SharePoint Connector

The frevvo SharePoint Connector and wizard, make it easy to create forms and approval workflows that validate information, route for signatures as required and save the data and documents to a secure SharePoint website. The Connector was designed to integrate with Office 365 SharePoint Online.

All customers need a valid Office 365 SharePoint account.

Submissions can contain multiple files of different types - Invoice, Receipt, PO etc. You may want to save these files in different locations on your SharePoint site.

The SharePoint Connector wizard, allows you to:

1. Save the form/flow data and metadata to a SharePoint destination. The destination could be a folder in a document library and/or a list item.
2. Designers select the SharePoint destination from a dropdown
3. Map form/flow control values to the SharePoint columns.
4. Configure two destinations for your data.

The Live Forms SharePoint wizard guides you through connecting your forms/flows to SharePoint.

New Employee Onboarding List

First Name ∨	Last Name ∨	Email Address ∨	Phone Number ∨	Zip Code ∨	Title ∨
William	Hitchcock	weh4@comcast.net	203-555-1234	12345	Mr.
Mookie	Betts	mookie.betts@redsox.co	200-300-3030	78787	Mr.
Mary	Woods	mwoods@mycompany.c	203.330.9089	99875	Miss
John	Edwards	jedwards@mycompany.c	800.334.5789	12345	Mr

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Live Forms - SharePoint Configuration Scenarios

1. **Cloud Customers Connecting to SharePoint Online** - This configuration had been certified by frevvo. Follow these steps:
   a. Configure Live Forms as a SharePoint Add-in
   b. Configure SharePoint for your Live Forms tenant.
   c. Connect your Forms/Flows using the SharePoint wizard.

2. **In-house Customers connecting to SharePoint Online** - This configuration has been certified by frevvo. Follow these steps:

   > frevvo only supports/certifies the SharePoint Connector running in the Apache Tomcat container.

   a. Configure Live Forms as a SharePoint Add-in

b. Configure SharePoint for your Live Forms tenant
c. Download the SharePoint Connector. Rename it to sharepoint.war. Copy it to the <frevvo-home>\tomcat\webapps folder
d. Connect your Forms/Flows using the SharePoint wizard.

3. **In-house customers using SharePoint On-premise** - this configuration is supported but not certified.
   a. Customers using SharePoint On-premise also need an Office 365 SharePoint Online account. This is necessary to obtain an authorization token. There is no data transfer from the SharePoint On-premise to SharePoint Online.
   b. Customers are responsible for configuring the On-premise installation and the integration with SharePoint Online.
   c. The On-premise version of SharePoint must be version 2013+.
   d. Refer to this Microsoft website for information about how to use Office 365 to allow Live Forms to authenticate.

4. **Live Forms Cloud customers connecting to SharePoint On-premise** - This configuration is supported but considered unlikely as SharePoint On-premise requires your On-premise SharePoint to be exposed to the Cloud.
   a. Customers are responsible for configuring the On-premise installation and it's exposure to the Cloud.

Configuring the SharePoint Connector

These instructions assume you are a frevvo Cloud customer or have an in-house installation of Live Forms up and running using the frevvo Tomcat bundle. Follow these steps:

Step 1 - Configure Live Forms as a SharePoint App/Add-in

Live Forms must be added as a SharePoint provider hosted add-in by your **global Office 365 tenant SharePoint Administrator**. The process is described in Steps 1 and 2 on this Microsoft SharePoint website. **Copy the Client Id and client Secret and save them** somewhere on your desktop. You will need to add these values when configuring your tenant for SharePoint.

Here are some tips

- The Title can be anything that can differentiate your frevvo SharePoint application from other applications.
- The app domain field should be the Live Forms server domain name plus the Live Forms SSL port. It should be the same <server>:<port> as the redirect URL.
  - **app.frevvo.com:443** for Cloud customers
  - **<server>:8443** for an in-house installation.
- The Redirect URI for Live Forms is shown below where the <server>:<port> is the same host and port in the URL used to access frevvo.
  - For a cloud customer, that would be **app.frevvo.com:443**.
  - For an on-premise customer, a typical example would be **<server>:8443**.

Redirect URI

```
https://<server>:<port>/frevvo/web/sharepoint/token
```

- The Permission Request XML should be: You can copy/paste this xml into the **Permission Request XML** box.

```
<AppPermissionRequests AllowAppOnlyPolicy="true">
<AppPermissionRequest Scope="http://sharepoint/content/tenant" Right="Manage" />
</AppPermissionRequests>
```

Remember SharePoint only allows **https**.

> We recommend that you create a separate user in SharePoint for frevvo forms connection, and use that user while configuring the Save to SharePoint wizard in frevvo forms. This frevvo specific SharePoint user always remains active and eliminates issues if the designer user configured your forms to submit to SharePoint using their own SharePoint login and then leaves the company.

Step 2 - Configure the Live Forms Tenant for SharePoint

Cloud and in-house customers must configure their Live Forms tenant to connect to SharePoint as a client. frevvo expects that customers will only be integrating with one SharePoint instance for their organization. You will need the **SharePoint Client Id and the Client Secret** from Step 1.

Follow these steps:

1. Login to Live Forms as the tenant admin
2. Click the **Edit Tenant** link.
3. Click the

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   blue arrow to expand the **SharePoint** section.
4. Enter the Connector URL. - This URL is needed if you are using Live Forms in the cloud and installing the connector locally. Enter the URL where your Live Forms installation that is configured for SharePoint is located. This URL must use the **https** protocol.

   The URL in the Connector URL field will override the connector URL that is specified in the configuration property in the <frevvo-home>\tomcat\conf\frevvo-config.properties file. In some cases you can leave this field blank.

   > The default value is shown below:
   > frevvo.sharepoint.connector.url=http://localhost:8082/sharepoint

5. Enter the **Client Id and the Client Secret** that you saved in Step 1 into the respective fields.


6. Enter the SharePoint Domain Name e.g. <Your SharePoint tenant name>.sharepoint.com - there is a dot between the SharePoint tenant name and sharepoint.com
7. To determine the realm for your SharePoint site :
   a. Navigate to **https://<tenant>.sharepoint.com/_layouts/appprincipals.aspx** - change the <tenant> to the name of your SharePoint tenant - e.g. **https://frevvo.sharepoint.com/_layouts/appprincipals.aspx**
   b. Find your registered application in the list and and look at the App Identifier column. The unique identifier after the @-sign in the App Identifier is the app realm and must be entered in the Realm field.
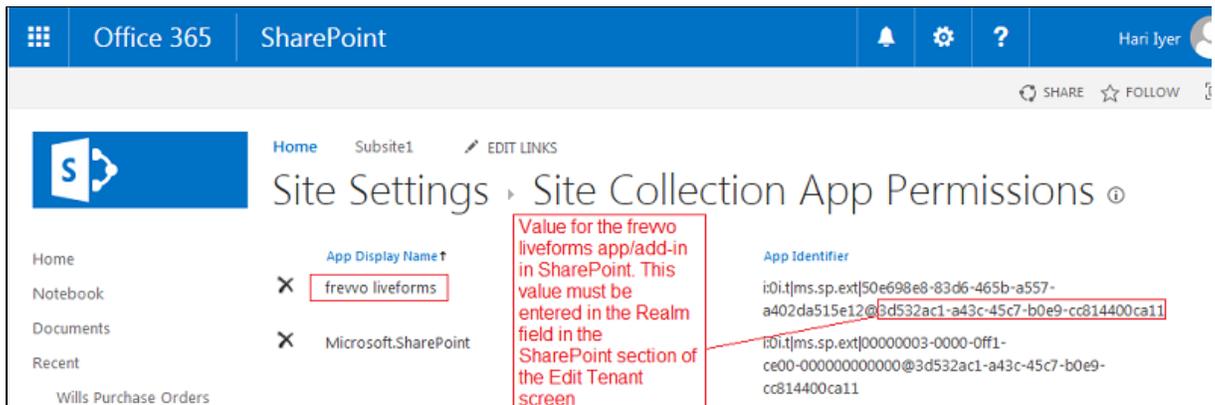
8. Click **Submit**
9. Browse **http://<your server:port>/sharepoint/health** (replace <your server:port> with your frevvo server:port) to check the status of the connector. If the connector is up and running, you will see { "status" : "UP" }.
10. Proceed to Connect Forms/Flows with the Save to SharePoint wizard

Step 3 - Connect Forms and Flows with the SharePoint wizard

1. Login as a Live Forms designer user.
2. Create your form or flow with controls that capture the data that you want to store in the columns configured in the Lists and Libraries on your SharePoint website
3. Click on the

   ![icon]

   what happens to my data? icon on the designer toolbar.
4. Select the **Sharepoint Connector** option. If the tenant is not configured for SharePoint, the **Save to SharePoint wizard** will not display.
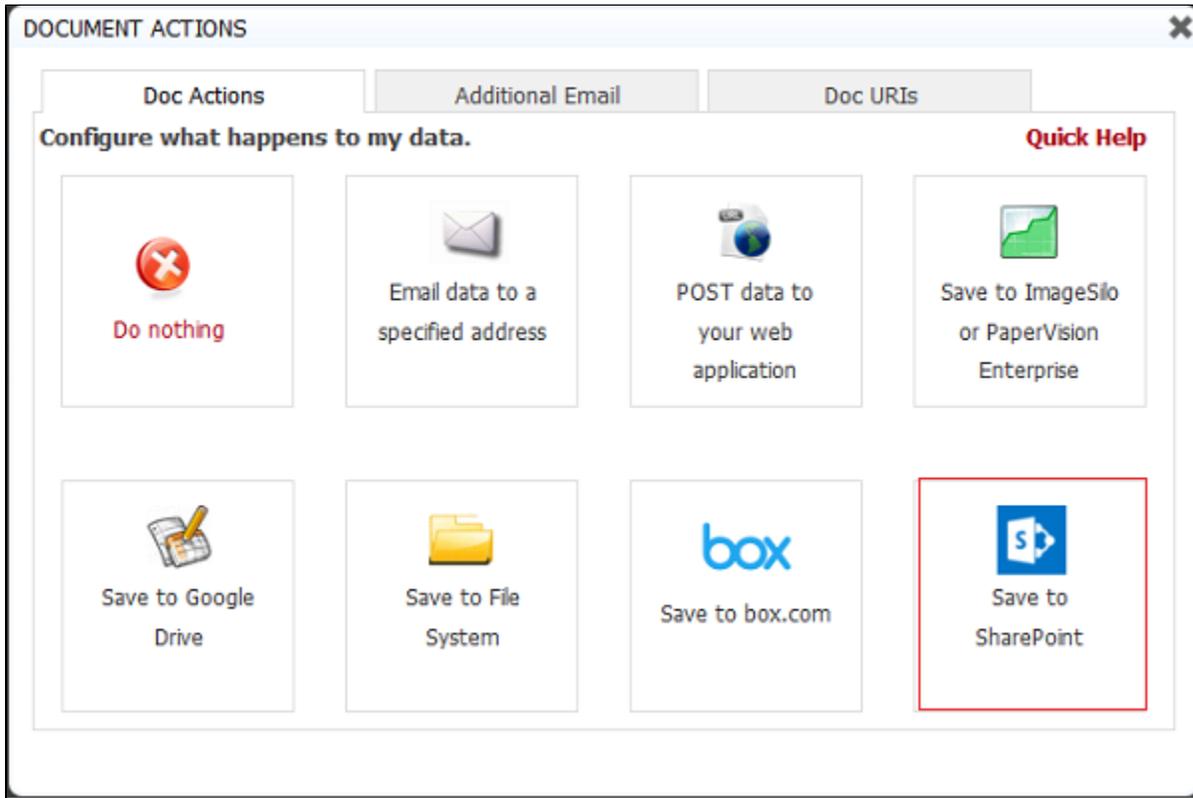
5. You'll be redirected to login to SharePoint or Office 365 if you are logging into your account for the first time.
   a. On successful login, you will be asked to grant or deny access for your Live Forms SharePoint add-in.

Click **Trust It** to authenticate and grant permission to Live Forms. You will not see the trust screen on subsequent logins. The wizard will display.

- We recommend that you create a separate user in SharePoint for frevvo forms connection, and use that user while configuring the Save to SharePoint wizard in frevvo forms. This frevvo specific SharePoint user always remains active and eliminates

1. You can set up a single Document Action to write to multiple places (SharePoint Library and List). Add a route for the second destination by clicking the

   ▶

   Route 2 icon.
   a. Select a format for the Snapshot to be saved in SharePoint. The choices are: **PDF**, **PNG** or **JPEG**. If you do not check the **Snap shot** checkbox under the **Destination Type** section, you can leave this field empty.

   b. Enter the site URL - this is the SharePoint site or subsite containing the destination e.g. **https://frevvo.sharepoint.com** - Remember this URL must specify the **https** protocol. This value is read in from the SharePoint tenant configuration screen for **R oute 1**.
   c. Set up the first location (route) where you want to save your files in SharePoint. SharePoint destinations can be a Library (and optionally a Folder), or List. Select **Library** or **List** from the **Destination Type** dropdown.
   d. The wizard pulls the list of Libraries and Lists configured on your SharePoint site to populate the **Library/List** dropdown. Select Library or List. Only destinations that the user has access to are displayed.
      i. If your Library has folders configured, the wizard will display a dropdown listing them. Select the destination folder from the list.
   e. Select a Content Type from the dropdown. The wizard automatically pulls the content type choices from your SharePoint site. The Content Type determines the available metadata column names for mapping. For example, if the destination is a Document list you would see **Item** as a choice for the Content Type. This means your submission is saved as a new item on your SharePoint list. Document Libraries show **Document**.as the Content Type.
   f. Check the types of files to be saved to the selected destination. The choices are:
      i. Data - checking this includes the Live Forms XML document to be saved
      ii. Snapshot - checking this includes a snapshot of your form/flow in the format selected in the **Snapshot Format** field to be saved
      iii. Files - checking this includes attachments uploaded to your forms/flows to be saved. The wizard automatically lists the U pload Controls in your form/flow by name when **Files** is checked. The attachments for the selected Upload Controls will be saved in the configured destination.
      iv. Gen Forms - this checkbox appears if you have mapped PDFs associated with your form/flow e.g. W-4 and I-9 filled out by a new employee. Select the mapped PDFs that you want to store in SharePoint.

g. Map the Control Names in your form/flow to the column names in your SharePoint destination. The wizard will populate the Column Name dropdown with all the columns in the destination but a maximum of **15** controls can be mapped.

> When mapping Message controls with templates to the SharePoint Connector, the Save Value property should be checked.

2. Click **Submit**.
3. Click the

   save and test icon to save the form/flow and bring up Test mode popup.
4. If you configure a second **Route,** clicking the **Clear Route** button removes the information for **Route 2** only.

Special Characters in Filenames

If you want to customize the name of the PDF of your form/flow to Sharepoint, make sure you have Save PDF checked. An optional field that is used to name the PDFs displays. You can use templates in this field. For example, if you have a control called EmployeeName in your form, you can type {EmployeeName} into the PDF Name field and the pdf's in the on your SharePoint site will be named {EmployeeName}.pdf.

- If you leave the PDF Name property blank, Live Forms uses the flow/form name as the pdf file name. The PDF will not post to SharePoint generating an HTTP 500 status error if the Form Name contains special characters. To avoid any issues, name your form/flows using characters that are suitable for filenames and explicitly set the pdf name in the form/flow using the same standard. Following the POSIX filename standard (A–Z a–z 0–9 . _ -) will ensure it works.
- Special characters in filenames will cause the submission to be flagged with an error in the Live Forms submission table.

Check Submissions on SharePoint

When the form is submitted or the flow is completed, submission data, metadata and attachments are uploaded to the specified destination in your SharePoint account

Verify your stored submissions on your SharePoint website:

1. Test your form/flow by filling in data, adding attachments, and submiting/completing it.
2. Login to your SharePoint account and navigate to the specified destination. The image shows submissions saved to a SharePoint list named Demo List and the John Edwards submission data and attachments.

Using the SharePoint Connector in an Azure SAML Security Manager tenant

At least one designer user that is going to be connecting forms/flows to SharePoint with the Save to SharePoint wizard must also be a SharePoint user with the correct privileges to provide consent if your tenant is configured with the Azure SAML Security Manager.

Troubleshooting

Some common issues with solutions are listed below.

Doc Post Failure

If the submission doesn't reach your SharePoint website - if Live Forms does not receive a response back from SharePoint with a status code of 200, you can find information about the error from the Live Forms submission table.

	Submitted Date ▼	Error ⇕	State ⇕	Error Description ⇕
⊕ ☐	Aug 18 2017 15:12	⚠	SUBMITTED	Could not POST data to http://sharepoint-connector:8080/sharepoint/submission. HTTP status 404
⊕ ☐	Aug 18 2017 15:07	⚠	SUBMITTED	Could not POST data to http://sharepoint-connector:8080/sharepoint/submission. HTTP status 404

All tenant admin(s) in your tenant or flow admin(s) configured for specific workflows will receive a Doc Post Failure notification email to alert them that an issue has occurred. The <server-name> will be provided in the email subject.

Max file size

The maximum size for all fevvo connectors is set to unlimited. Any size file can be uploaded to Live Forms and posted to SharePoint.

Determine the version of the SharePoint Connector you are using:

To determine the version of the SharePoint connector you are using:

1. Browse **http://<your server:port>/sharepoint/info** - the version information is returned as shown in the image.
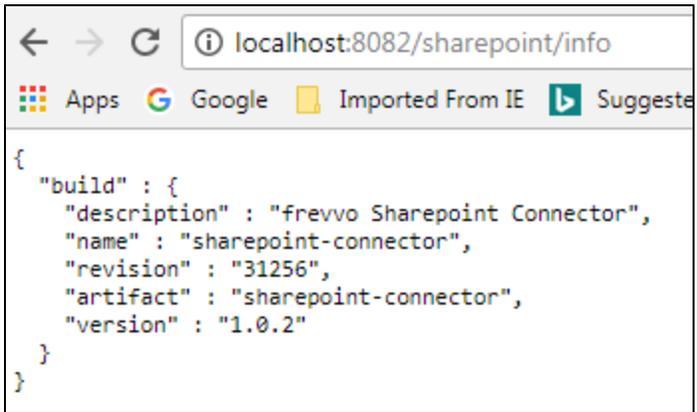
```
{
  "build" : {
    "description" : "frevvo Sharepoint Connector",
    "name" : "sharepoint-connector",
    "revision" : "31256",
    "artifact" : "sharepoint-connector",
    "version" : "1.0.2"
  }
}
```