



KingswaySoft
SSIS Integration Toolkit for Marketo
Help Manual

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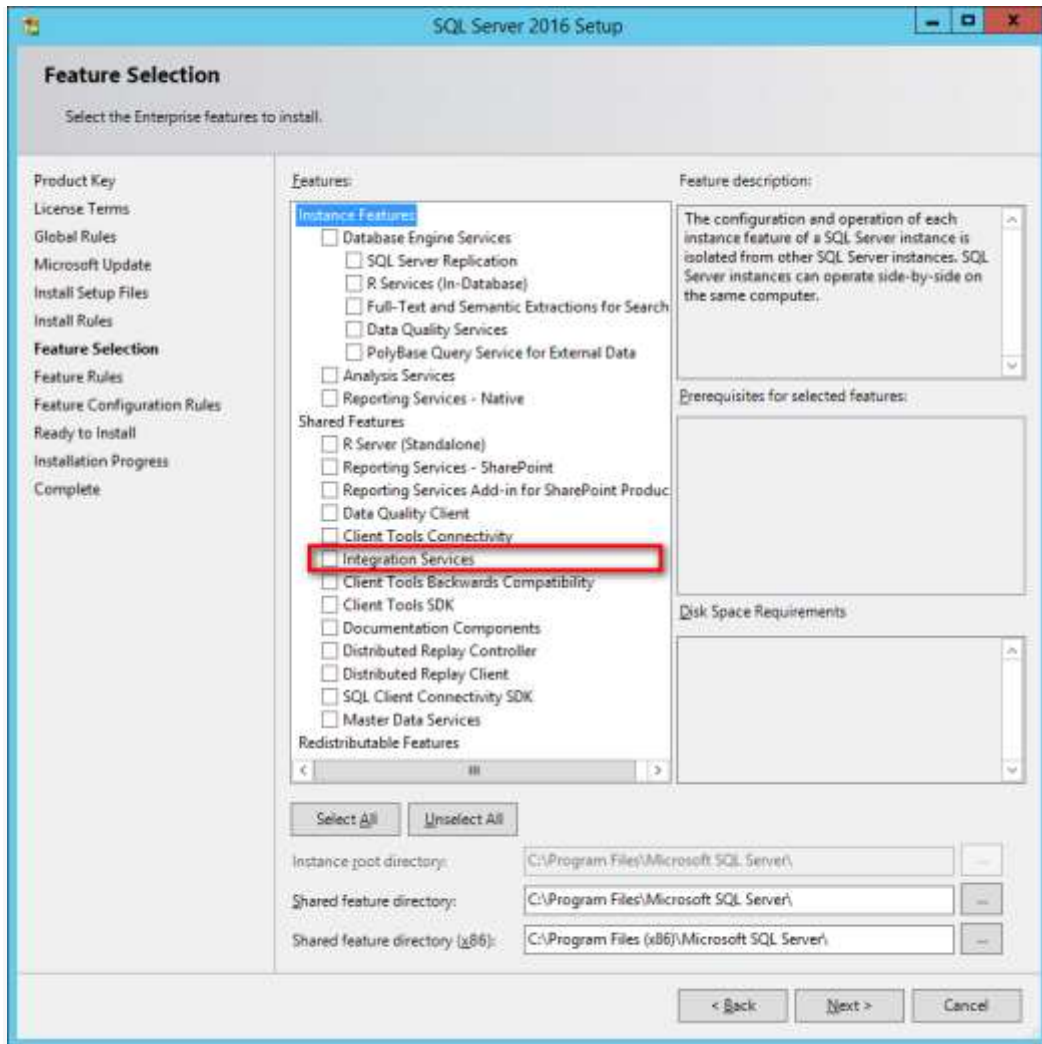
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Installation

To install and run SSIS Integration Toolkit for Marketo, your system must have the following components installed.

- A supported SSIS design-time or run-time, which can be one of the following:
 - SSIS 2017
 - SSIS 2016
 - SSIS 2014
 - SSIS 2012
 - SSIS 2008 R2
 - SSIS 2008
 - SSIS 2005

For SSIS runtime, the installation should be done by using the corresponding SQL Server installation media (most likely in CD/DVD format), and you must select the "**Integration Services**" component during the installation (as shown below).



Note that when using **SQL Server 2014**, a cumulative update is required (a recent service pack, such as one of the following, is more preferred) in order to run our software during runtime.

- SQL Server 2014 Service Pack 2: <https://www.microsoft.com/download/details.aspx?id=53168>
- SQL Server 2014 Service Pack 1: <https://www.microsoft.com/download/details.aspx?id=46694>

For SSIS design-time, you should be installing the version of SSDT (SQL Server Data Tools) or BIDS (Business Intelligence Development Studio) that aligns with the SQL Server version that you plan to use for your final deployment (the runtime).

- When targeting SSIS 2017 or 2016, you would use SSDT for Visual Studio 2015 available for download at <https://msdn.microsoft.com/mt186501.aspx>
 - Note that this SSDT installation can be used to target SSIS 2014 or 2012 as well.
- When targeting SSIS 2014, you can use either one of the following:

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- SSDT for Visual Studio
2015: <https://msdn.microsoft.com/mt186501.aspx> (Packages created using SSDT 2015 need to have their project's **TargetServerVersion** setting set to "SQL Server 2014" in order to work with SSIS 2014)
 - SSDT-BI for Visual Studio
2013: <https://www.microsoft.com/download/details.aspx?id=42313>
 - When targeting SSIS 2012, you can use any one of the following:
 - SSDT for Visual Studio
2015: <https://msdn.microsoft.com/mt186501.aspx> (Packages created using SSDT 2015 need to have their project's **TargetServerVersion** setting set to "SQL Server 2012" in order to work with SSIS 2012)
 - SSDT-BI for Visual Studio
2012: <https://www.microsoft.com/download/details.aspx?id=36843>
 - You can install the "SQL Server Data Tools" component that is shipped with the SQL Server 2012 installation media (which is based on a Visual Studio 2010 shell)
 - When targeting SSIS 2008 R2 or earlier, you would have to install the Business Intelligence Development Studio that is shipped with the installation media of the corresponding SQL Server version.
- .NET Framework 3.5
 - For any version before v1.1, .NET Framework 3.5 is required. **For v1.1 or later, .NET Framework 3.5 is only required when you use SSIS 2005.**
 - If you are using Windows Server 2003, Windows Server 2008, Windows Vista, Windows XP operating systems, you would install .NET framework by [downloading it from Microsoft website](#).
 - If you are using Windows Server 2008 R2 or 2012 family of operating systems, .NET framework 3.5 should be installed using **Server Manager** program by adding **.NET Framework 3.5.1 features**.
 - If you are using Windows 8, go to Control Panel -> Programs and Features -> Turn Windows features on or off, then select **.NET Framework (includes .NET 2.0 and 3.0)**.
- Windows Installer 4.5
 - If you are using Windows Server 2008, Windows Server 2012 family of operating systems or later (including Windows Vista, Windows 7, Windows 8, Windows Server 2012 R2, Windows Server 2016), you do not need to do anything since the latest Windows Installer has been installed by the operating system.
 - If you are using Windows Server 2003 family of operating systems (including Windows XP), you should install Windows Installer 4.5 by [downloading it from Microsoft website](#).

When you have confirmed that your system satisfies the above prerequisites, you can navigate to the KingswaySoft website at <http://www.kingswaysoft.com> to download the installation package. In the download page you will find two download links. One for x86 systems and one for x64 systems. Make sure to choose and download the correct package for your system.

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64 bit (x64)

SQL Server 2014, 2012, 2008R2, 2008, 2005



32 bit (x86)

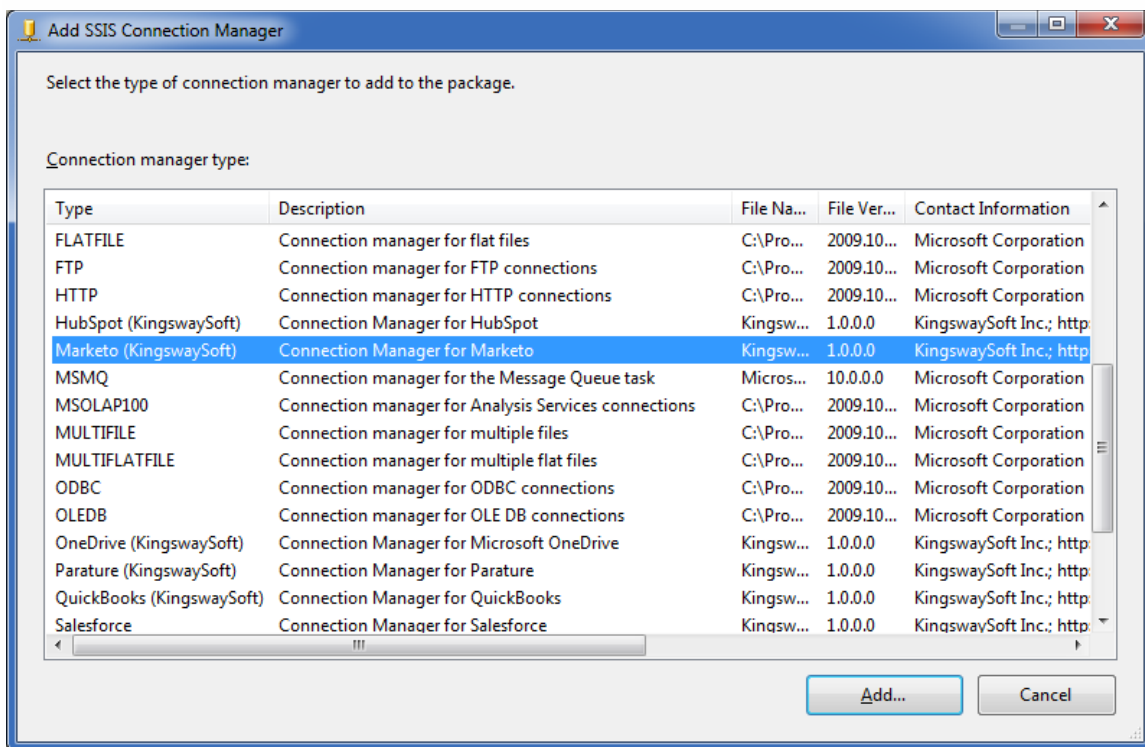
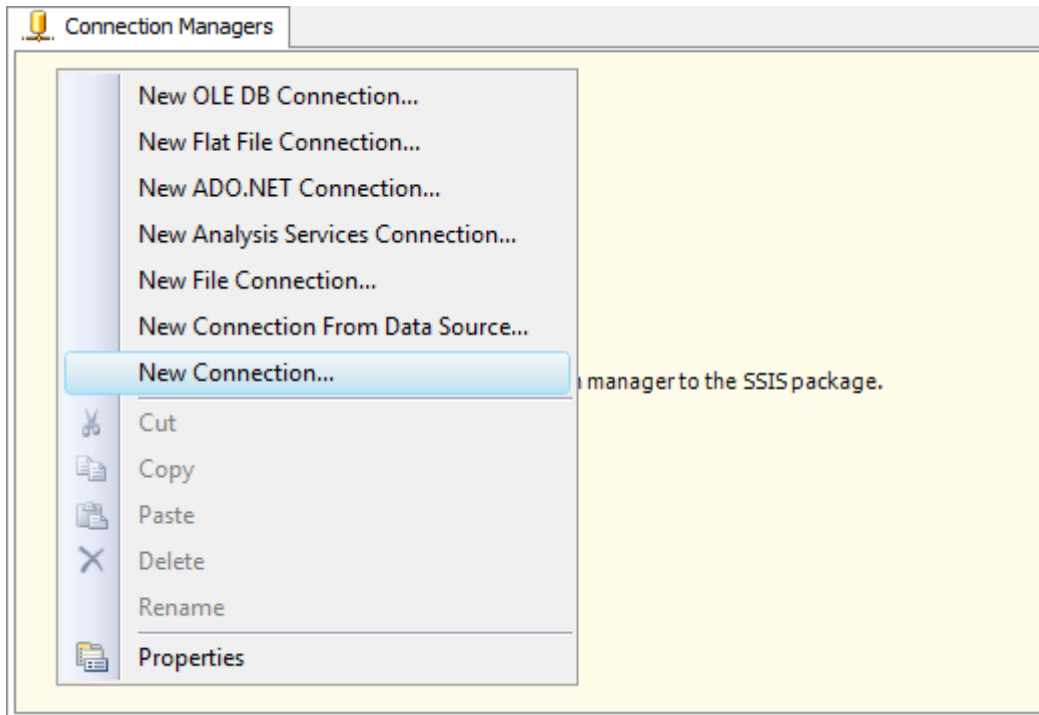
SQL Server 2014, 2012, 2008R2, 2008, 2005

After you have downloaded the package, you can install the software by following the installation wizard.

Using the Marketo Connection Manager

The Marketo Connection Manager is an SSIS connection manager component that can be used to establish connections with Marketo.

To add a Marketo connection to your SSIS package, right-click the **Connection Manager** area in your Visual Studio project, and choose "New Connection..." from the context menu. You will be prompted the "Add SSIS Connection Manager" window. Select the "**Marketo**" item to add the new Marketo connection manager.



The Marketo Connection Manager contains the following three pages which configures how you want to connect to Marketo.

- General
- Advanced Settings
- More Info

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General page

The General page on the Marketo Connection Manager allows you to specify general settings for the connection. Before you can connect to Marketo, you must first create a [Custom Service](#).

Marketo Connection Manager
Specify how to connect to Marketo

General | Advanced Settings | More Info

Identity:

Client Id:

Client Secret:

Rest Endpoint:

Timeout (secs): ^ v

API Throttling Rate: ^ v requests/second

API Usage Limit: ^ v requests/session

Concurrent Batch Limit: ^ v

Test Connection OK Cancel

Identity

The **Identity** field specifies the identity url the connection will use to request an access token. The Identity can be found in Marketo under Admin > Integration > Web Services > REST API

Client Id

The **Client Id** field specifies the Client Id of the [Custom Service](#) you created. It is used to request an Access Token. The Client Id can be found in Marketo under Admin > Integration > LaunchPoint > View Details

Client Secret

The **Client Secret** field specifies the Client Secret of the [Custom Service](#) you created. It is used to request an Access Token. The Client Secret can be found in Marketo under Admin > Integration > LaunchPoint > View Details

Rest Endpoint

The **Rest Endpoint** field specifies the rest endpoint the connection will use to read and write data. The Rest Endpoint can be found in Marketo under Admin > Integration > Web Services > REST API

Timeout (secs)

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The **Timeout (secs)** option allows you to specify a timeout value in seconds for the connection. The default value is 120 seconds.

API Throttling Rate (requests/sec)

The **API Throttling Rate** is based on the Throttle Limits in Marketo. This rate is set to 5 requests per second limit, by default, to respect the Marketo API Throttle limit. If the API Throttling Rate exceeds 5 requests per second, the Marketo server may stop your request for a short period of time.

API Usage Limit (requests/session) (since v3.0)

The **API Usage Limit** option limits the number of API calls being used per session, which can be used to avoid hitting the Marketo Daily API Quota. Marketo has a Default Daily API Quota of 10,000 API calls. If you would like to increase your Rate Limit due to high volume integrations, Marketo recommends that you contact your account representative to request to increase your daily API quota.

When the specified limit is reached,

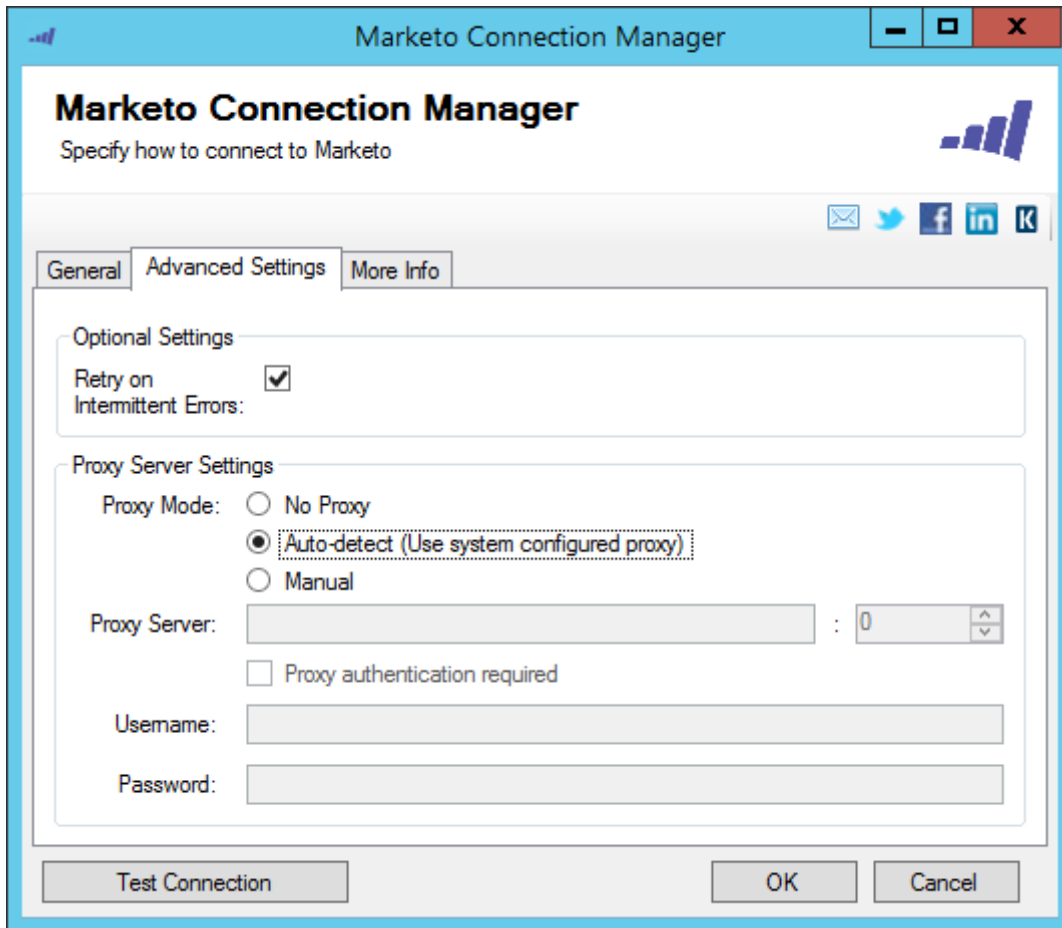
- Marketo source component would stop processing and throw a warning message.
- Marketo destination component would stop processing and report an error message.

Test Connection

After all the connection information has been provided, you may click the **Test Connection** button to test if the connection settings entered are valid.

Advanced Settings

The Advanced Settings page on the Marketo Connection Manager allows you to specify some advanced and optional settings for the connection.



Proxy Mode (since v2.2)

Proxy Mode option allows to specify how you want to configure the proxy server setting. There are three options available.

- No Proxy
- Auto-detect (Using system configured proxy)
- Manual

Proxy Server

Using **Proxy Server** option allows you to specify the name of the proxy server for the connection.

Port

The **Port** option allows you to specify the port number of the proxy server for the connection.

Username (Proxy Server Authentication)

Username option (under Proxy Server Authentication) allows you to specify the proxy user account.

Password (Proxy Server Authentication)

Password option (under Proxy Server Authentication) allows you to specify the proxy user's password.

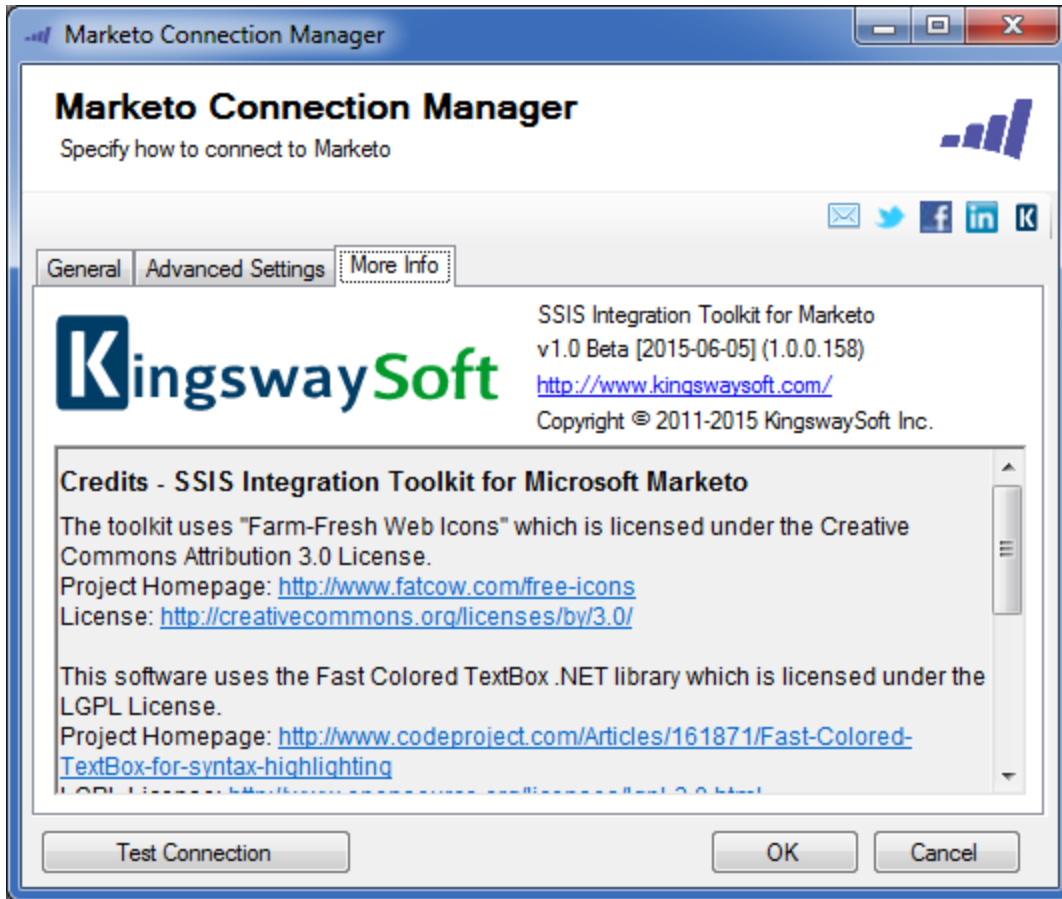
NOTE: The Proxy Password is not included in the connection manager's `ConnectionString` property by default. This is by design for security reasons. However, you can include it in your **ConnectionString** if you want to parameterize your connection manager. The format would be **ProxyPassword=myProxyPassword;** (make sure you have a semicolon as the last character). It can be anywhere in the `ConnectionString`.

Retry on Intermittent Errors

This is an option designed to help recover from possible intermittent outages or disruption of service so the integration does not have to be stopped because of such temporary issues. Enabling this option will allow service calls to be retried upon certain types of failure. A service call may be retried up to 3 times before an exception is fired. Retries occur after 0 seconds, 15 seconds, and 60 seconds. Warning: Although we have carefully designed this feature so that such retries should only happen when it is deemed to be safe to do so. However, in some extreme occasions, such retried service calls could result in the creation of duplicate data.

More Info page

The More Info page shows some basic information about the toolkit. In this page, you can find the version information of the toolkit.

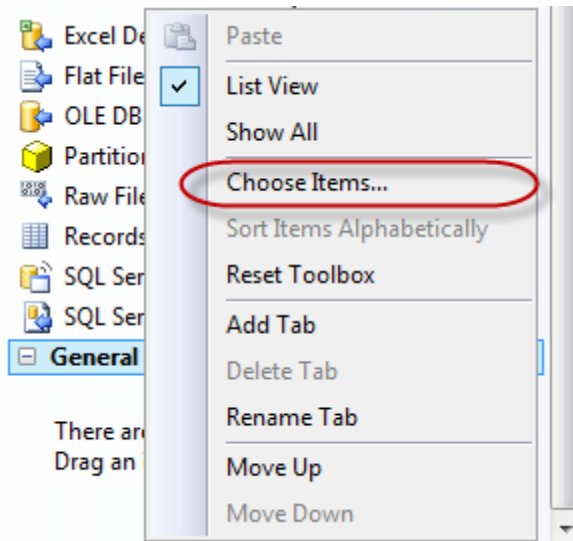


Adding SSIS Components to Business Intelligence Development Studio's Toolbox

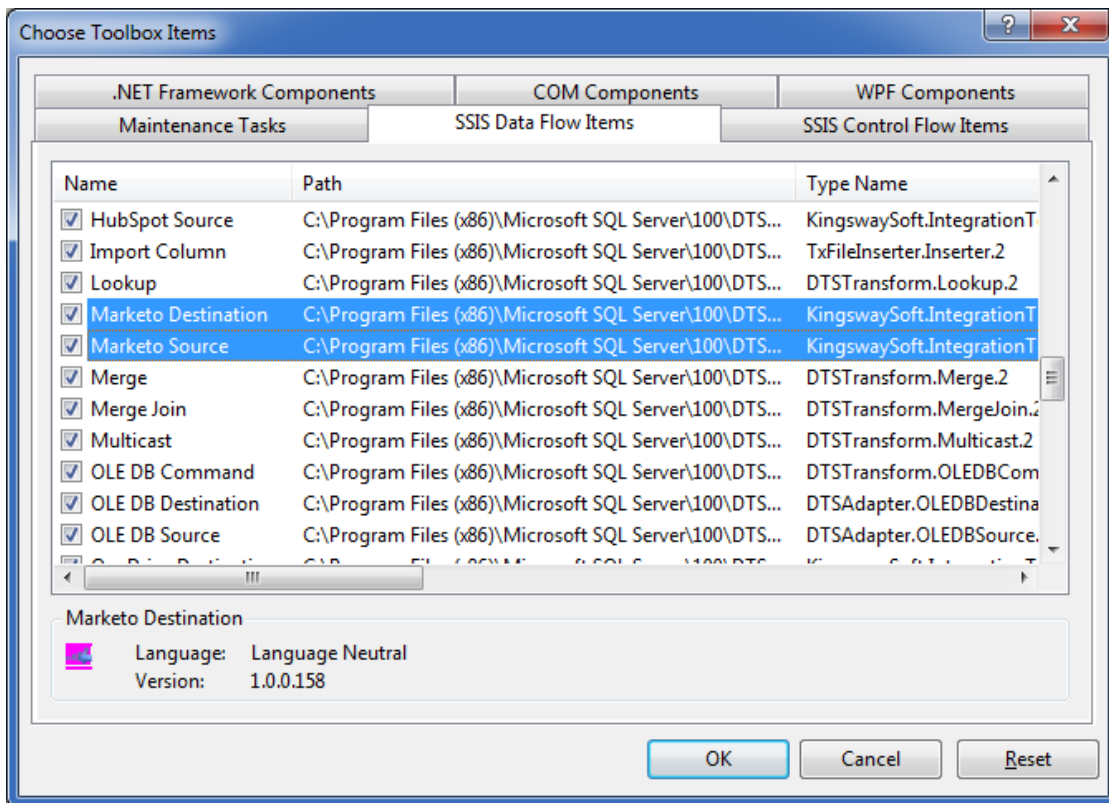
SSIS Integration Toolkit for Marketo includes two data flow components for use with Marketo. They need to be added to the SSIS toolbox before you can use them in a SSIS data flow task.

NOTE: If you are using SQL Server 2012 or later development environment, you should not need to do this, as SQL Server 2012 or later automatically lists all available pipeline components by scanning the system.

To add the data flow components, create a new **data flow** task if you do not have one yet and switch to the SSIS data flow page. Right-click on the toolbox area to bring up the context menu, where you can select the "**Choose Items...**" option as shown below.



You will be presented with a window called "Choose Toolbox Items". Switch to "**SSIS Data Flow Items**" tab, and select **Marketo Destination** and **Marketo Source** components from the list.



Both data flow components should now appear in your SSIS Toolbox, where you can drag and drop any of them to the design surface of your SSIS data flow task.

Using the Marketo Source Component

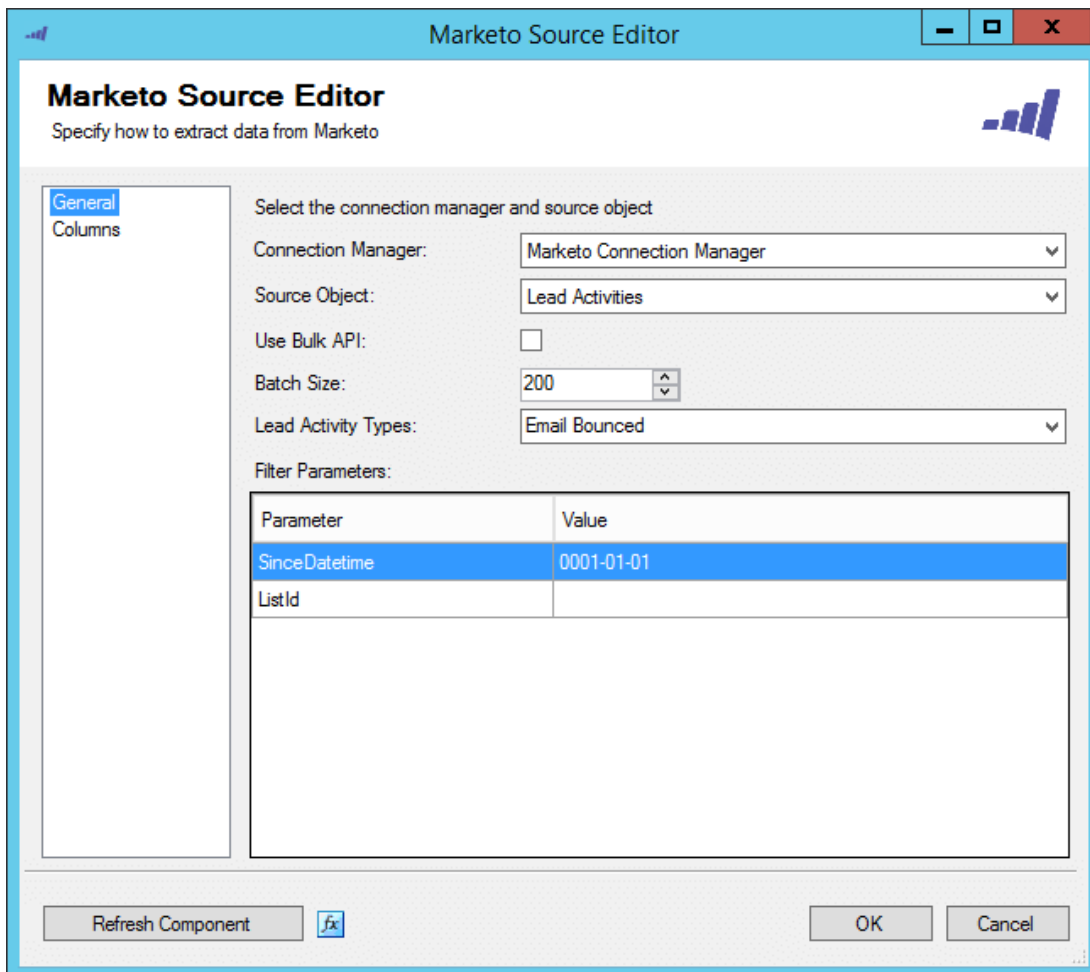
The **Marketo Source Component** is an SSIS data flow pipeline component that can be used to read / retrieve data from Marketo.

The component includes the following two pages to configure how you want to read data from Marketo.

- General
- Columns

General page

The General page of the Marketo Source Component allows you to specify the general settings of the component.



The screenshot shows the 'Marketo Source Editor' dialog box. The title bar reads 'Marketo Source Editor' with standard window controls. The main title is 'Marketo Source Editor' with the subtitle 'Specify how to extract data from Marketo'. On the left, there is a sidebar with 'General' selected and 'Columns' below it. The main area contains the following settings:

- Select the connection manager and source object
- Connection Manager: Marketo Connection Manager (dropdown)
- Source Object: Lead Activities (dropdown)
- Use Bulk API:
- Batch Size: 200 (spin box)
- Lead Activity Types: Email Bounced (dropdown)
- Filter Parameters:

Parameter	Value
SinceDatetime	0001-01-01
ListId	

At the bottom, there are buttons for 'Refresh Component' (with a refresh icon), 'OK', and 'Cancel'.

Connection Manager

The Marketo Source Component requires a Marketo connection in order to connect with Marketo. The **Connection Manager** drop-down will show a list of all **Marketo** connection managers that are available to your current SSIS package.

Source Object

The **Source Object** drop-down lists all of the currently supported objects which you can read from.

Lead Activity Types

The **Lead Activity Type** drop-down is enabled when the LeadActivities Source Object is specified. You may select as many Lead Activity Types as you prefer.

It is important to note that when you choose a combination of Lead Activity Types, it is possible that you may have duplicate Column Names in the Columns page. If this is the case, this issue can easily be corrected by going into the **Input and Output Properties** tab of the **Advanced Editor** of the Destination Component, and changing the name of the field listed in the **Output Columns**.

Batch Size

The **Batch Size** lets you specify how many records to retrieve per service call to Marketo. The default is set to 200.

Use Bulk API (*since v3.0*)

Use Bulk API option specifies whether you want to use Marketo Bulk Export API to read data from your Marketo organization. This option can be used when you have significantly large number of records in Marketo system.

Note: This option will only be available to Lead and Lead Activities objects.

Polling Throttle Rate (minutes) (*since v3.0*)

The **Polling Throttle Rate** determines the frequency rate to poll the status of the job to determine if it has been completed.

Note that this option will only be available when the **Use Bulk API** option is enabled.

Download Chunk Size (kilobytes) (*since v3.0*)

The chunk size to use when retrieve the export data.

Note that this option will only be available when the **Use Bulk API** option is enabled.

Filter Parameters

You can specify filtering parameters so that the source component only returns those records that satisfy such filtering parameters. Filter Parameters are supported by most objects and some objects require a Filter Parameter to be specified. If you wish to specify multiple values for a single Filter Parameter, just separate the values with a comma. In some cases an object will support the use of "LowerBound(s)" and "MaxConsecutiveUnusedIds" parameters. These special parameters do the following:

The **LowerBound(s)** specifies the Id value(s) you would like to start reading records from.

The **MaxConsecutiveUnusedIds** parameter specifies the maximum number of empty consecutive ids starting from the LowerBound(s) values onwards until it hits

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the maximum consecutive unused ids you have specified. It will either start reading again from the next LowerBound value or stop if no additional LowerBound values are listed.

Since v3.1, we added the support which allows you to get specific record(s) by setting MaxConsecutiveUnusedIds = 0. If you specify a list of record ID(s) separated by comma(s) in LowerBound(s) option, the component will only returns the record(s) you've specified. Note that the Batch Size still takes effect in this situation, so you need to use a Batch Size of 1 in order to get the list of specific record(s) correctly.

If the LowerBound(s) and MaxConsecutiveUnusedIds parameters are not specified (and they are supported in the currently selected object), the default values of 1 and 1500 will be used.

The Lead Activities object supports **SinceDatetime** as filter parameter to retrieve the next page token for a given date. (**since v1.1**)

The supported datetime format as follow:

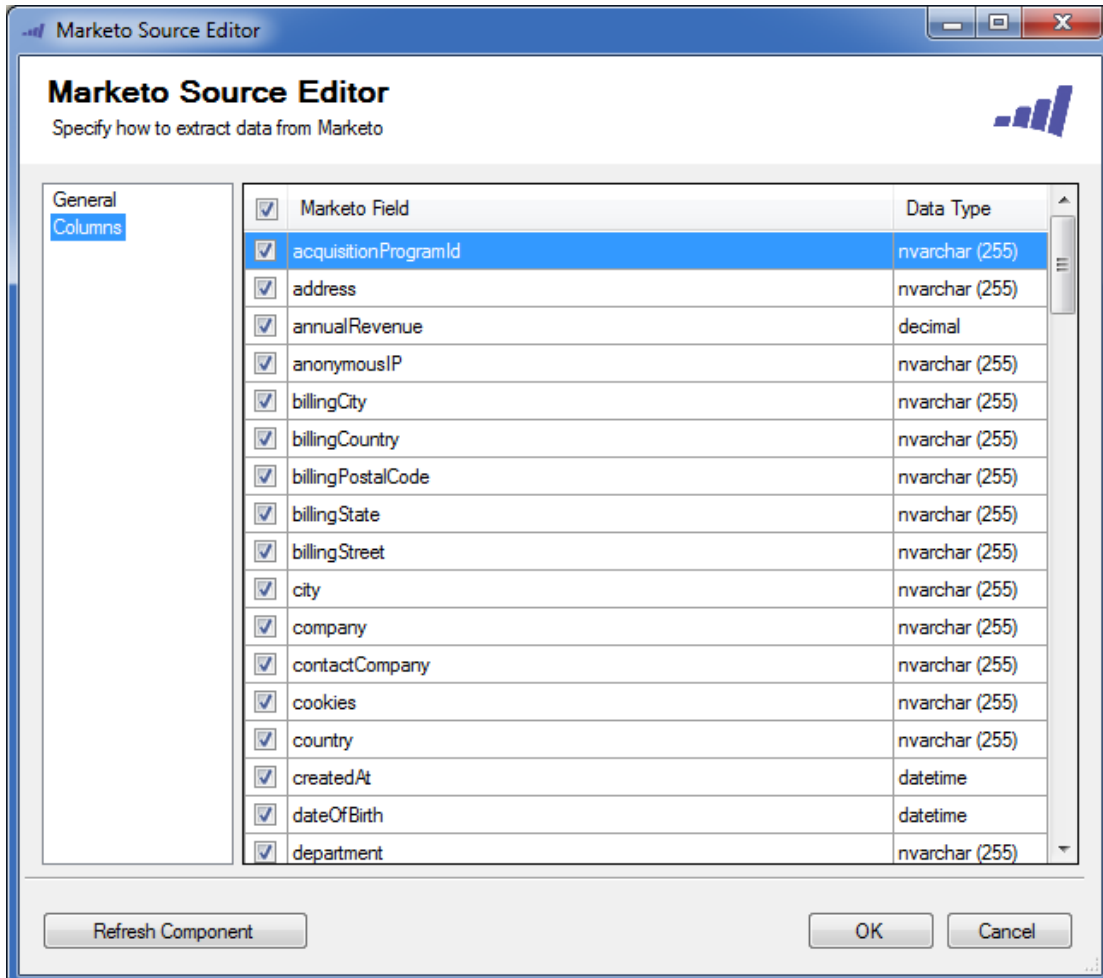
- 2014-10-06T13:22:17 or 2014-10-06T13:22:17-08:00
- 2014-10-06T13:22 or 2014-10-06T13:22-07:00
- 2014-10-06

Refresh Component Button

Clicking the **Refresh Component** button causes the component to retrieve the latest metadata and update each field to its most recent metadata.

Columns page

The **Columns** page of the Marketo Source Component shows you all available attributes from the object that you specified on the **General** page.



On the top left of the grid, you can see a checkbox, which can be used to toggle the selection of all available Marketo fields. This is a productive way to check or uncheck all available fields.

NOTE: As a general best practice, you should only select the Marketo fields that are needed for the downstream pipeline components.

Using the Marketo Destination Component

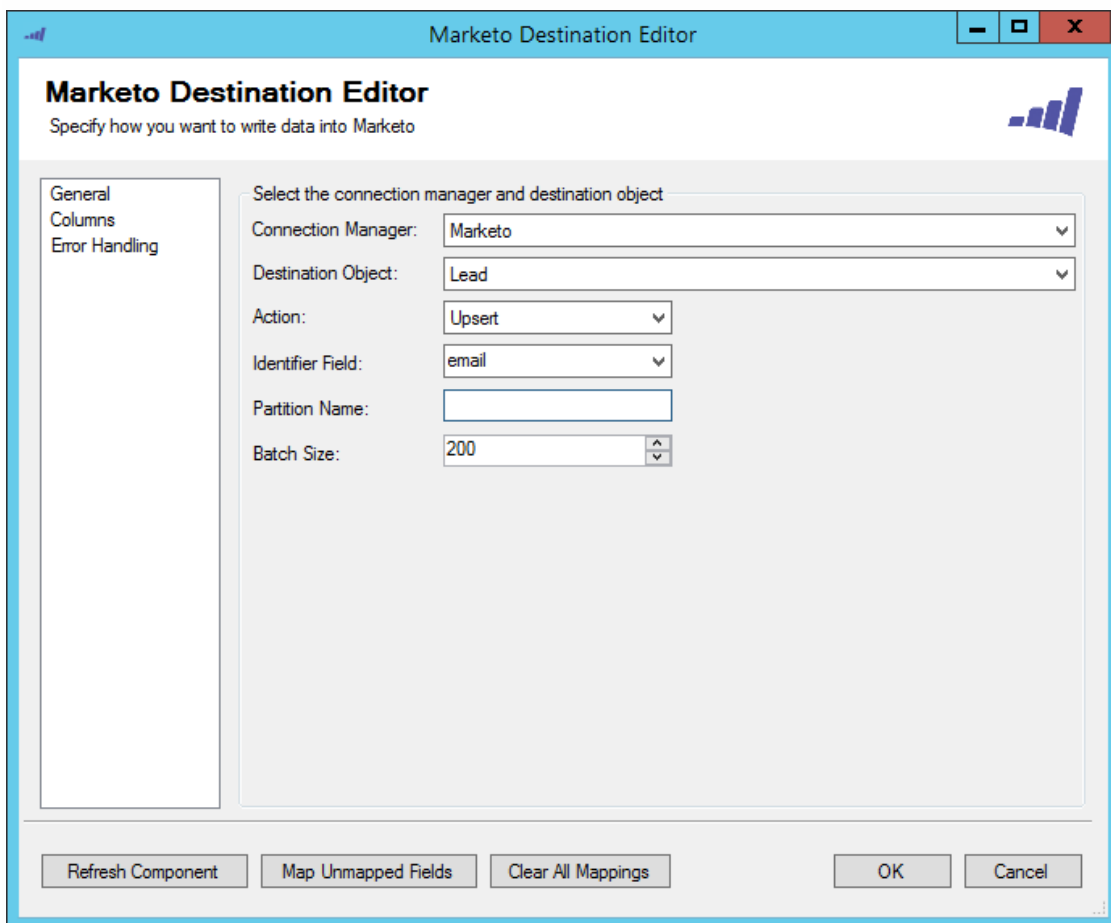
The Marketo Destination Component is an SSIS data flow pipeline component that can be used to write data to Marketo. You can **create, update, upsert** or **delete** objects that allow a particular action with this component. There are three pages of configuration:

- General
- Columns
- Error Handling

The **General** page is used to specify general settings for the Marketo Destination Component. The **Columns** page allows you to map the columns from upstream components to Marketo fields in the destination object. The **Error Handling** page allows you to specify how errors should be handled when they occur.

General page

The General page allows you to specify general settings for the component.



The screenshot shows the 'Marketo Destination Editor' dialog box. The title bar reads 'Marketo Destination Editor'. Below the title bar, the main heading is 'Marketo Destination Editor' with the subtitle 'Specify how you want to write data into Marketo'. On the left side, there is a navigation pane with three options: 'General' (selected), 'Columns', and 'Error Handling'. The main area contains the following configuration options:

- Select the connection manager and destination object
- Connection Manager:
- Destination Object:
- Action:
- Identifier Field:
- Partition Name:
- Batch Size:

At the bottom of the dialog, there are five buttons: 'Refresh Component', 'Map Unmapped Fields', 'Clear All Mappings', 'OK', and 'Cancel'.

Marketo Connection Manager

The Marketo Destination Component requires a Marketo connection. The **Marketo Connection Manager** option will show all **Marketo**connection managers that have been created in the current SSIS package or project.

Destination Object

The **Destination Object** drop-down lists all of the currently supported objects which you can write to.

Dedupe By

The **Dedupe By** option is available when performing an **Update** action on most objects. "Dedupe" is a Marketo term for de-duplicate. You can choose to dedupe by **Dedupe Fields** or the **Id Field**. Depending on what option is selected determines what field(s) will uniquely identify records while updating.

Delete By

The **Delete By** option is available when performing an **Delete** action on most objects. You can choose to delete by **Dedupe Fields** or the **Id Field**. Depending on what option is selected determines what field(s) will uniquely identify records while deleting.

Identifier Field

The **Identifier Field** specifies the field that will behave like the primary key field. This only applies to the Lead object when you are Creating, Updating, or Upserting. The way the field behaves is different for the different actions:

- **Create** - The Identifier Field behaves like a duplicate detection field. The record cannot be created if the value of the Identifier Field matches that of a record in Marketo.
- **Update** - The Identifier Field behaves like a selector. The record in Marketo that gets updated is the one whose Identifier Field matches that of the record being sent.
- **Upsert** - The Identifier Field behaves like a combination of the Create and Update actions.

Partition Name (*since v2.2*)

The **Partition Name** allows you to specify the partition when create or update leads in Marketo.

Note this option will only be available to Lead object with Upsert action and use Email as Identifier Field.

Action

The **Action** option allows you to specify how data should be written to Marketo. There are currently five (5) supported:

- **Create**
- **Update**
- **Upsert**
- **Delete**
- **Merge (*since v1.4*)** (Lead object only)

Batch Size

The **Batch Size** lets you specify how many records to send per service call to Marketo.

Bulk Api (since v3.0)

Use **Bulk API** option dictates whether you want to use Marketo Bulk Import API to write to your Marketo system. By default, this option is not selected. When using Marketo Bulk API, your data will be processed asynchronously, which can provide some significant performance improvement.

Note: This option will only be available to Lead and Custom Objects.

When the option is enabled, the following bulk API related options become available for configuration.

Static List Id (Lead Object Only)

Specify the Id of the static list to import Leads into.

Polling Throttle Rate

The **Polling Throttle Rate** determines the frequency rate to poll the status of the job to determine if it has been completed.

Refresh Component Button

Clicking the **Refresh Component** button causes the component to retrieve the latest metadata and update each attribute to its most recent metadata.

Map Unmapped Fields Button

By clicking this button, the component will try to map any unmapped Marketo attributes by matching their names with the input columns from upstream components. This is useful when your source component has recently added more columns, in which case you can use this button to automatically establish the association between input columns and unmapped destination attributes.

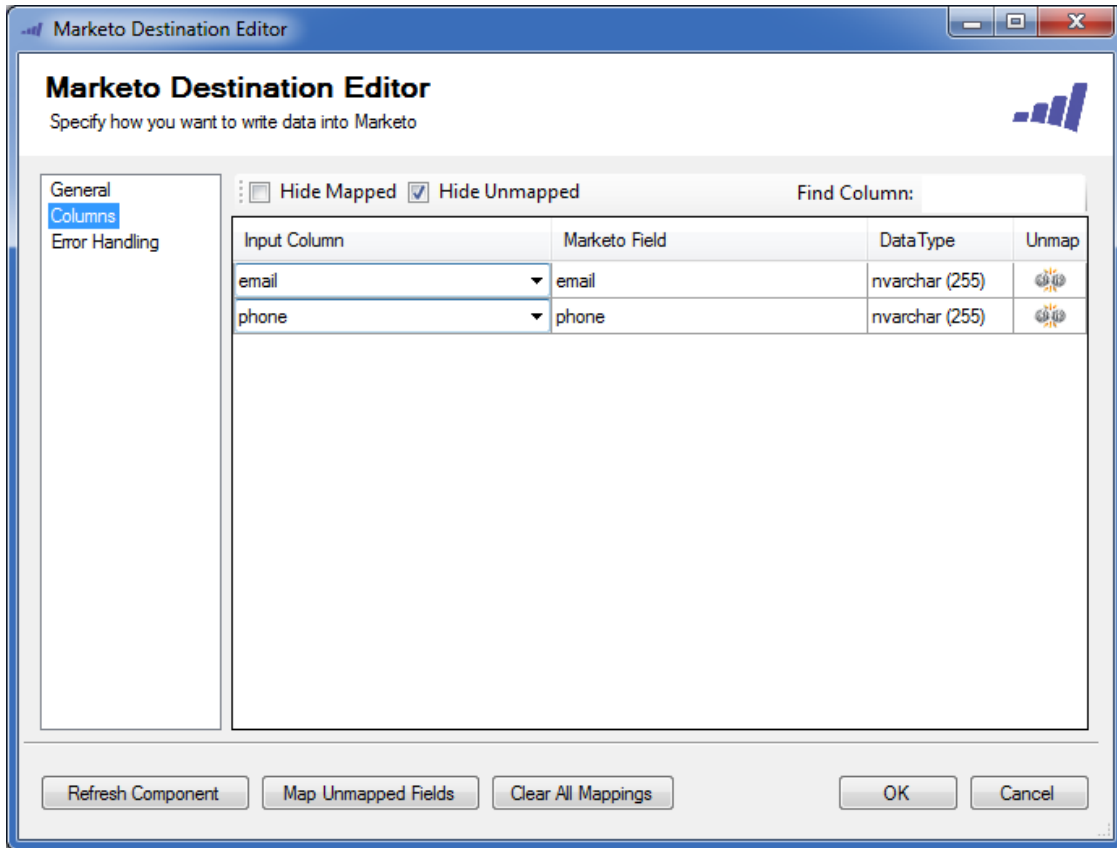
Clear All Mappings Button

By clicking this button, the component will reset all your mappings in the destination component.

Columns page

The **Columns** page of the Marketo Destination Component allows you to map the columns from upstream components to the Marketo destination fields.

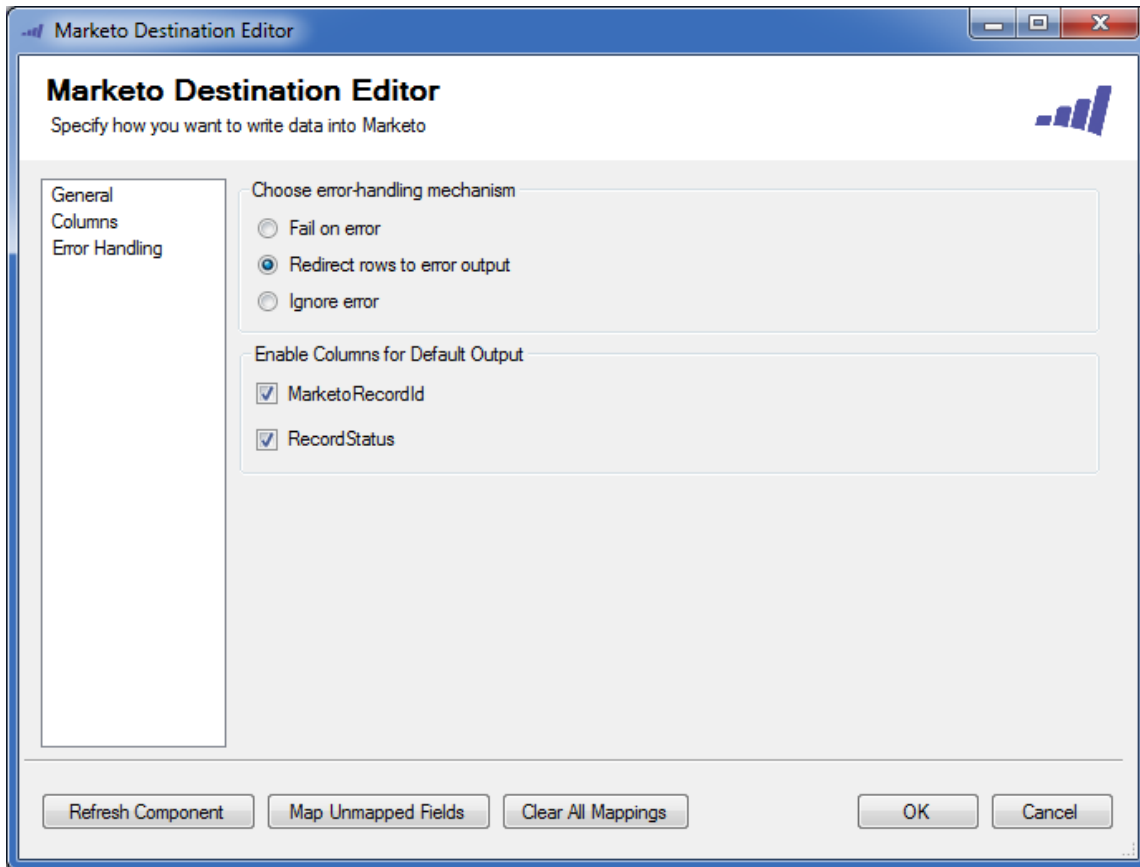
In the Columns page, you would see a grid that contains four columns as shown below.



- **Input Column** - You can select an input column from an upstream component for the corresponding Marketo field.
- **Marketo Field** - The Marketo field that you are writing data.
- **Data Type** - This column indicates the type of value for the current field.
- **Unmap** - This column can be used to unmap the field from the upstream input column, or otherwise it can be used to map the field to an upstream input column by matching its name if the field is not currently mapped.

Error Handling page

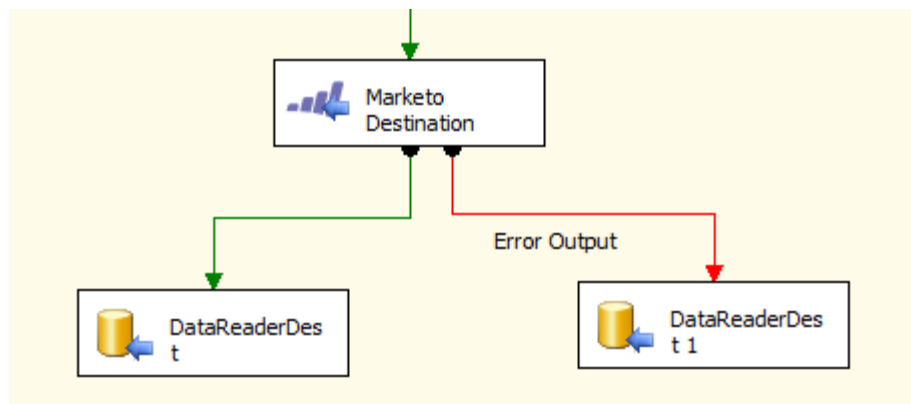
The **Error Handling** page allows you to specify how errors should be handled when they happen.



There are three options available.

1. Fail on error
2. Redirect rows to error output
3. Ignore error

When the **Redirect rows to error output** option is selected, rows that failed to write to Marketo will be redirected to the 'Error Output' output of the Destination Component. As indicated in the screenshot below, the green output connection represent rows that were successfully written, and the red 'Error Output' connection represents rows that were erroneous. The 'ErrorMessage' output column found in the 'Error Output' may contain the error message that was reported by Marketo or the component itself.



NOTE: Use extra caution when selecting **Ignore error** option, since the component will remain silent for any errors that have occurred.

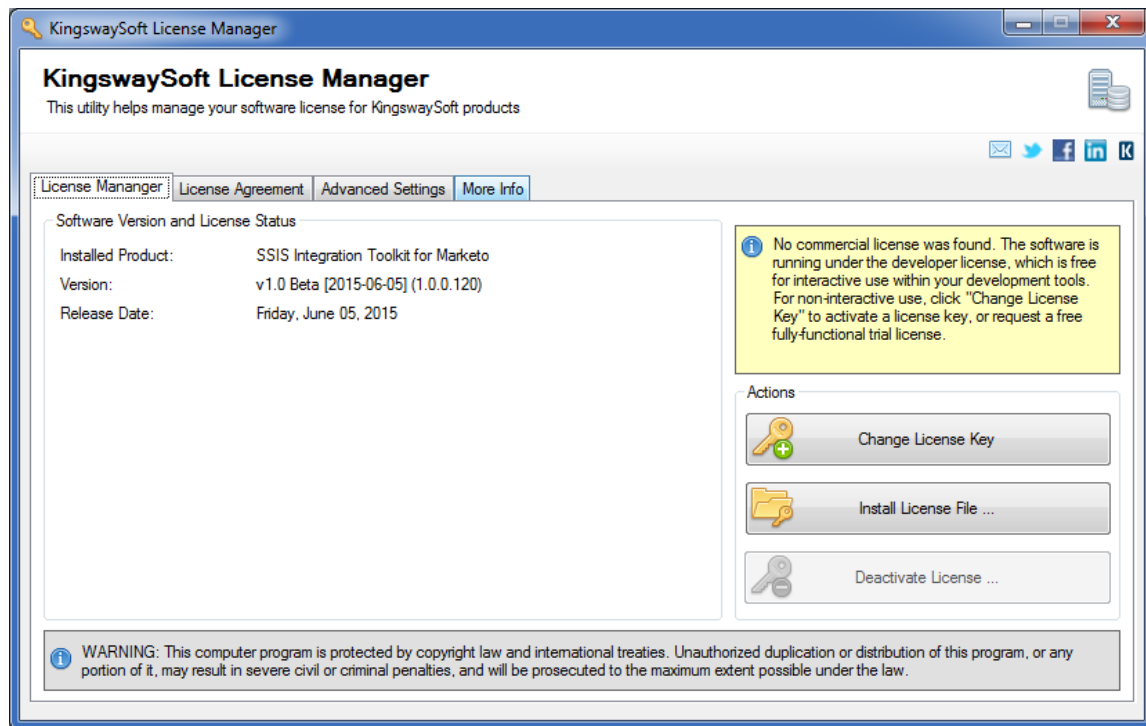
Enable Columns for Default Output.

- MarketoRecordId - Contains the id of the Marketo item
- RecordStatus - Contains the status of the Marketo record

License Manager

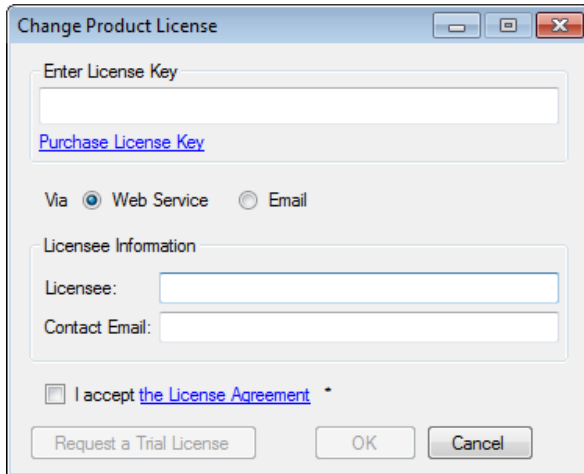
SSIS Integration Toolkit comes with a license manager program which helps you manage and activate the product license key to be used for the toolkit.

Without a commercial license, SSIS Integration Toolkit will operate under the **Developer License** which is free to use for development or evaluation purpose. Under the developer license, you can use the software within the development tool (SSDT-BI, BIDS, or Visual Studio).



The only limitation with the free developer license is the inability to run the software outside of the development tool (SSDT-BI, BIDS, or Visual Studio). If you would like to run the software outside the development tool, such as running SSIS packages on a scheduled basis or from a command line, you will need to acquire a license from us.

If you want to test out the functionality by scheduling your SSIS packages, a trial license can be requested. To do so, you can launch License Manager program, then click "**Change License Key**" button, where you can request a free trial license after filling out the necessary Licensee Information.

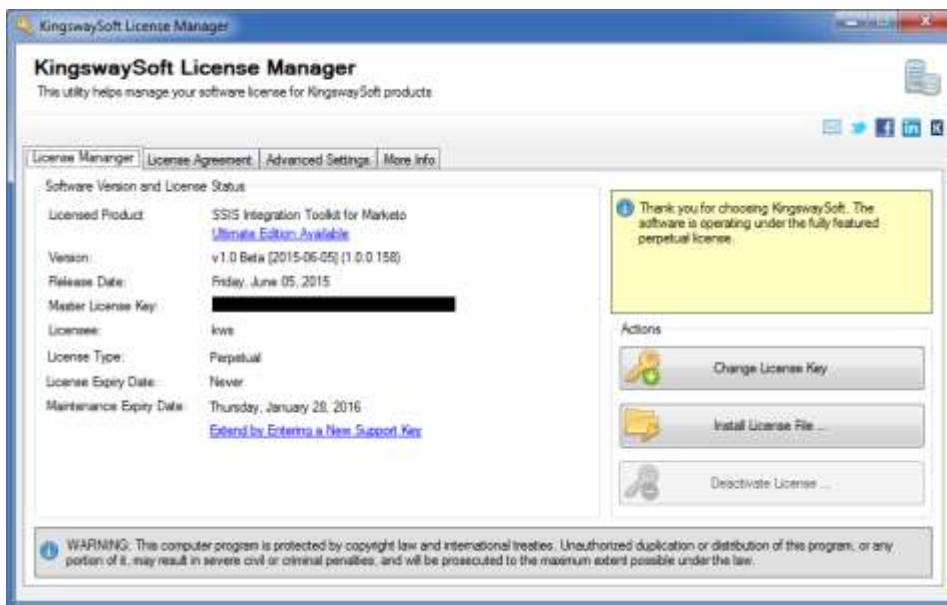


If you have received a product license key from us after placing an order through our online shopping cart system, you can also click "**Change License Key**" button and enter the product license key in order to activate the software to use the fully-featured commercial license.

To request a free trial license or activate a product license key that you have received, you can use **Web Service** option to complete the process by sending the request to our license server directly. An Internet connection is required when **Web Service** option is used. This is the option that we recommend.

Alternatively, you can choose the **Email** option so that the license manager will generate an email for you which you can send to us. The **Email** option should only be used if your system has no Internet access. It requires manual processing so please expect to wait for 24 to 48 hours before receiving a license file from us. Once you have received the license file from us from through email, you can save it to a local file, which you can then install by clicking "**Install License File...**" button in **License Manager**.

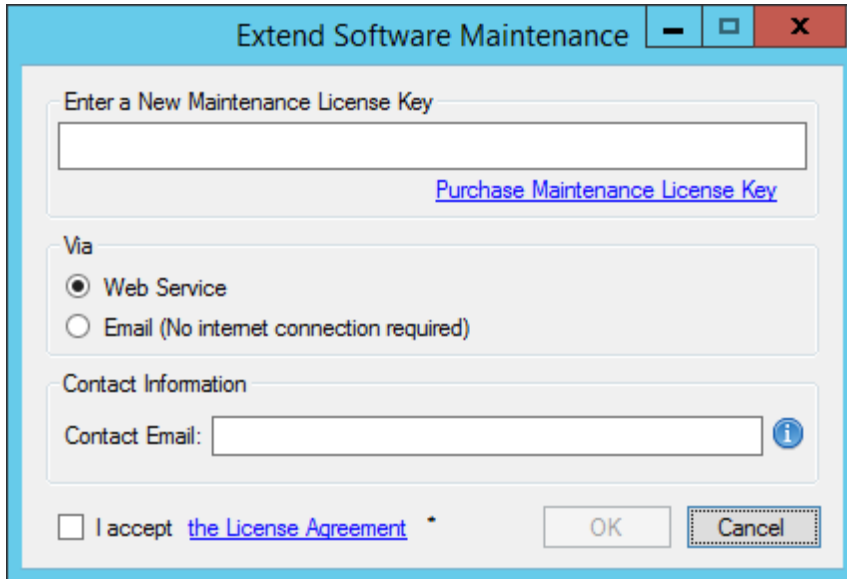
If you have acquired a perpetual license from us, once the software has been activated, your license manager will be shown as something like below.



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Since v2.0, you can see your **Support Expiry Date** or **Maintenance Expiry Date** in the License Manager program if you are using a perpetual license. By default, your perpetual license comes with a one-year maintenance and upgrade, which entitles you to use any version of the software released before your **Support Expiry Date** or **Maintenance Expiry Date**. You can extend it by entering a new **maintenance license key** that you have acquired from us.



Extend Software Maintenance

Enter a New Maintenance License Key

[Purchase Maintenance License Key](#)

Via

Web Service

Email (No internet connection required)

Contact Information

Contact Email:

I accept [the License Agreement](#) *

OK Cancel

If your commercial license is a subscription license, you will not see the **Support Expiry Date** or **Maintenance Expiry Date** option in the License Manager program, since your subscription license comes with maintenance and upgrade for the entire subscription period.

NOTE: You must run License Manager program under a local administrative account due to the privileges required to write license file to the system.