

Lasernet 10.

Lasernet SharePoint 10

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Revision 3
2024-02-16

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1 Introduction.

1.1 Who Should Use This Guide?

This guide is written for Lasernet Developers. It is intended primarily as a reference to the different Microsoft SharePoint functions in Lascript.

It provides the information required for successfully integrating Microsoft SharePoint and Lascript in your business. The guide addresses the Microsoft SharePoint 2016 and newer development tasks of the Lascript Output Management system.

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3 SharePoint in Lasernet.

3.1 Microsoft SharePoint

Microsoft SharePoint is a family of software products developed by Microsoft for collaboration, file sharing and web publishing.

From a Lascript perspective, SharePoint is seen as a file / document archive. Support for SharePoint is implemented so use is very similar to what is known from working with databases.

This document will not explain what SharePoint is and you will require knowledge of document libraries, fields etc.

3.2 Lascript Components

Lascript Output Management for Microsoft SharePoint 2016 and newer consists of the following components.

Note: Older versions of SharePoint may still work with together with Lascript 10, but they are not supported in case of incompatibility, reported security issues or bugs. You can read more information, about supported SharePoint versions, at microsoft.com.

3.2.1 SharePoint Output Module

The SharePoint output module enables Lascript Server to deliver documents and associated metadata to Microsoft SharePoint.

3.2.2 SharePoint Connection

A SharePoint Connection is used by a SharePoint Command to tell Lascript where the server is located and which credentials are needed for successful connection. It is possible to address a specific subsite on the SharePoint Server and a Document library within this subsite.

3.2.3 SharePoint Command

SharePoint Commands can be inserted at modifier event points and supports the following options:

- insert new documents with metadata
- update metadata on existing documents or folders
- create new folders
- delete documents or folders along with all documents in the folders
- check in documents (not supported by Graph API)
- check out documents (not supported by Graph API)
- discard check outs (not supported by Graph API)
- new document library (not supported by Graph API)
- new subsite (not supported by Graph API)

3.2.4 Scripting

Script support enables you to call your SharePoint commands in batches in a logical manner.

3.3 Troubleshooting and Support

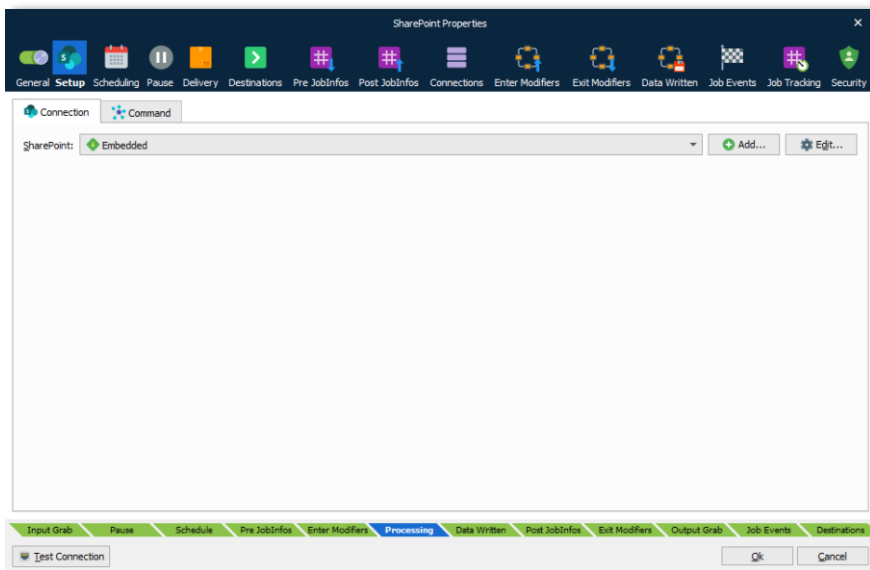
For technical support, we recommend creating a support ticket in the Formpipe support portal.

Alternatively, please contact your local partner or reseller.

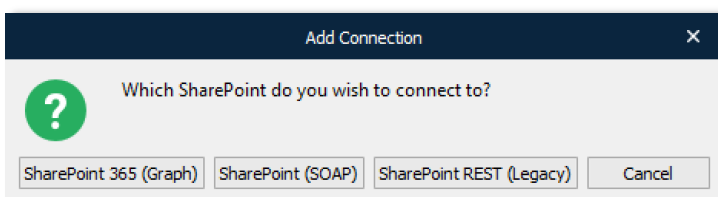
4 Reference.

4.1 SharePoint Output Module

The SharePoint Output module is used to insert a new document in SharePoint with metadata or to update the metadata of an existing document. Supported connection types are Web Services and REST API (Legacy or Graph).



On the Connection tab, select **Embedded** from the drop-down menu and click **Edit** to set up a connection to SharePoint. An embedded connection is accessible from this module only.



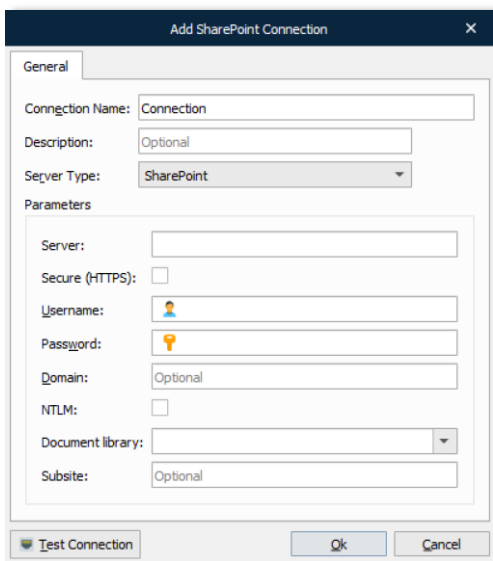
Supported API versions are:

- SharePoint 365 (Graph)
- SharePoint (SOAP)
- SharePoint REST (Legacy)

Connect to SharePoint via Graph, SOAP (Web Service) or REST (Legacy). An advantage of using Graph (latest Microsoft API) and REST is that you do not have to add references to any SharePoint 365 libraries or client assemblies. Instead, you make HTTP requests to the appropriate endpoints to retrieve or update SharePoint 365 entities, such as webs, lists, and list items.

Note: Supported command types and properties can vary between the protocols because not all types are supported by the Graph and REST interfaces.

4.1.1 Connection: Web Services

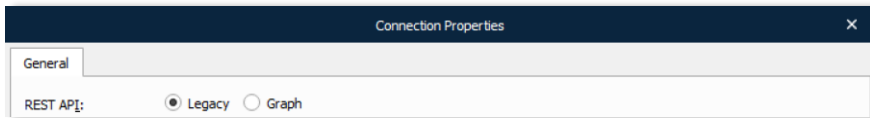


Protocol	Web Service
Server	The name of the server. Note. Do not use IP address or localhost
Username	A SharePoint user with appropriate rights. The domain can be specified using the format: <code><domain>\<username></code>
Password	Password of the SharePoint user
Domain	Domain name for SharePoint server
NTLM	Windows network protocol for security
Document library	(Optional) The library where insert / update is done. Library can be specified as part of the destination path
Subsite	If SharePoint is set up with subsites, a subsite must be specified

Click **Test Connection** to validate the connection between the Lasernet module and SharePoint.

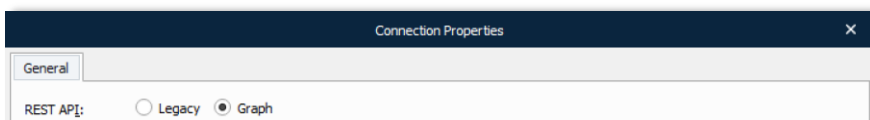
4.1.2 Connection: REST API (Legacy or Graph)

Select between **Legacy**



Connection Properties dialog, General tab. REST API: Legacy Graph

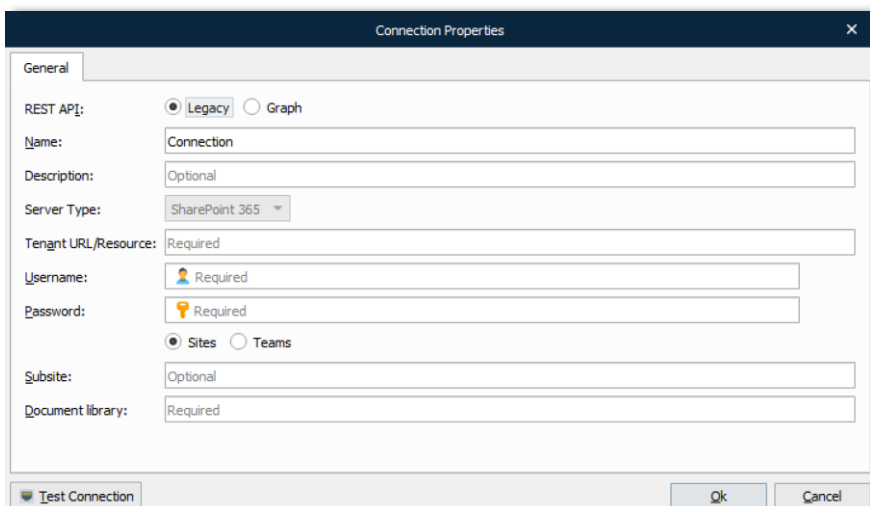
or **Graph**



Connection Properties dialog, General tab. REST API: Legacy Graph

as your preferred **REST API** connection type.

4.1.3 Connection: Legacy



Connection Properties dialog, General tab. REST API: Legacy Graph. Fields include Name, Description, Server Type (SharePoint 365), Tenant URL/Resource, Username, Password, Subsite, and Document library. Buttons: Test Connection, Ok, Cancel.

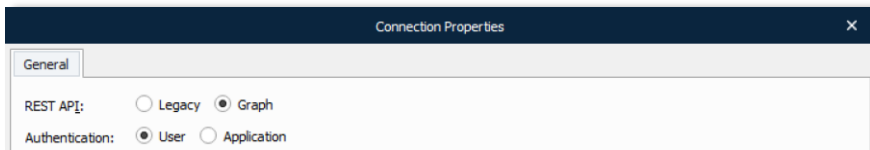
REST API	Legacy
Tenant URL/Resource	The tenant URL for your resource, like https://microsoft.sharepoint.com
Secure (HTTPS)	HTTP security can be activated for encrypted communication and secure identification
Username	A SharePoint user with appropriate rights. The domain can be specified using the format: <code><domain>\<username></code>
Password	Password for the SharePoint user
Type of resource	Activate Teams if you want to connect to Teams instead of SharePoint
Subsite	If SharePoint is set up with subsites, a subsite must be specified

Document library (Optional) The library where insert / update is done. Library can be specified as part of the destination path.

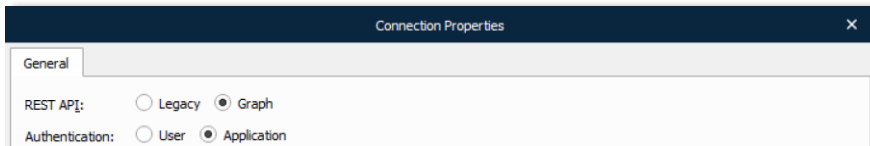
Click **Test Connection** to validate the connection between the Lasernet module and SharePoint.

4.1.4 Connection: Graph

Select between **User**



or **Application**

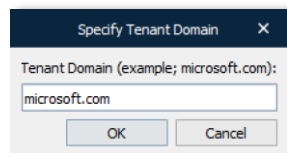


as your preferred **Authentication** method.

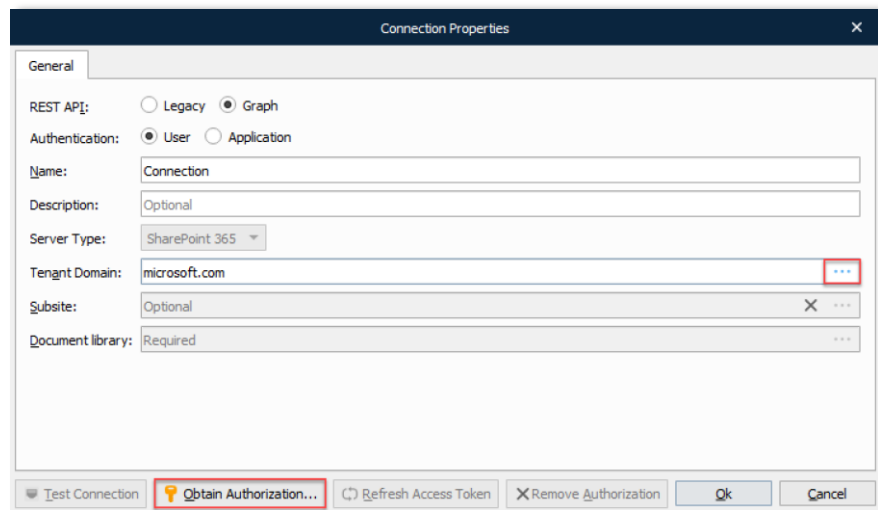
REST API Graph

Authentication Select User to authentication with a user account in your organization

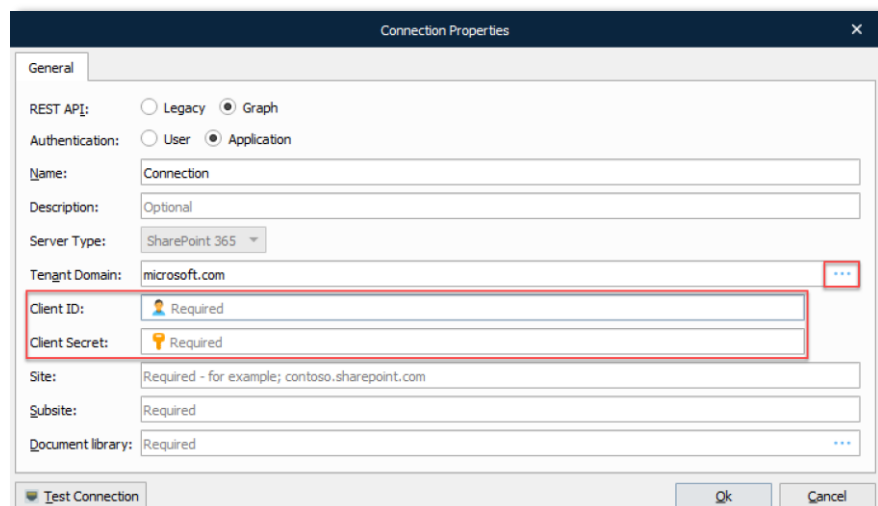
Tenant Domain Click the **...** button to specify your domain, for example, microsoft.com



Click **Obtain Authorization...** and log in with a user to connect to an account in your organization.



or Application to authenticate as an application that is registered as an app.



Added authentication as application for SharePoint Graph communication requires that:

- Lasernet SharePoint must be registered as an app by an Azure AD admin
- Azure AD admin must provide a ClientID and Client Secret for the module to sign in

Site (Required) The organization site for your SharePoint

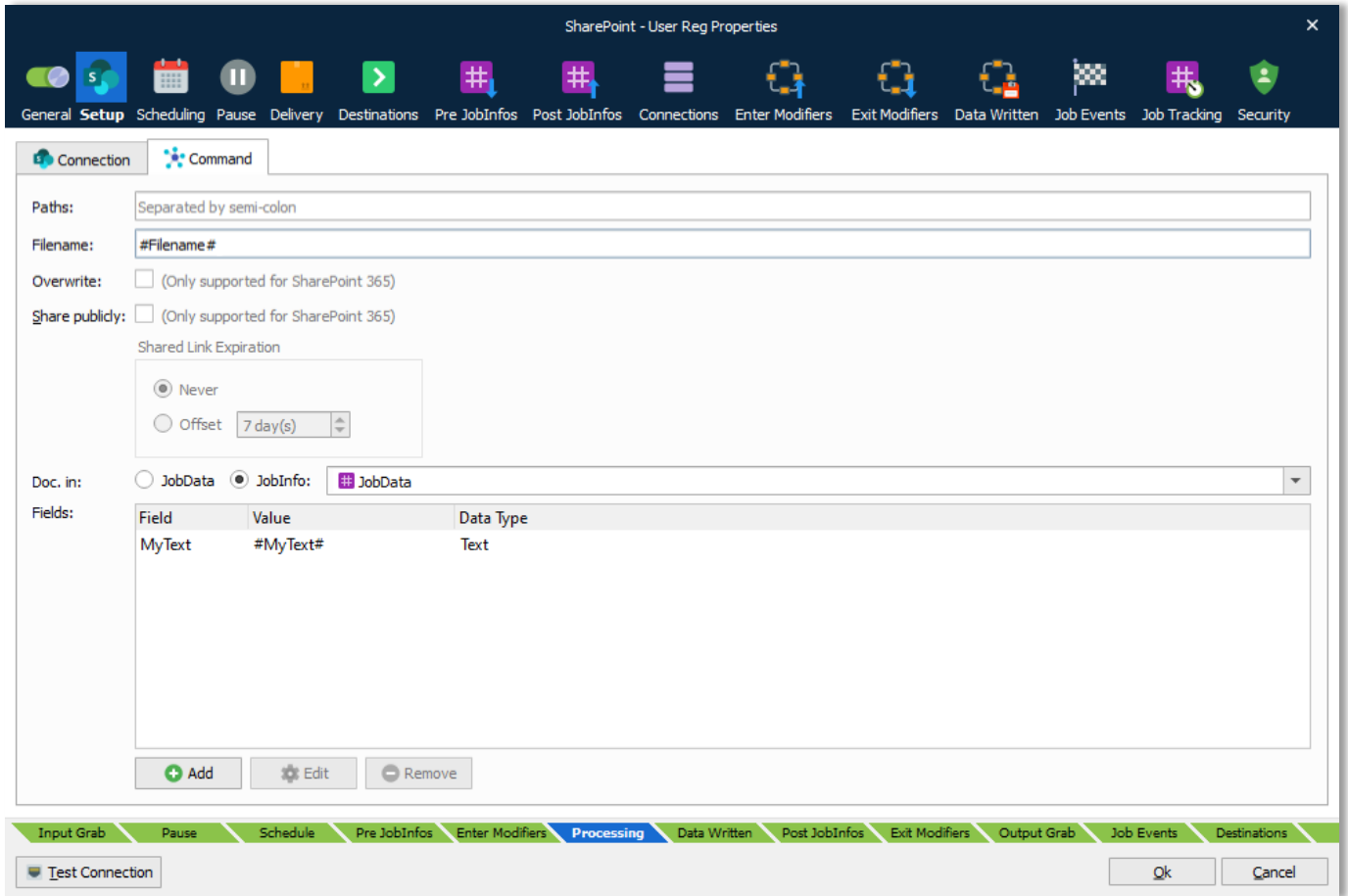
Subsite (Optional) If SharePoint is set up with subsites, a subsite must be specified. Click the **...** button to get a list of your available subsites

Document library (Required) The library where insert / update is done. Library can be specified as part of the destination path. Click the **...** button to get a list of your available document libraries

Click **Test Connection** to validate the connection between the Lasernet module and SharePoint.

Note: The button is activated when all required fields are completed.

Command



In the Command tab you must enter your Insert properties. Information about the properties are listed in the chapter about the insert command.

4.1.5 Insert Document

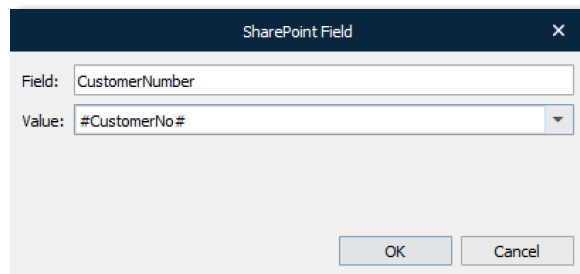
Documents can be inserted from JobData or another JobInfo.

Destination paths It is possible to insert the same document in multiple paths in SharePoint. To do this, each path must be separated with a colon.

Doc. in Specifies where document data comes from:

- **JobData** The actual job is inserted (this is default)
- **JobInfo** The data to be inserted is taken from a specific JobInfo.

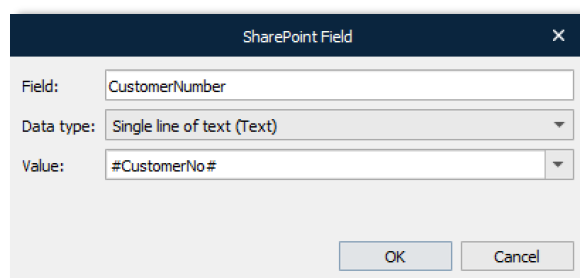
Fields A list of metadata to be inserted along the document. These fields must exist in the SharePoint library.



The data type of a field must match the data type of the field in SharePoint.

It is possible to use JobInfo substitution, as seen above, in the example with #CustomerNo# JobInfo.

The data type field is required for Web Services only and is therefore hidden for REST.



4.1.6 Update Document or Folder

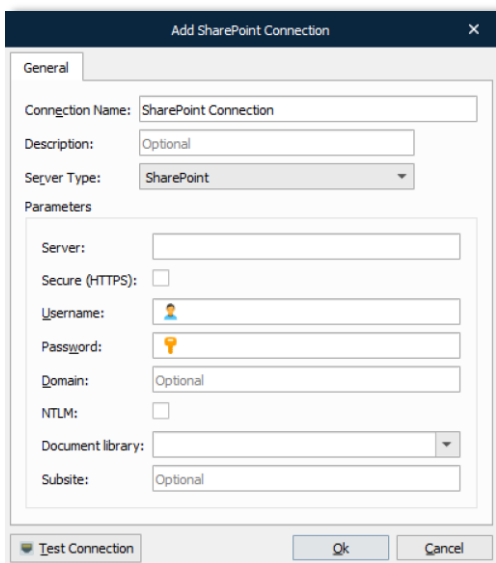
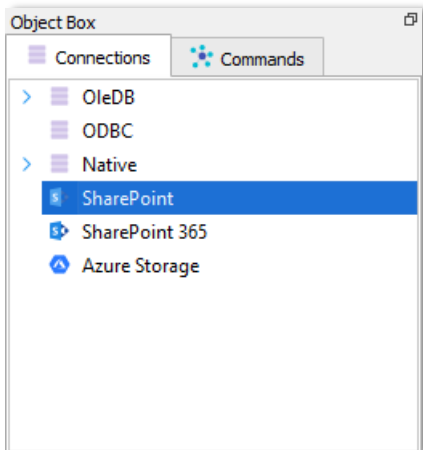
Metadata for an existing Document or Folder in SharePoint can be updated via the Data in “Fields only” option. When this option is set, no document is uploaded – only metadata.

Note: Only one document or folder can be updated; however, inserting can be done in multiple paths.

Refer to the previous section for a description of the settings.

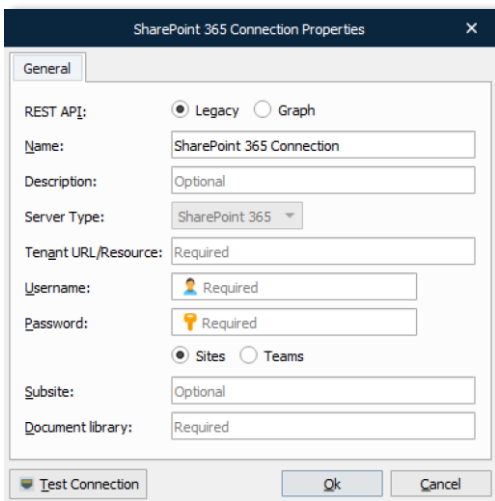
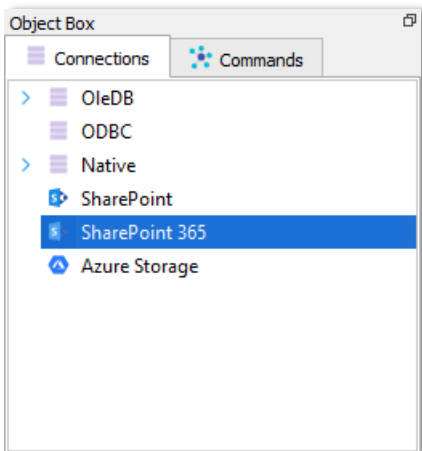
4.2 SharePoint Connections

SharePoint connections are added through the Databases menu in Lasernet. Select SharePoint to use Web Service as connection type.



In addition to testing the connection, **Test Connection** fetches the list of libraries from the SharePoint server. These can then be accessed via the drop-down menu of the Document library setting.

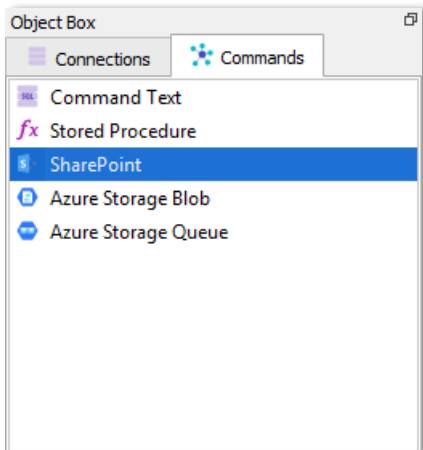
Select SharePoint 365 to use REST API with Legacy or Graph communication.



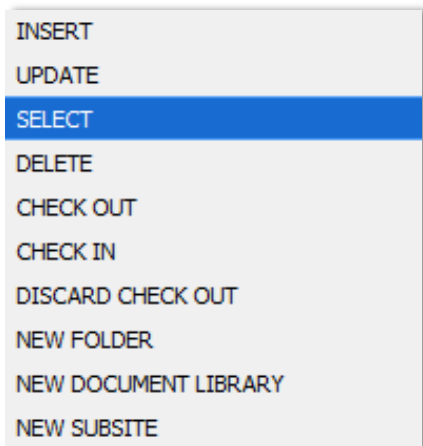
Click the **Test Connection** button to validate the connection between the Lasernet module and SharePoint.

4.3 SharePoint Commands

SharePoint commands are added through the Databases menu in Lasernet.

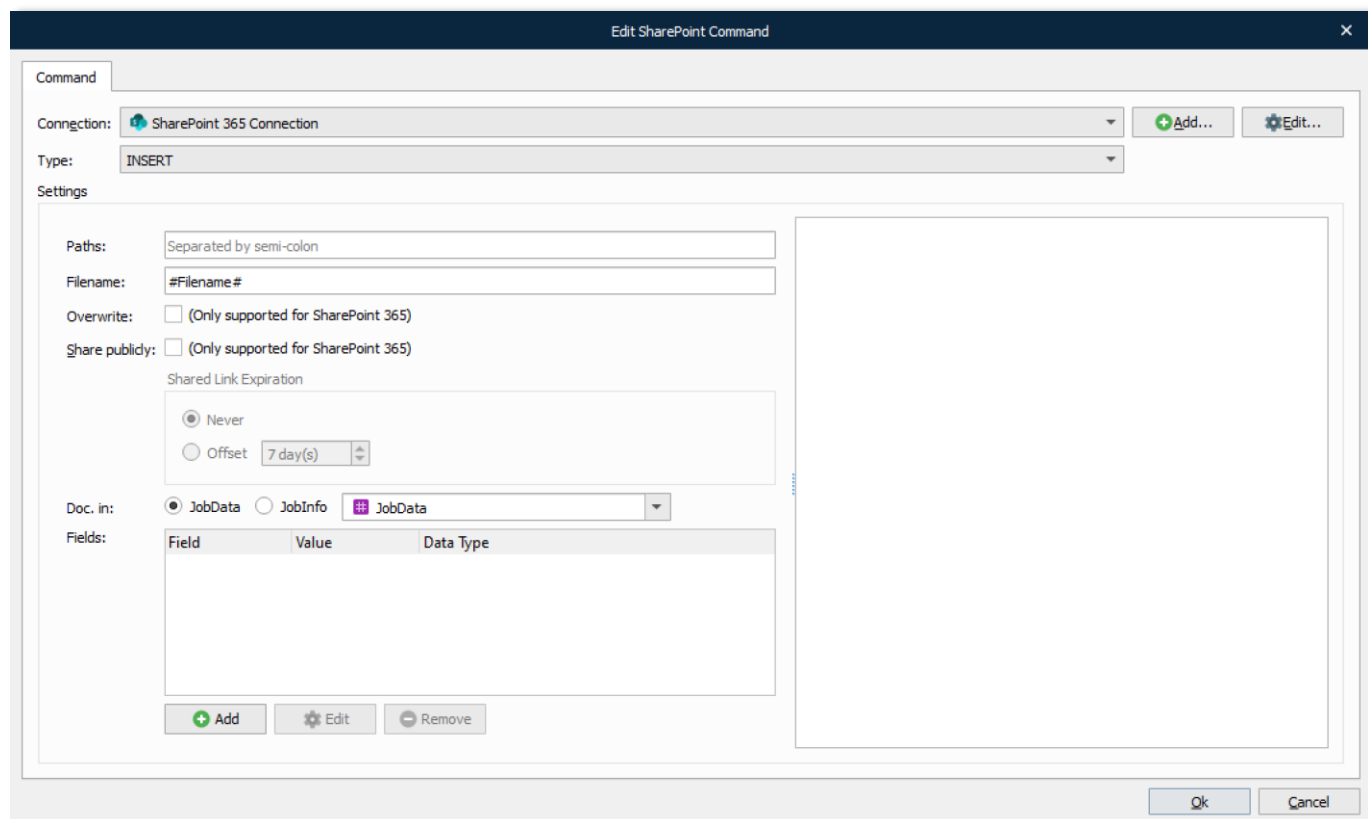


There are 10 different command types for REST API but only 5 for Graph API. They will be listed in the following sections.



4.3.1 INSERT and UPDATE

These command types work exactly like the SharePoint output module, but are split in two different command types.



Overwrite

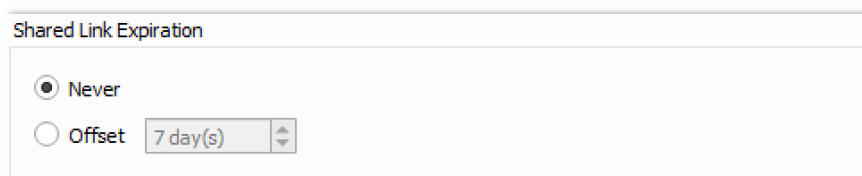
Select the checkbox to allow an Insert command to overwrite an existing document.

Note: This setting is only supported for the SharePoint 365 modifier module.

Share publicly

Select the checkbox to share the inserted file publicly with or without shared link expiration.

Note: This setting is only supported for the SharePoint 365 with REST Graph API.



The offset can be set from 1 to 999 days, where 7 is the default value.

Doc. in

Describes where Lasernet should read the document data.

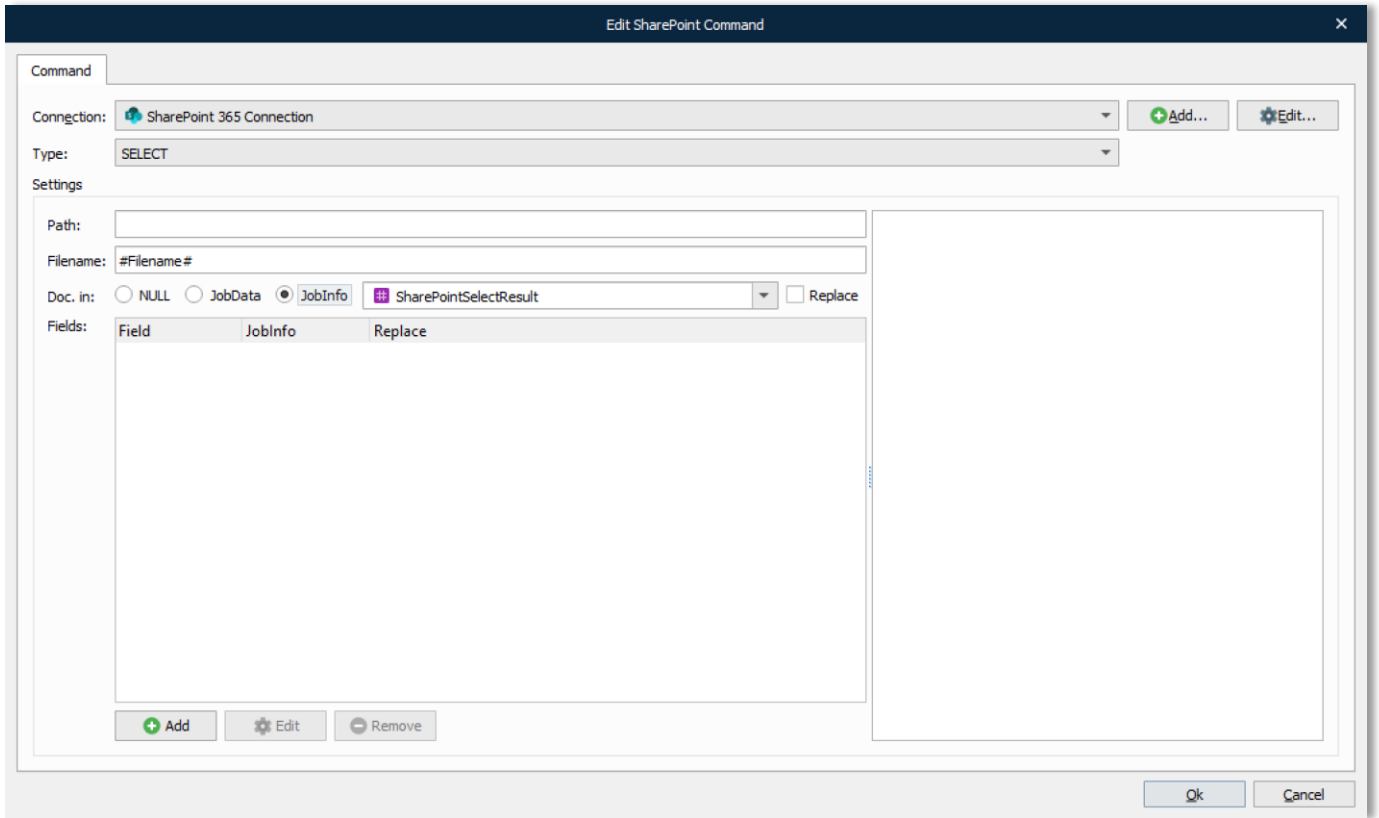
- **JobData:** The document will overwrite the data of the primary job.
- **JobInfo:** The document will be stored in a specific JobInfo. The default is SharePointSelectResult.

Fields

SharePoint documents can contain a lot of metadata, so it is possible to choose which fields should be stored, and in which JobInfos, in Lasetnet.

4.3.2 SELECT

This command type is used to retrieve documents or metadata.



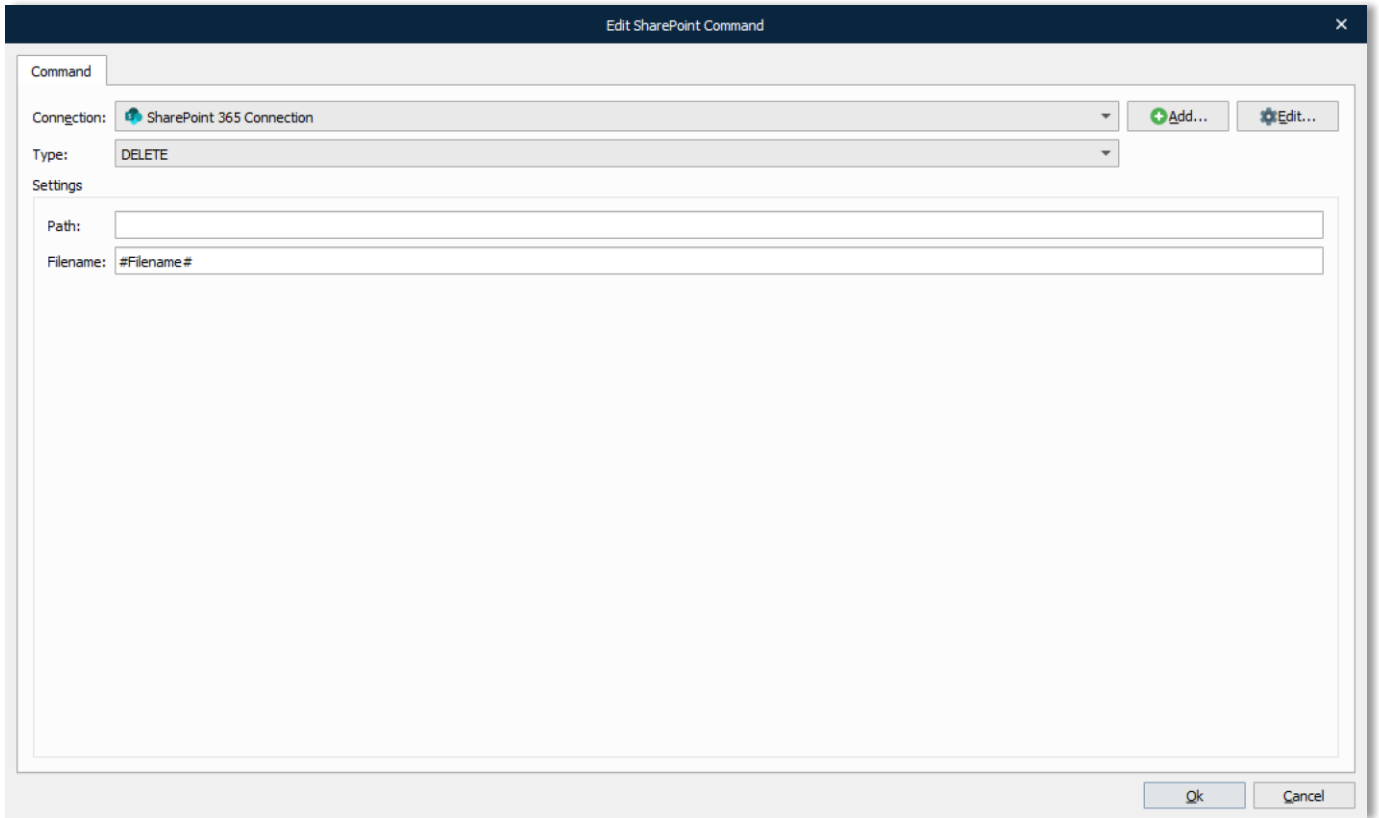
Doc in Describes where Lasernet should store the actual document data

- NULL The document will not be stored. Use this to only load fields.
- JobData The document will overwrite the data of the primary job.
- JobInfo The document will be stored in a specific JobInfo. The default is SharePointSelectResult.

Fields SharePoint documents can contain a lot of metadata, so it is possible to choose which fields should be stored, and in which JobInfos, in Lascript.

4.3.3 DELETE

This command type is used to delete specific documents or entire folders of documents.



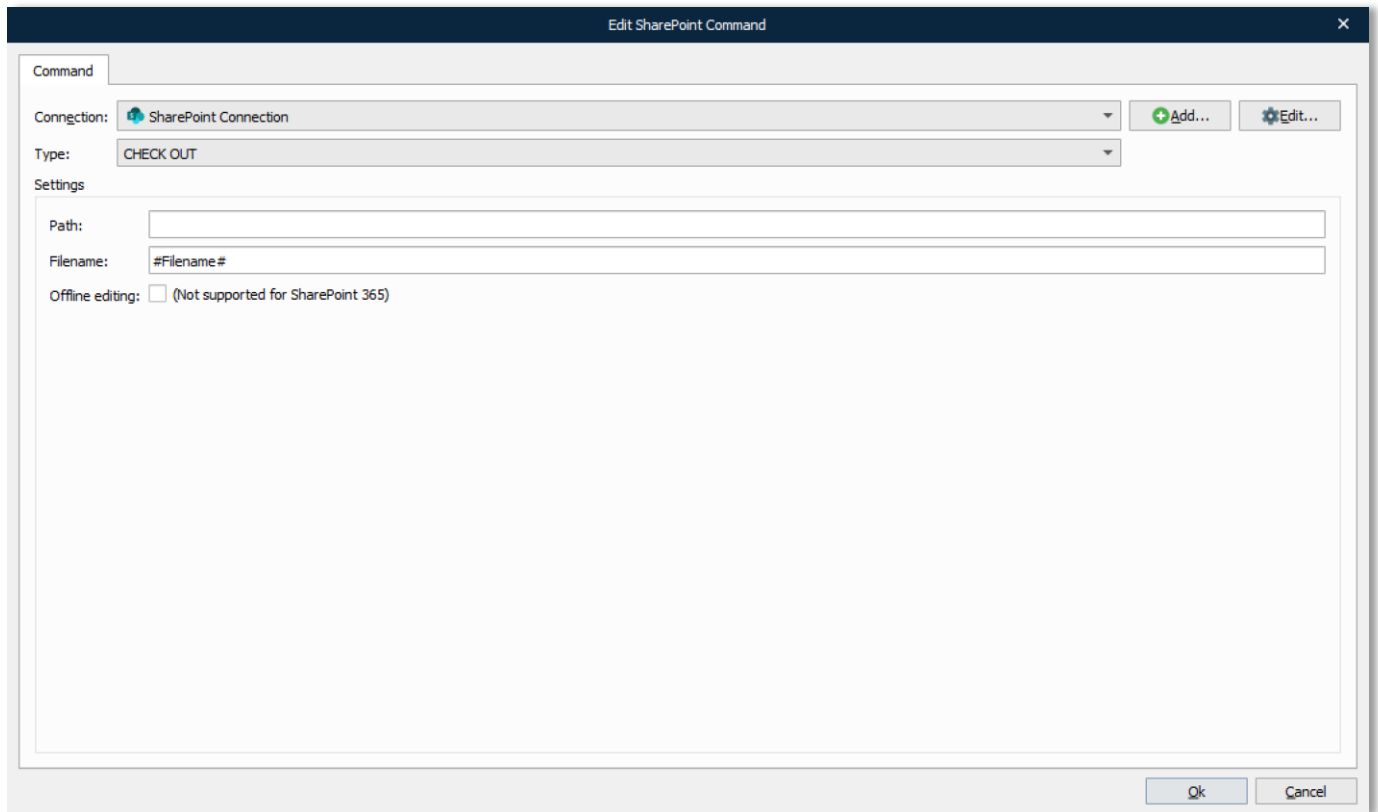
The screenshot shows a dialog box titled "Edit SharePoint Command". It has a "Command" tab. The "Connection" dropdown is set to "SharePoint 365 Connection". The "Type" dropdown is set to "DELETE". The "Settings" section contains two text boxes: "Path:" (empty) and "Filename:" (containing "#Filename#"). There are "Add..." and "Edit..." buttons next to the connection dropdown. At the bottom right, there are "Ok" and "Cancel" buttons.

If no filename is specified, the folder specified by path setting will be deleted.

4.3.4 CHECK OUT

This command is used for checking out documents for editing.

Note: This command type is not supported by Graph API.



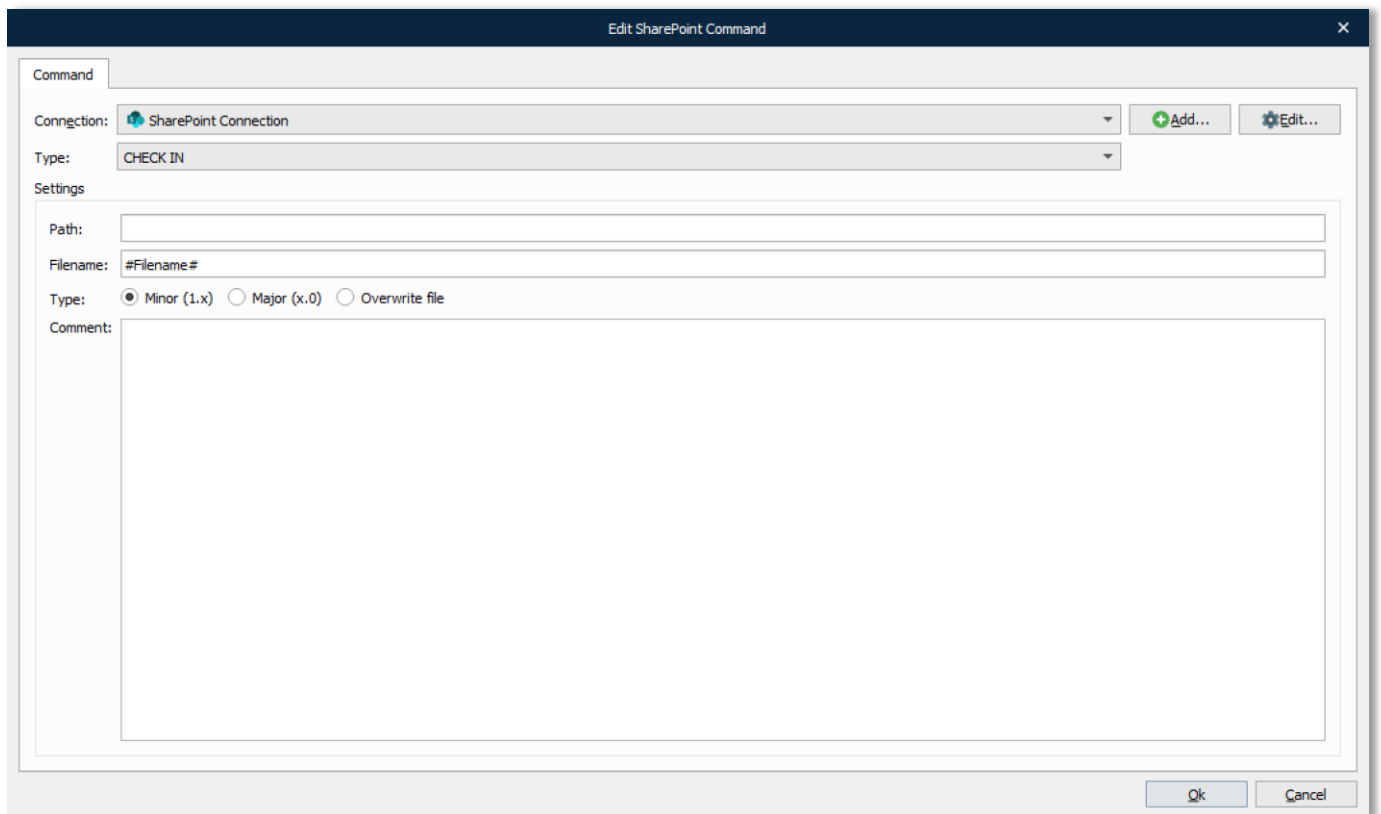
The screenshot shows a dialog box titled "Edit SharePoint Command". It features a "Command" tab, a "Connection" dropdown menu currently showing "SharePoint Connection", and two buttons: "Add..." and "Edit...". Below this is a "Type" dropdown menu set to "CHECK OUT". A "Settings" section contains a "Path:" text box, a "Filename:" text box with the placeholder "#Filename#", and an "Offline editing:" checkbox which is unchecked and followed by the text "(Not supported for SharePoint 365)". At the bottom right, there are "Ok" and "Cancel" buttons.

Offline editing is used to edit documents when you are not connected to the SharePoint server.

4.3.5 CHECK IN

This command type is used for checking in documents that were previously checked out.

Note: This command type is not supported by Graph API.



Type When checking in documents it is possible to update revision number of the document in three ways (if enabled in SharePoint).

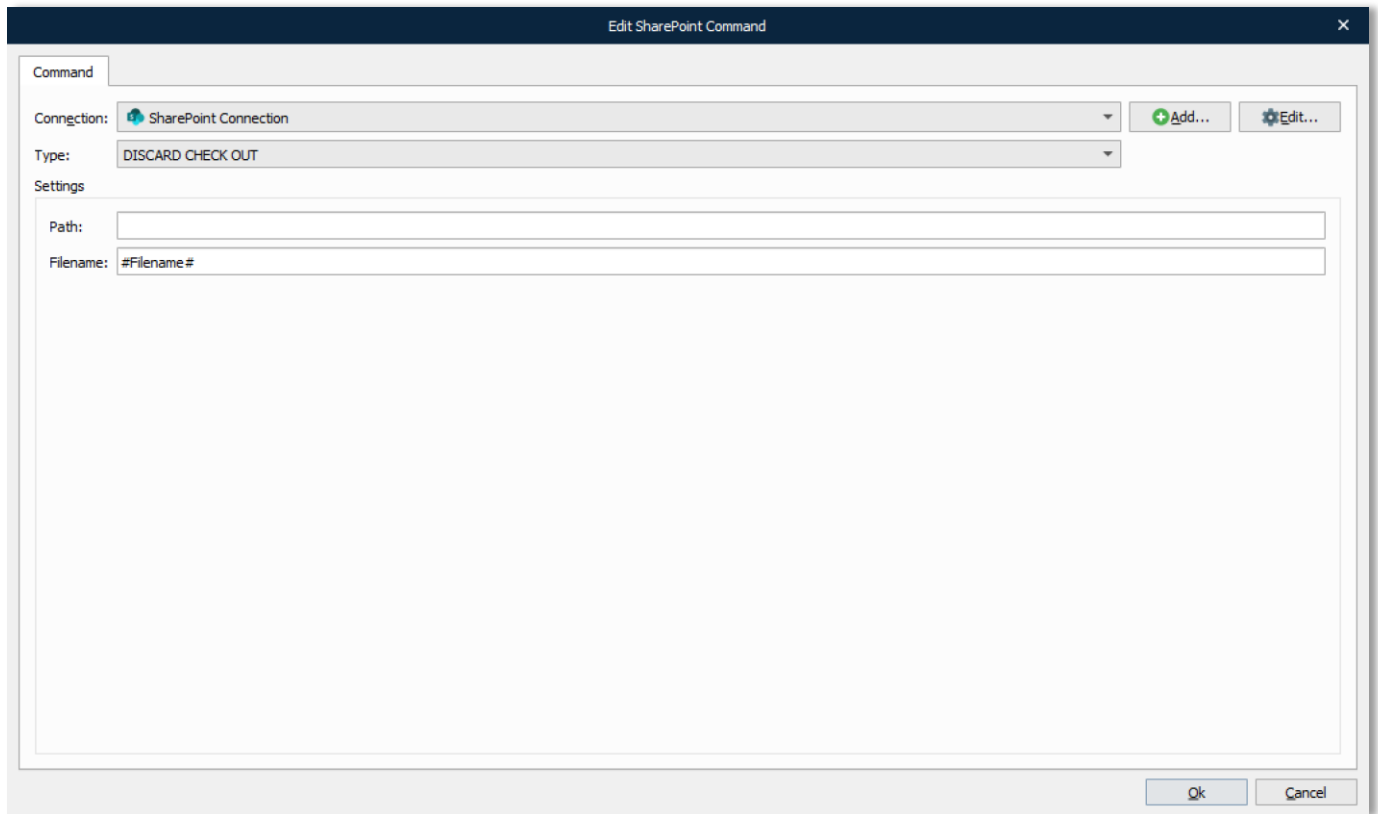
- Minor (1.x) (The minor part of the version number is incremented)
- Major (x.0) (The major part of the version number is incremented)
- Overwrite file (The version number is not incremented)

Comment Optional comment for check in.

4.3.6 DISCARD CHECK OUT

This command type is used to rollback any changes done since the document was checked out.

Note: This command type is not supported by Graph API.



Command

Connection: SharePoint Connection Add... Edit...

Type: DISCARD CHECK OUT

Settings

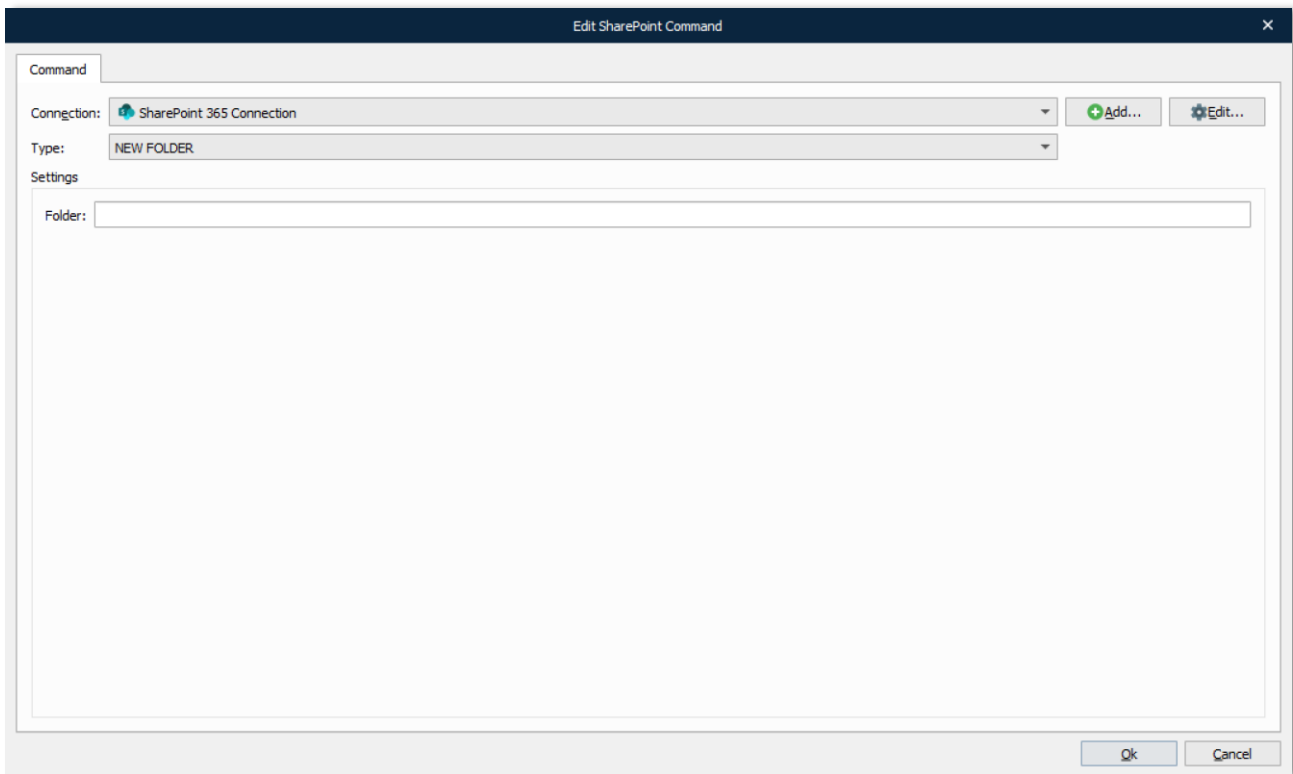
Path:

Filename:

Ok Cancel

4.3.7 NEW FOLDER

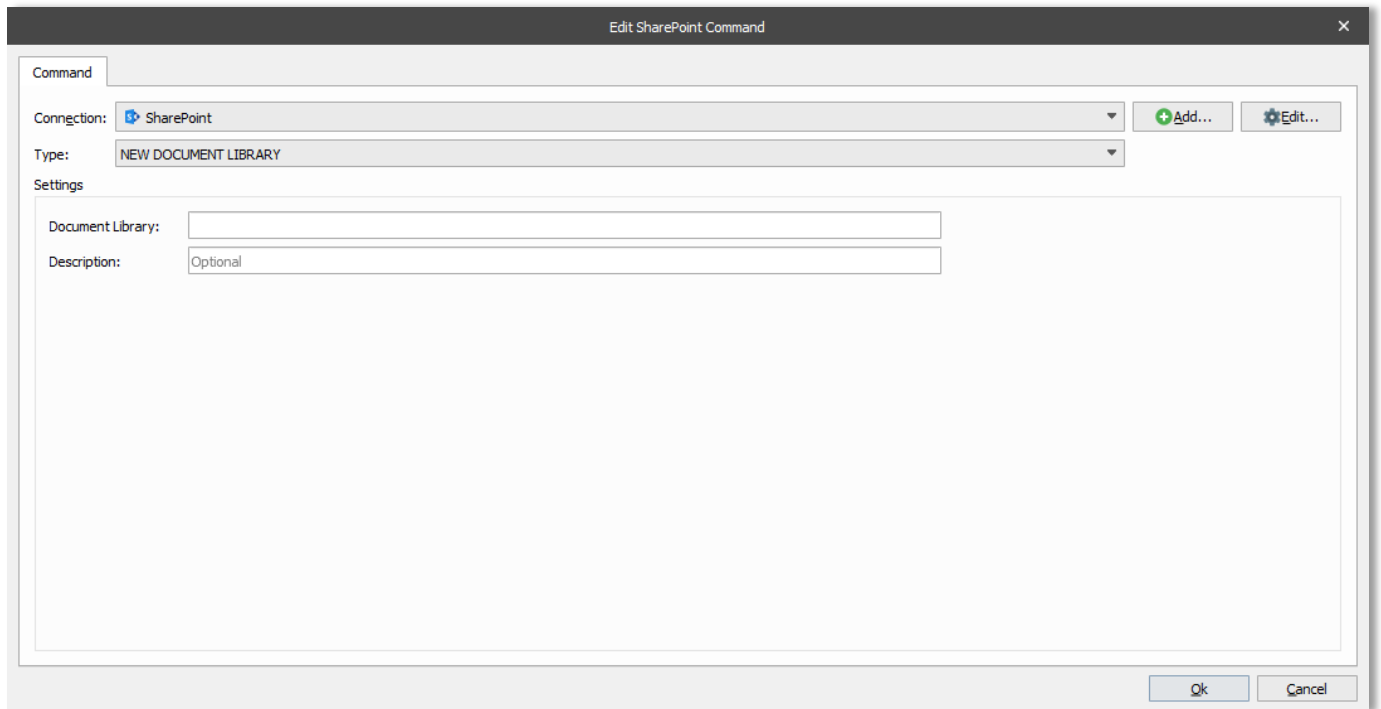
This command type is used to create a new folder in the document library.



4.3.8 NEW DOCUMENT LIBRARY

This command type is used to create a new document library

Note: This command type is not supported by Graph API.



Command

Connection: SharePoint Add... Edit...

Type: NEW DOCUMENT LIBRARY

Settings

Document Library:

Description:

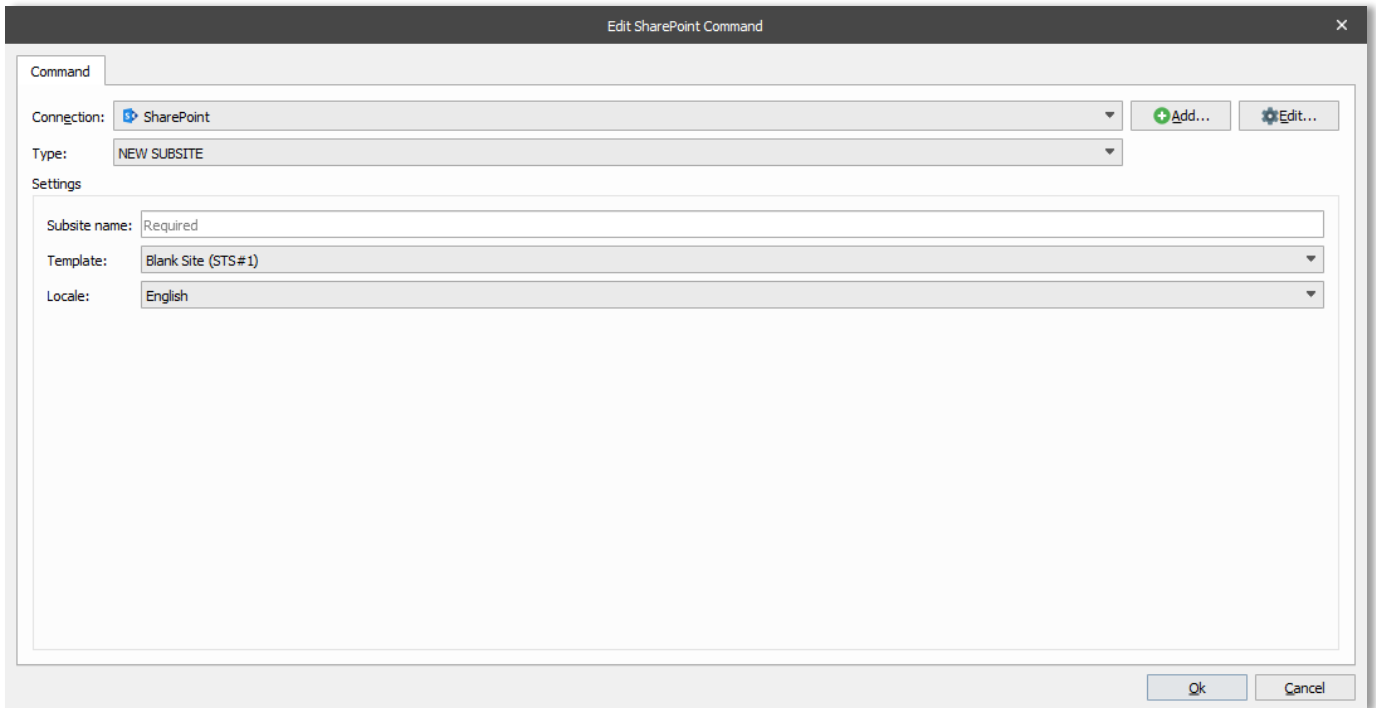
Ok Cancel

4.3.9 NEW SUBSITE

This command type is used to create a new subsite.

Notes:

1. This command type is not supported by Graph API.
2. This command type is not supported by REST interface (SharePoint 365).



The screenshot shows a dialog box titled "Edit SharePoint Command". It has a "Command" tab and contains the following fields:

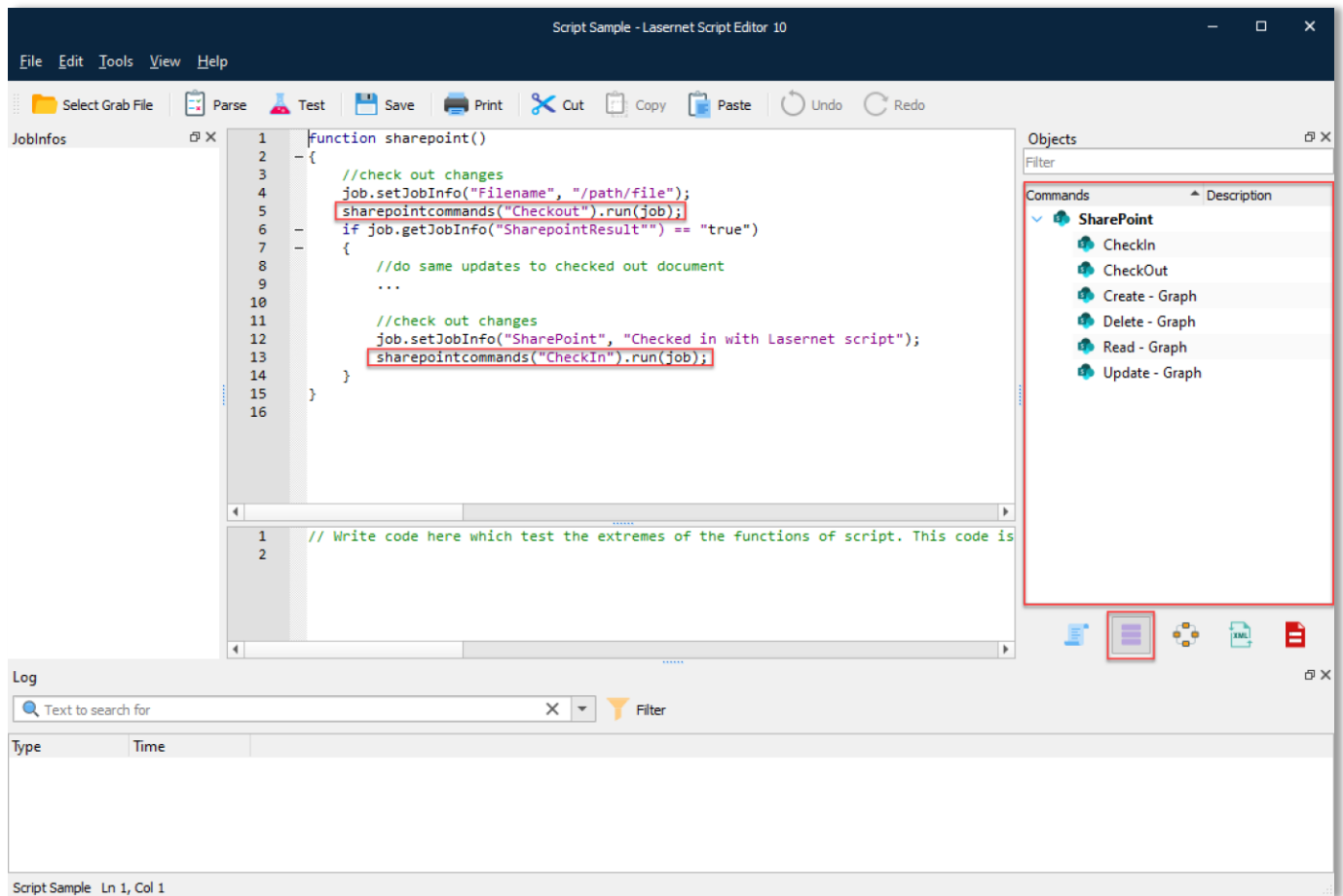
- Connection:** A dropdown menu set to "SharePoint" with "Add..." and "Edit..." buttons to its right.
- Type:** A dropdown menu set to "NEW SUBSITE".
- Settings:** A section containing three fields:
 - Subsite name:** A text input field with the value "Required".
 - Template:** A dropdown menu set to "Blank Site (STS#1)".
 - Locale:** A dropdown menu set to "English".

At the bottom right of the dialog box are "Ok" and "Cancel" buttons.

4.4 SharePoint Scripting

You can execute SharePoint commands directly via scripting in Lasernet, just like modifiers. This is done via a new array called “**sharepointcommands**”.

In order to retrieve a specific command, use the index operator “[]” and a string with the name of the command as an argument. You can then use the “run” function to invoke the command.



The screenshot shows the Lascript Editor interface. The main editor window contains the following script:

```

1  Function sharepoint()
2  --{
3      //check out changes
4      job.setJobInfo("Filename", "/path/file");
5      sharepointcommands("Checkout").run(job);
6      if job.getJobInfo("SharepointResult") == "true")
7      {
8          //do some updates to checked out document
9          ...
10         //check out changes
11         job.setJobInfo("SharePoint", "Checked in with Lascript");
12         sharepointcommands("CheckIn").run(job);
13     }
14 }
15 }
16

```

The Objects panel on the right shows a list of SharePoint commands:

- SharePoint
 - CheckIn
 - CheckOut
 - Create - Graph
 - Delete - Graph
 - Read - Graph
 - Update - Graph

The Log panel at the bottom is empty, showing a search bar and a filter icon.

i You can drag any SharePoint Command added to the configuration into the editor window. The script command to run SharePoint Commands, including value and parameter, will be automatically inserted.