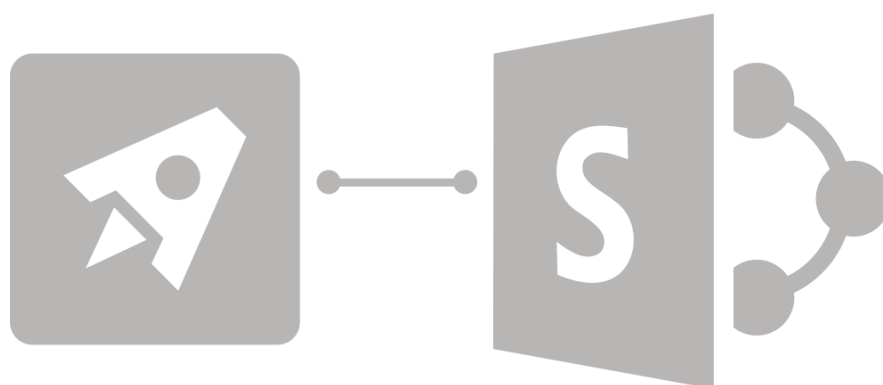




White Paper

# SharePoint Integration



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# Preface

This document describes and compares alternative concepts for connecting Open as App to a SharePoint environment.

This document requires a basic understanding of Open as App. The *Security whitepaper* provides an overview of the functionality, terminology, and general security concepts of Open as App: <https://support.openasapp.net/hc/en-us/articles/209775469>.

## SharePoint Online

With Open as App, files from a SharePoint Online environment can be used to create apps. The data is not exported from the SharePoint environment. The apps are dynamically linked to the files. This way, the user is always supplied with the most current data from the original Excel file.

Apps that just require read-only access to an Excel file (like classic reports) obtain the file directly from the SharePoint Online servers – without detours via the Open as App Cloud.

The file only needs to be processed on the Open as App servers if data has to be written back to a file. Also, a file is temporarily uploaded to the App Wizard when administrators create and edit an app. To ensure that the file is not processed in the Open as App Cloud, a dummy file can be used for this step.

Depending on the sensitivity of the data, two modes can be selected for the SharePoint online connection: 1) connection via guest links and 2) connection with SharePoint authentication.

### SharePoint Online with Guest Links

When connected via a guest link, the source file of an app is published with the option “Anyone with the link can view”. The app creator needs to publish the file for Open as App once. Now, the file can be accessed without the user having to authenticate to SharePoint. The generated link is stored as a data source for the app in Open as App. Anyone who has access to the app can use it without coming into contact with SharePoint.

### SharePoint Online with User Authentication

When connecting with SharePoint authentication, users of the app need to authenticate themselves to SharePoint Online the first time they open the app.



Since apps cannot be used without the underlying Excel files, the same access permissions apply to the apps as to the original file. The app cannot break out of the access rights implemented in SharePoint.

## Single-Sign-On

SharePoint Online uses Office365/Azure Active Directory to authenticate users. This enables a single sign-on experience for the users of an app. Users can log into Open as App directly with their existing Office365/Azure Active Directory accounts via single sign-on. Even if a local Active Directory is used, it can be used via Azure Active Directory pass-through authentication for SharePoint and for single sign-on.

## Requirements for Open as App with SharePoint Online

- SharePoint Online
- When using guest links, the possibility of enabling anonymous users needs to remain activated.
- Optional: Office365/Azure Active Directory for Single-Sign-On

## SharePoint On-Premises

To ensure maximum data protection, SharePoint On-Premises Farms are often operated in an internal company network that is disconnected from the Internet. As a result, the data is of course – as intended – not accessible for the Open as App servers as well. Nevertheless, Open as App offers the possibility to connect apps to a SharePoint on-premises environment: with the help of the Open as App On-Premises Gateway.

This is a piece of server software that can be operated as a Windows service on the customer's own infrastructure in the same network as the SharePoint Farm. The On-Premises Gateway takes over all the tasks that the Open as App servers cannot perform due to lack of access to the SharePoint environment such as delivering and editing Excel files. In general, the gateway ensures that sensitive data does not leave the company network and in particular, does not get into the Cloud.

If all devices are on the same network the gateway does not have to be accessible from outside the network (internet). Yet, the gateway needs to be able to establish connections to the Open as App servers of its own accord to be able to perform licensing and rights management, for example.



Please note: When creating an app, the structure of the Excel file on which the app is based needs to be checked temporarily on an isolated service in the cloud. However, the files are protected from the internet when using the on-premises gateway. So, dummy data need to be used to create the app. Once the app is created the URL of the dummy Excel can be exchanged with the URL of the actual file in the internal network and the app can be used with productive data. It is important that the files have the same structure.

### **Requirements for setting up the gateway:**

- Gateway needs to be set up as a Windows service via MSI Installer
- Microsoft SQL Server database required from 2012 (2008 on request) for administrative data
- No special hardware requirements, scaling depending on the number of users
- Gateway needs to be on the same network as the SharePoint farm
- Gateway requires port sharing for incoming connections from the internal network on port 80
- Gateway needs to be able to establish outgoing connections to [api.openasapp.net](https://api.openasapp.net)
- Gateway should be accessible via own DNS entry e.g.: `oaa-gateway.intern.my-company.com`

### **On-Premises Gateway with local folder or network drive**

To run the Open as App On-Premises Gateway use a local folder on the gateway server as the source for the Excel files. The gateway makes the files available to all Open as App administrators of the company for building apps and writes changes directly back to the folder. The files are delivered via the internal network and are not accessible from outside. The files are only delivered to authorized users and are thus secured via the access rights for the apps stored in Open as App.

With the same principle, a network drive can be connected to the Open as App gateway as an alternative to a local folder. Thus, a SharePoint library or any subfolder can be mounted as a network drive on the gateway server to connect the files to Open as App.

In this scenario, the access to the data will be via the SharePoint user account that was used to mount the network drive on the server. The use of a specially created “global user account” is a best practice.



## Specifics

- Access to SharePoint via global user

### **Requirements in addition to the essential requirements for the installation of the gateway:**

- SharePoint Library/Folder needs to be mounted as network drive on Gateway Server
- Recommended: Create a separate “global user account” to mount the SharePoint network drive

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