Integration Documentation

L2S 1.0

L2S Integration Documentation

ZSD Digital Experience

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1 Integrations

Target audience for this document is external companies which wants to integrate with L2S using the integration API.

L2S expose an endpoint allowing companies to integrate with L2S using a secure machine-to-machine integration. In this document, the details about this endpoint will be explained, but before we go into these details, let us start with a more holistic view.

L2S is built upon the Microsoft SaaS services of Office 365 and Power Platform. Both of these services provides APIs which could be used to integrate with L2S, but because of security requirements related to MFA and Microsoft's throttling of their SaaS-services, integrating with these Microsoft APIs using a machine-to-machine integration isn't possible. To achieve a secure and performing API for L2S, a custom endpoint has been developed that supports a machine-to-machine integration. This document will serve the purpose of explaining this custom L2S API, and not focus any further on the O365 and Power Platform APIs.

2 Overview

The L2S API consists of an endpoint with multiple operations covering the integration needs towards L2S. Any external party that wants to integrate with L2S needs to be given a Service Principal from NOROG which will be used for authentication towards the L2S endpoint.
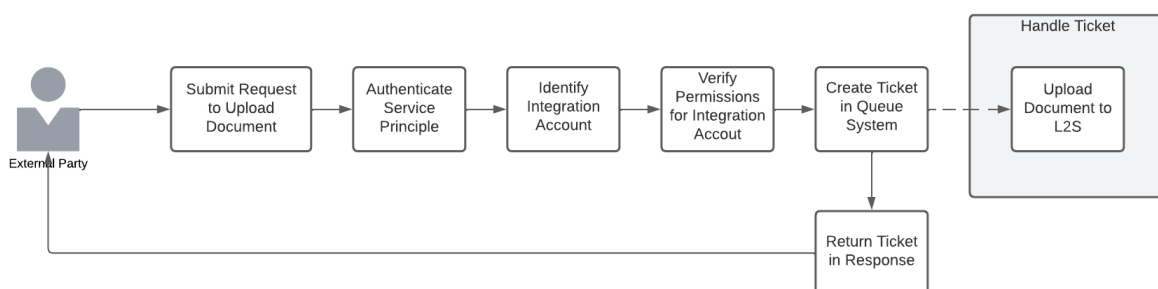
2.1 Security and Permissions

The integration API is protected in the same way requiring that the external party authenticate using a Service Principal. After being authenticated towards L2S, the integration will identify the external party's integration account which the Service Principal is connected to, and any further actions towards L2S will be done in the context of what that integration account has permissions to do. The external party (i.e. oil company or authority) is themselves responsible for granting sufficient permissions to that integration account.

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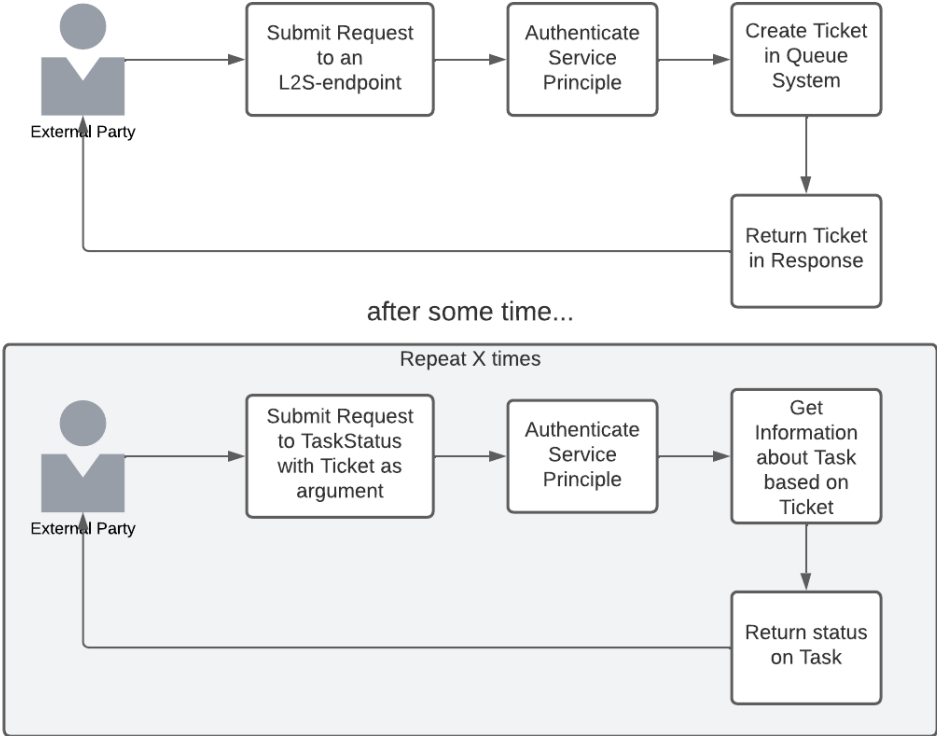
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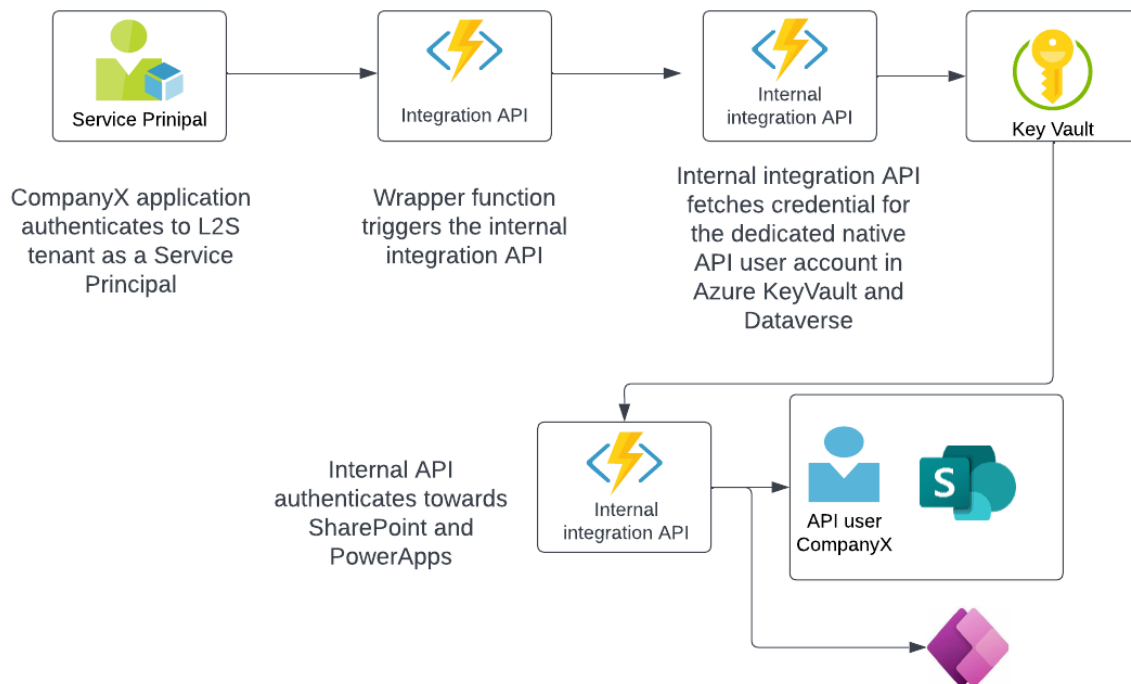
Compared to the out-of-the-box SharePoint API, the main objective of the external API is to perform operations that isn't supported by the out-of-the-box SharePoint API. In SharePoint, users will never have more than read-permissions in L2S libraries, and therefore when we need to add new or update content, it needs to happen through a protected L2S layer – which is one of the features the integration API provides. As for updating or storing data in Dataverse, the data is protected by built-in security mechanisms, but the integration API simplifies the integration.

Note! Technical details on how to connect, the URL of the endpoint and the arguments of the operations are described in a separate integration details document.

2.2 L2S ticketing queue system

L2S is running on a Microsoft-provided SaaS platform designed to handle multi-tenants in a high performing environment. To ensure quality in delivery, Microsoft have implemented among others, throttling preventing APIs to produce to high load causing a performance impact on their multi-tenant SaaS platform. To provide good quality in delivery of services from L2S, we have a ticketing queue system that is designed to handle high load in conjunction with Microsoft's throttling.

For most major POST-request submitted to the integrations API's operations, a ticket number is being returned. To check the progress of the submitted request, you can use the ticket as argument to L2S' RequestStatus operation.

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3 Guide to developers

If you want to integrate with L2S, you need to order an integration account through the L2S Support. Once the request has been approved and handled, you will receive integrations details which contains technical details about the tenant, client application credentials, a certificate and the API URL. This information will be sent in a secure way.

To integrate with L2S you need:

API URL to L2S API: https://apis-test-l2s.collabor8.no

Client application credentials and private key for certificate authentication (pfx)

L2S Azure tenant information

In chapter 4 Operations we describe the endpoints available through this API, and the related technical details are available in a separate integration details document "Integration API technical details.pdf".

The integration API is currently under development and the table below lists the current status.

3.1 Development Status

Operation	URL	Development Status
Request ticket status	GET /api/RequestStatus/{unique-ticket-guid}	Completed
CC&B – Upload CC-document	POST: /api/CashCalls/{JointVentureName}/{year}/{month}/{fileName}	Completed
CC&B – Upload B-document	POST: /api/Billings/{JointVentureName}/{year}/{month}{fileName}	Completed
CC&B – Download CC-document	GET /api/CashCalls/{JointVentureName}/{year}/{month?}?type=xml&type=xlsx&type=pdf	Completed
CC&B – Download	GET /api/Billings/{JointVentureName}/{year}/{month?}?type=xml&type=xlsx&type=pdf	Completed

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Operation	URL	Development Status
B-document		
Upload document	POST: /api/UploadDocument /{JointVentureName}	Completed
Update document metadata	PATCH: /api/UpdateDocumentMetadata/{JointVentureName}/{DocumentId}	Completed
Upload PDF rendition	POST: /api/UpdateDocumentRendition/{JointVentureName}/{DocumentId}	Completed
Create folder	POST: /api/CreateFolder/{JointVentureName}	Completed
Get document comments	GET: /api/GetDocumentComments/{JointVentureName}/{DocumentId}?ver=2.0	Completed
Send message about document	POST: /api/SendMessage/{JointVentureName}	Completed
Get message recipients	GET: /api/GetMessageRecepients/{JointVentureName}	Completed
Get metadata about company's content	POST: /api/GetCompanyMetadata/{JointVentureName}	Completed (improving performance)

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Operation	URL	Development Status
Get document content	GET: }/api/DownloadDocument/{JointVentureName}/{DocumentId}	Completed

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4 Operations

4.1 Request ticket status

When submitting a request to add content to L2S, the job will be put in a queue, and a ticket will be returned. Use this operation to get the status of the job to check if it's completed.

4.2 Cash Call & Billing (CC&B)

CC&B is a module that exposes two operations that utilizes L2S API ticketing queue system to support high load of requests. One CC&B operation allows external parties to send compliant XML files to L2S, where the CC&B module transforms the XML into an Excel file and store them both in a set location in L2S, while another CC&B operation allows for documents to be downloaded.

CC&B – Upload CC-document

This operation is about adding cash call XML files to L2S, having them transformed into Excel and PDF, and stored in the correct Joint Venture and folder in L2S. This operation utilizes L2S API ticketing queue system to support high load of requests.

A prerequisite for the upload to succeed, is that the integration account has been granted WRITE permission to the folder where the files are to be uploaded. This permission needs to be granted by the external party's JV Admin or Super User.

When uploading documents to L2S, you need to also apply document metadata according to L2S general document requirements. The document will inherit permissions from the folder the document is uploaded to.

CC&B – Upload B-document

This operation is about adding billing XML files to L2S, having them transformed into Excel and PDF, and stored in the correct Joint Venture and folder in L2S. This operation utilizes L2S API ticketing queue system to support high load of requests.

A prerequisite for the upload to succeed, is that the integration account has been granted WRITE permission to the folder where the files are to be uploaded. This permission needs to be granted by the external party's JV Admin or Super User.

When uploading documents to L2S, you need to also apply document metadata according to L2S general document requirements. The document will inherit permissions from the folder the document is uploaded to.

CC&B – Download CC-document

This operation allows for the integration to download cash call document(s) from L2S. You specify what folder to download from and what type of files you wish to download. The downloaded files will be available in a zip file.

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A prerequisite for the download operation to success, is that the integration account has been granted READ (or higher) permission to the folder where the file(s) resides in L2S. This permission needs to be granted by the external party's JV Admin or Super User.

CC&B – Download B-document

This operation allows for the integration to download billing document(s) from L2S. You specify what folder to download from and what type of files you wish to download. The downloaded files will be available in a zip file.

A prerequisite for the download operation to success, is that the integration account has been granted READ (or higher) permission to the folder where the file(s) resides in L2S. This permission needs to be granted by the external party's JV Admin or Super User.

4.3 Upload document

This operation allows for external parties to upload documents to L2S. This operation utilizes L2S API ticketing queue system to support high load of requests.

A prerequisite for the upload to succeed, is that the integration account has been granted WRITE permission to the folder where the file is to be uploaded. This permission needs to be granted by the external party's JV Admin or Super User.

When uploading documents to L2S, you need to also apply document metadata according to L2S general document requirements. The document will inherit permissions from the folder the document is uploaded to.

4.4 Update document metadata

This operation allows for update of a document's metadata.

<more details will come later>

4.5 Upload PDF rendition

While L2S supports generating PDF renditions of supported formats; this operation allows for uploading another PDF rendition of an already uploaded document.

<more details will come later>

4.6 Create folder

This operation allows for creation of folders in a L2S library.

<more details will come later>

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4.7 Get document comments

This operation allows for external parties to get comments added to a document in L2S within a Joint Venture.

A prerequisite for the operation to succeed, is that the integration account has been granted at least READ permission to the document. This permission needs to be granted by the external party's JV Admin or Super User.

4.8 Send message about document

This operation allows for external parties to send a message about a document in L2S within a Joint Venture. This operation utilizes L2S API ticketing queue system to support high load of requests.

A prerequisite for the sending to succeed, is that the integration account has been granted permission to the workspace where the message is to be sent from and to the document to be sent. This permission needs to be granted by the external party's JV Admin or Super User.

When sending a message, you need to specify at least the To recipients and a category, while Cc, message and due date is not mandatory to be filled out. Messages will also have to have one or many related documents.

4.9 Get message recipients

Recipients needs to be set when sending messages. This operations allows you do get a list of valid recipients.

<more details will come later>

4.10 Get metadata about company's content

Allows for a company's users to download information about all the data this integration user have access to.

<more details will come later>

4.11 Get document content

Download a document's content specified by the document's workspace and document id.

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5 Change history

Version	Date	Author	Reviewed by	Approved by	Change history
<V1.0-1 Draft>	<yyyy-mm-dd>	<name>	<name>	<name>	<description of changes>
V0.82 - Draft	2022-06-22	Leif Horpestad			Added guide to developers with status on endpoints
V0.81 - Draft	2022-06-07	Leif Horpestad			Updated after review and with more details
V0.8 - Draft	2022-05-27	Leif Horpestad	Egil Andre Knutsen		Initial draft version

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