



Data Connector 2.0

User Guide

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Our web site: <http://www.boostsolutions.com>

Contents

| | | |
|-------|---|----|
| 1. | Introduction | 1 |
| 2. | Installation | 2 |
| 2.1 | Product Files | 2 |
| 2.2 | Software Requirements..... | 3 |
| 2.3 | Installation..... | 4 |
| 2.4 | Upgrade | 6 |
| 2.5 | Uninstallation | 6 |
| 2.6 | Command_Line Installation | 6 |
| 2.7 | Feature Activation | 9 |
| 3. | How to Use Data Connector..... | 11 |
| 3.1 | Enter the Data Connector Job Center | 11 |
| 3.1.1 | Entrances..... | 11 |
| 3.1.2 | Interface Introduction | 12 |
| 3.2 | Create a Job..... | 13 |
| 3.2.1 | General Settings | 14 |
| 3.2.2 | Schedule | 25 |
| 3.2.3 | Notification..... | 26 |
| 3.2.4 | Save the Job..... | 27 |
| 3.3 | Manage a Job..... | 27 |
| 3.3.1 | Run a Job..... | 27 |
| 3.3.2 | Edit a Job..... | 28 |
| 3.3.3 | Delete a Job..... | 28 |
| 3.4 | Monitor and Log..... | 29 |
| 3.4.1 | Notification Emails..... | 29 |
| 3.4.2 | Logs..... | 29 |
| 3.4.3 | Job Message | 31 |
| 3.5 | Column Mapping Rules | 31 |
| 3.5.1 | Read-only Column..... | 31 |
| 3.5.2 | Unsupported Column Types..... | 32 |

| | | |
|-------|---|----|
| 3.5.3 | Mapping Rules for Special Columns | 32 |
| 3.5.4 | Column Mapping Matrix..... | 33 |
| 4. | Troubleshooting & Support | 35 |
| | Appendix 1: License Management..... | 38 |

1. Introduction

SharePoint Data Connector is a lightweight out-of-the-box solution that provides a secure and convenient way to transfer business data between SharePoint lists and external data sources.

Use SharePoint Data Connector to send data both ways either by exporting SharePoint list content to an External database or importing business data to a SharePoint list from multiple External data sources.

This user guide is intended to walk you through the process of how to work with BoostSolutions Data Connector.

For latest version of this copy or other user guides, please visit our document center:

<http://www.boostsolutions.com/download-documentation.html>

2. Installation

2.1 Product Files

After you download and unzip the Data Connector zip file from www.boostsolutions.com, you will find the following files:

| Path | Descriptions |
|---|--|
| Setup.exe | A program that installs and deploys the WSP solution packages to the SharePoint farm. |
| EULA.rtf | The product End-User-License-Agreement. |
| Data Connector_V2_User Guide.pdf | User guide for Data Connector in PDF format. |
| Library\2.0\Setup.exe | The product installer for .Net Framework 2.0. |
| Library\2.0\Setup.exe.config | A file containing the configuration information for the installer. |
| Library\4.0\Setup.exe | The product installer for .Net Framework 4.0. |
| Library\4.0\Setup.exe.config | A file containing the configuration information for the installer. |
| Library\6.0\Setup.exe | The product installer for .Net Framework 4.6. |
| Library\6.0\Setup.exe.config | A file containing the configuration information for the installer. |
| Solutions\Foundation\BoostSolutions.FoundationSetup14.1.wsp | A SharePoint solution package containing Foundation files and resources for SharePoint 2010 or SharePoint Foundation 2010. |
| Solutions\Foundation\BoostSolutions.FoundationSetup15.1.wsp | A SharePoint solution package containing Foundation files and resources for SharePoint 2013 or SharePoint Foundation 2013. |
| Solutions\Foundation\BoostSolutions.FoundationSetup16.1.wsp | A SharePoint solution package containing Foundation files and resources for SharePoint 2016/2019. |

| | |
|--|--|
| Solutions\Foundation\Install.config | A file containing the configuration information for the installer. |
| Solutions\DataConnector\ BoostSolutions.DataConnector14.2.wsp | A SharePoint solution package containing Data Connector files and resources for SharePoint 2010 or SharePoint Foundation 2010. |
| Solutions\DataConnector\ BoostSolutions.DataConnector15.2.wsp | A SharePoint solution package containing Data Connector files and resources for SharePoint 2013 or SharePoint Foundation 2013. |
| Solutions\DataConnector\ BoostSolutions.DataConnector16.2.wsp | A SharePoint solution package containing Data Connector files and resources for SharePoint 2016/2019. |
| Solutions\DataConnector\Install.config | A file containing the configuration information for the installer. |

2.2 Software Requirements

Before you install Data Connector, ensure your system meets the following requirements:

SharePoint 2019

| | |
|------------------|---|
| Operating System | Windows Server 2016 Standard or Datacenter Windows Server 2019 Standard or Datacenter |
| Server | Microsoft SharePoint Server 2019 |
| Browser | Microsoft Internet Explorer 11 or greater Microsoft Edge Mozilla Firefox Google Chrome |

SharePoint 2016

| | |
|------------------|--|
| Operating System | Microsoft Windows Server 2012 Standard or Datacenter X64 Microsoft Windows Server 2016 Standard or Datacenter |
| Server | Microsoft SharePoint Server 2016 Microsoft .NET Framework 4.6 |

| | |
|---------|---|
| Browser | Microsoft Internet Explorer 10 or greater Microsoft Edge Mozilla Firefox Google Chrome |
|---------|---|

SharePoint 2013

| | |
|------------------|--|
| Operating System | Microsoft Windows Server 2012 Standard or Datacenter X64 Microsoft Windows Server 2008 R2 SP1 |
| Server | Microsoft SharePoint Foundation 2013 or Microsoft SharePoint Server 2013 Microsoft .NET Framework 4.5 |
| Browser | Microsoft Internet Explorer 8 or greater Microsoft Edge Mozilla Firefox Google Chrome |

SharePoint 2010

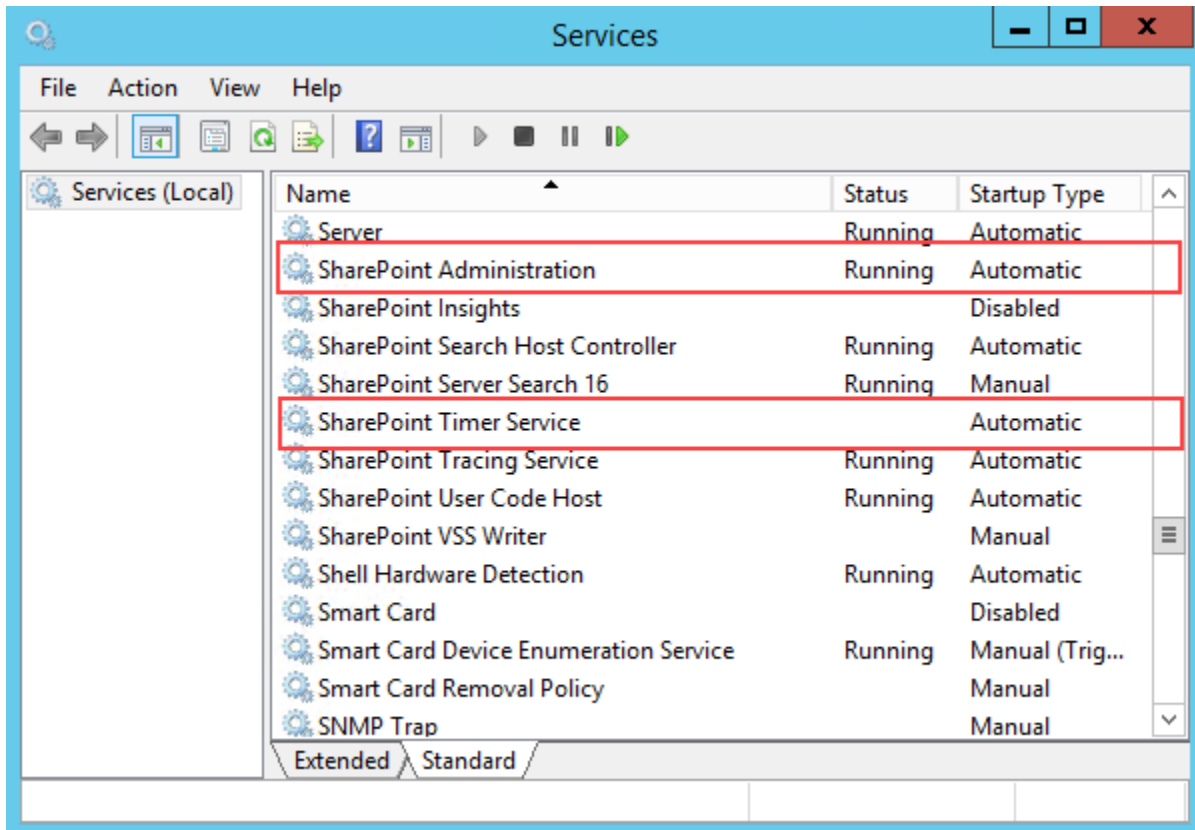
| | |
|------------------|--|
| Operating System | Microsoft Windows Server 2008 x64 Microsoft Windows Server 2008 R2 |
| Server | Microsoft SharePoint Foundation 2010 or Microsoft SharePoint Server 2010 Microsoft .NET Framework 3.5 |
| Browser | Microsoft Internet Explorer 7 or greater Mozilla Firefox Google Chrome |

2.3 Installation

Follow these steps to install Data Connector on your SharePoint servers.

Installation Preconditions

Before you start installing the product, please make sure these services are started on your SharePoint servers: **SharePoint Administration** and **SharePoint Timer Service**.



Data Connector must be run on one front-end Web server in the SharePoint farm where **Microsoft SharePoint Foundation Web Application services** are running. Check **Central Administration → System Settings** for a list of servers running this service.

Required Permissions

To perform this procedure, you must have specific permissions and rights.

- Member of the local server's **Administrators** group.
- Member of the **Farm Administrators** group.

To install Data Connector on SharePoint server.

1. Download the zip file (*.zip) of the product of your choice from the BoostSolutions website, then extract the file.
2. Open the created folder and run the **Setup.exe** file.

Note If you cannot run the setup file, please right click the **Setup.exe** file and choose Run as administrator.

3. A system check is performed to verify if your machine meets all the requirements for installing the product. After the system check is finished, click **Next**.
4. Review and accept the End-User License Agreement and click **Next**.
5. In the Web Application Deployment Targets, select the web applications you are going to install and click **Next**.

Note If you select **Automatically activate features**, the product features will be activated in the target site collection during the installation process. If you want to manually activate the product feature later, uncheck this box.

6. Upon completion of the installation, details are displayed showing which web applications you product has been installed to. Click **Close**.

2.4 Upgrade

Download the latest version of our product and run the **Setup.exe** file.

In the **Program Maintenance** window, select **Upgrade** and click **Next**.

2.5 Uninstallation

If you want to uninstall the product, double-click the **Setup.exe** file.

In the **Repair or Remove** window, select **Remove** and click **Next**. Then the application will be removed.

2.6 Command_Line Installation

The following instructions are for installing the solution files for Data Connector in SharePoint 2016 by using the SharePoint STSADM command line tool.

Required permissions

To use STSADM, you must be a member of the local Administrators group on the server.

To install Data Connector to SharePoint servers.

If you have installed BoostSolutions products before, please skip the steps of Foundation installation.

1. Extract the files from the product zip pack to a folder on one SharePoint server.
2. Open a command prompt and make sure your path is set with the SharePoint bin directory.

SharePoint 2016

C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\16\BIN

3. Add the solution files to SharePoint in the STSADM command line tool.

```
stsadm -o addsolution -filename BoostSolutions.DataConnector16.2.wsp
stsadm -o addsolution -filename BoostSolutions.FoundationSetup16.1.wsp
```

4. Deploy the added solution with the following command:

```
stsadm -o deploysolution -name BoostSolutions.DataConnector16.2.wsp -allowgacdeployment -
url [virtual server url] -immediate
stsadm -o deploysolution -name BoostSolutions.FoundationSetup16.1.wsp -allowgacdeployment -
url [virtual server url] -immediate
```

5. Wait for the deployment to complete. Check the final status of the deployment with this command:

```
stsadm -o displaysolution -name BoostSolutions.DataConnector16.2.wsp
stsadm -o displaysolution -name BoostSolutions.FoundationSetup16.1.wsp
```

The result should contain a <Deployed> parameter for which the value is TRUE.

6. In the STSADM tool, activate the features.

```
stsadm -o activatefeature -name SharePointBoost.DataConnector -url [site collection url] -
force
stsadm -o activatefeature -name SharePointBoost.DataConnecotr.TimerJob -url [site
collection url] -force
```

Note:

After install product using command line, you can check whether the product is installed and deployed successfully in Central Administration.

- a. On the Central Administration Home page, click **System Settings**.
- b. In the Farm Management section, click **Manage farm solutions**.

- c. On the Solution Management page, check whether the solution "BoostSolutions.DataConnector16.2.wsp" is deployed to the web applications.
- d. On the Solution Properties page, click **Deploy Solution**.
- e. On the Deploy Solution page, in the Deploy When section, select **Now**.
- f. In the Deploy To? section, in the A specific web application list, click either All web applications or select a specific Web application.
- g. Click **OK**.

To remove Data Connector from SharePoint servers.

1. Removal is initiated with the following command:

```
stsadm -o retractsolution -name BoostSolutions.DataConnector16.2.wsp -immediate -url [virtual server url]
```

2. Wait for the removal to finish. To check the final status of the removal you can use the following command:

```
stsadm -o displaysolution -name BoostSolutions.DataConnector16.2.wsp
```

The result should contain the <Deployed> parameter for which the value is FALSE and the <LastOperationResult> parameter with the RetractionSucceeded value.

3. Remove the solution from the SharePoint solutions storage:

```
stsadm -o deletesolution -name BoostSolutions.DataConnector16.2.wsp
```

Note:

After uninstall product using command line, you can check whether the product is removed and successfully in Central Administration.

- a. On the Central Administration Home page, click **System Settings**.
- b. In the Farm Management section, click **Manage farm solutions**.
- c. On the Solution Management page, click "BoostSolutions.DataConnector16.2.wsp".
- d. On the Solution Properties page, click **Retract Solution**.

- e. On the Retract Solution page, in the Deploy When section, select **Now**.
- f. In the Retract From section, in the A specific web application list, click All content web applications.
- g. Click **OK**.
- h. Wait a minute, and refresh the browser until you see "Not Deployed" as the status for BoostSolutions.DataConnector16.2.wsp.
- i. Select "BoostSolutions.DataConnector16.2.wsp".
- j. On the Solution Properties page, click **Remove Solution**.

To remove BoostSolutions Foundation from SharePoint servers.

The BoostSolutions Foundation is mainly designed to provide a centralized interface to manage licenses for all BoostSolutions software from within SharePoint Central Administration. If are still using BoostSolutions product on your SharePoint server, please do not remove Foundation from the servers.

1. Removal is initiated with the following command:

```
stsadm -o retractsolution -name BoostSolutions.FoundationSetup16.1.wsp -immediate -url  
[virtual server url]
```

2. Wait for the removal to finish. To check the final status of the removal you can use the following command:

```
stsadm -o displaysolution -name BoostSolutions.FoundationSetup16.1.wsp
```

The result should contain the <Deployed> parameter for which the value is FALSE and the <LastOperationResult> parameter with the RetractionSucceeded value.


3. Remove the solution from the SharePoint solutions storage:


```
stsadm -o deletesolution -name BoostSolutions.FoundationSetup16.1.wsp
```

2.7 Feature Activation

Activate features in site collection


By default, the application's features are automatically activated once the product is installed. You can also activate the product feature manually.

1. Click **Settings**  and then click **Site Settings**.
2. Under **Site Collection Administration** click **Site collection features**.
3. Find the application feature and click **Activate**. After a feature is activated, the Status column lists the feature as **Active**.

| | | |
|---|--|---|
|  | BoostSolutions Data Connector 2.13.709.0 Transfer business data between SharePoint lists and external data sources. (Powered by BoostSolutions) | <input type="button" value="Activate"/> |
|---|--|---|

Activate Data Connector's features in Central Administration

1. Using the Quick Launch click **Application Management**.
2. On the Application Management page, under Manage Applications, click **Manage Web applications**.
3. Select a web application you want to configure and click **Manage Features** on the ribbon.
4. Find Data Connector's features and click **Activate**. After a feature is activated, the Status column lists the feature as **Active**.

| | | | |
|---|---|---|---------------------------------------|
|  | Data Connector Timer Job 2.13.709.0 Transfer business data between SharePoint lists and external data sources. (Powered by BoostSolutions) | <input type="button" value="Deactivate"/> | <input type="button" value="Active"/> |
|---|---|---|---------------------------------------|

3. How to Use Data Connector

3.1 Enter the Data Connector Job Center

3.1.1 Entrances

There are two entrances to access the Data Connector Job Center page, from **Site Settings** and from **List Settings**; both require users to have the appropriate permissions.

Users who access Data Connector should be a site or list administrator or have **Full control** permission.

If a custom permission level is assigned to users, then the following permissions must be included in your permission levels: **Manage list**, **Add item**, **Edit item**, **Delete item**, **View application pages**, and **Enumerate lists**.

➤ Entering from **Site Settings**

Click **Site Settings** and then click **Data Connector Settings** under **BoostSolutions Software**. You will enter the Data Connector Job Center of the current site.

➤ Entering from **List Settings**

Go to the **List Settings** page and click **Data Connector Settings** under **General Settings**. You will enter the Data Connector Job Center of the current list.

General Settings

- [List name, description and navigation](#)
- [Versioning settings](#)
- [Advanced settings](#)
- [Validation settings](#)
- [Audience targeting settings](#)
- [Rating settings](#)
- [Data Connector Settings \(Powered by BoostSolutions\)](#)
- [Form settings](#)

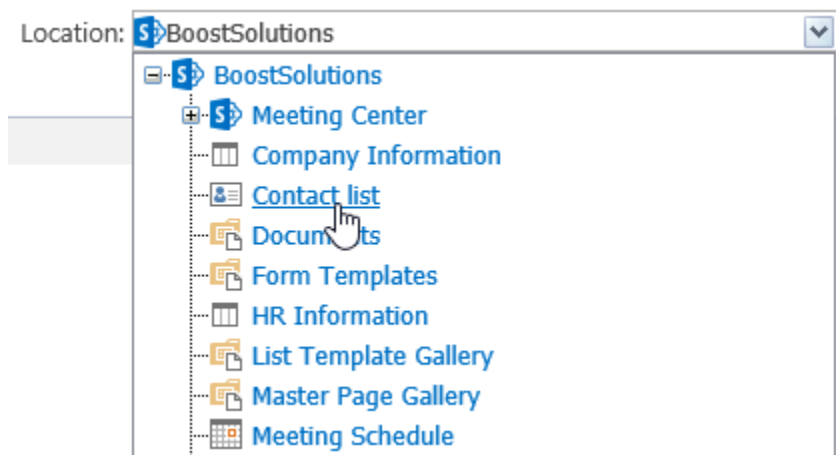
3.1.2 Interface Introduction

The Data Connector Job Center shows you all jobs under the current site or list, including jobs in the sub-sets. After selecting a site or list from the Location dropdown list, all jobs will be shown under the specified location without leaving the current page.

In the Jobs table, the properties are listed to indicate the jobs status, including: **Job Name, Direction & Path, Schedule Type, Status, Last Modified, and Actions.**

- Location

Location indicates the current location you navigate to; you can switch to other sites or lists by selecting a location from the dropdown list.



- Job Name

Job Name lists the job names in the current location; you can click it to enter the job page.

- Direction

Direction shows the direction of the data connection.

- Schedule Type

Schedule type shows the schedules job type: Manual or Automatic and the time interval before the next time the job runs, if you set the job to run automatically.

- Status

The status indicates the job running status: Ready/Waiting/Stopped/Running.

- Last Modified

Last modified shows you when and who modify the job last.


- Actions

There are three options for you to manage a job: Run, Edit, and Delete.

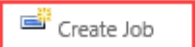
3.2 Create a Job

To create a Job, click **Create Job** in the Data Connector Job Center page.

Data Connector Job Center

Jobs -(BoostSolutions) Location:  BoostSolutions

| Job Name | Direction | Schedule Type | Status | Last Modified |
|--|-----------|---------------|--------|---------------|
| There are no jobs in the current location. | | | | |



A job is a container within Data Connector that stores settings, which are used to link a SharePoint list with external data sources.

A job contains the following main components in three tabs (General Settings, Schedule, Notification):

General Settings:

Direction: Import or export data from external data sources to a SharePoint list or vice versa.

External data: Specify what external data (SQL server, Oracle, MySQL, or SharePoint 2007/2010/2013/2016/2019) to be connected to a SharePoint list.

List: Select a SharePoint list to receive data from an external data source or export data to an external data source.

Column Mapping: Map columns between external data record fields and SharePoint list columns to ensure that information is synced accurately.

Run Options: Specify how to manipulate data in the SharePoint list or external data.

Workflow: Specify if workflows are triggered when items are created, updated or deleted by the current job.

Schedule

Background Update: Enable or disable background update.

Schedule: Specify a plan indicating how the data should be updated.

Notification

Notification and Log: Track and record the job running status and send notifications when an error occurs.

3.2.1 General Settings

Type a Job Name

In the Job Name section, type the name that you want for the job.

Job Name

Enter a name for this job.

Specify Direction

Select a direction for data connection in the dropdown list.

Direction

Specify direction for data connection.



From list to external data
From external data to list

Specify a List

Specify a list or library which you want to connect to external data. The settings of the **List** may vary according to the direction.

- If Direction is **From list to external data**

When the direction is set as **From list to external data**, then the list is the data source, and external data is the target.

To configure a list:

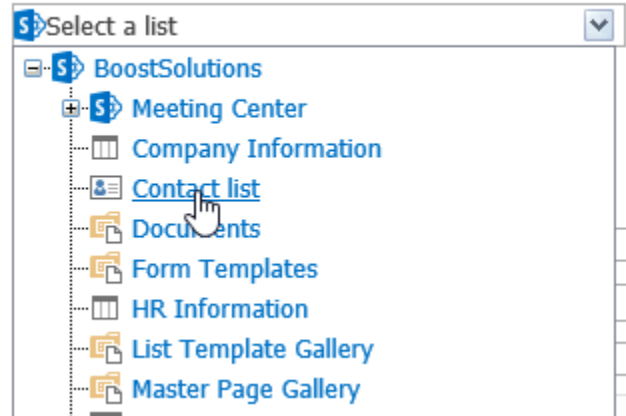
1. In the **Select a list** dropdown list, choose a list or library as the data source.

List

Specify a list or library which you want to connect to external data.

External Data and Authentication

Specify the external data type and database authentication. (Ensure the user account you specify has the appropriate permissions to access the external data source.)

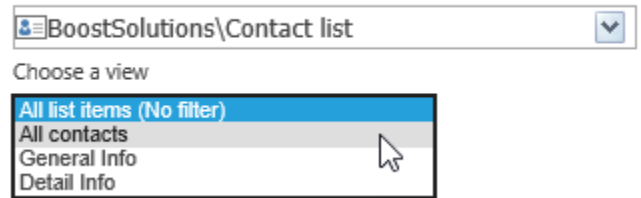


- In the **Choose a view** dropdown list, select a view to filter items.

If you select **All list items (No filter)**, it means that all items of list will be exported to external data source.

List

Specify a list or library which you want to connect to external data.



Note Personal views will not appear in the dropdown list.

- If Direction is **From external data to list**

When the direction is set as **From external data to list**, then the list is the target, and external data is the source.

You can choose an existing list or create a new list as the target for data connection.

Select one of the options:

Choose an existing list: Select a list as the target list in the site tree.

- Choose an existing list

Create a new list: Create a new list as the target list. The list type will be created as Customized List.

- Create a new list

Specify External Data and Authentication

Data Connector supports multiple popular external data systems, such as Microsoft SQL Server 2000-2014, Oracle Database and My SQL 5.0 Database, SharePoint 2007/2010/2013/2016/2019.

● SQL Server

| | |
|--|---|
| External Data Type: | <input type="text" value="SQL Server"/> |
| Database Server: | <input type="text" value="dbserver2"/> |
| Database Authentication: | <input type="text" value="Windows Authentication"/> |
| Username: | <input type="text"/> |
| Password: | <input type="text"/> |
| Database: | <input type="text" value="Choose a database name"/> |
| <input type="button" value="Connect"/> | |

Connection successful.

- External Data Type:** Select SQL Server as the external data type.
- Database Server:** Enter the database server name or IP address.
- Database Authentication:** There are two types of authentication, Windows Authentication and SQL Server Authentication.
 - Windows Authentication:** Select this authentication if you want use the application pool account to access the SQL database. You need to enable Windows Authentication as the Authentication Mode in SQL Server in order to access the database successfully.
 - SQL Server Authentication:** If you select this authentication, you need to enter a SQL user name and password to access the database.

Note Windows Authentication uses the application pool account. If you select Windows Authentication, the User Name and Password text box will be disabled.

- Username:** Enter a SQL user name. The user should have **Write** permission to the database.
 - Password:** Enter the password.
 - Click **Connect** to connect to the database and populate the database dropdown list.
 - Database:** Select a database.
- ### ● Oracle

| | |
|--|---|
| External Data Type: | <input type="text" value="Oracle"/> |
| Host Name/IP: | <input type="text" value="OracleServer"/> |
| Port Number: | <input type="text" value="1521"/> |
| Service Name/SID: | <input type="text" value="test.boost"/> |
| | <input checked="" type="radio"/> Service Name <input type="radio"/> SID |
| Username: | <input type="text" value="yanwei"/> |
| Password: | <input type="password" value="..."/> |
| Database: | <input type="text" value="Choose a database name"/> |
| <input type="button" value="Connect"/> | |

Connection successful.

- External Data Type:** Select Oracle as the external data type.
- Host Name/IP:** Enter a host name where the database is situated or the IP address of the server.
- Port Number:** Enter the TCP/IP port number to connect to the database server (The default port number is 1521).
- Service Name/SID:** Set the Service Name/SID which you can connect to. Select the corresponding radio button here.
- User Name:** Enter the name of a user who has **Write** permission to the database.
- Password:** Enter the password.
- Click **Connect** to connect to the database and populate the database dropdown list.
- Database:** Select a database.

Note You must install the oracle client in the SharePoint server if you want to connect to the oracle data source.

- **My SQL**

| | |
|--|------------------------|
| External Data Type: | MySQL |
| Host Name/IP: | 192.168.6.137 |
| Port Number: | 3306 |
| Username: | zpf |
| Password: | ●●● |
| Database: | Choose a database name |
| <input type="button" value="Connect"/> | |

Connection successful.

- a. **External data Type:** Select MySQL as the external data type.
- b. **Host Name/IP:** Enter a host name where the database is situated or the IP address of the server.
- c. **Port Number:** Enter the TCP/IP port number to connect to the database server (The default port number is 3306).
- d. **User Name:** Enter a MySQL user name. The user should have **Write** permission to the database.
- e. **Password:** Enter the Password.
- f. Click **Connect** button to connect to the database and populate the database dropdown list.
- g. **Database:** Select a database name.

● **SharePoint 2007/2010/2013/2016/2019**

| | |
|--|------------------------------------|
| External Data Type: | SharePoint 2016 |
| URL: | its/HR%20Information/AllItems.aspx |
| Username: | br\spfarm12 |
| Password: | ●●●●●●●● |
| <input type="button" value="Connect"/> | |

Connection successful.

- a. **External Data Type:** Select SharePoint 2016 as the external data type.
- b. **URL:** Enter a SharePoint list URL.

- c. **User Name:** Enter the name of a SharePoint 2010 user who has **Contribute** permission to the target SharePoint list.
- d. **Password:** Enter the password.
- e. Click **Connect**.

Note The configuration for SharePoint 2007, 2010, 2013, 2016 and 2019 are the same.

Specify Data Settings

Specify the external data to connect to list. The settings may vary according to the direction and external data source choices.

- If the direction is **From list to external data**, you need to choose a database table to receive the data.

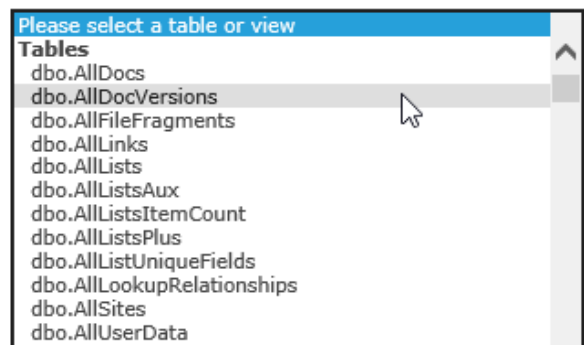
Data Settings

Specify which external data will be connected to SharePoint list.

If the database is selected as target, you can select a table to receive data.

If the database is selected as source, you can filter data by a table, view or a SQL clause.

Specify a table/view to filter



- If the direction is **From external data to list**, you can specify the connected data by a table, view or a SQL clause.
 - **Specify a Table/View to filter**

Specify a table/view to filter and you can optionally enter SQL WHERE clause to filter those records that fulfill a specified criterion from database table or view.

Specify a table/view to filter

dbo.AllLists

Enter a SQL WHERE clause to filter data(optional):

where ID < 500

The SQL statement is valid.

● **Or, Enter a SQL clause to choose data**

Type a SQL clause to filter data from the database you selected, then click Validate to check the statement.

Enter a SQL clause to choose data

```
SELECT [system.Id],
[System.AuthorizedAs],
[System.IterationPath],
are.Fid10070
FROM [Tfs_DefaultCollection].[dbo]
[WorkitemsAreUsed] v inner join
[Tfs_DefaultCollection].[dbo].WorkitemsAre are on
```

The SQL statement is valid.

If the SharePoint 2007/2010/2013/2016/2019 is chosen from the external data, the Data Filter section will not display.

Map Columns

Column mapping allows users to accurately map the external data fields to SharePoint list columns. Also, you can specify key columns to uniquely identify records/items and to compare the data between a SharePoint list and external data. You have to specify at least one key column.

This section may vary according to the direction choices.

➤ If the direction is **From list to external data**

1. Add a column mapping

By default, the columns with the same column name and type will be automatically mapped. Click **Add a column mapping** to add a column mapping manually.



Column Mapping

A column mapping allows users to map the external data fields to a SharePoint list. A "key column" is one that uniquely identifies records and can be used to compare two data sources.

Overwriting column value will force the entered value in text field to the mapped column.

Note: This column is no longer able to be a "key column".

| Key | Column in List | Column in External Data | |
|--------------------------|----------------|-------------------------|---|
| <input type="checkbox"/> | First Name | First Name | ✗ |
| <input type="checkbox"/> | Modified | Modified | ✗ |
| <input type="checkbox"/> | Email Address | E-mail | ✗ |
| <input type="checkbox"/> | Mobile Number | Mobile Phone | ✗ |
| <input type="checkbox"/> | Notes | Department | ✗ |

 Add a column mapping
 Overwrite column value

2. Specify a key

You can set a column as a key column to uniquely identify records/items and to compare the data between SharePoint list and external data.






Note

- You must select at least one column as the key column.
- The value in the key column must be unique like ID column. If the key column is not unique, the running process will stop.
- If the value of the key column in the source has changed, the data connection will be broken in the next running process. The old items will be overwritten with new items.
- If the value in the target has changed, the changed value will be overwritten with source value after the next running process.
- Unsupported key column type: Yes/No, Enhanced Rich Text.

3. Overwrite column value

Overwrite column value is used to overwrite the original target column value.

Click **Overwrite column value**, and input the desired value.

| Key | Column in List | Column in External Data | |
|-------------------------------------|----------------|-------------------------|---|
| <input checked="" type="checkbox"/> | First Name | First Name |  |
| <input type="checkbox"/> | Modified | Modified |  |
| <input type="checkbox"/> | Email Address | E-mail |  |
| <input type="checkbox"/> | Mobile Number | Mobile Phone |  |
| <input type="checkbox"/> | 2017-10-22 | Joined in |  |

Add a column mapping **inputed value**
 Overwrite column value

Note The function **Overwrite column value** will force the entered value in text field to the mapped column.

4. Remove a column mapping

To remove a mapping, simply click on the  icon along the right side of every column.

➤ If the direction is **From external data to list**

If you select **Choose an existed list** in the **List** section, you can map the columns following the above steps.

If you select **Create a new list** in the **List** section, follow the following steps:

1. Identify column automatically

By default, **Data Connector** will identify the column type and name, and map them to the columns in the new list automatically.

You can change the column name or the column type as you want.

| Select Column | Key | Link to Edit Menu | Column in List | Column Type | Column in External Data |
|-------------------------------------|-------------------------------------|----------------------------------|-------------------|---------------|-------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="radio"/> | Account Name | Person or Gi | Account Name |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="radio"/> | Approval Status | Single line o | Approval Status |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="radio"/> | Approver Commen | Single line o | Approver Commen |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="radio"/> | Content Type | Single line o | Content Type |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="radio"/> | Contract Due Date | Date and Tir | Contract Due Dat |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="radio"/> | Created | Date and Tir | Created |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="radio"/> | Created By | Person or Gi | Created By |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="radio"/> | Department | Choice | Department |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="radio"/> | E-mail | Single line o | E-mail |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="radio"/> | Employee ID | Single line o | Employee ID |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="radio"/> | Family Name | Single line o | Family Name |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="radio"/> | First Name | Single line o | First Name |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="radio"/> | ID | Number | ID |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="radio"/> | ID Card | Single line o | ID Card |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="radio"/> | Joined in | Date and Tir | Joined in |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="radio"/> | Mobile Phone | Single line o | Mobile Phone |

Note Data Connector do not support to create system default column, including ID, Version, Created By, Modified By, Approve Status, Approver Comments, Created, Modified, etc.

2. Select Column

Tick the **Select Column** checkboxes to select columns that you want to create in the new list.

3. Link to Edit Menu

Select one column to link the Edit menu to the corresponding column in the new list.

Note You can select only one Link Edit Column, and the column type must be Single line of text.

Specify Run Options

There are four run options in this section. You can select how to run a job by enabling/disabling the four options.

Run Options

Specify whether to enable Add, Update or Delete operations separately while running this job.

Enable ADD operations

Add records that only exist in the source.

Enable UPDATE operations

Update records that exist in both the source and the target.

Enable DELETE operations

Remove records that only exist in the target.

Enable WRITE-BACK operations

Add, update or delete changes from SharePoint list to external data.

Enable ADD operations: Add records only exist in the source.

Enable UPDATE operations: Update records that both exist in the source and the target.

Enable DELETE operations: Remove records that only exist in the target.

Enable WRITE-BACK operations: Add, update or delete changes from SharePoint list to external data.

Note:

- If you select **Enable WRITE-BACK** operations, any changes made in the SharePoint list will be write-back to the external data for this column immediately.
- To make sure the WRITE-BACK function works in the current list, you must manually run at least one job which enabled WRITE-BACK function.

Workflow Settings

In this section, you can specify if the attached workflows should be triggered when items are updated by the current job.

This setting is only available when you specify the direction as **From external data to list** and disable the **Enable WRITE-BACK operations** option.

Workflow

Specify if workflows are triggered when items are created, updated or deleted by the current job.

Enable Trigger Workflow

Disable Trigger Workflow

If the Enable Trigger Workflow option is selected, the workflows in lists will be activated when items are created, updated or deleted.

Otherwise, the workflows will not be activated.

3.2.2 Schedule

Set the schedule to indicate how often the job should be performed.

1. To automatically run the job, you need to activate the Data Connector Timer Job in Central Administration; otherwise the schedule will not work.

To activate Data Connector Timer Job feature, see section [Feature Activation](#).

2. In the **Background Update** section, check the checkbox **Enable background update** to automatically run this job.

Background Update

Enabling background update will automatically run this job.

Enable background update

3. In the **Update plan** section, there are 3 options:

Schedule

A timer job runs in the background to check jobs and transfer data. Set the schedule to indicate how often the job should be performed.

Minutes

Every minutes

Daily

Weekly

Note: These settings will only take effect when the Data Connector Timer Job has been activated in Central Administration.

- **Minutes**

This option allows you to set a short time interval to run the job.

Minutes

Every minutes

- **Daily**

You can specify several starting times to run the job automatically every day.

Daily

Starting at :

➤ To add a starting time, specify the time first, then click **Add**.

➤ To delete a starting time, click **X**.

- **Weekly**

You can set a schedule for weekly recurrence.

Select the days which the job will run, and specify the starting time.

Weekly

Run on:

Monday Tuesday Wednesday Thursday

Friday Saturday Sunday

Starting at :

3.2.3 Notification

This function allows you to send a notification email when an error occurs and enable the logging to monitor the running process of the job.

- **Send Notification email**

You can send a notification email to the specified email address when an error occurs.

Send a notification email for each error that occurs, while background update is enabled:

Separate e-mail addresses with semicolons (;).

Note Email notification is available only when Background Update is enabled.

- **Enable logging**

The log section allows you to set the log options. It will store the history of every connection process. You can enable logging for each job.

Select **Enable logging**. Select the **Automatically delete log files...** checkbox if you want to delete log files older than a specified number of days. Specify the number of days.

Enable logging

Automatically delete log files older than days


3.2.4 Save the Job

After you have finished the configuration, click **Save** on the top or bottom of the page. Then you will return to the Data Connector Job Center page of the selected list.

Data Connector Job Center

Jobs -(BoostSolutions) Location:

| Job Name | Direction | Schedule Type | Status | Last Modified | Actions |
|-----------------------|--|--|--|--|--|
| job-2 | From: BoostSolutions>Contact list(List) To: SqlServer(External) | Manual | ✔ Ready | 0#.w\br\spfarm12 11/2/2017 4:34:40 PM | <input type="button" value="Run"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Logs"/> |
| job-1 | From: SharePoint2016(External) To: BoostSolutions\User Info(List) | Automatic Job will start in 8 Hour(s) 25 minute(s). | ✔ Ready | 0#.w\br\spfarm12 11/2/2017 4:22:35 PM | <input type="button" value="Run"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Logs"/> |

 Create Job

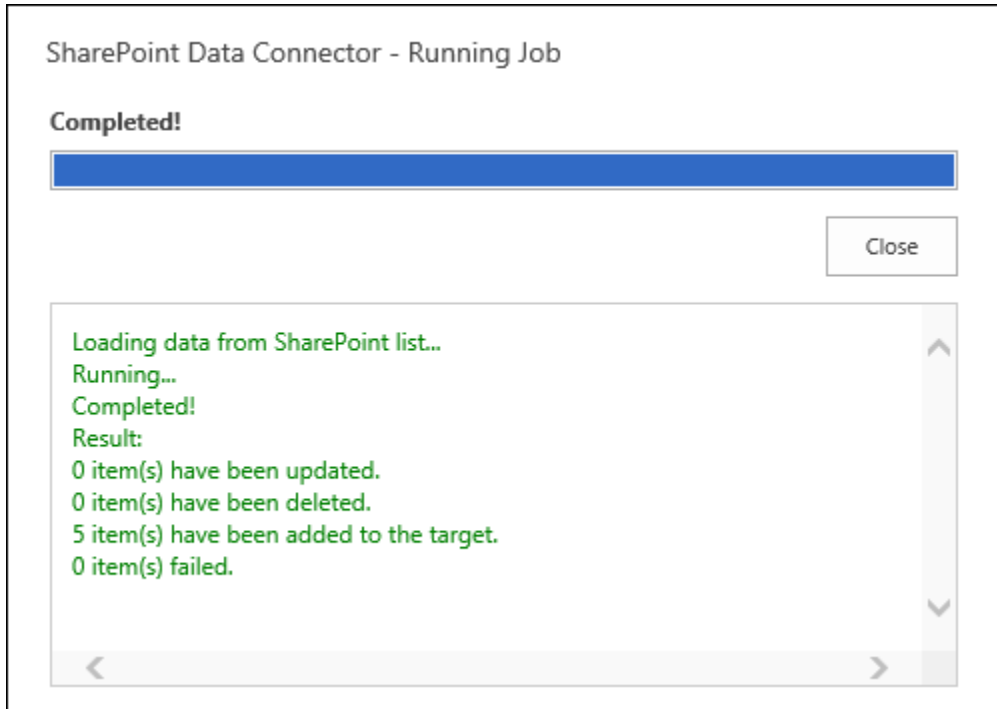
3.3 Manage a Job

3.3.1 Run a Job

You can click to run the job manually in the Edit Job page after you create or edit the job.

Or, after a job is created, in the Data Connector Job Center, click to run a job manually.

You can see the following dialog box, it will show the progress and the result of the running job.



3.3.2 Edit a Job

You can edit the settings for a job, such as schedule, notification and column mapping. But you cannot change the Direction and List sections.

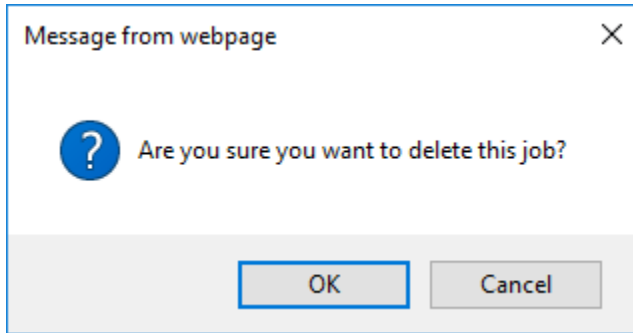
In the Data Connector Job Center, find the job you want to edit, and click . After changing the settings, click **Save**.

Note You are not allowed to edit the job when the status shows Waiting.

3.3.3 Delete a Job

To delete a job, click in the Data Connector Job Center.

A Message window will appear asking if you are confirmed with the deletion. Click **OK**.



3.4 Monitor and Log

Data Connector provides you the methods to monitor and analyze the jobs. You can define an email to notify the administrator when an error occurs and view the job log files in the system.

3.4.1 Notification

When a job automatically run on background, Data Connector will monitor the process and notify you if an error occurs.

If you want to see details about an error, you can find the log files on your SharePoint Server (see [Log](#) for details).

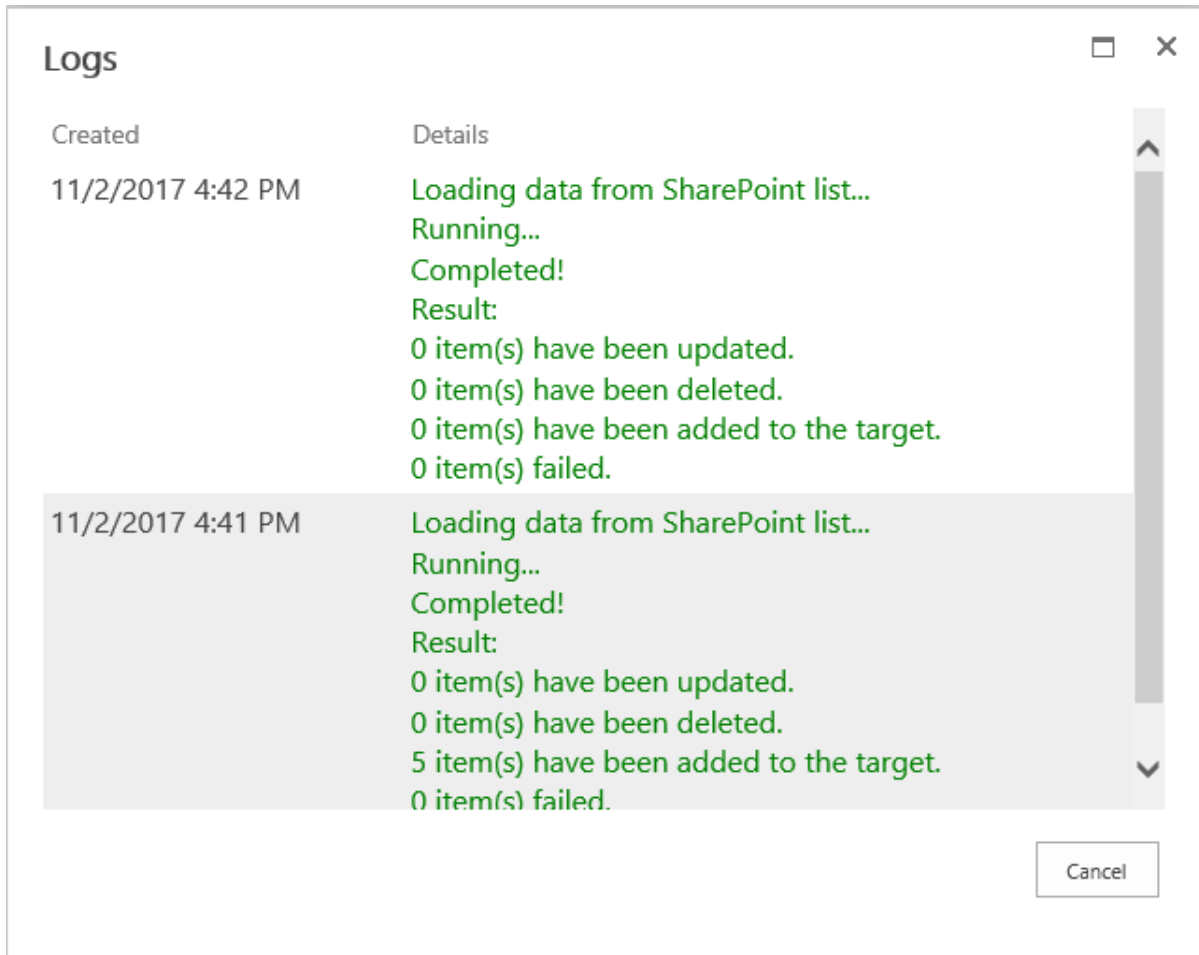
| General Settings | Schedule | Notification |
|---|----------|--------------|
| Notification and Log | | |
| Specify whether you want to send notification email and enable logging. | | |
| <input checked="" type="checkbox"/> Send a notification email for each error that occurs, while background update is enabled: | | |
| <input type="text" value="administrator@boostsolutions.com"/> | | |
| Separate e-mail addresses with semicolons (;). | | |
| <input checked="" type="checkbox"/> Enable logging | | |
| <input checked="" type="checkbox"/> Automatically delete log files older than <input type="text" value="180"/> days | | |

3.4.2 Logs

When a job is running, it will generate a log file on your SharePoint Server. The log files are saved as **.log** files and can be opened in Notepad.

Data Connector gives you a convenient way to check the logs for every job. You can view the logs with a simple click on the Data Connector Job Center page.

You can find the job you want to view the logs, and click **Logs** button under the Action column, and you will see the logs for the current job.



Or, you can find the Data Connector Logs on your SharePoint Server:

By default, the logs are stored to the following location on your SharePoint Server:

C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\16\LOGS\Data Connector Logs

Note

For SharePoint 2019, the default path is C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\16\LOGS\Data Connector Logs.

For SharePoint 2013, the default path is C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\14\LOGS\Data Connector Logs.

For SharePoint 2010, the default path is C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\12\LOGS\Data Connector Logs.

3.4.3 Job Message

Data Connector provides the job messages to indicate the job processing status.


- If there are many jobs running on SharePoint, you may get this message:
The job is running and is waiting for response from the server.
- If the job is in the queue, and will run in a few hours or minutes, you may get this message:
*Job will start in **n** minutes.*

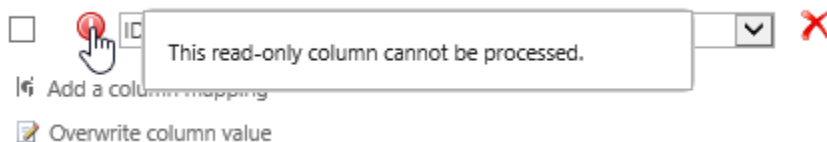
3.5 Column Mapping Rules

There are some rules you should follow when configure column mapping. This section will help you smoothly set up column mappings between list and external data.

3.5.1 Read-only Column

In SharePoint list, there are some system reserved fields cannot be modified or updated. We define these fields as read-only and cannot be set as target column.

If you set a read-only column as Target column, there will be an  icon next to the column. Move your mouse cursor over this icon, it will show the reasonable message.



Note that these columns are defined as read-only: ID, Created By, Modified By, Managed Metadata, External Data, Version, Approver Comments, Approval Status, Calculated column.

3.5.2 Unsupported Column Types

In Data Connector, the following columns are not supported:

- Rich media data for publishing
- File Type
- Attachment
- Summary Link data

And the following columns are not supported to export from list to external data source:

- Lookup
- Cascaded Lookup
- Cross-site Lookup

3.5.3 Mapping Rules for Special Columns

If you map some special columns, some descriptions of these columns that may help you quickly understand the rules are listed in the table below.

| Source Column Type | Target Column Type | Note |
|---------------------|---------------------|--|
| Single line of text | Yes/No | The value of the single line of text column must be "True" or "False", corresponds to "Yes" or "No" in Target. |
| Single line of text | All Day Event | The value of the single line of text column must be "1" or "0", corresponds to "Yes" or "Empty" in Target. |
| All Day Event | All Day Event | It only works when "Start Time" is mapped with "Start Time". |
| Approval Status | Single line of text | If the Approval Status is not enabled, the target column value would be empty. If the Approval Status is enabled, the source value for the column would be "Approved\Rejected\Pending\Draft", corresponds to "0\1\2\3" in Target. |
| Recurrence | Single line of text | The value of the single line of text column will be "1" or "0". |
| Choice | Yes/No | The value of the Choice column must be "1" or "0", corresponds to "Yes" or "No" in Target. |
| Choice | All Day Event | The value of the Choice column must be "1" or "0", |

| | | |
|-----------------|-----------------|---|
| | | corresponds to "Yes" or "Empty" in Target. |
| External Data | Yes/No | The value of the External Data must be "True" or "False", corresponds to "Yes" or "No" in Target. |
| External Data | All Day Event | The value of the External Data must be "True" or "False", corresponds to "Yes" or "No" in Target. |
| Person or Group | Person or Group | Only works when the person or group is in the same site collection or added to a trust domain. |

3.5.4 Column Mapping Matrix

Data Connector supports the following SharePoint column types: Single line of text, Multiple lines of text, Choice, Number, Currency, Date and Time, Lookup, Additional fields from the lookup column, Yes/No, Person or Group, Hyperlink or Picture, Managed Metadata, External Data, Calculated column.

| Source | Target | Single line of text | Multiple lines of text | Choice | Number | Currency | Date and Time | Lookup | Yes/No | Person or Group | Hyperlink or Picture | Recurrence | Content Type | All Day Event |
|-------------------------------------|-------------------------------------|---------------------|------------------------|--------|--------|----------|---------------|--------|--------|-----------------|----------------------|------------|--------------|---------------|
| Single line of text | Single line of text | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | Y |
| Multiple lines of text (Plain text) | Multiple lines of text (Plain text) | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | Y |
| Multiple lines of text (Rich text) | Multiple lines of text (Rich text) | Y | Y | Y | N | N | N | N | N | N | N | N | N | N |
| Choice | Choice | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | Y |
| Number | Number | Y | Y | Y | Y | Y | N | Y | Y | N | N | N | N | Y |
| Number (%) | Number (%) | Y | Y | Y | Y | Y | N | Y | N | N | N | N | N | Y |
| Currency | Currency | Y | Y | Y | Y | Y | N | Y | N | N | N | N | N | Y |
| Date and Time | Date and Time | Y | Y | Y | N | N | Y | Y | N | N | N | N | N | N |
| Lookup | Lookup | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | Y |
| Yes/No | Yes/No | Y | Y | Y | Y | Y | N | Y | Y | N | N | N | N | Y |
| Person or Group | Person or Group | Y | Y | Y | N | N | N | Y | N | Y | N | N | N | N |
| Hyperlink or Picture | Hyperlink or Picture | Y | Y | Y | N | N | N | Y | N | N | Y | N | N | N |
| Managed MetaData | Managed MetaData | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | Y |
| External Data | External Data | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | Y | Y |
| Calculated (Single line of text) | Calculated (Single line of text) | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | N | Y |
| Calculated (Number) | Calculated (Number) | Y | Y | Y | Y | N | N | Y | N | N | N | N | N | Y |
| Calculated (Currency) | Calculated (Currency) | Y | Y | Y | Y | Y | N | Y | N | N | N | N | N | N |
| Calculated (Data and Time) | Calculated (Data and Time) | Y | Y | Y | N | N | Y | Y | N | N | N | N | N | N |
| Calculated (Yes/No) | Calculated (Yes/No) | Y | Y | Y | N | N | N | Y | Y | N | N | N | N | N |
| Recurrence | Recurrence | Y | Y | Y | Y | Y | N | Y | Y | N | N | Y | N | N |
| Content Type | Content Type | Y | Y | Y | N | N | N | Y | N | N | N | N | Y | N |
| All Day Event | All Day Event | Y | Y | Y | Y | Y | N | Y | Y | N | N | N | N | Y |

4. Troubleshooting & Support

Frequently Asked Question:

1. You do not have permission to connect to this database server.

When trying to connect to a SQL Server, Windows Authentication will use the Application Pool account, by default. If this account does not have enough permission to access the database, a warning message will display, "You do not have permission to connect to this database server."

There are two solutions for this problem:

- Enable SQL Authentication on the SQL Server.
- Create a new login and distribute permissions for the Application Pool account on the SQL Server. Now you can reconnect using Windows Authentication.

2. Cannot see the User Information list in the tree view.

Only the site collection administrator can see this list in the tree view.

3. Jobs in the list which are created using a saved list template does not work.

You must enter the Data Connector Job Center page through List Settings > Data Connector Settings after the list is created, then the job will work correctly.

4. Cannot edit Column Mapping in Edit Job page.

Click the Connect button to reconnect to External Data, then you can edit the column mapping.

5. When connecting to a SharePoint URL, you get the following error message: Unable to connect to the remote server.

- a. Make sure the URL, Username and Password are correct.
- b. Go to your SharePoint Server and check if you can access the SharePoint URL on the server.
- c. If you cannot access the URL on the SharePoint Server, you need to configure the host file through C:\Windows\System32\drivers\etc.

-
- d. Make sure you can access the external URL on your SharePoint Server, then you can connect to the external URL in Data Connector.
 6. After upgrading from Data Connector Version 1.0 to Version 2.0, the schedule function does not work.

You need to restart your SharePoint Timer Service on every front-end Web server after the upgrade.

7. We were able to install your product, deploy the solution, and create the job without any issues, but the job is on running status and is waiting for a response from the server.

There are several reasons that may affect the job from running:

The first is SharePoint Timer. Enter Administrative Tool -> Services and make sure the timer is running.

The second is Data Connector Timer Job. Enter Central Administration -> Monitoring -> Timer Jobs -> Check job status and check if BoostSolutions Data Connector Timer Job is running properly.

The last is the job running schedule. Check the Recurring Schedule in BoostSolutions Data Connector Timer Job. If the time interval is set too long, the data connection job will remain in waiting status until the timer job runs. Try changing the time interval to a shorter period, such as minutes.

8. Enabled the WRITE-BACK function in a list, but it doesn't work.

Enter the Data Connector Job Center of the current list, manually run at least one job which enabled WRITE-BACK function to make sure the data in both side are same. Then the WRITE-BACK function will work.

For more information please visit:

<http://www.boostsolutions.com/general-faq.html#Show=ChildTitle9>

Contact Info:

Product & Licensing Inquires: sales@boostsolutions.com

Technical Support (Basic): support@boostsolutions.com

Request a New Product or Feature: feature_request@boostsolutions.com

Live chat:

<http://www.boostsolutions.com/support/chat/livezilla.php?intgroup=U3VwcG9ydA==&reset=true>

Appendix 1: License Management

You can use Data Connector without entering any license code for a period of 30 days from when you first use it.

To use the product without limitation after expiration, you will need to purchase a license and register the product.

Finding License Information

- Navigate to the **BoostSolutions Software Management** section in Central Administration. Then, click **License Management Center** link.
- In the products main page, click the trial link and enter the **License Management Center**.
- Click Download License Information, choose a license type and download the information (Server Code, Farm ID or Site Collection ID).

Download License Information ✕

Download the license type information and send to sales@boostsolutions.com to get license.

Choose a license type

Server License
Server Code: 8fa4fcbbbeab9475d8b8f10d2c7b27e1e982261612
75d49c683442a828de45bdd

Farm License
Farm ID: {8fa4fcbb-eab9-475d-8b8f-10d2c7b27e1e}
Number of Users: 43 user(s)

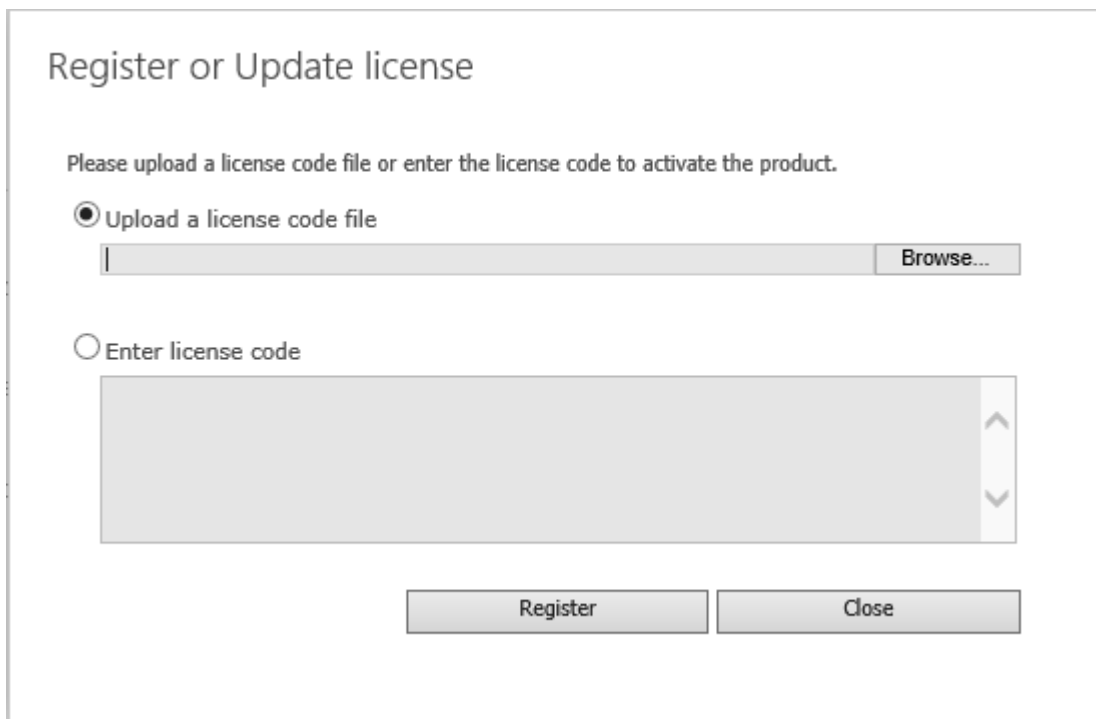
Site Collection License
Site Collection ID: Select a site collection
Site Collection:

In order for BoostSolutions to create a license for you, you need to send us your SharePoint environment identifier (Note: different license types need different information). A server license needs a server code; a Farm license needs a farm ID; and a site collection license needs a site collection ID.

- d. Send the above information to us (sales@boostsolutions.com) to generate a license code.

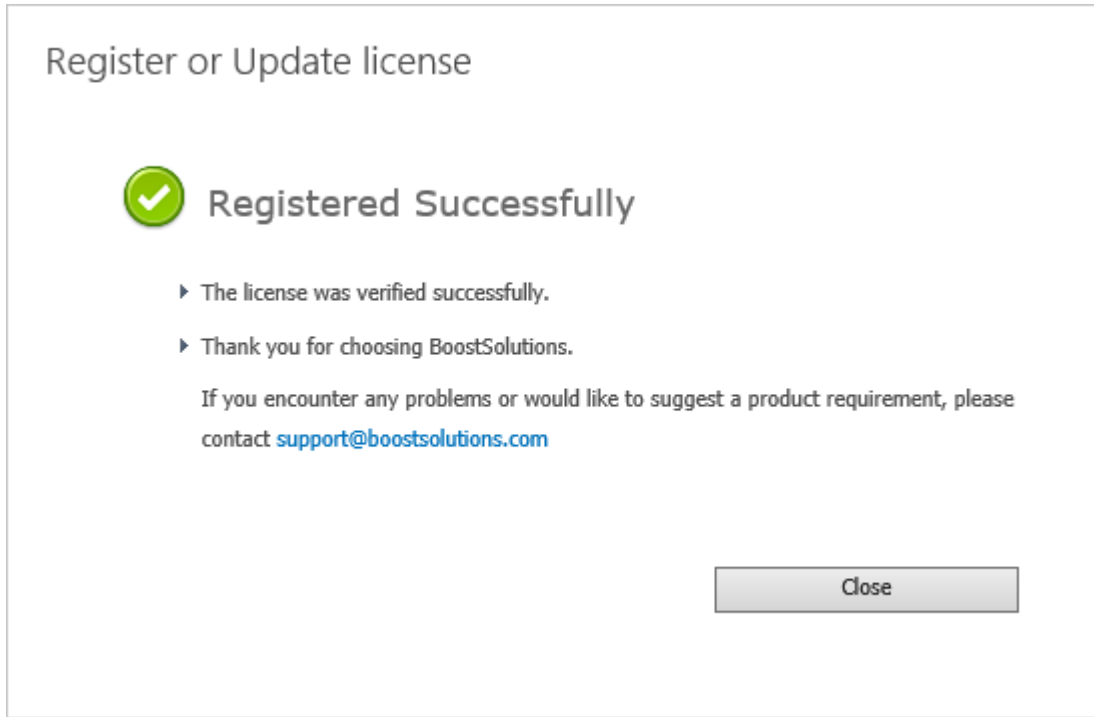
License Registration

- a. When you receive a product license code, enter the **License Management Center** page.
- b. Click **Register** on the license page and a **Register or Update license** window will open.



The screenshot shows a dialog box titled "Register or Update license". The main heading is "Register or Update license". Below the heading, there is a prompt: "Please upload a license code file or enter the license code to activate the product." There are two radio button options: "Upload a license code file" (which is selected) and "Enter license code". Under the "Upload a license code file" option, there is a text input field and a "Browse..." button. Under the "Enter license code" option, there is a large text area with a vertical scrollbar. At the bottom of the dialog, there are two buttons: "Register" and "Close".

- c. Upload the license file or enter the license code and click **Register**. You will get confirmation that your license has been validated.



For more details on license management, see the [BoostSolutions Foundation](#).