

Sharepoint O365 Requirements

This product is intended for use by Site Collection Administrators only.

Sharepoint Online commonly uses the Modern Authentication model. Modern authentication is an updated set of authentication protocols and policies for Office 365 and Azure that allow improved authentication scenarios that are required to implement LinkFixer Advanced.

LinkFixer Advanced includes the ability to authenticate using Single Sign On, Multi-factor Authentication and including authenticating Federated Identity Management systems.

Key Requirements:

SharePoint global admin site permissions to initiate app registration.

This registration is not added manually, but through a series of short dialogs in the Network Location section of LinkFixer Advanced.

API / Permissions name	Type	Description	Admin Consent Requir...	Status
▼ SharePoint (1)				
AllSites.Manage	Delegated	Read and write items and lists in all site colle...	-	✔ Granted for Axiom Servi...

LinkFixer Advanced dialogs:

In order to read/write file data from any Site Collection, a user must be granted permission as a Site Collections Admin for each individual site. The app registration does not allow the user to make those changes by itself.

LinkFixer Advanced

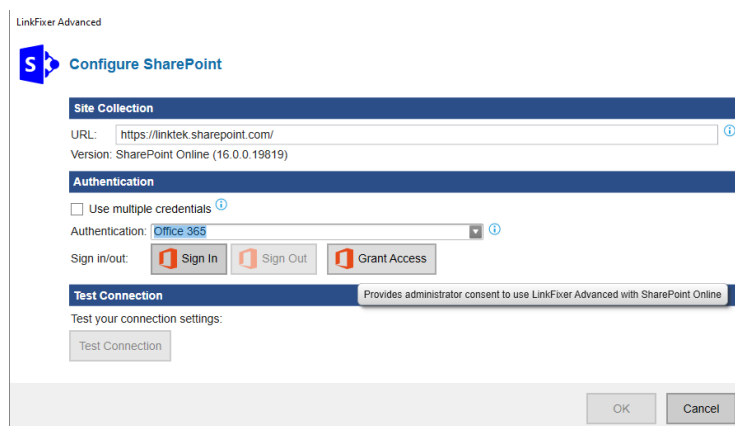
Important Note

This authentication option requires approval by your Office 365 global administrator. Use the {Grant Access} button to provide this.

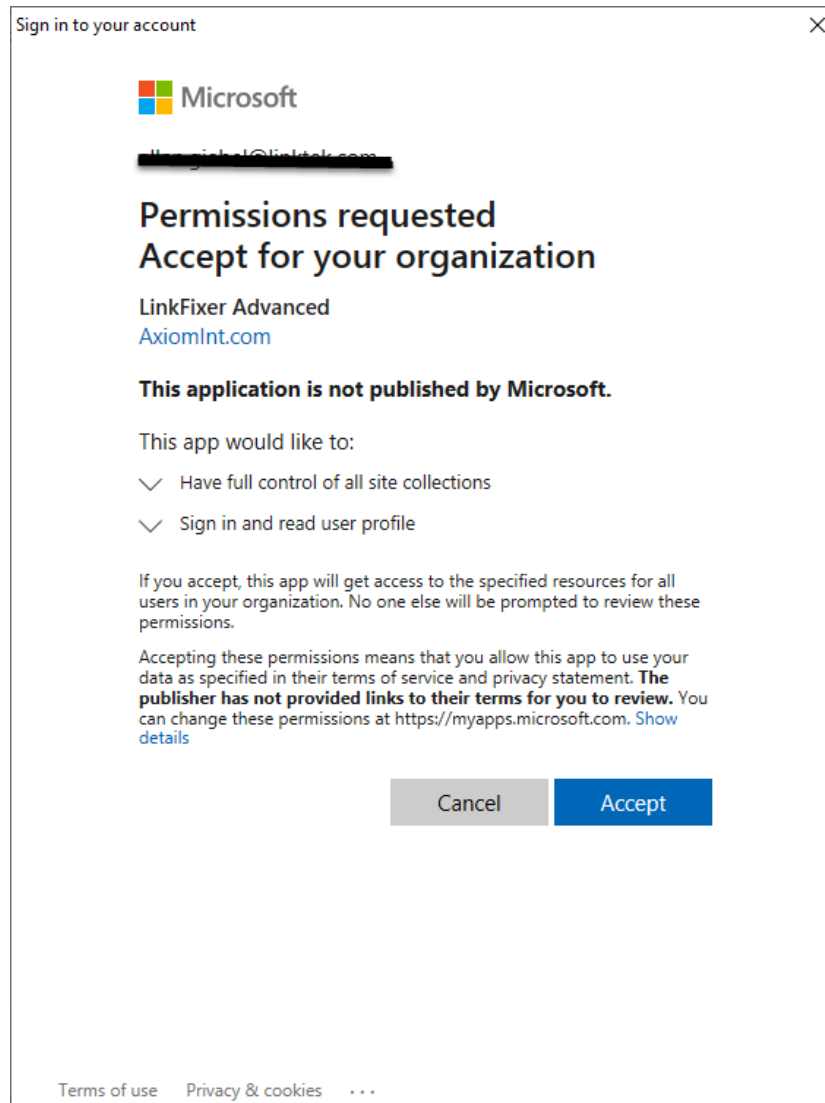
If you require other authentication options, please contact LinkTek at 727-442-1822 or Support@LinkTek.com.



LinkFixer Advanced uses the Grant Access Button instead of having the Global Admin manually register the application.

A screenshot of the "LinkFixer Advanced" "Configure SharePoint" dialog. The dialog has a blue header with the LinkTek logo and the title "Configure SharePoint". Below the header, there are three main sections: "Site Collection", "Authentication", and "Test Connection". The "Site Collection" section has a text box for "URL" containing "https://linktek.sharepoint.com/" and a label for "Version" showing "SharePoint Online (16.0.0.19819)". The "Authentication" section has a checkbox for "Use multiple credentials" and a dropdown menu for "Authentication" set to "Office 365". Below this, there are three buttons: "Sign In", "Sign Out", and "Grant Access". The "Test Connection" section has a button labeled "Test Connection" and a message that says "Provides administrator consent to use LinkFixer Advanced with SharePoint Online". At the bottom right of the dialog are "OK" and "Cancel" buttons.

Permissions Dialog:



LinkFixer Advanced cannot authenticate without this registration.

Note: in order to authenticate Sharepoint Online in a Federated Environment there may be additional steps.

You need to arrange a meeting with your Global SharePoint Administrator and have them add the top level site using GRANT ACCESS”

These permissions can be revoked at any time by any Global Sharepoint Admin.

Hardware and Software Requirements

Hardware and Software Requirements

For the best performance and results, please contact LinkTek Support at 727-442-1822 or email: Support@LinkTek.com so that we can discuss your specific needs.

Software Requirements:

- Windows 7 or newer operating system, or Windows Server 2008 or newer.
- Microsoft SQL Server is required for optimal performance.
- .NET 4.6.1 framework is required. This will be installed along with *LinkFixer Advanced* if not already present.
- Ports that must remain open are: (80 (HTTP), 443 (TCP HTTPS, Amazon S3), 53 (DNS), 8080 (HTTP), 22 (Support channel), 123 (NTP), 111 (Amazon Data), 2049 (NFS), 20048 (NFS v3), 139 (SMB v2), 445 (SMB v3))
https://docs.aws.amazon.com/storagegateway/latest/userguide/Resource_Ports.html
- AWS IP Address Ranges:
<https://docs.aws.amazon.com/general/latest/gr/Welcome.html>

Hardware Requirements:

- **8 processors are required for testing.** Using 16 processors is strongly recommended for production servers.
- **32 gigabytes RAM are required for testing.** Using 64 gigabytes of RAM is strongly recommended for production servers.
- 200 gigabytes of available hard disk space. System free space must be at least 150 GB after install of *LinkFixer Advanced*.
- Multiple computers to share the processing load are also recommended. *LinkFixer Advanced* can share its workload across multiple computers. In most cases, this can *dramatically* increase your processing speed and thus shorten your migration jobs.

Note: If your resources are less than these requirements your performance may be reduced.

File-level Passwords and Encryption

You need to remove any *file-level* password protection or encryption from your files in order for *LinkFixer Advanced* to be able to process them.

File System Permissions

Full control access to the folder “C:\ProgramData\LinkTek\LinkFixer Advanced\”.
Access should include all files and subfolders.

Full control access to the folder “C:\Users\Public\Desktop\LinkFixer Advanced\”.
Access should include all files and subfolders.

Internet Access (License Activation)

Access to <https://secure.softwarekey.com>

SharePoint Permissions

- Domain user account which must be a Site Collection Administrator and must have read/write access to the Active Directory Domain

SharePoint Online Permissions

- Domain user account which must be a SharePoint Online Site Collection Administrator and must have read/write access to the Active Directory Domain
- Access to <https://sharepoint.com>
- Access to the domain <https://microsoftonline.com>

Important: Your Windows user account must have *read and write* access to every network location, server, share, directory and file that *LinkFixer Advanced* will be instructed to process.

Database Requirements

The default database installed by *LinkFixer Advanced* is SQLite, which is ideal for testing and for small production jobs up to 100 gigabytes. SQLite is a file-based database and is not sufficient for processing larger numbers of files and links. Since it is a flat database, it will process your files far more slowly than with a SQL Server database installation.

Production installations will require that you connect *LinkFixer Advanced* to a Microsoft SQL Server 2008 or newer SQL Server. We do not recommend using Microsoft SQL Express. It has limitations which could cause performance bottlenecks.

SQL Server Advantages

There are some very important advantages to using SQL Server (even SQL Server Express) instead of SQLite. These include:

- *LinkFixer Advanced* will process your files and links faster, both because SQL Server is faster and because using SQL Server allows *LinkFixer Advanced* to process more files using multiple threads at the same time. Multi-threading will automatically be enabled as soon as you switch from SQLite to SQL Server.
- If your license permits, you will be able to install and run multiple instances of *LinkFixer Advanced* at the same time and connect these instances to the same *LinkFixer Advanced* database.

Configuring SQL Server

If you already have SQL Server installed, have your database administrator make a new database specifically for *LinkFixer Advanced*. *LinkFixer Advanced* will automatically create the necessary database schema when it first accesses the database.

Note: *LinkFixer Advanced* requires use of Microsoft SQL Server 2008 or newer.

Also, the following is important to know regarding the SQL Server database:

1. *LinkFixer Advanced* requires a blank database which the *LinkFixer Advanced* user has read/write access.
2. *LinkFixer Advanced* requires the default schema be used for the database.
3. When *LinkFixer Advanced* creates its schema, it does not use named schemas and expects its own schema to be the default (“dbo”). There should not be any conflict with other schemas, as *LinkFixer Advanced* only uses and requires a single schema for its operation. For more information, see the following article under the section titled “Default Schema”:

<https://technet.microsoft.com/en-us/library/dd283095%28v=sql.100%29.aspx>

Important:

Microsoft SQL Server database requirements:

SQL Database initial size: 500MB or more

SQL Log initial size: 8MB or more

DB Autogrowth: 250MB or more

LOG Autogrowth: 250MB or more

Windows Account must have read/write permissions

SQL Account must have read/write permissions

New Database

Select a page

General

Options

Filegroups

Connection

Server:

DESKTOP-JG3FVDO\LINKTEK

Connection:

DESKTOP-JG3FVDO\Allen Giebel

[View connection properties](#)

Progress

Ready

Script Help

Database name:

LinkFixer

Owner:

<default>

...

☒ Use full-text indexing

Database files:

Logical Name	File Type	Filegroup	Initial Size (MB)	Autogrowth / Maxsize	
LinkFixer	ROWS...	PRIMARY	1,000	By 250 MB, Unlimited	...
LinkFixer_log	LOG	Not Applicable	8	By 250 MB, Unlimited	...

Add

Remove

OK

Cancel

SQL Server Database Permissions

The database permissions of the *LinkFixer Advanced* user should be set to “db_owner”.

Select a page

- General
- Server Roles
- User Mapping
- Securables
- Status

Script ? Help

Users mapped to this login:

Map	Database	User	Default Schema
<input checked="" type="checkbox"/>	LinkFixer	dbo	dbo
<input type="checkbox"/>	master		
<input type="checkbox"/>	msdb		
<input checked="" type="checkbox"/>	ReportServer\$LINKTEK	dbo	dbo
<input checked="" type="checkbox"/>	ReportServer\$LINKTEKTempDB	dbo	dbo
<input type="checkbox"/>	tempdb		

☐ Guest account enabled for: LinkFixer

Database role membership for: LinkFixer

- ☐ db_accessadmin
- ☐ db_backupoperator
- ☐ db_datareader
- ☐ db_datawriter
- ☐ db_ddladmin
- ☐ db_denydatareader
- ☐ db_denydatawriter
- ☒ db_owner
- ☐ db_securityadmin
- ☒ public

Connection

Server: DESKTOP-JG3FVDO\LINKTEK

Connection: DESKTOP-JG3FVDO\Allen Giebel

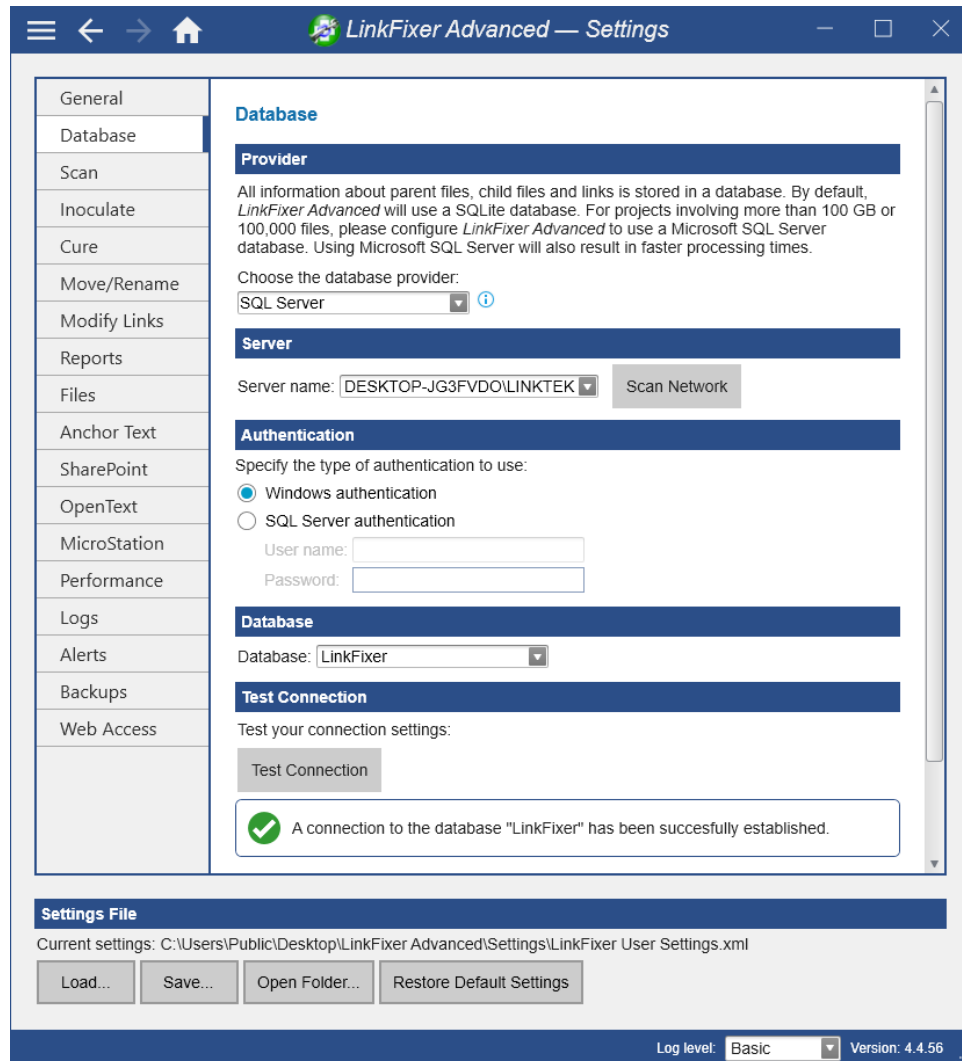
[View connection properties](#)

Progress

Ready

OK Cancel

Detailed instructions for provisioning and configuring SQL Server are automatically presented in a pop-up screen in *LinkFixer Advanced* when you select SQL Server as the database provider in the “*Options / Database*” screen.



The screenshot shows the 'LinkFixer Advanced — Settings' window with the 'Database' tab selected. The left sidebar contains a list of settings categories: General, Database, Scan, Inoculate, Cure, Move/Rename, Modify Links, Reports, Files, Anchor Text, SharePoint, OpenText, MicroStation, Performance, Logs, Alerts, Backups, and Web Access. The main content area is titled 'Database' and includes sections for 'Provider', 'Server', 'Authentication', 'Database', and 'Test Connection'. The 'Provider' section explains that information is stored in a database and offers a choice between SQLite and Microsoft SQL Server, with 'SQL Server' selected. The 'Server' section shows the server name 'DESKTOP-JG3FVDO\LINKTEK' and a 'Scan Network' button. The 'Authentication' section has 'Windows authentication' selected. The 'Database' section shows 'LinkFixer' selected. The 'Test Connection' section has a 'Test Connection' button and a success message: 'A connection to the database "LinkFixer" has been successfully established.' Below the main settings is a 'Settings File' section showing the current settings file path and buttons for 'Load...', 'Save...', 'Open Folder...', and 'Restore Default Settings'. The bottom status bar shows 'Log level: Basic' and 'Version: 4.4.56'.

Testing the Connection

Be sure you select the database from the dialog and test that your database connection is communicating.



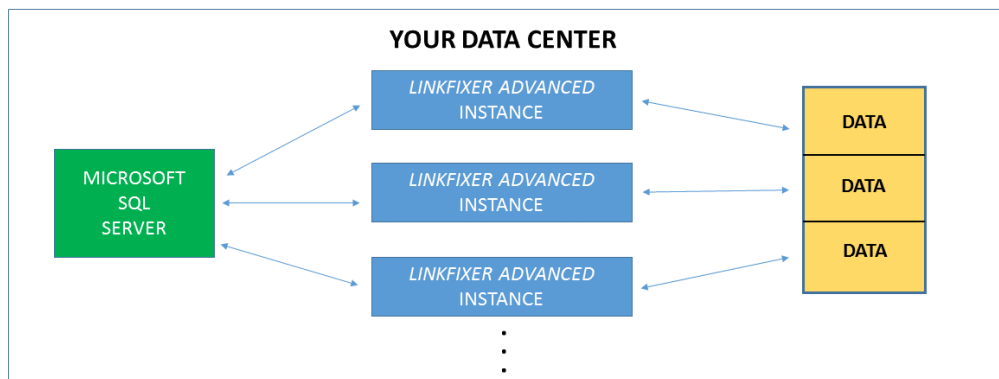
This block shows a close-up of the 'Test Connection' section. It features a blue header bar with the text 'Test Connection'. Below the header, it says 'Test your connection settings:' followed by a 'Test Connection' button. At the bottom, there is a green checkmark icon and a message: 'A connection to the database "LinkFixer" has been successfully established.'

Where to Install *LinkFixer Advanced*

Where on your network you install *LinkFixer Advanced* can have a profound effect on the speed at which *LinkFixer Advanced* can process your files and links. In general, you should install *LinkFixer Advanced* as close as possible to both the data you intend to process and your SQL Server database. The images below illustrate the relative speed and efficiency of various network configurations.

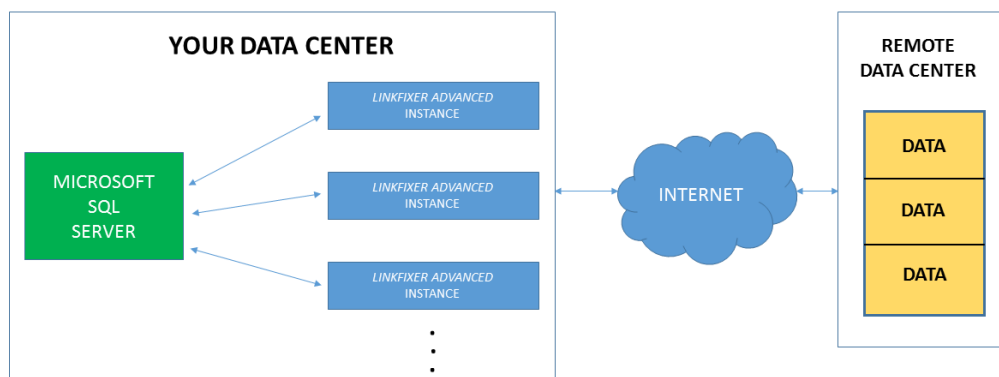
LinkFixer Advanced will always work fastest when it is installed in the same location as the data and your SQL Server.

FASTEST: *LinkFixer Advanced* will process files fastest when *LinkFixer*, your data and your SQL Server are all in the same location.



Processing speeds will always be relatively slower if you install *LinkFixer Advanced* in your local data center but configure it to process files that are located in a remote data center. This occurs as a result of network latency between the data centers.

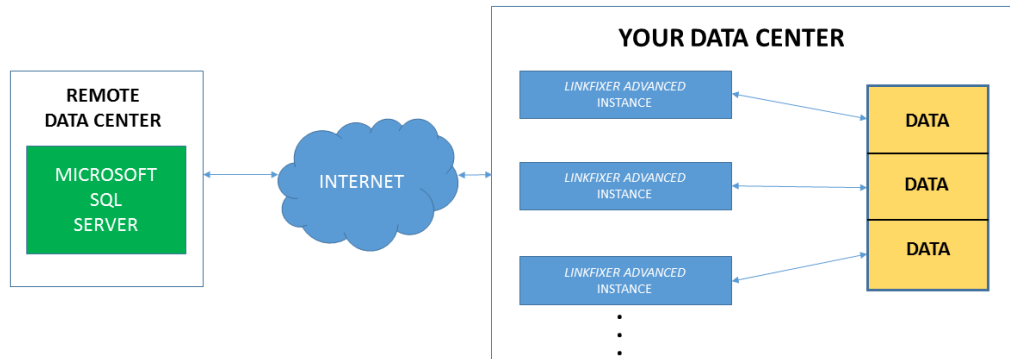
SLOW: Expect significantly slower processing speeds when *LinkFixer Advanced* is processing files located in a remote data center.



We strongly recommend that you avoid installing *LinkFixer Advanced* at a distance from your SQL Server. *LinkFixer Advanced* communicates even more frequently with the SQL Server database than it does with your data. So, any network latency introduced between *LinkFixer Advanced* and the database will have even more of a

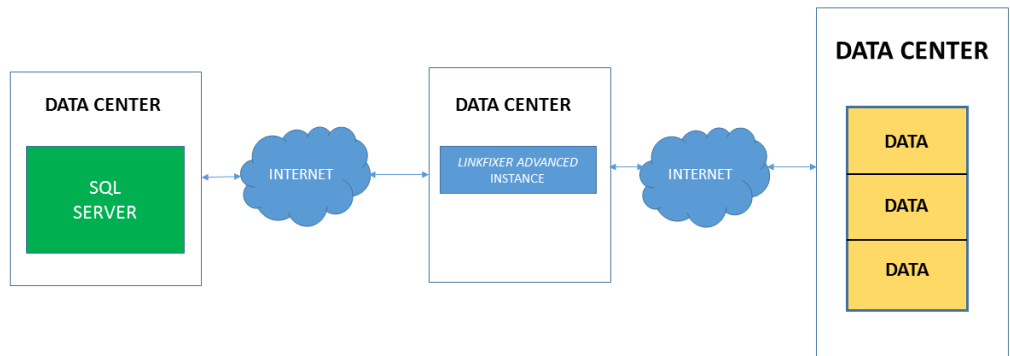
negative effect on speed than distance between *LinkFixer Advanced* and your data set.

SLOWER: Processing speeds will be even slower if your SQL server is located at a distance from *LinkFixer Advanced* and your data.



The worst-case scenario would be if you install *LinkFixer Advanced* in a location that is remote from both the SQL Server database and your data.

SLOWEST: This is the “worst-case” scenario, where network latency will most dramatically degrade performance of *LinkFixer Advanced*.



Notice also that running only one instance of *LinkFixer Advanced* will always be slower than running multiple instances with each instance pointed to a different segment of your data.

