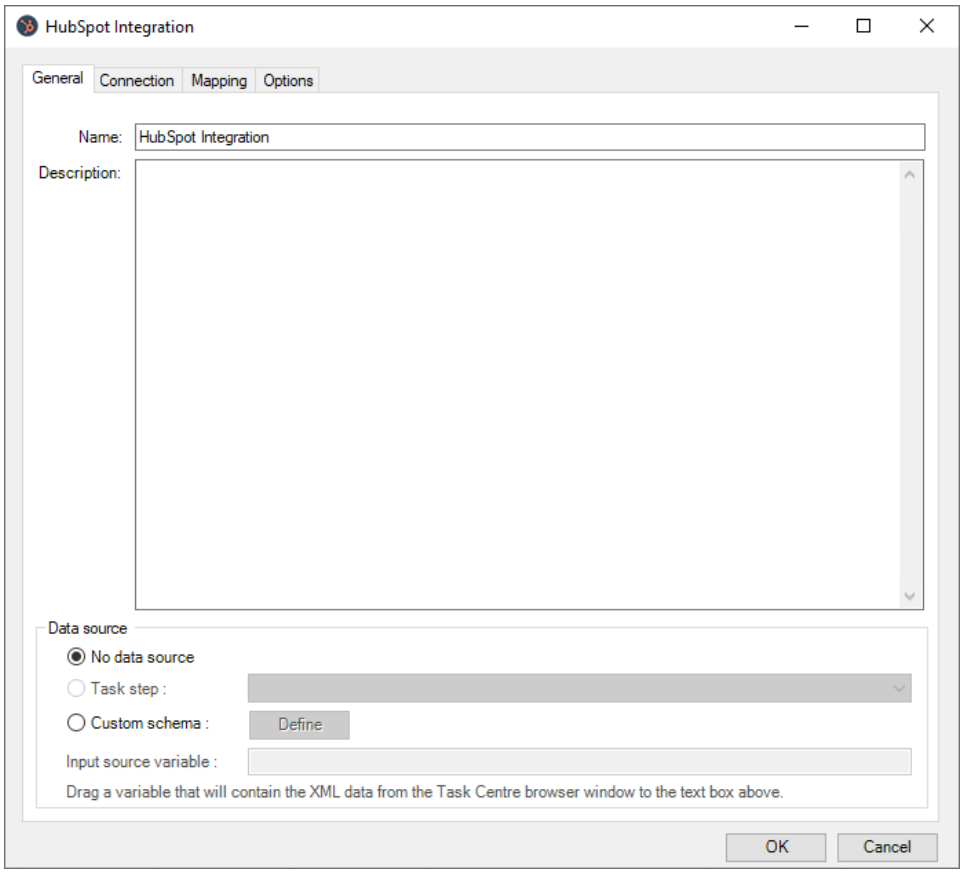


Figure 5 — HubSpot Integration - General tab

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

Choose your **Data source**. This can either be:

- **No data source** — If you don't make use of a dedicated XML input source, select this option to use BPA Platform variables in place of the XML objects' fields. These can then be mapped to operational fields — see **MAPPING TAB ON PAGE 8**.

  For example, you can extract various bits of information from an email and store them in BPA Platform variables. Then, having mapped them to HubSpot objects and operations, these can be stored in HubSpot for later use.

- **Task step** — The data source can be set to an available BPA Platform XML data source. Only those steps that are capable of natively exposing an XML document at runtime are listed. These may be another **HubSpot Integration** step, or a tool, such as **Convert Recordset to XML**.

- **Custom schema** — 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 will be used as the input data source for this step. The industry standard XSD format is used by the **HubSpot Integration** tool. 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** — As well as defining the schema, you must specify the BPA Platform variable that contains the XML data at runtime.

Connection Tab

You specify the HubSpot **Connection** this step must use.

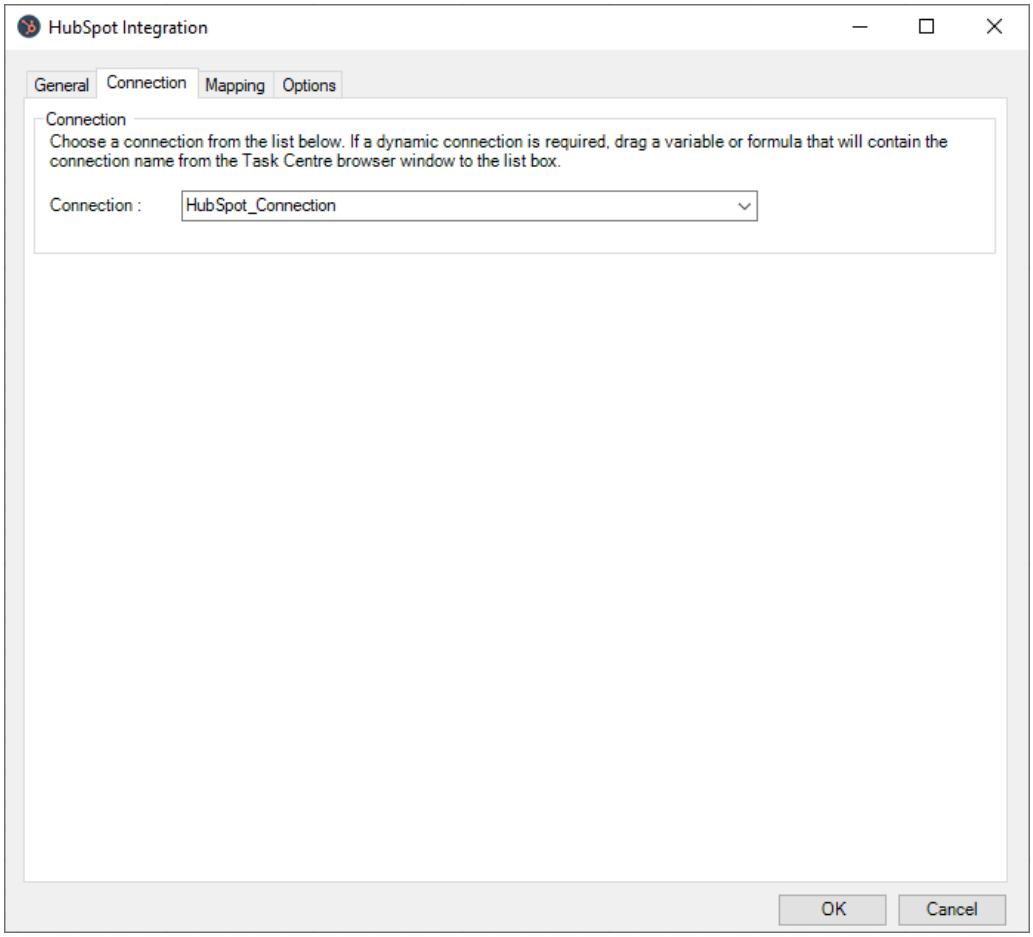


Figure 6 — HubSpot Integration - Connection tab

All connections created in **GLOBAL CONFIGURATION ON PAGE 3** are presented here.

Alternatively, you can use a BPA Platform variable 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.

Mapping Tab

Here you define links between the incoming XML and the outgoing data that is sent to the HubSpot API. This defines how, at runtime, the incoming XML is to be translated into the XML required for the relevant object and operation.

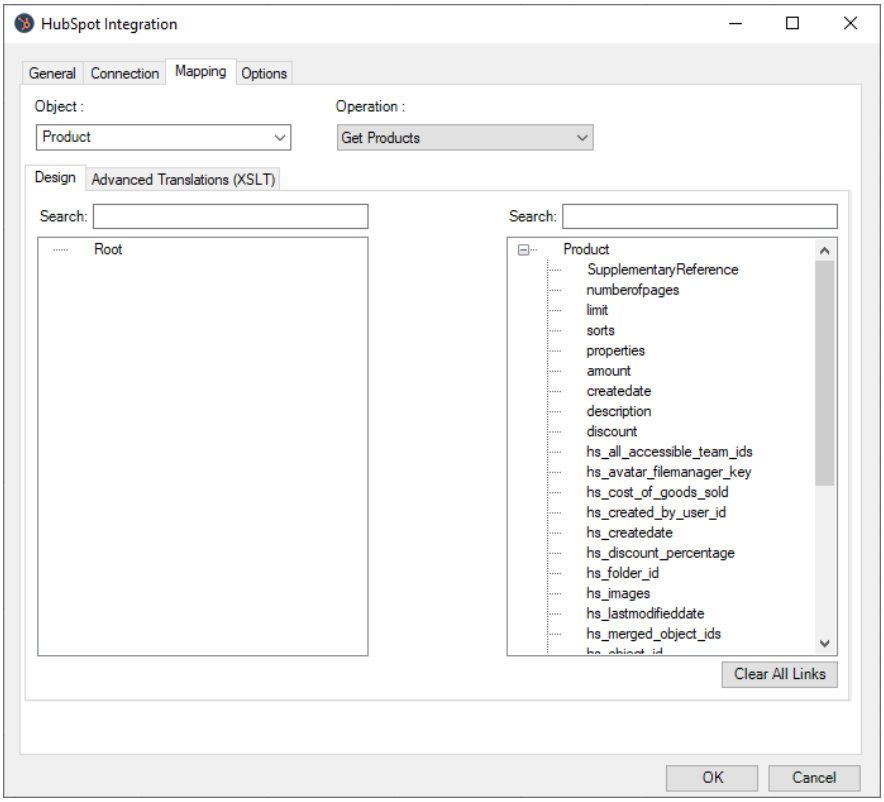


Figure 7 — HubSpot Integration - Mapping tab

The **Object** drop-down shows the available objects. The **Operation** drop-down shows the operations available for the selected **Object**. For more information about which operation is available for an object, see **SUPPORTED OBJECTS ON PAGE 12**.

Create links by dragging and dropping a data source field (left) onto its corresponding HubSpot Integration input field (right). Note that only linked fields are used in the output XML. BPA Platform formulas and variables can be included in the source data — drag them from the BPA Platform Browser to the object's XML tree control. These can then be linked to operation fields. Note that 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 **HubSpot 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 nonstandard requirement.

Options Tab

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

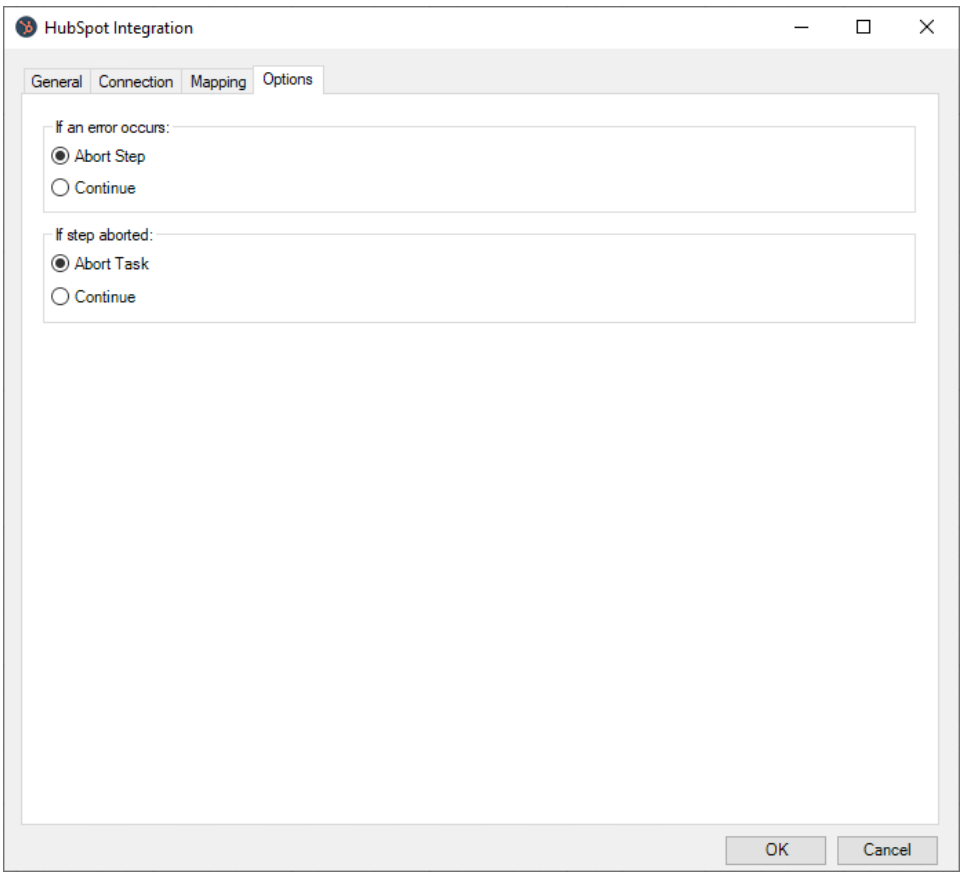


Figure 8 — HubSpot Integration - Options tab

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**).

Allowing the task to continue allows you to use the error XML received back from **HubSpot Integration** in a **Save File** step for investigation purposes, for example.

All errors are recorded to the BPA Platform Event Log (*Manage* > *Event Log*).

Working with Other Tools

HubSpot Integration can directly interact with the following tools:

Consuming XML from Other Tools

The **HubSpot Integration** tool can consume XML outputted by the following tools:

Step Icon	Name	Step Type
	**Import Flat File**	Input
	**Import XML Document**	Input
	**Convert Recordset to XML**	Format
	**Transform Data**	Format
	**Call Task**	Execute
	**Web Service Connector Tool**	Data Connectors
	**HubSpot Integration**	Data Connectors

Exposing XML to Other Tools

The XML outputted by the **HubSpot Integration** tool can be used by the following tools:

Step Icon	Name	Step Type
	**Convert XML to Recordset**	Format
	**Run Microsoft Reporting Services**	Format
	**Transform Data**	Format
	**Save File**	Output
	**Call Task**	Execute
	**Web Service Connector Tool**	Data Connectors
	**HubSpot Integration**	Data Connectors

XML Output

The **HubSpot Integration** tool outputs two documents:

- `OutputData`
- `ErrorData`

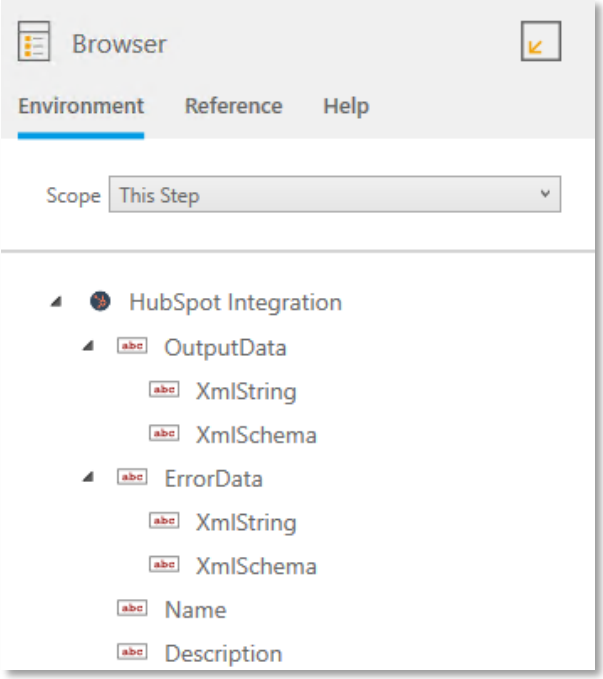


Figure 9 — HubSpot Integration tool outputs

Both outputs can be used:

- Directly by subsequent tool steps which consume XML data inputs
    - If required, use the **Convert XML to Recordset** tool to convert the XML to a BPA Platform recordset
- Accessed using the output or error objects for response data (`XmlString`), or the output or error schema (`XmlSchema`) present in the Task Browser

OutputData XML

The `OutputData` XmlString object contains:

- Data returned from **HubSpot Integration**, for instance the created, updated or retrieved entity instances
- `SupplementaryReference`

ErrorData XML

The ErrorData XmlString object is structured as follows:

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

`<Object>` — The name of the requested object, such as, `Product`

<CODE> — The error code returned by HubSpot

<MESSAGE> — The corresponding error message

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

<INPUTDATA> — The input data mapped for the object, plus all data contained in the SupplementaryReference field

Supported Objects

At the time of writing, the following objects and operations are supported:

Module	HubSpot Object	Standard Operations					Comment
		Get	Add	Update	Delete	Other	
Contacts:	Company	✓	✓	✓	✓		
	Contact	✓	✓	✓	✓		
Sales:	Deal	✓	✓	✓	✓		
	Line Item	✓	✓	✓	✓		
	Product	✓	✓	✓	✓		
	Quote	✓					

Runtime

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 were linked are brought across. The XML is passed to the connector tool, which then:

- Processes the data
- Performs the operation requested
- Sends back an XML document containing the response

The XML can then be used by other BPA Platform steps.

Error Handling

Errors are written to the BPA Platform Event Log (*Manage* > *Event Log*). You define how errors are handled in the **Options** tab of the **HubSpot Integration** tool — see **OPTIONS TAB ON PAGE 9**.

Reasons for the errors could include:

- Web service connection errors
- User privilege errors
- Errors from the HubSpot API (see **XML OUTPUT ON PAGE 11**)
- Warnings and messages from the HubSpot API (see **XML OUTPUT ON PAGE 11**)

HubSpot Account Security

The HubSpot API is the only method used to connect to HubSpot and perform read / write tasks — all security present in the API is used.

Want to learn more?

Discover how Codeless Platforms can help your business by improving performance, boosting efficiency and cutting costs.


+44 (0) 330 99 88 700


enquiries@codelessplatforms.com


www.codelessplatforms.com



codeless PLATFORMS