

Sphereon Add-ins for SharePoint Online

Installation Guide



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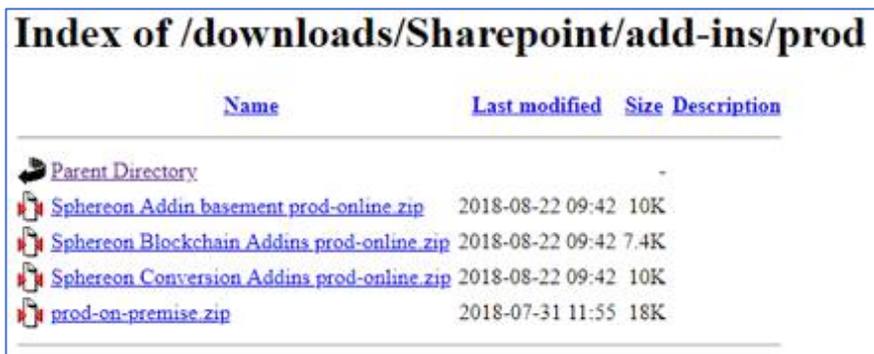
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PREREQUISITES

1. Download the add-in packages

Go to <https://sphereon.com/downloads/Sharepoint/add-ins/prod> and download the desired (-online) app packages.



The screenshot shows a directory listing with the following columns: Name, Last modified, Size, and Description. The entries are:

Name	Last modified	Size	Description
Parent Directory		-	
Sphereon Addin basement prod-online.zip	2018-08-22 09:42	10K	
Sphereon Blockchain Addins prod-online.zip	2018-08-22 09:42	7.4K	
Sphereon Conversion Addins prod-online.zip	2018-08-22 09:42	10K	
prod-on-premise.zip	2018-07-31 11:55	18K	

Sphereon Addin basement prod-online.zip (required)

You will need this package to be able to link and configure our service with your SharePoint environment.

Sphereon Blockchain Addins prod-online.zip

You will need this package to be able to use the Blockchain Sign and Verify functions.

Sphereon Conversion Addins prod-online.zip

You will need this package to be able to use the PDF Conversion functions.

Note:

The above are the installation packages for a Production installation.

When testing: the parent directory also contains packages for /test and /acc that correspond to the Test resp. the Acceptance deployments of the Sphereon Add-in Cloud Provider.

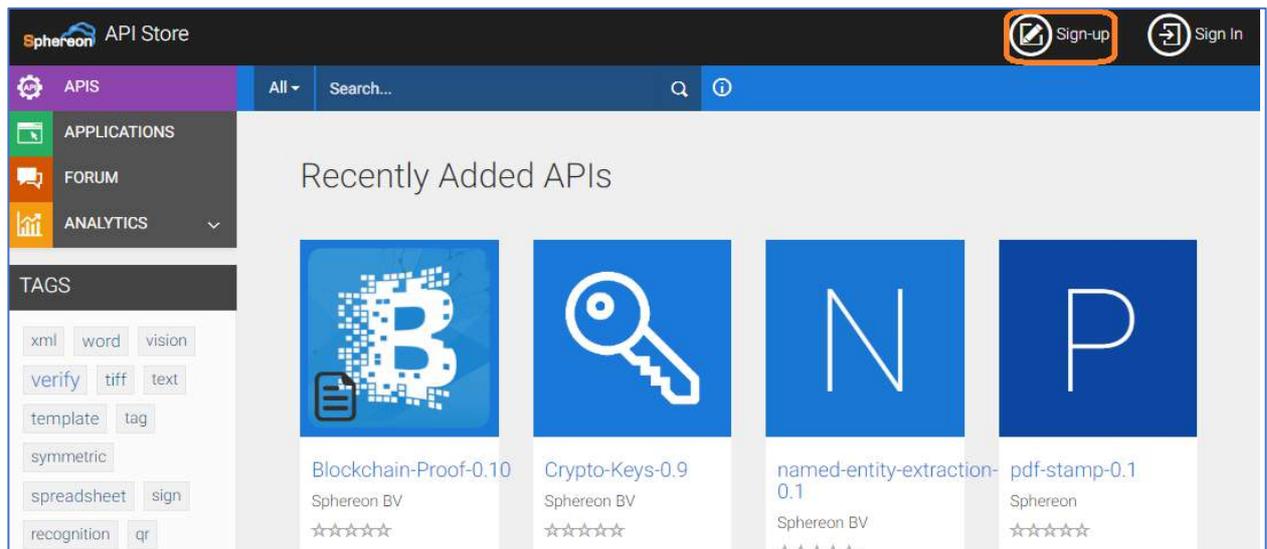
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2. Signup and register on store.sphereon.com

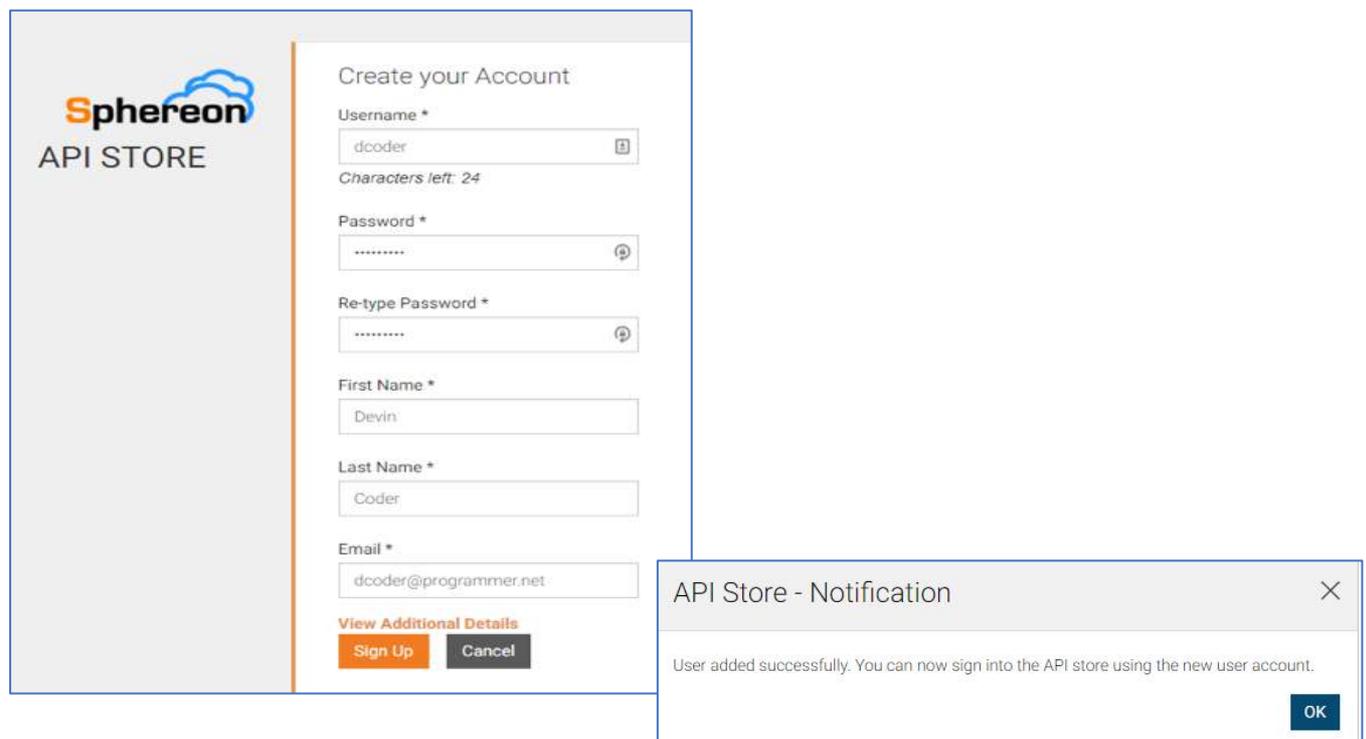
In order to use the Sphereon APIs you need a **consumer key** and a **secret value**.

To obtain these you must signup at <https://store.sphereon.com>

Click on Sign up.

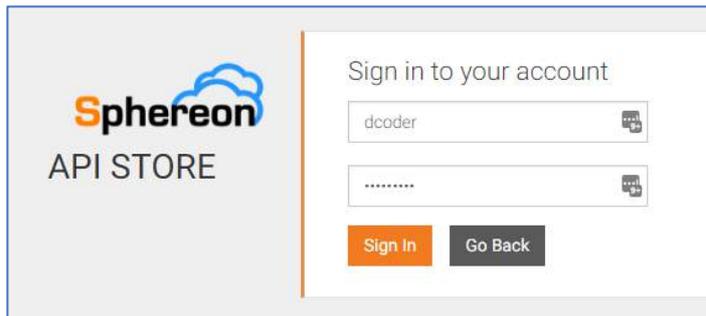


Enter your account details



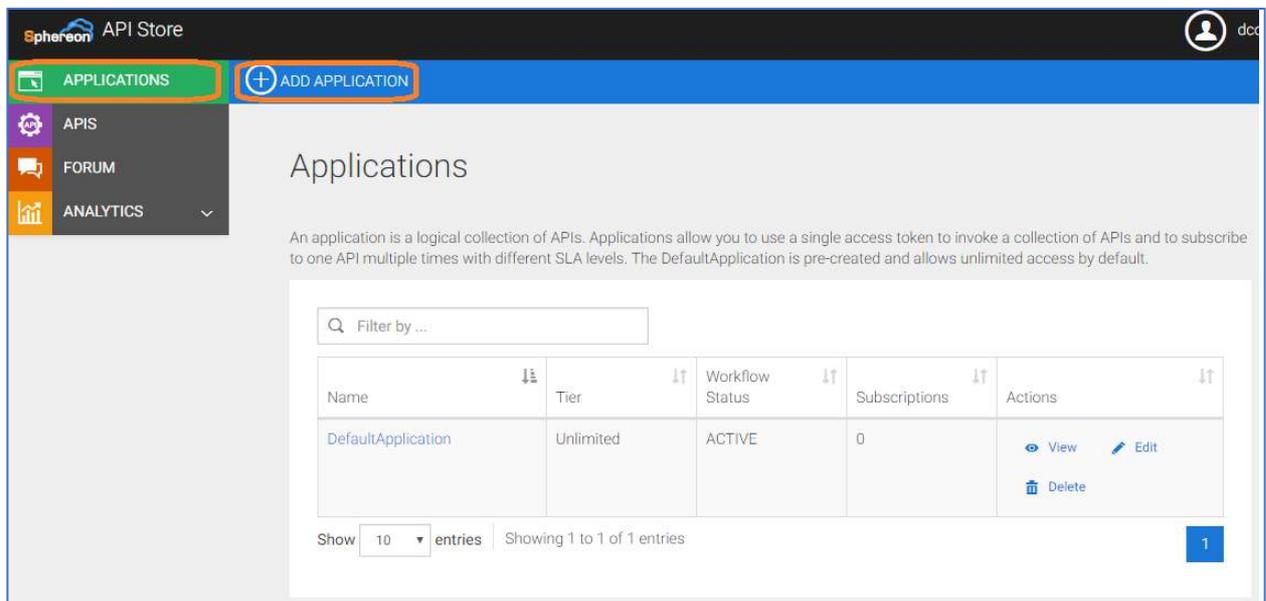
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Log in with the user name and password that you just entered in the Sign up screen.



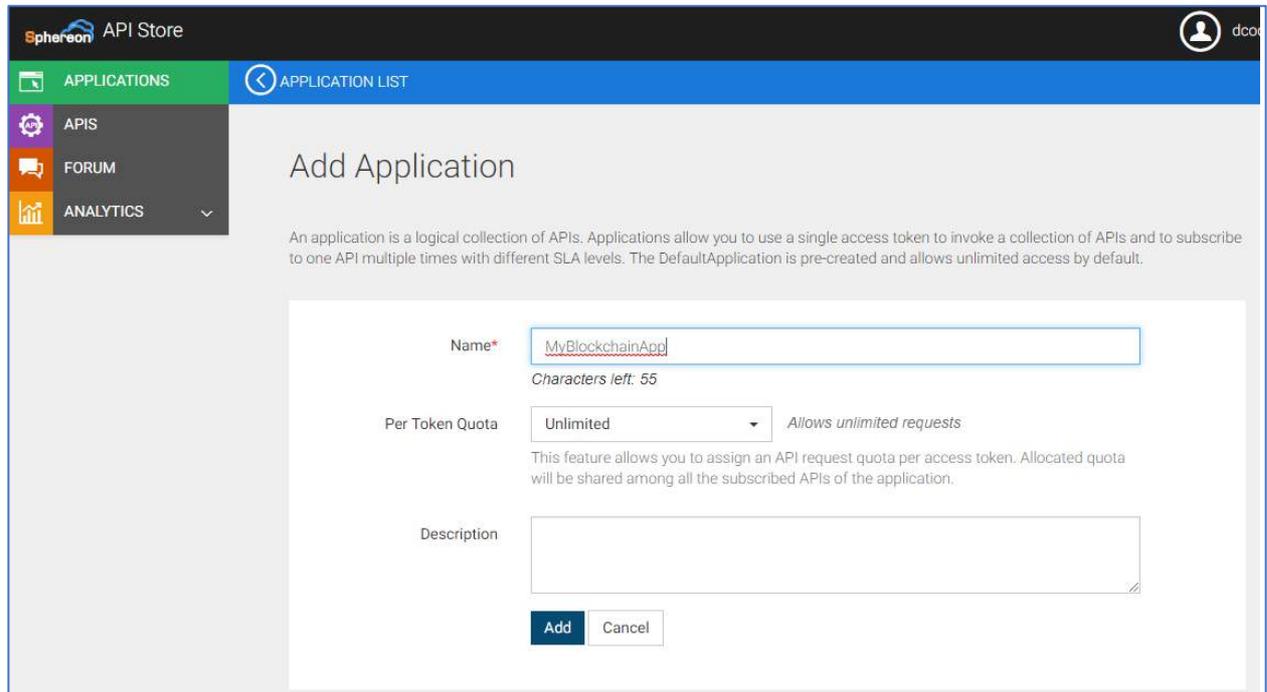
You will need to define and configure a so-called Application, which will consist of one (or more) APIs and that you will use for your project.

Go to the APPLICATIONS section, click ADD APPLICATION.



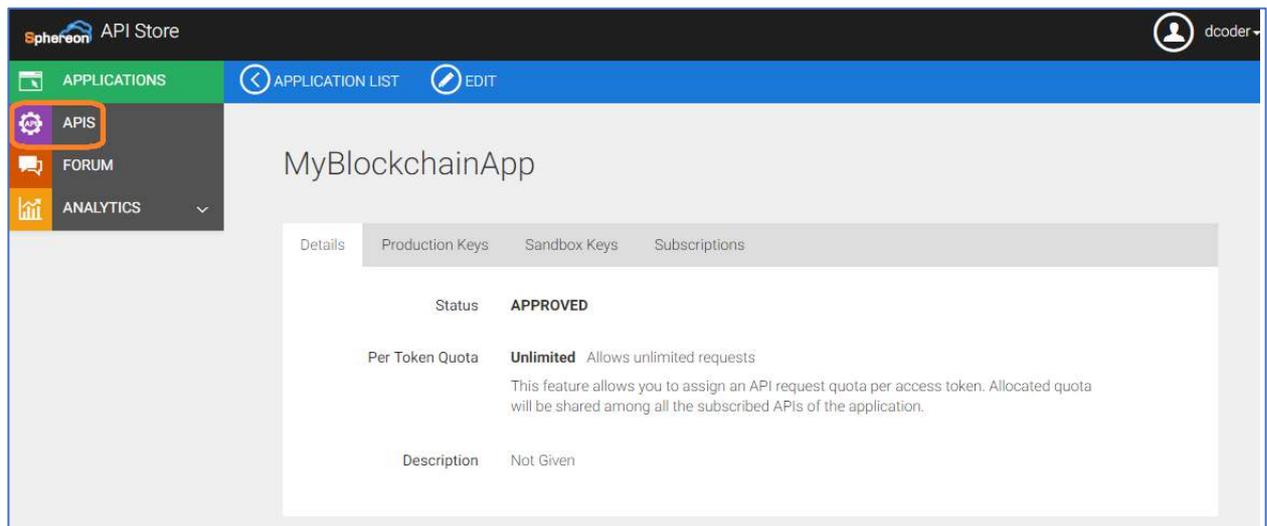
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Choose and enter a name for the Application that is going to use.



You can leave the Per Token Quota as is. Optionally, you can enter a Description for your Application.

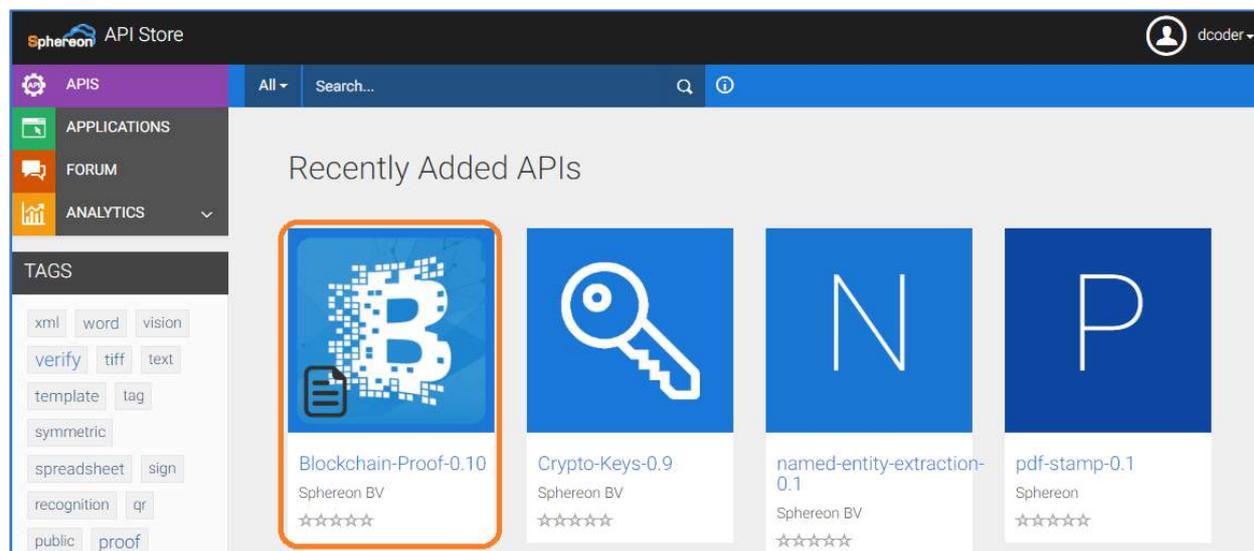
Next, go to the APIS section.



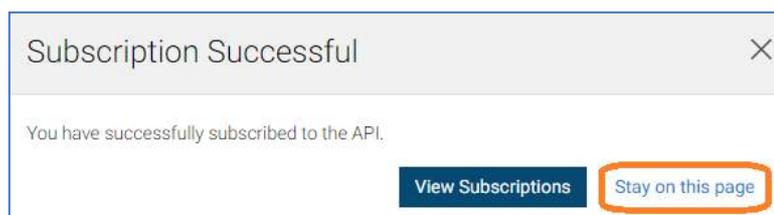
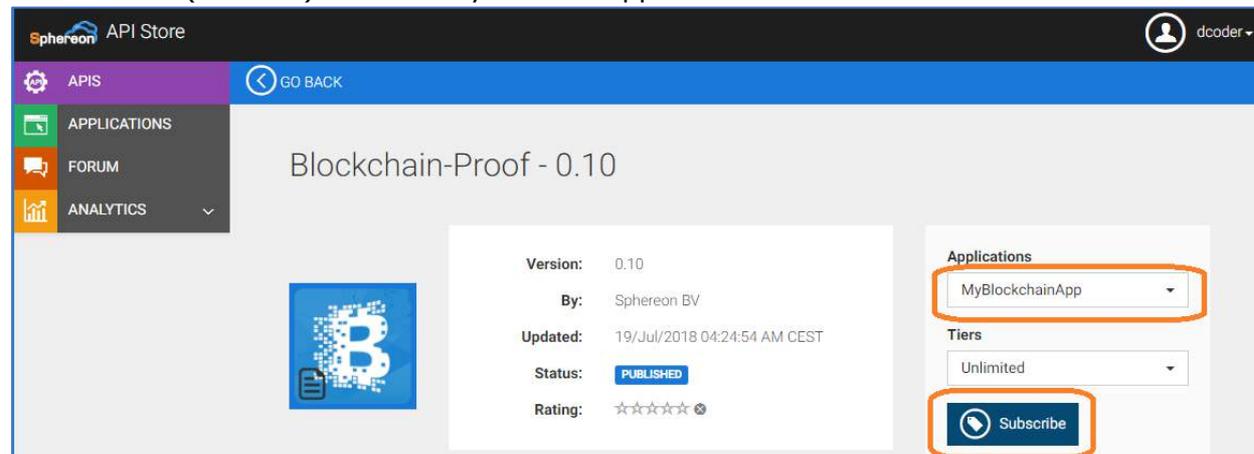
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The APIS Section will display publicly available APIs.

Click on Blockchain-Proof API.



Next, select your Application from the drop-down menu and click the [Subscribe] button to subscribe (and link) the API to your new Application.



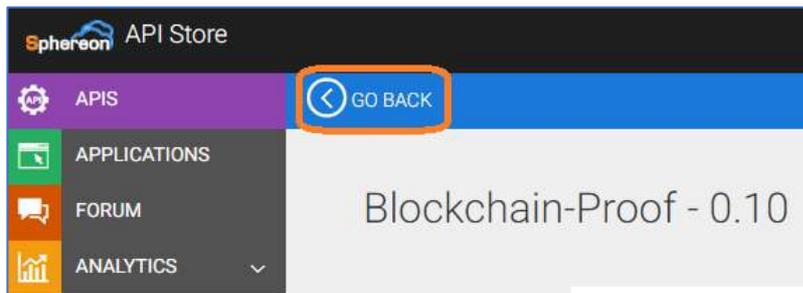
Click on the [Stay on this page] button.

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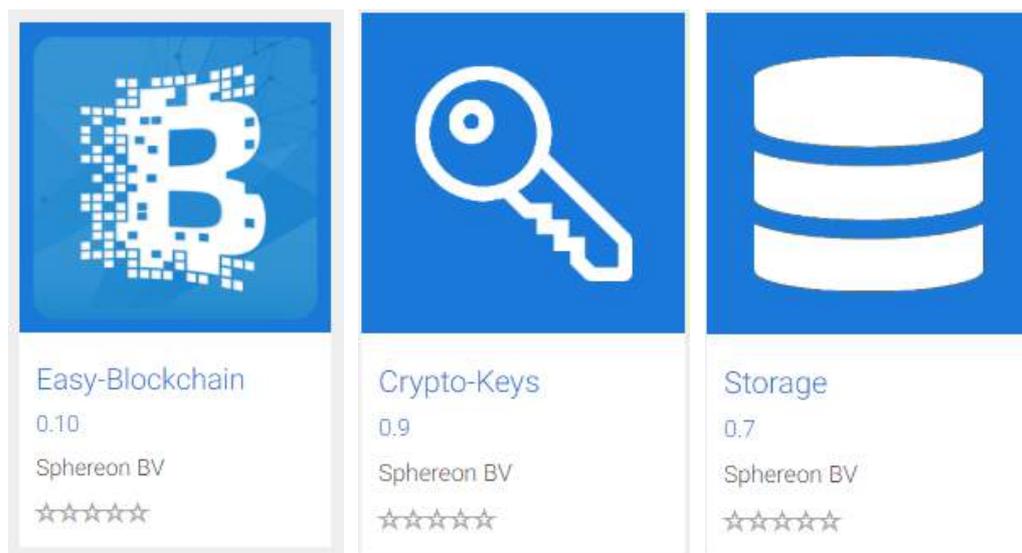
Besides the Blockchain-Proof API, you also need to subscribe to the following APIs:

- Easy-Blockchain
- Crypt-Keys
- Storage

Click on GO BACK to return to the APIS page.

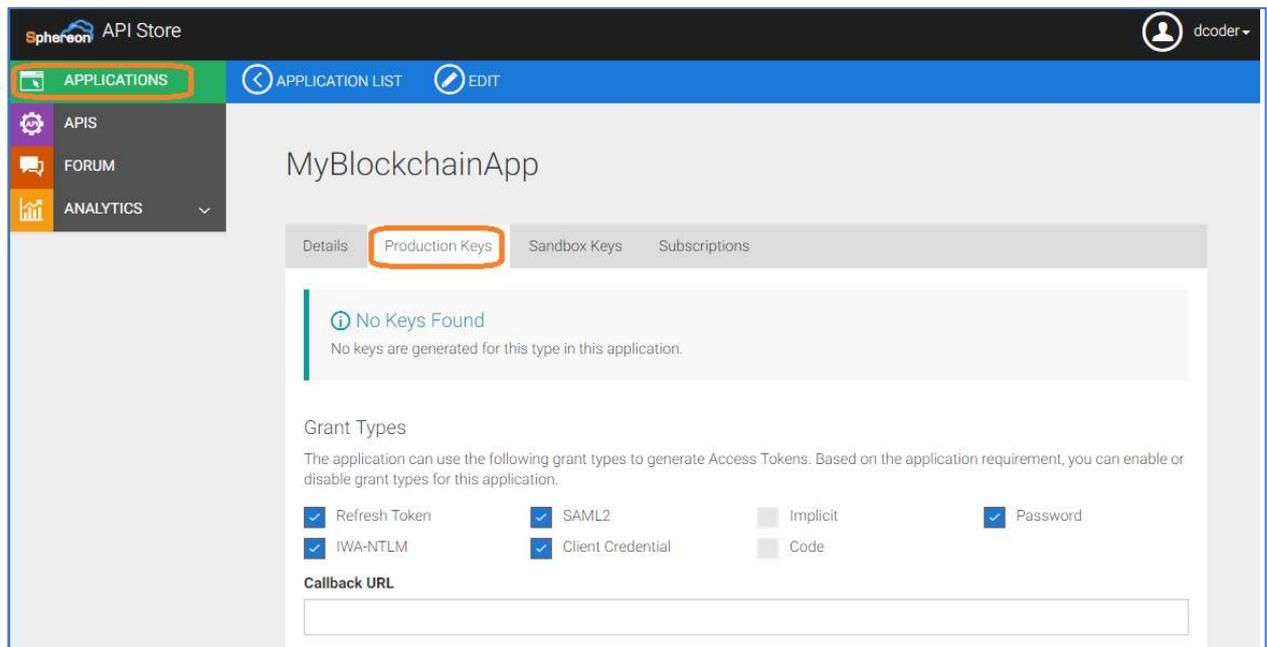


Repeat steps 7 and 8 for all of the API's below:

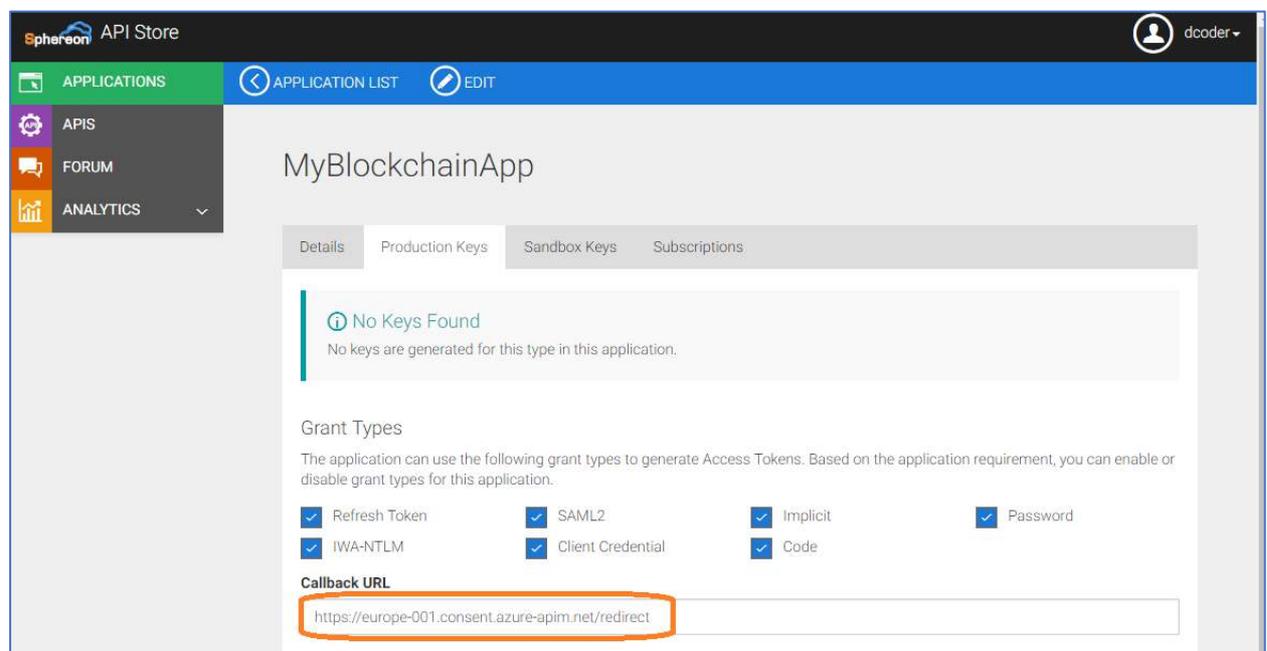


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Go back to the APPLICATION section and open the Production Keys tab.

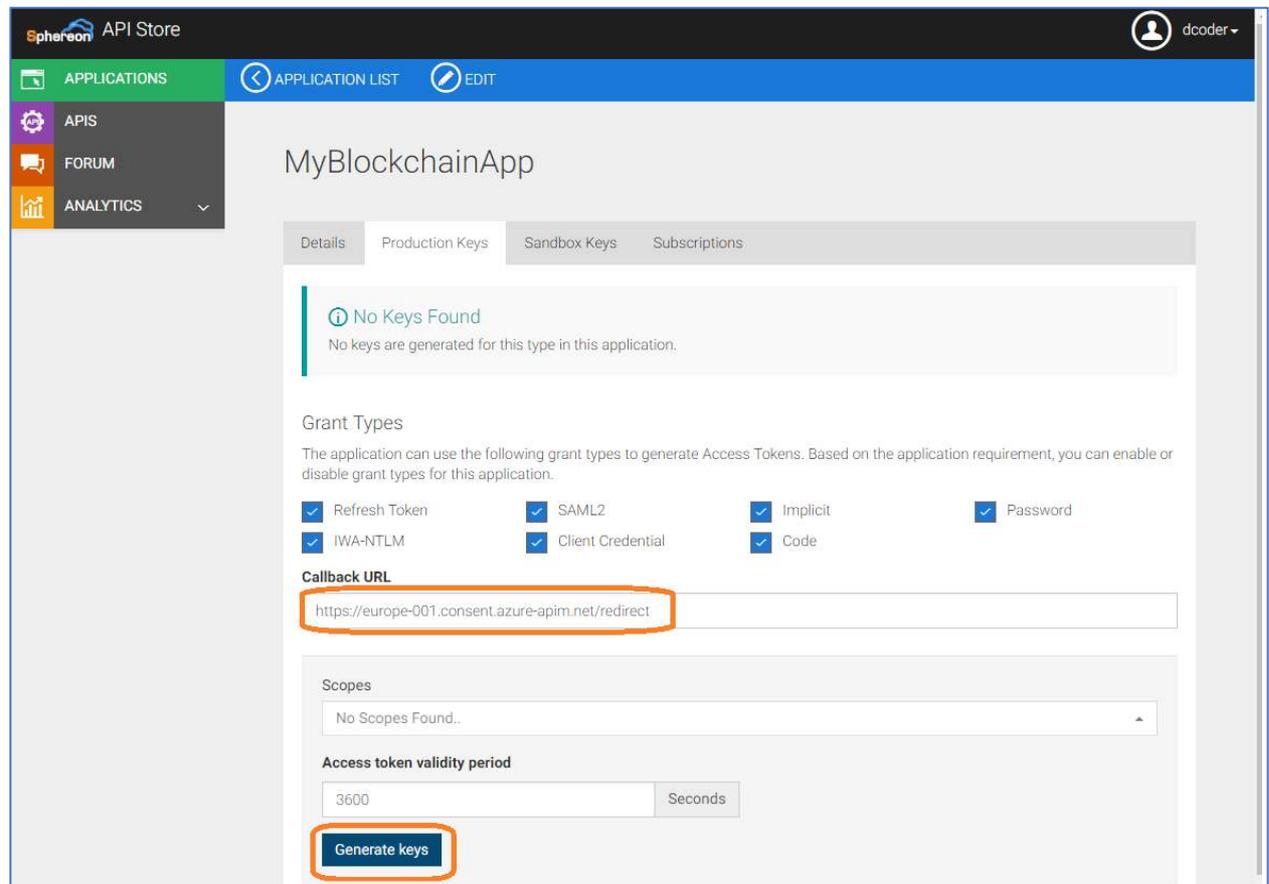


Note: If your connecting app provides a callback URL (like MS-flow) you can enter this in the "Callback URL" field.



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Now click on the [Generate Keys] button at the bottom of the screen.



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If your keys are hidden, you can click on the [Show keys] button.

The screenshot displays the 'Production Keys' configuration page. At the top, there are tabs for 'Details', 'Production Keys', 'Sandbox Keys', and 'Subscriptions'. A 'Show Keys' button is highlighted with an orange border. Below this, the 'Consumer Key' and 'Consumer Secret' are shown as hidden text boxes with copy icons. The 'Grant Types' section includes checkboxes for Refresh Token, IWA-NTLM, SAML2, Client Credential, Implicit, Code, and Password. The 'Callback URL' field contains 'https://europe-001.consent.azure-apim.net/redirect'. An 'Update' button is present. The 'Generate a Test Access Token' section shows an 'Access Token' field with a copy icon. A note indicates the token's validity period is 3600 seconds and it has (am_application_scope default) scopes. The 'Scopes' dropdown is empty, and the 'Validity period' is set to 3600 seconds. A 'Regenerate' button is at the bottom.

Write down or copy the keys. You will need them during the installation process.

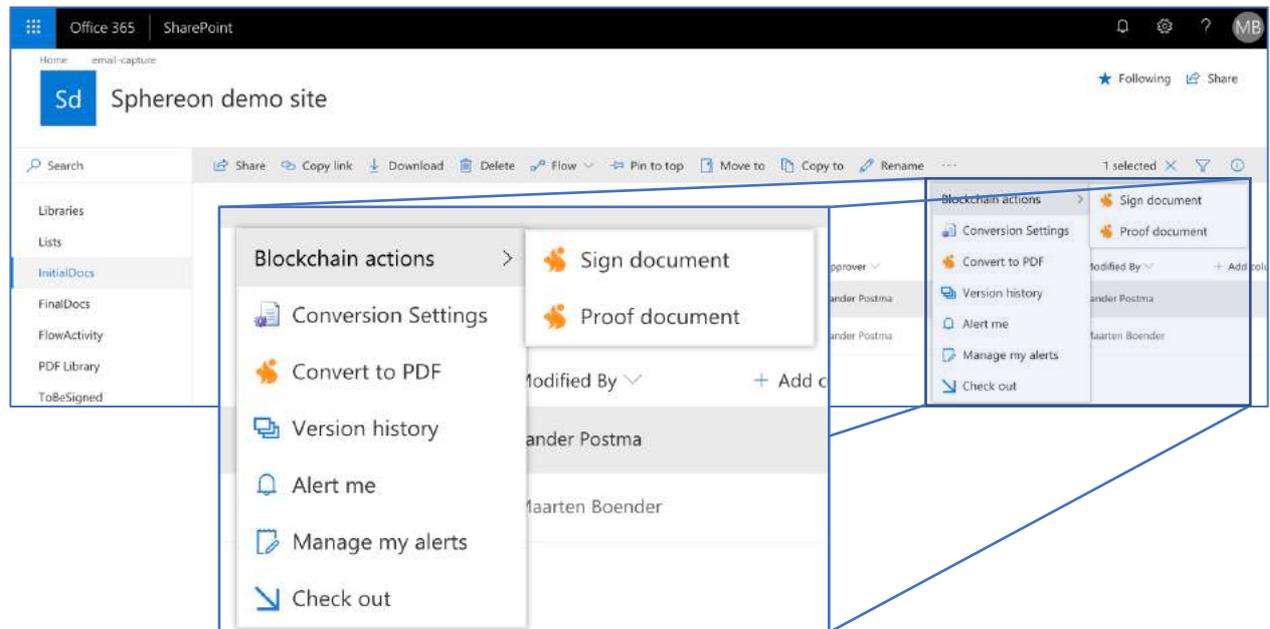
Note: You can always revisit this page.

Note: There are separate keys for Production and Sandbox (Test) environments.

INSTALLATION

The following sections of this document describe how to install the Sphereon add-ins.

The Sphereon SharePoint Add-in will provide Menu items for function that link them to Sphereon's cloud API content services.



Installation steps

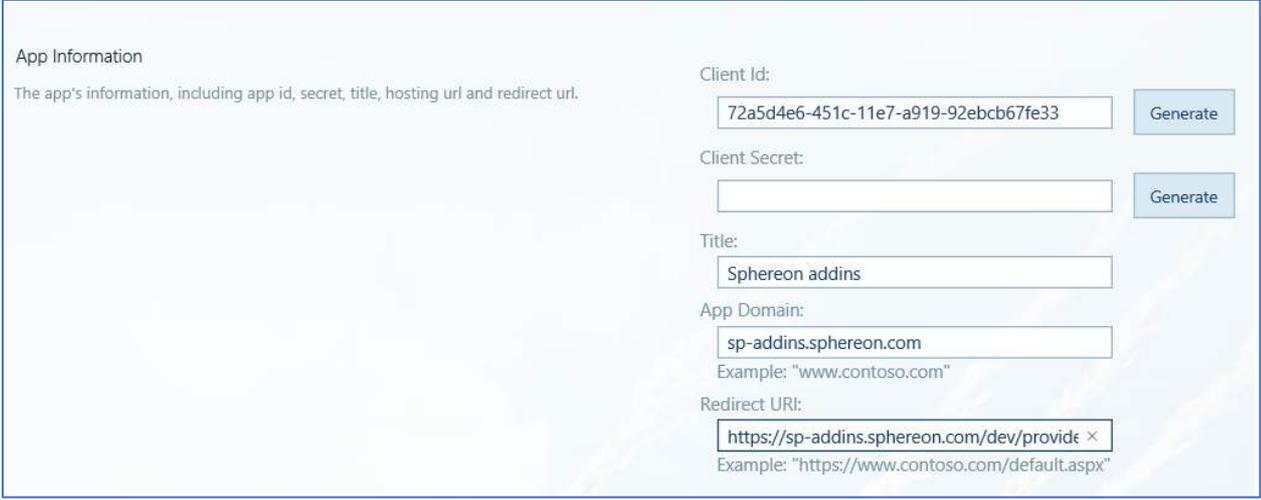
The steps are:

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Register the add-in client

1. Go to - <https://<your-site>.sharepoint.com/layouts/15/AppRegNew.aspx>



The screenshot shows the 'App Information' section of the SharePoint App Registration New page. The section is titled 'App Information' and includes a subtitle: 'The app's information, including app id, secret, title, hosting url and redirect url.' The form contains the following fields and values:

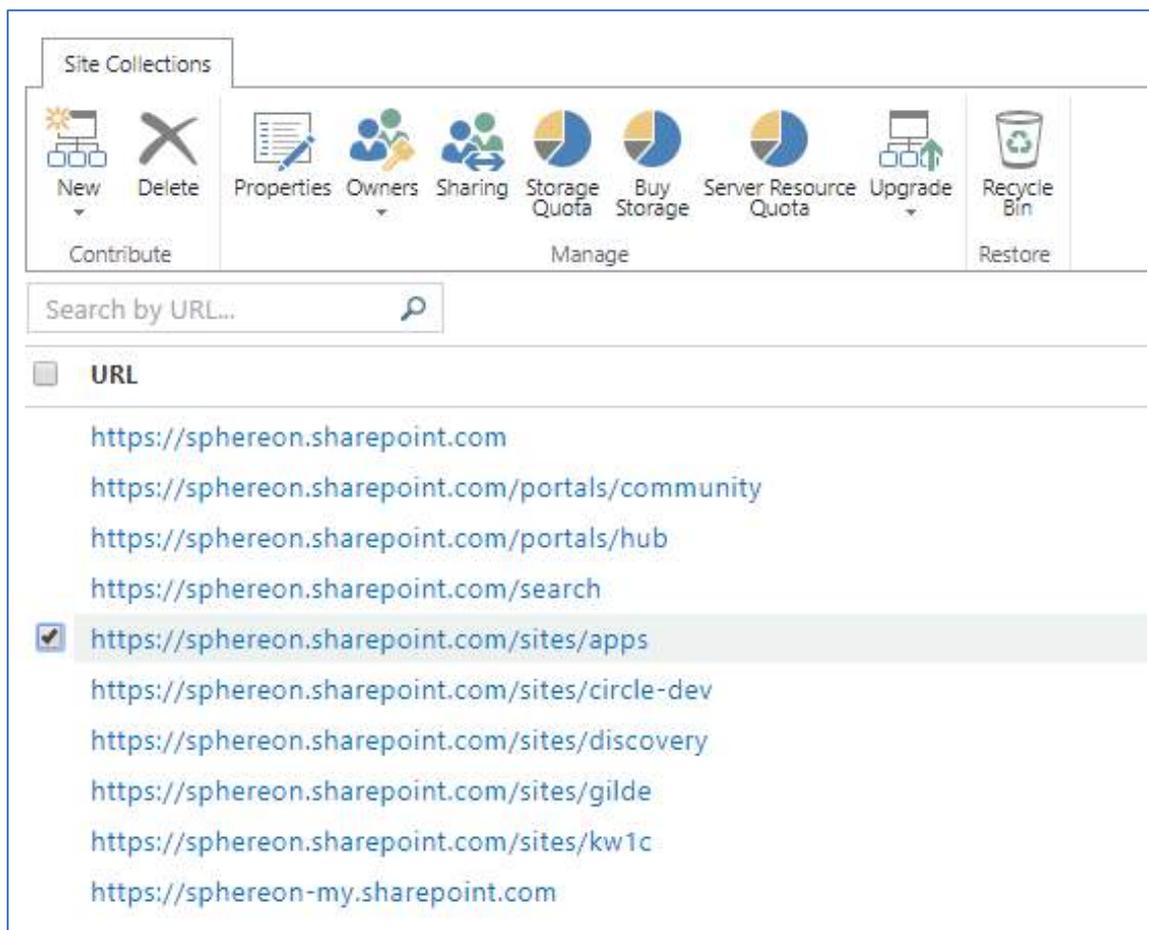
- Client Id:** 72a5d4e6-451c-11e7-a919-92ebcb67fe33 (with a 'Generate' button to the right)
- Client Secret:** (empty field with a 'Generate' button to the right)
- Title:** Sphereon addins
- App Domain:** sp-addins.sphereon.com (with an example: "www.contoso.com")
- Redirect URI:** https://sp-addins.sphereon.com/dev/provide (with an example: "https://www.contoso.com/default.aspx")

2. Use the Sphereon provider client id: 72a5d4e6-451c-11e7-a919-92ebcb67fe33
3. After the client secret click "Generate"
4. **Save this value**, f.i. in your password vault.
(You will need this in the Configuration step, later.)
5. The App domain is sp-addins.sphereon.com
6. The Redirect URI is https://sp-addins.sphereon.com/start

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Upload app package

1. Go to the site collections section in your SharePoint admin portal - <https://<your-site>-admin.sharepoint.com/layouts/15/online/SiteCollections.aspx>
2. Check your app catalog site (name can vary) and select Owners from the ribbon.



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3. Next, select the menu-item Manage Administrators.

<input type="checkbox"/> URL	STORAGE USED (GB)
https://virtualdeveloper.sharepoint.com	0.40
https://virtualdeveloper.sharepoint.com/portals/community	0.00
https://virtualdeveloper.sharepoint.com/portals/hub	0.00
https://virtualdeveloper.sharepoint.com/search	0.03
https://virtualdeveloper.sharepoint.com/sites/adappteam	0.00
https://virtualdeveloper.sharepoint.com/sites/BSG	0.00
<input checked="" type="checkbox"/> https://virtualdeveloper.sharepoint.com/sites/catalogue	0.00
https://virtualdeveloper.sharepoint.com/sites/d	0.01

4. Make sure your account is in the list of Site Collection Administrators

manage administrators

Primary Site Collection Administrator
Specify the administrator for this site collection. Only one user login can be provided; security groups are not supported.

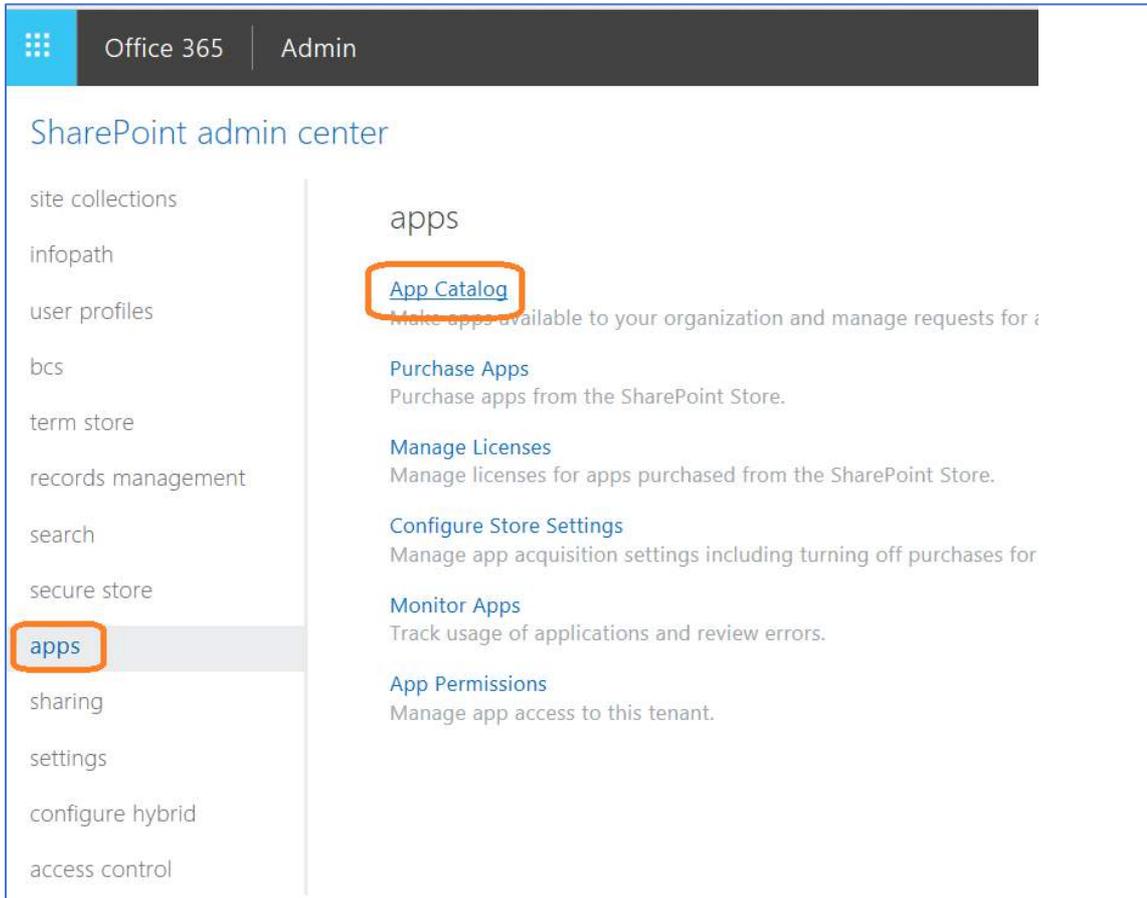
User name:

Site Collection Administrators
Site Collection Administrators are given full control over all Web sites in the site collection. They may also receive site use confirmation mail. Enter users separated by semicolons.

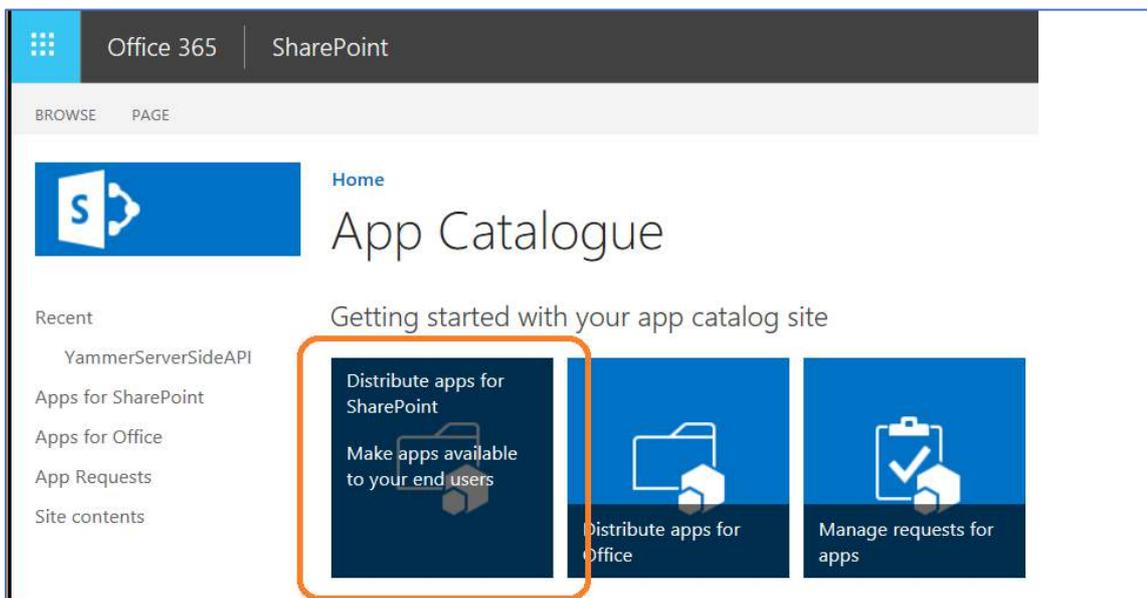
OK Cancel

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5. Next, open the apps menu, then click on App Catalog



6. Click the Distribute apps for SharePoint tile:



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7. If you have not yet done so, go to <https://sphereon.com/downloads/Sharepoint/add-ins/prod> and download the desired (-online) app packages.

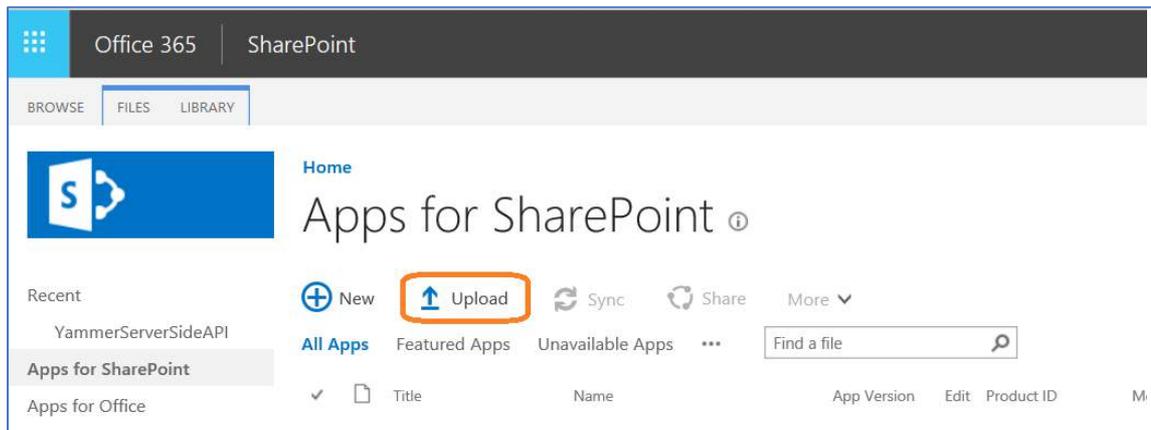
You will need the `Sphereon Addin basement prod-online.zip` package to be able to link and configure our service with your SharePoint environment.

(For more information on how to obtain these, see PREREQUISITES at the beginning of this manual)

8. You will need to extract the app packages from the zip archives.

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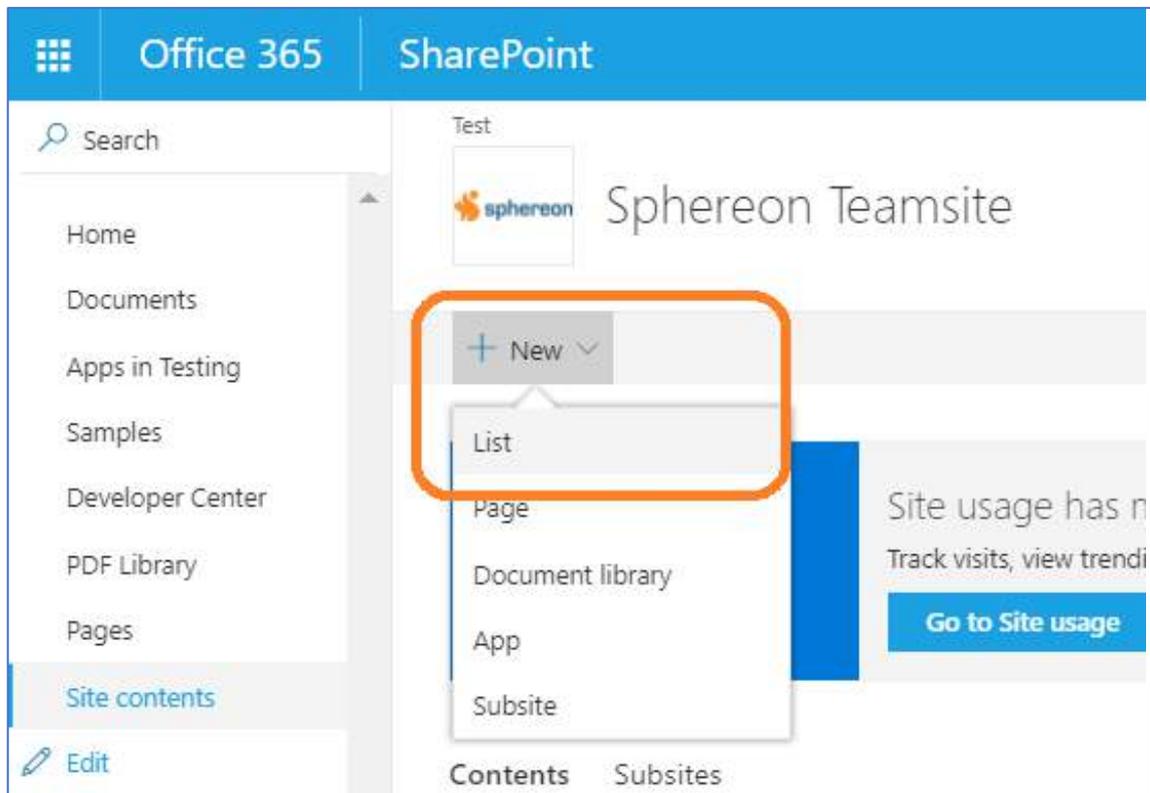
9. In Office 365, click the "Upload" button and upload the latest app packages.



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Install the app(s)

1. Go to the site contents of your root site
<https://<your-site>.sharepoint.com/layouts/15/viewlists.aspx>
and click the New button, then select List



Create a list called "Sphereon"

Create list

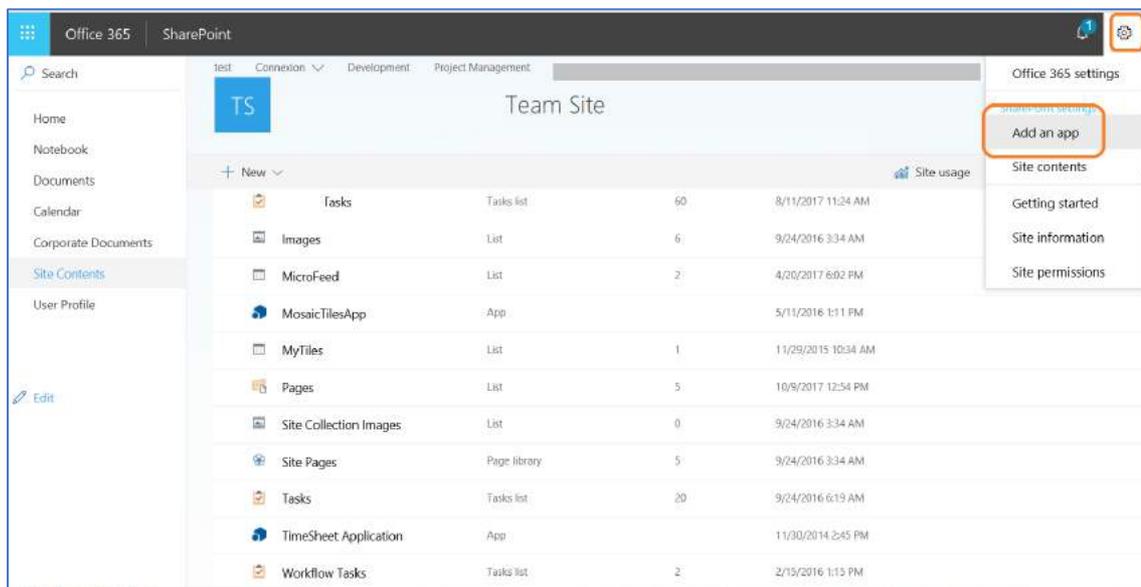
Name

Description

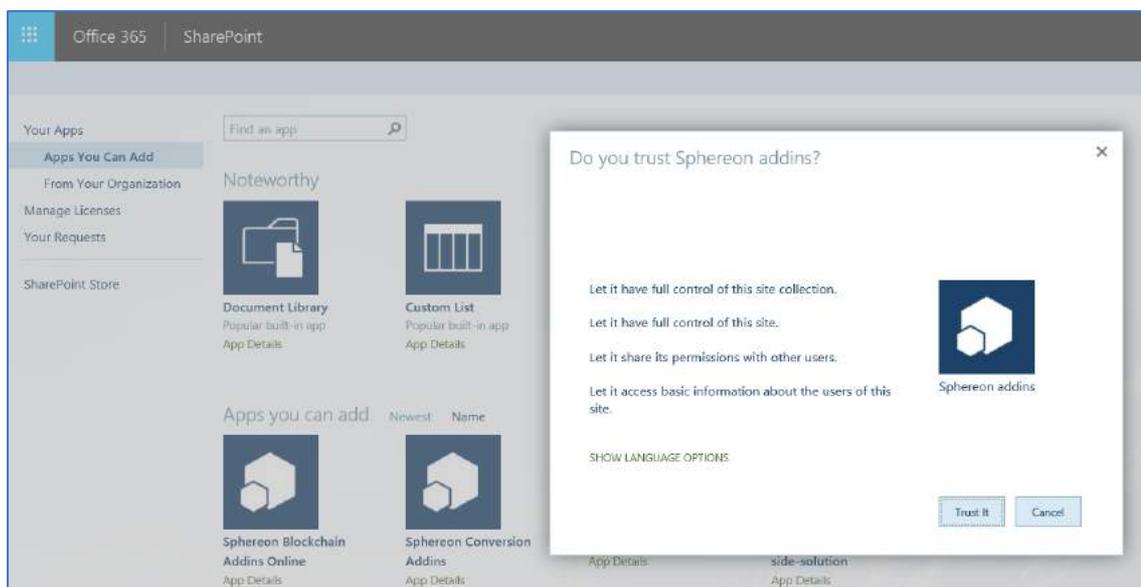
Show in site navigation

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2. Go back to the site contents and select Add an app



3. Then select the desired Sphereon add-in and Trust it:

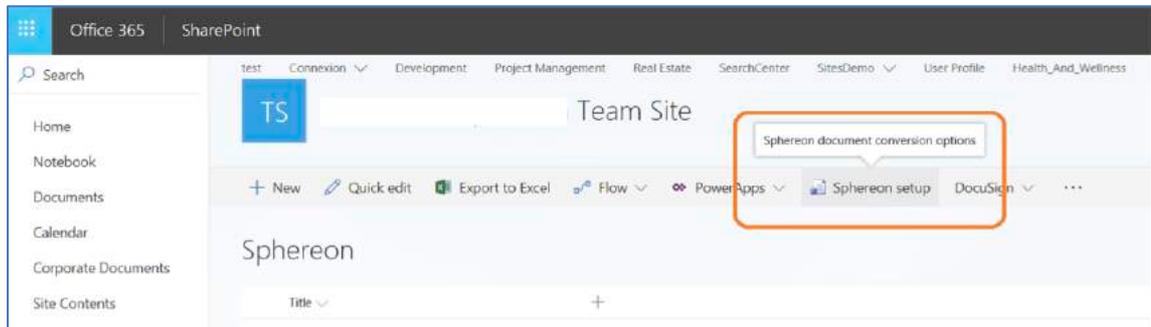


Repeat this for all Sphereon add ins that you require.

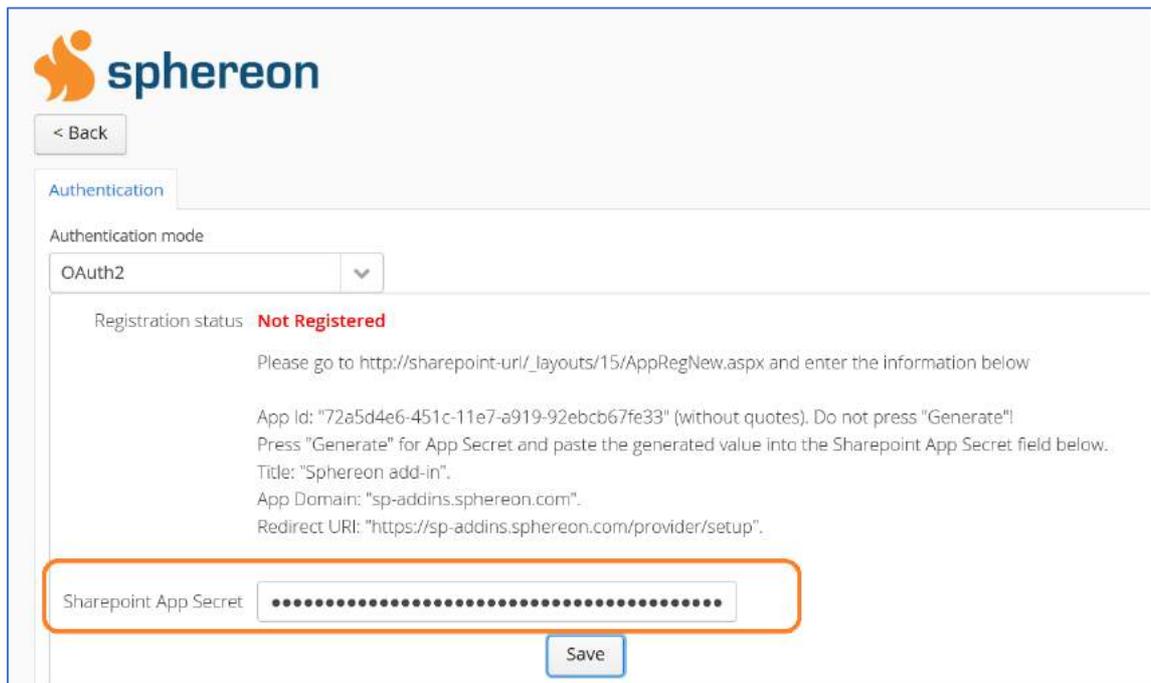
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Configure the Sphereon Add-in

1. Open the just created Sphereon list and click the Sphereon Setup menu-item:



2. In the configuration screen paste the client secret you saved in §1.3,



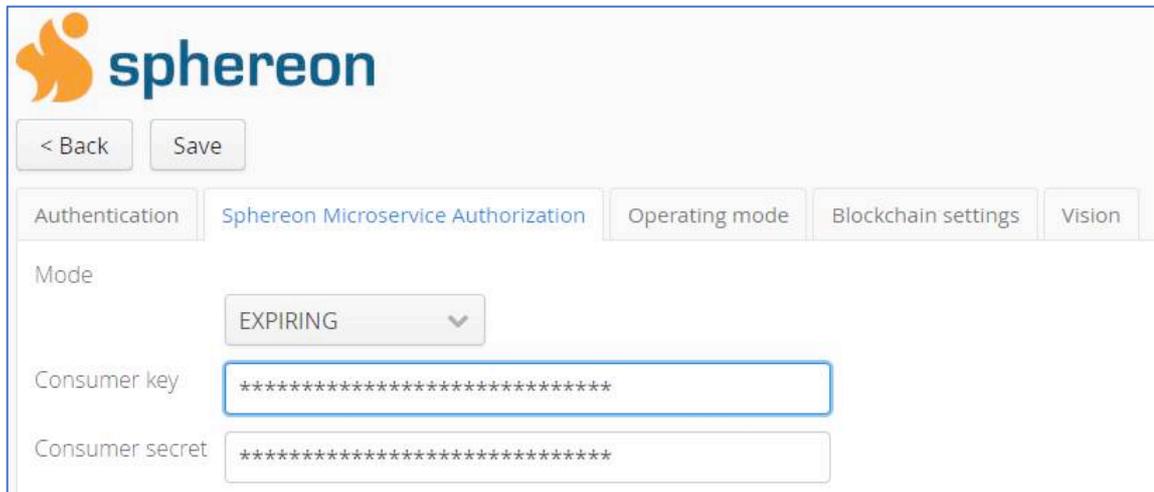
Select OAuth2 as authentication mode.

Press the Save button.

Note. If you are connected to an older backend version you will now need to press the back button and client Sphereon Setup again.

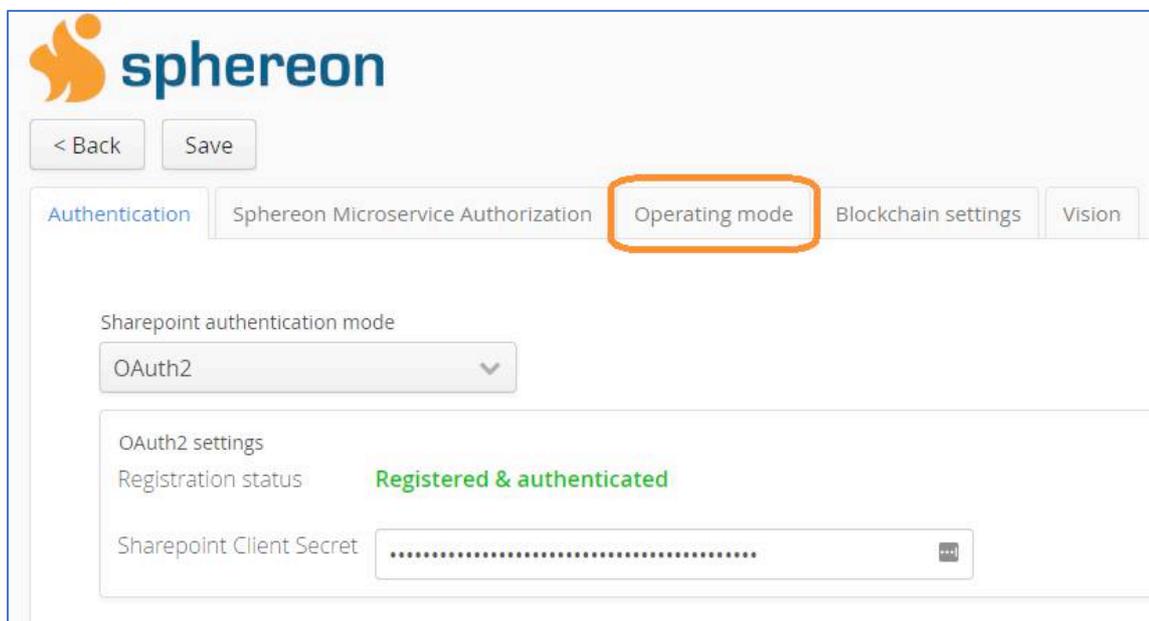
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- Under "Sphereon Microservice Authorization" you will need to enter a **consumer key** and a **secret value**.
(For more information on how to obtain these, see PREREQUISITES at the beginning of this manual)



The screenshot shows the Sphereon configuration interface. At the top left is the Sphereon logo. Below it are two buttons: "< Back" and "Save". A horizontal navigation bar contains five tabs: "Authentication", "Sphereon Microservice Authorization" (which is active), "Operating mode", "Blockchain settings", and "Vision". Under the active tab, there is a "Mode" section with a dropdown menu currently set to "EXPIRING". Below this are two text input fields: "Consumer key" and "Consumer secret", both containing a series of asterisks to represent masked text.

- Next click Operating mode tab.



The screenshot shows the Sphereon configuration interface with the "Operating mode" tab selected and highlighted with an orange box. The "Sharepoint authentication mode" dropdown is set to "OAuth2". Below this, under "OAuth2 settings", the "Registration status" is displayed as "Registered & authenticated" in green text. The "Sharepoint Client Secret" field is filled with asterisks and has a small icon on the right side.

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5. Verify the configuration variables:

The screenshot shows the 'Operating mode' configuration page. It includes the following elements:

- Authentication** and **Operating mode** tabs.
- Connection type** dropdown menu set to **DIRECT**.
- Processing mode** dropdown menu set to **INTERACTIVE**.
- Public URL** text input field containing `https://[redacted].sharepoint.com/`.
- Direct connection URL** text input field containing `https://[redacted].sharepoint.com/`.
- A note: "When using workflow you need to install a custom package for your Sharepoint farm".
- Generate & download** button.
- Save** button.

For SharePoint Online installations you can leave these settings alone, except for the option "Processing Mode".

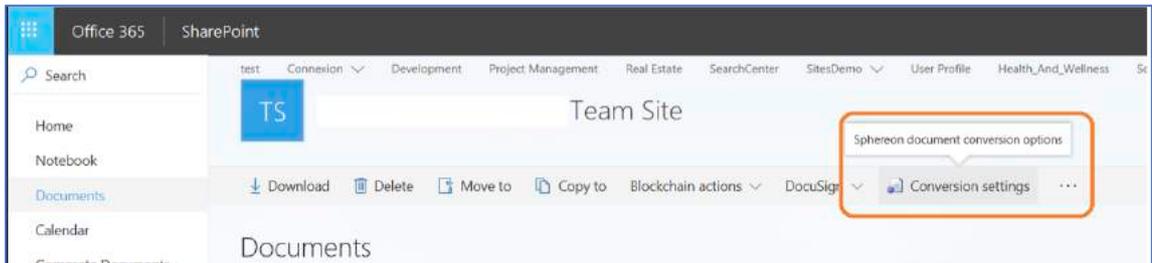
Processing Mode options:

- | | |
|---------------------------|---|
| <u>INTERACTIVE</u> | A Status page is displayed that shows messages of all the processing steps that are executed. |
| <u>BACKGROUND</u> | All the processing is done in the background without displaying a Status page. |

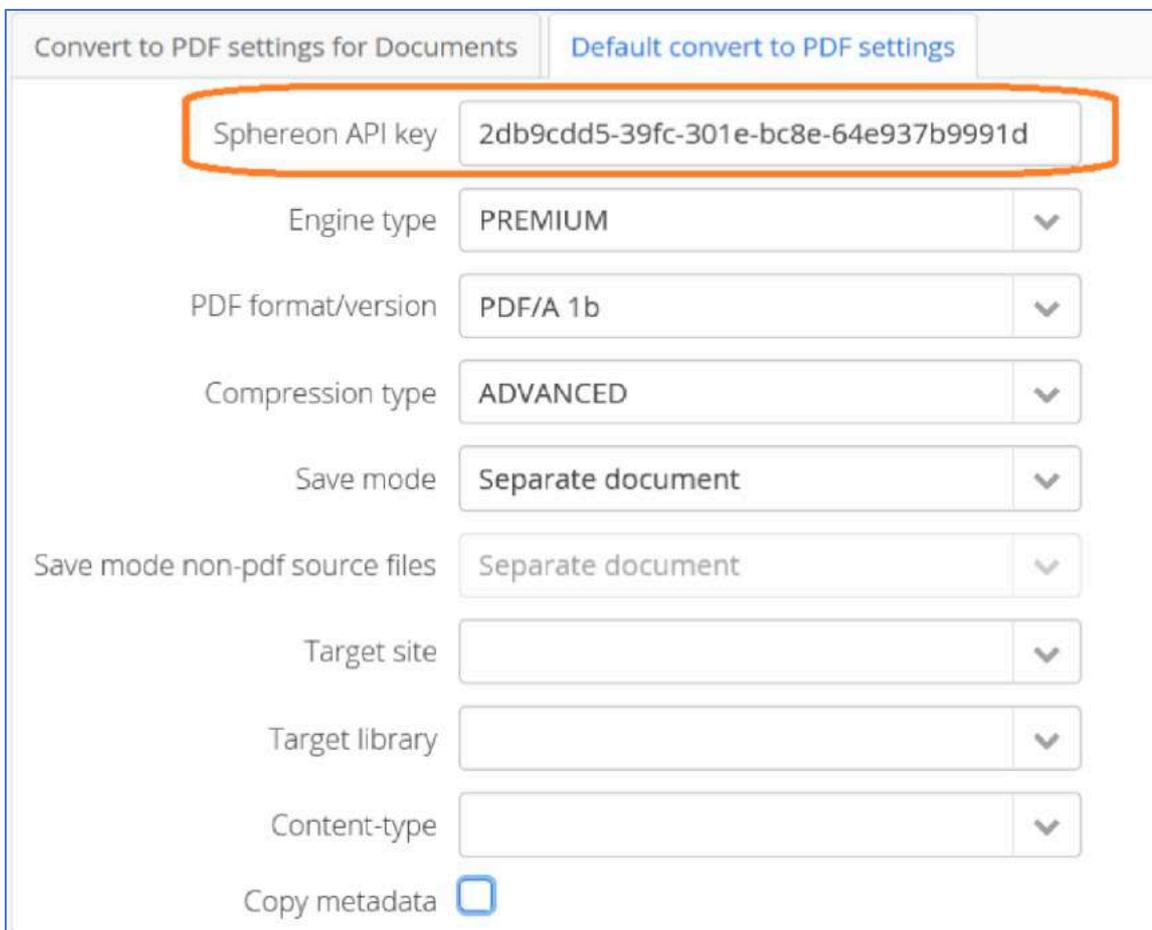
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Configure the Sphereon PDF Conversion Add-in

1. If you are using our Sphereon PDF Conversion Add-in, go to your Documents library and click Conversion settings menu-item:



2. You will need to provide an access token and configure the variables:



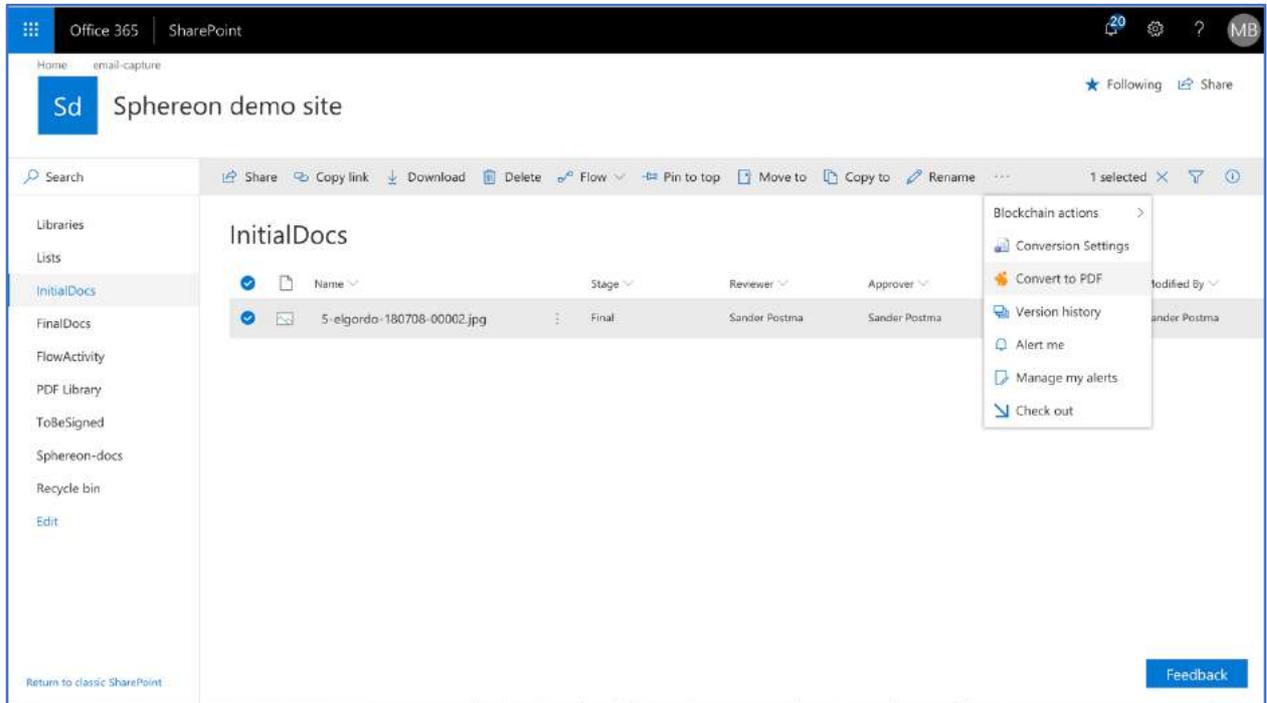
(Details about these settings can be found on page 26 or in the API documentation which is online on <https://store.sphereon.com>).

For any questions, do not hesitate to contact us!

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Using the Sphereon PDF Conversion Add-in

You should now be able to use the new menu items in your document libraries.



Just select a document and select **Convert to PDF** from the drop-down menu.

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PDF Conversion settings

The screenshot displays the Spheron PDF Conversion settings interface. At the top left is the Spheron logo. Below it are '< Back' and 'Save' buttons. The main content area is titled 'Convert to PDF settings for InitialDocs' and contains a sub-tab 'Default convert to PDF settings'. The settings are as follows:

Setting	Value
Engine type	PREMIUM
Compression type	ADVANCED
PDF format/version	PDF/A 1b
Save mode	Separate document
Save mode non-pdf source files	Separate document
Target Site	
Target Library	
Copy metadata	<input checked="" type="checkbox"/>
Content type	

The following parameters can be set for the PDF Conversion:

Engine type	Select the type of engine you want to use.
Compression type	Select the level of compression.
PDF format/version	Select the sub-type PDF specification.
Save mode	Select if you want to either Replace a PDF file with the new PDF or as a Separate file or as a new Version of the PDF file.
Save mode non-pdf source files	The new PDF files for Non-PDF source files will be saved as a Separate file.
Target Site	Select the target Site to save the PDF file in.
Target Library	Select the target Library to save the PDF file in.
Copy metadata	Check this if you want to copy the associated metadata and column data to the target Site/Library.
Content type	Select a Content type for the new PDF file.

Default settings and Library specific settings

You can define these settings as the Default for all PDF conversions, as well as, define settings to override these on the SharePoint Library level.

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Using the Sphereon Blockchain Add-in

The Blockchain Add-in enables you to Sign and Proof documents, or any object, on Blockchain.

Signing an object

When you Sign an object, Sphereon will create a standard SHA-256 hash-value, a kind of electronic fingerprint, which is a unique representation of a digital object. If anything in the object is changed, this will result in a different hash-value.

This hash-value is then appended to a block in a blockchain, where it is time-stamped and distributed over the peer-to-peer blockchain network.

When the network has checked and validate this transaction as a valid transaction, it is marked as registered.

Sphereon supports multiple blockchain infrastructures, such as BigchainDB, Ethereum, Factom, Hyperledger Fabric, Multichain, through a generic interface. You can specify which one to use in the Add-in settings.

Using the Blockchain Sign function in SharePoint

You can use the functions through the menu items in your document libraries.

Just select a document and select **Blockchain actions-> Sign document** from the drop-down menu.

The screenshot shows the SharePoint Online interface for a site named 'Sphereon demo site'. The 'InitialDocs' library is selected, and a context menu is open over a document named '5-elgordo-180708-00002.jpg'. The menu includes options like 'Sign document', 'Proof document', 'Conversion Settings', 'Convert to PDF', 'Version history', 'Alert me', 'Manage my alerts', and 'Check out'. A modal window is open in the foreground, displaying the Sphereon logo and a progress bar. The status logs in the modal window are as follows:

```
Status [INFO] [2018-10-17 07:25:18] We are processing your sign request. One moment please...
[INFO] [2018-10-17 07:25:18] 1 document was selected to sign.
[INFO] [2018-10-17 07:25:24] File 5-elgordo-180708-00002.jpg registered on chain 'd769a0a7431c400d0ac5aaf64f7b1986447495e01e6ce88dedb4a260e231a649'
[INFO] [2018-10-17 07:25:24] File 5-elgordo-180708-00002.jpg is pending registration on chain '187bda6ffeef6fe33db29f86f43f8804b3a776f5599d1a7ec1901639ed5f53ac'
```

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Verifying an object

When you want to Verify an object, Sphereon will again create the same standard SHA-256 hash-value, the electronic fingerprint, which is a unique representation of a digital object.

Sphereon will the search for the hash-value in the blockchain transactions. If the hash-value is found, the object was registered. Sphereon will return the related information, such as the timestamp.

Now, if anything in the object is changed, this will result in a different hash-value. Sphereon will then not be able to find it in the blockchain transactions. Sphereon will return that it could not find the information and therefor cannot guarantee the document as the original, authentic version.

Using the Blockchain Proof function in SharePoint

You can use the functions through the menu items in your document libraries.

Just select a document and select **Blockchain actions-> Proof document** from the drop-down menu.

The screenshot displays the SharePoint Online interface for a document library named 'InitialDocs'. A context menu is open over a document, showing options like 'Sign document', 'Proof document', and 'Blockchain actions'. The 'Blockchain actions' sub-menu is expanded, showing 'Conversion Settings', 'Convert to PDF', 'Version history', 'Alert me', 'Manage my alerts', and 'Check out'. In the foreground, a modal window shows the Sphereon logo and a progress bar. The status logs indicate the verification process:

```
Status: [INFO] [2018-10-17 07:47:47] We are processing your verify request. One moment please...
[INFO] [2018-10-17 07:47:47] 1 document was selected to verify.
[INFO] [2018-10-17 07:47:51] File 5-elgordo-180708-00002.jpg is successfully registered:
The registration time is 2018-10-17T09:26+02:00
The chain factom/d769a0a7431c400d0ac5aaf64f7b1986447495e01e6ce88dedb4a260e231a649
[INFO] [2018-10-17 07:47:51] File 5-elgordo-180708-00002.jpg is successfully registered:
The registration time is 2018-10-17T09:26+02:00
The chain factom/187bda6ffef6fe33db29f86f43f8804b3a776f5599d1a7ec1901639ed5f53ac
```

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