



BPA
Platform

Technical Overview

Shopify Integration Tool

v1.0.14

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Introduction

The **Shopify Integration** tool allows communication between BPA Platform and Shopify. All communication uses XML. You use the Integration tool to map BPA Platform data to Shopify objects and operations. Operations such as, ADD, UPDATE, GET, and DELETE, are supported for a variety of business objects, such as `Product`, `Customer`, and `Order` — for a detailed list, see [SUPPORTED OBJECTS ON PAGE 14](#).

The XML responses received back from the Shopify 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 **Shopify Integration** to provide an indirect link between systems that do not typically synchronise data with each other, such as synchronising contacts from a CRM platform as Shopify customers, importing Shopify sales orders into an ERP, or even to provide reports containing data from both systems.

The Shopify Integration Tool Pack

The tool pack consists of:

- **Shopify 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 Shopify 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 **Shopify Integration** tool requires BPA Platform 4.6 (build 1944) or above.

Architecture

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

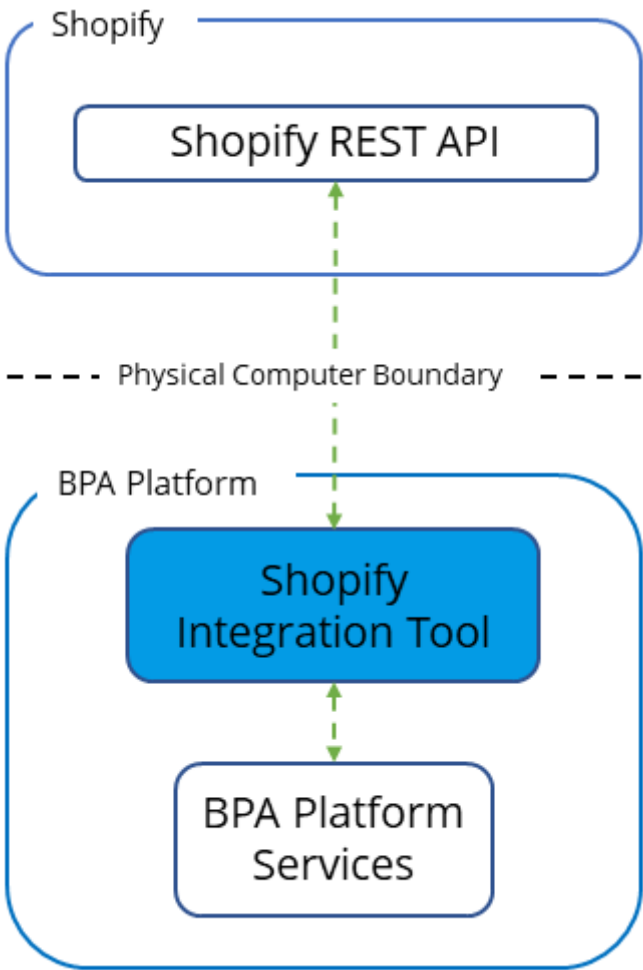


Figure 1 — High-level system architecture of the Shopify Integration

About the Shopify Integration Tool

Global Configuration

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

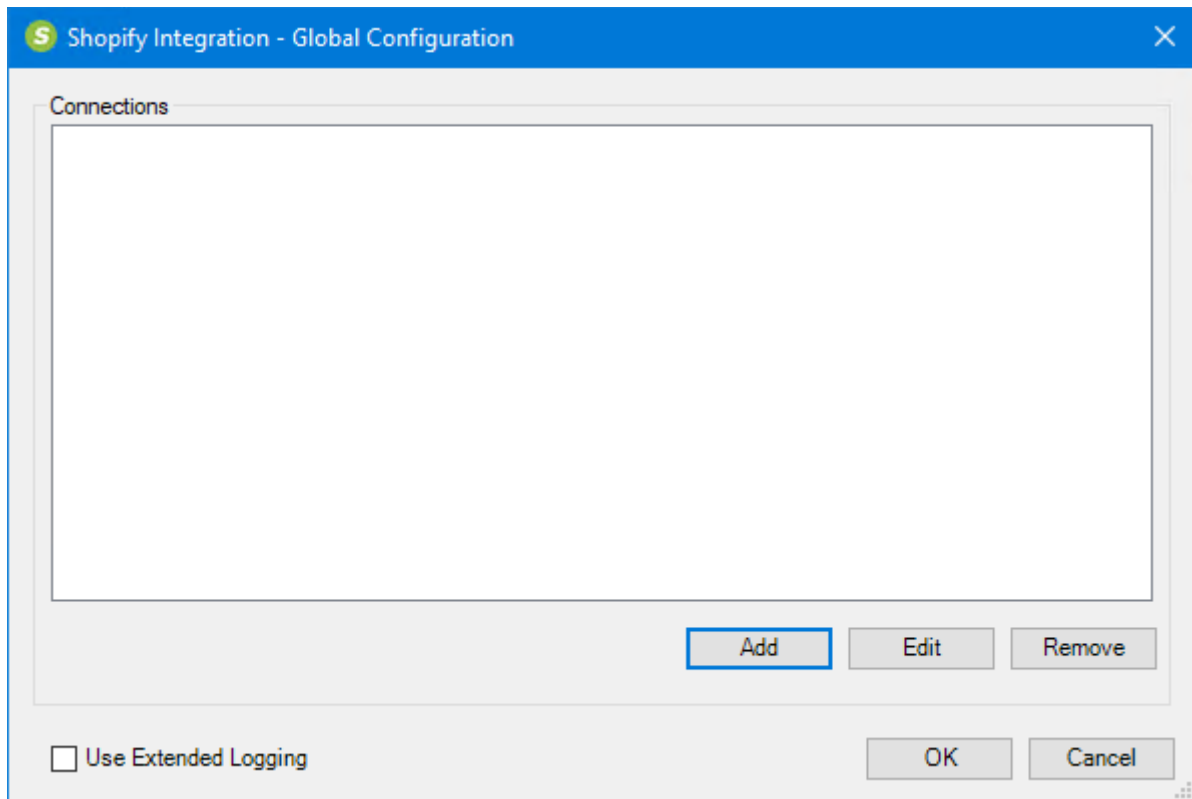


Figure 2 — Shopify Integration - Global Configuration dialog

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

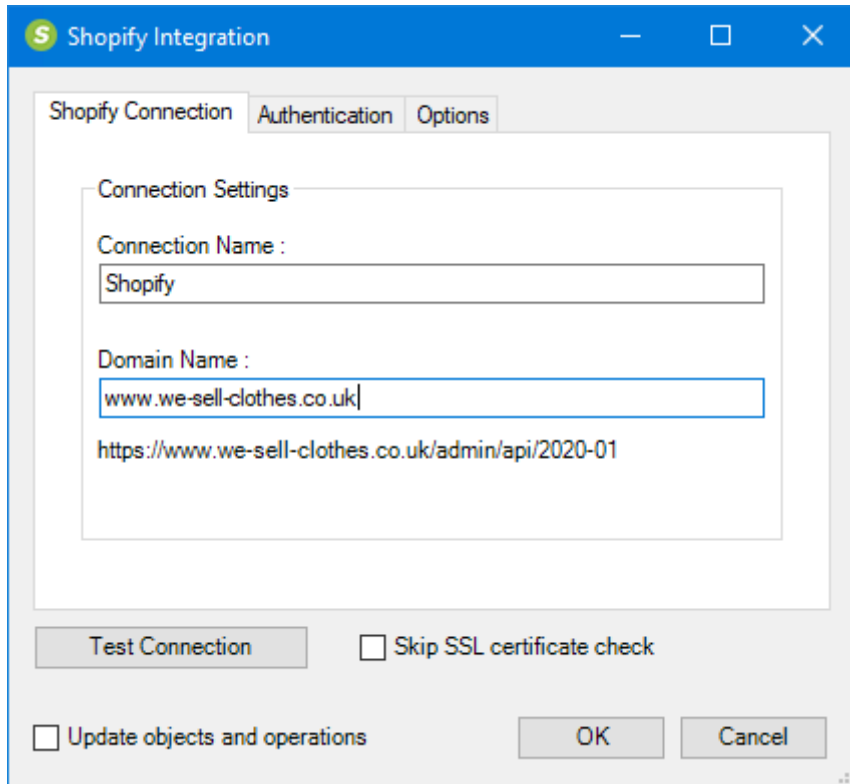
Use Extended Logging

Enabling this option exposes the XML parsed between Shopify Integration and the Shopify API. You can view the log from the BPA Platform Event Log (*Manage > Event Log*).

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

Shopify Connection Tab

You configure the connection to Shopify here.



The screenshot shows a dialog box titled "Shopify Integration" with three tabs: "Shopify Connection", "Authentication", and "Options". The "Shopify Connection" tab is active. Inside the tab, there is a "Connection Settings" section with three input fields: "Connection Name" (containing "Shopify"), "Domain Name" (containing "www.we-sell-clothes.co.uk"), and a URL field (containing "https://www.we-sell-clothes.co.uk/admin/api/2020-01"). Below these fields are three buttons: "Test Connection", "Skip SSL certificate check" (with an unchecked checkbox), and "Update objects and operations" (with an unchecked checkbox). At the bottom right are "OK" and "Cancel" buttons.

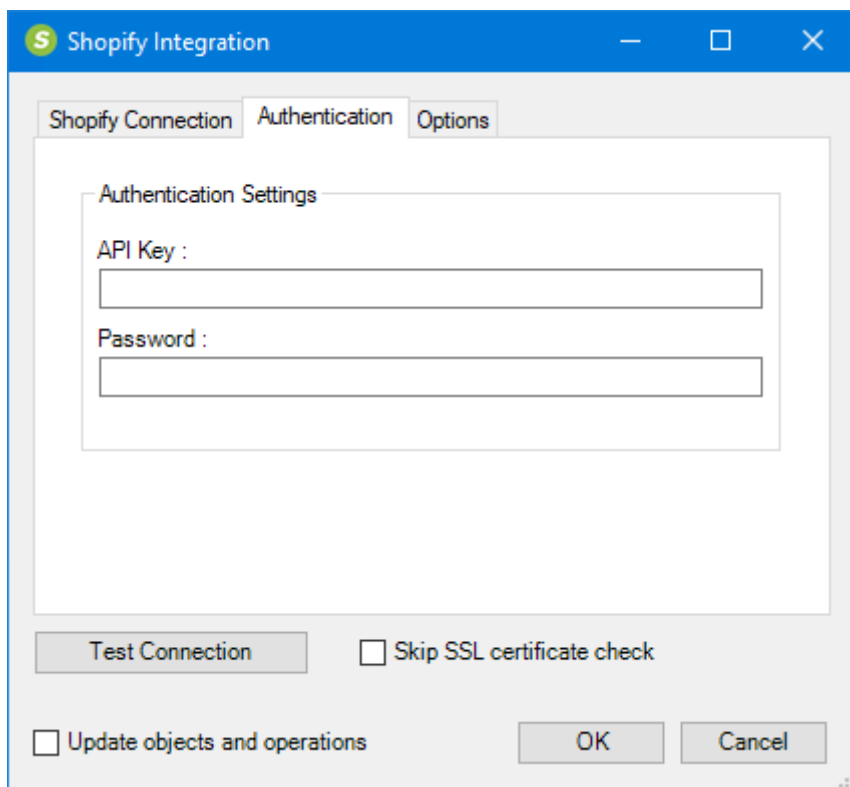
Figure 3 — Shopify Integration – Shopify Connection Tab

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

Within **Domain Name**, specify the domain name of the URL to Shopify. For example, if the Shopify webshop is running on `https://www.we-sell-clothes.co.uk`, the corresponding domain name is `www.we-sell-clothes.co.uk`.

Authentication Tab

You can configure the Shopify credentials here that allow access to Shopify.



The image shows a Windows-style dialog box titled "Shopify Integration". It has three tabs: "Shopify Connection", "Authentication" (which is selected), and "Options". The "Authentication" tab contains a section titled "Authentication Settings" with two text input fields: "API Key :" and "Password :". Below these fields, there is a "Test Connection" button, a checkbox labeled "Skip SSL certificate check", and another checkbox labeled "Update objects and operations". At the bottom right, there are "OK" and "Cancel" buttons.

Figure 4 — Shopify Integration - Authentication Tab

Specify the **API Key** and **Password** created in Shopify.

Options Tab

Optionally, choose a **Module** to show only objects from that module on the mapping tab, see [MAPPING TAB ON PAGE 9](#).

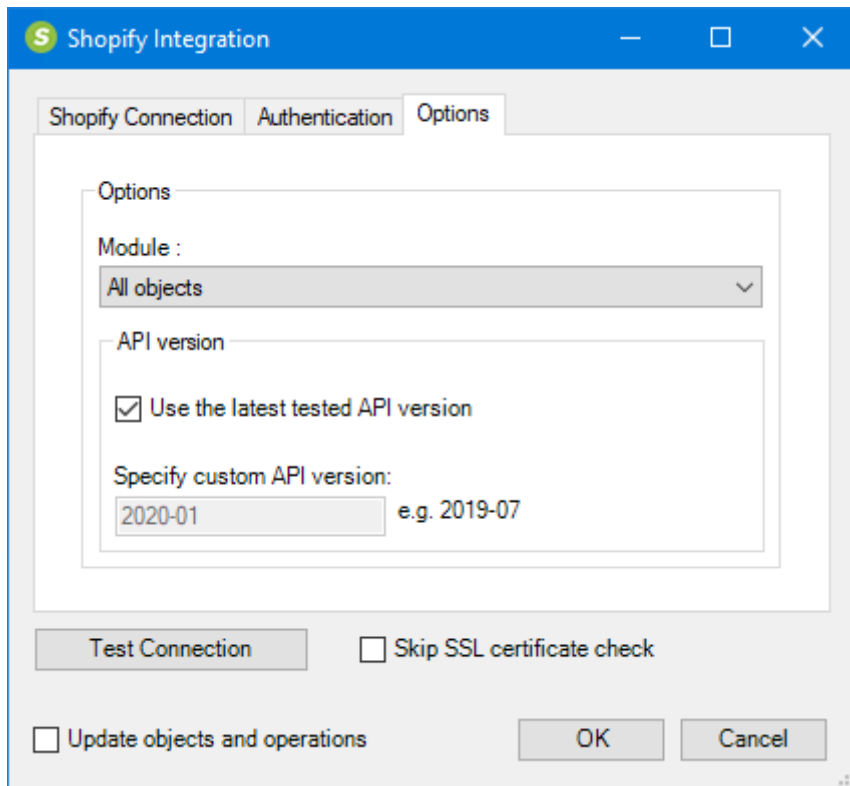
The image shows a software window titled "Shopify Integration" with a blue header bar. Inside the window, there are three tabs: "Shopify Connection", "Authentication", and "Options", with "Options" being the active tab. The "Options" tab contains a section titled "Options" with a "Module:" label and a dropdown menu currently showing "All objects". Below this is an "API version" section containing a checked checkbox labeled "Use the latest tested API version" and a text input field labeled "Specify custom API version:" with the value "2020-01" and a hint "e.g. 2019-07". At the bottom of the window, there are four buttons: "Test Connection", "Skip SSL certificate check" (with an unchecked checkbox), "Update objects and operations" (with an unchecked checkbox), "OK", and "Cancel".

Figure 5 — Shopify Integration - Options tab

Specifying the API Version to Use

Use the **API version** pane to specify the API version this instance of the **Shopify Integration** tool uses. Either specify the API version number or enable **Use the latest tested API version** to use the latest version the release of **Shopify Integration** tool was tested with (which may no longer be the latest).

Test Connection

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

Skip SSL Certificate Check

Communication to the Shopify API is over HTTPS, which typically involves an SSL certificate. If required, enable **Skip SSL certificate check** to ignore the SSL certificate — this is particularly useful if using a test environment (sandbox) on an internal server that doesn't have a valid SSL certificate.

Update Objects and Operations

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

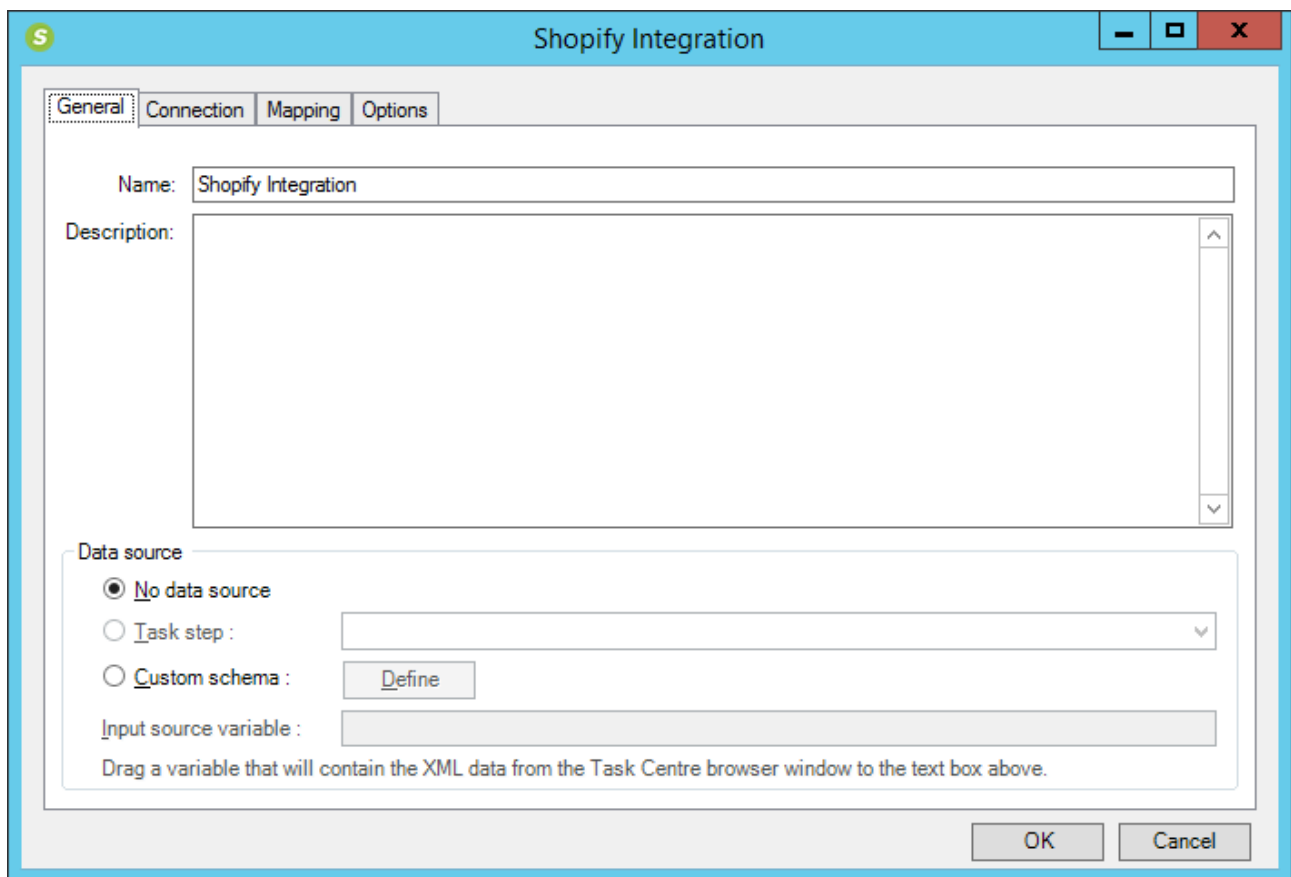
NOTE: Existing task steps using the Shopify connection must be refreshed in order to use the latest schema.

Step Configuration

When creating new tasks, the **Shopify Integration** tool is located under **Data Connectors** of the Task Browser.

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

General Tab



The screenshot shows the 'Shopify Integration' configuration window with the 'General' tab selected. The window has a title bar with a green 'S' icon and standard window controls. Inside, there are four tabs: 'General', 'Connection', 'Mapping', and 'Options'. The 'General' tab contains the following fields and options:

- Name:** A text box containing 'Shopify Integration'.
- Description:** A large text area for a description.
- Data source:** A section with three radio button options:
 - ☒ **No data source**
 - ☐ **Task step :** A dropdown menu.
 - ☐ **Custom schema :** A text box with a 'Define' button next to it.
- Input source variable :** A text box.
- A note below the input source variable: 'Drag a variable that will contain the XML data from the Task Centre browser window to the text box above.'
- Buttons:** 'OK' and 'Cancel' buttons at the bottom right.

Figure 6 — Shopify 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 9](#).

For example, you can extract various bits of information from an email and store them in BPA Platform variables. Then, having mapped them to Shopify objects and operations, these can be stored in Shopify 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 **Shopify 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 **Shopify Integration** tool. Any XML processed by this step must conform to this schema else an error will be reported.

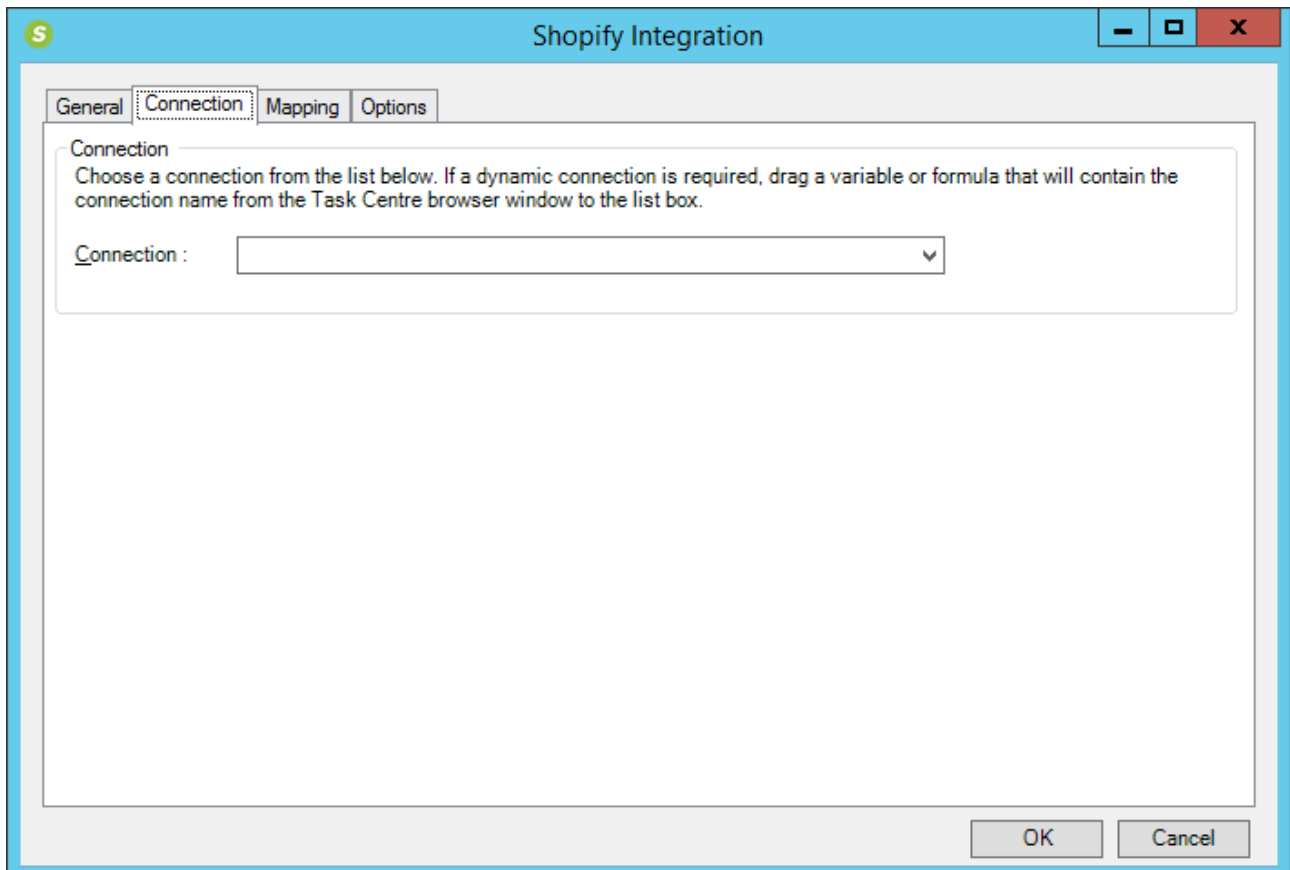
If the XSD schema is available, either import it into the **Custom Schema Configuration** (use the **Import XSD/XML File** button) or copy and paste it into the configuration box.

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 Shopify **Connection** this step must use.



The screenshot shows a dialog box titled "Shopify Integration" with a blue header bar. Inside the dialog, there are four tabs: "General", "Connection" (which is selected and highlighted with a dashed border), "Mapping", and "Options". The "Connection" tab contains the following text: "Connection" followed by "Choose a connection from the list below. If a dynamic connection is required, drag a variable or formula that will contain the connection name from the Task Centre browser window to the list box." Below this text is a label "Connection:" followed by a text input field with a dropdown arrow on the right. At the bottom right of the dialog are two buttons: "OK" and "Cancel".

Figure 7 — Shopify 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 Shopify API. This defines how, at runtime, the incoming XML is to be translated into the XML required for the relevant object and operation.

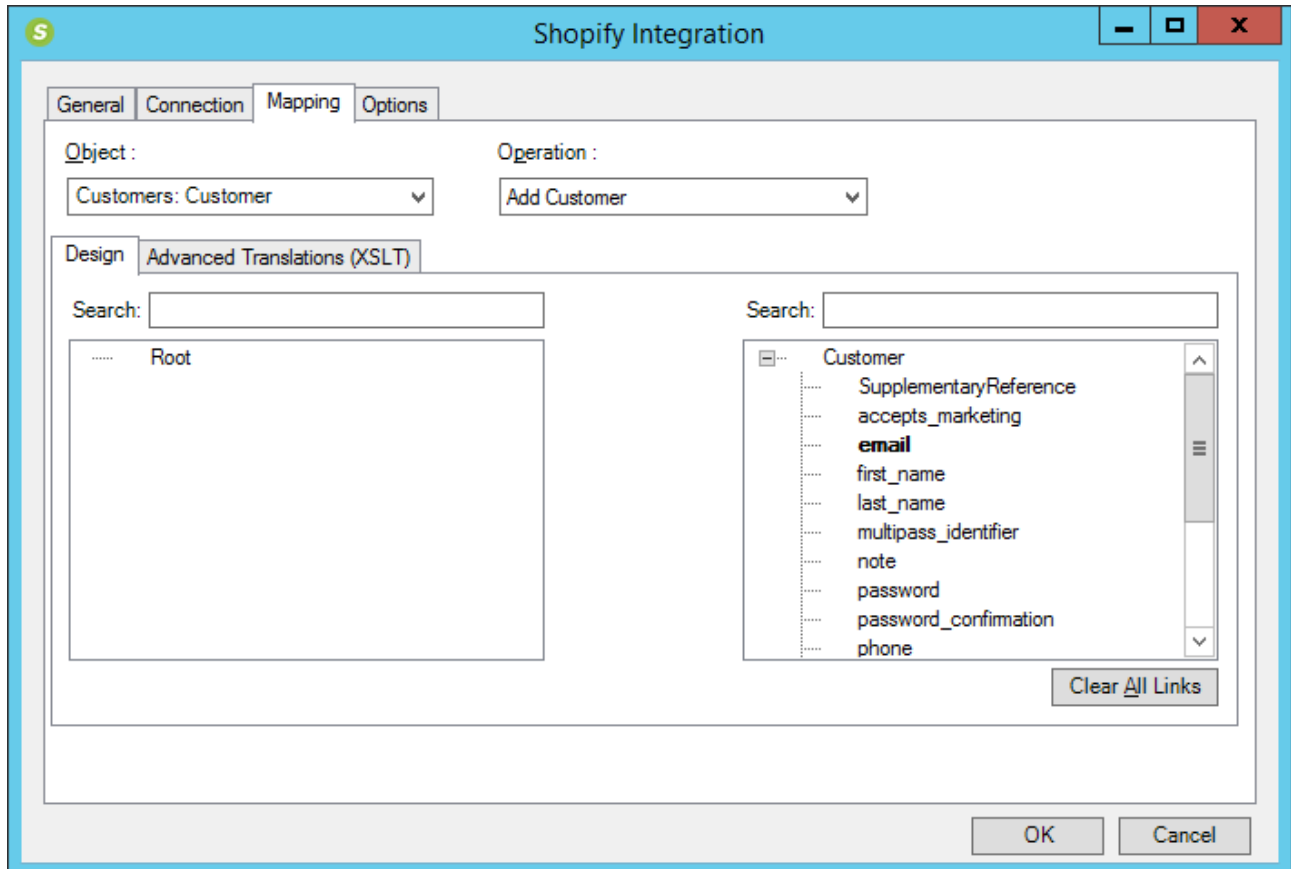


Figure 8 — Shopify Integration - Mapping tab

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 14**.

You create the links by clicking and dragging an object field onto its corresponding operation field. 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 **Shopify 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.

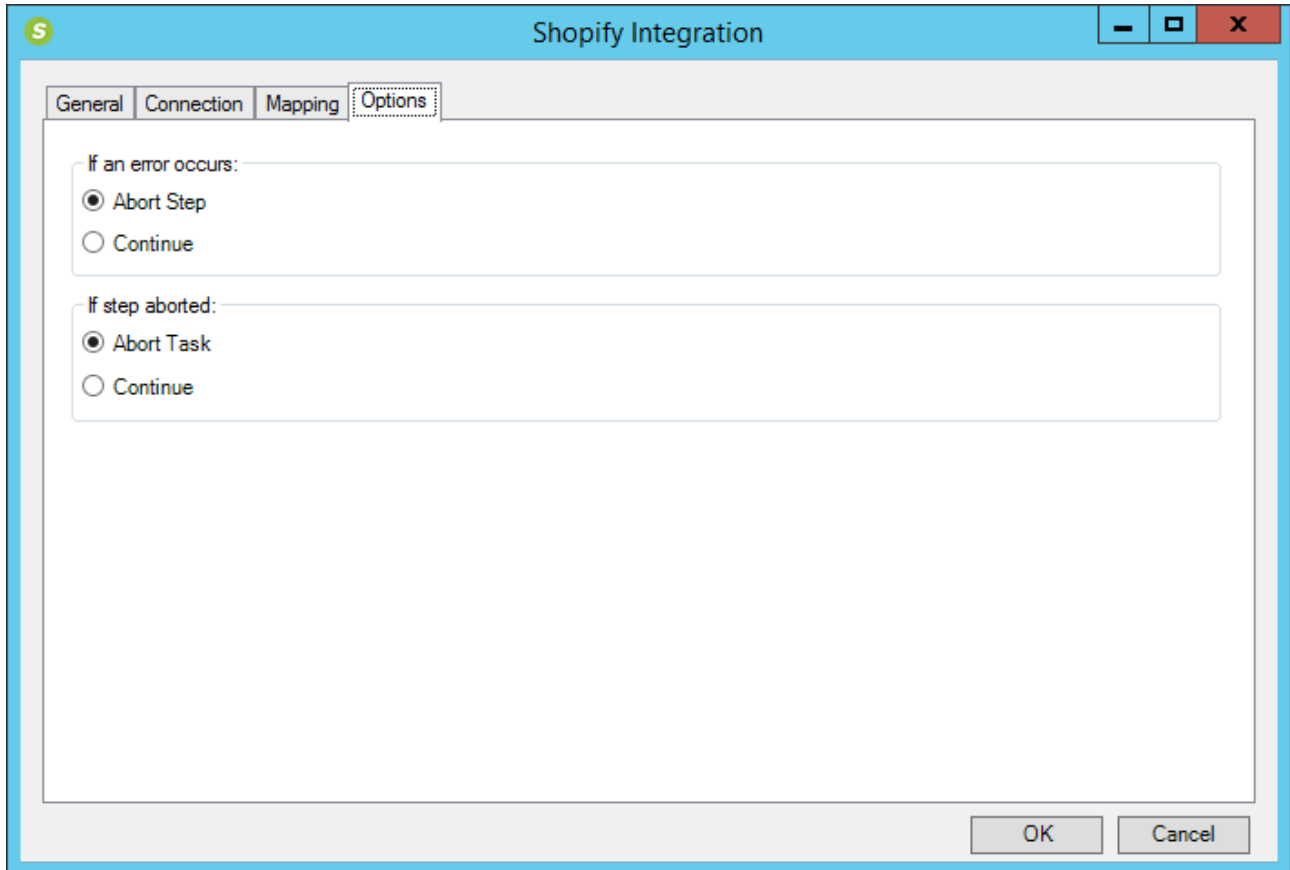
The image shows a screenshot of a software window titled "Shopify Integration". The window has a blue header bar with a green "S" icon on the left and standard window controls (minimize, maximize, close) on the right. Below the header is a tabbed interface with four tabs: "General", "Connection", "Mapping", and "Options". The "Options" tab is currently selected and highlighted with a dashed border. The main content area of the "Options" tab contains two sections. The first section is titled "If an error occurs:" and contains two radio button options: "Abort Step" (which is selected) and "Continue". The second section is titled "If step aborted:" and also contains two radio button options: "Abort Task" (which is selected) and "Continue". At the bottom right of the dialog box are two buttons: "OK" and "Cancel".

Figure 9 — Shopify 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 **Shopify Integration** in a **Save as File** step for investigation purposes, for example.








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

Working with Other Tools

Shopify Integration can directly interact with the following tools:







Consuming XML from Other Tools


The **Shopify 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
	Shopify Integration	Data Connectors

Exposing XML to Other Tools

The XML outputted by the **Shopify 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

Step Icon	Name	Step Type
	Shopify Integration	Data Connectors

XML Output

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

- OutputData
- ErrorData

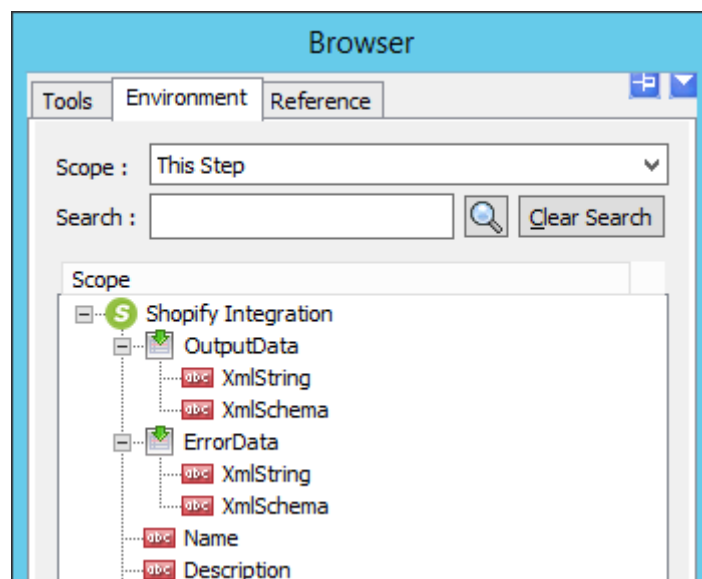


Figure 10 - Shopify Integration tool outputs

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 Document

The OutputData document contains:

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

ErrorData XML Document

The ErrorData document 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 Shopify

`<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	Shopify Object	Standard Operations					Comment
		Get	Add	Update	Delete	Other	
Customers	Customer	✓	✓	✓	✓		
	Customer address	✓	✓	✓	✓		
	Customer metafield	✓	✓	✓	✓		
Events	Event	✓					
	Order event	✓					
	Product event	✓					
Inventory	Inventory item	✓		✓			
	Inventory level	✓			✓	✓	Additional supported operations: <ul style="list-style-type: none"> Adjust Connect Set
	Location	✓					
Orders	Order	✓	✓	✓	✓	✓	Additional supported operations: <ul style="list-style-type: none"> Close Open Cancel
	Fulfillment	✓	✓	✓		✓	Additional supported operations: <ul style="list-style-type: none"> Complete Open Cancel
	Order metafield	✓	✓	✓	✓		
	Order risk	✓	✓	✓	✓		

Module	Shopify Object	Standard Operations					Comment
		Get	Add	Update	Delete	Other	
	Refund	✓	✓			✓	Additional supported operations: <ul style="list-style-type: none"> Calculate
	Order transaction	✓					
Payments	Payment balance	✓					
	Payment dispute	✓					
	Payment payout	✓					
	Payment transaction	✓					
Products	Collect	✓	✓		✓		
	Custom collection	✓	✓	✓	✓		
	Product	✓	✓	✓	✓		
	Product image	✓	✓	✓	✓		
	Product metafield	✓	✓	✓	✓		
	Product variant	✓	✓	✓	✓		
	Product variant metafield	✓	✓	✓	✓		
Store Properties	Shop	✓					

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 **Shopify Integration** tool — see [OPTIONS TAB ON PAGE 10](#).

Reasons for the errors could include:

- Web service connection errors
- User privilege errors
- Errors from the Shopify API (see [XML OUTPUT ON PAGE 12](#))
- Warnings and messages from the Shopify API (see [XML OUTPUT ON PAGE 12](#))

Shopify Account Security

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

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