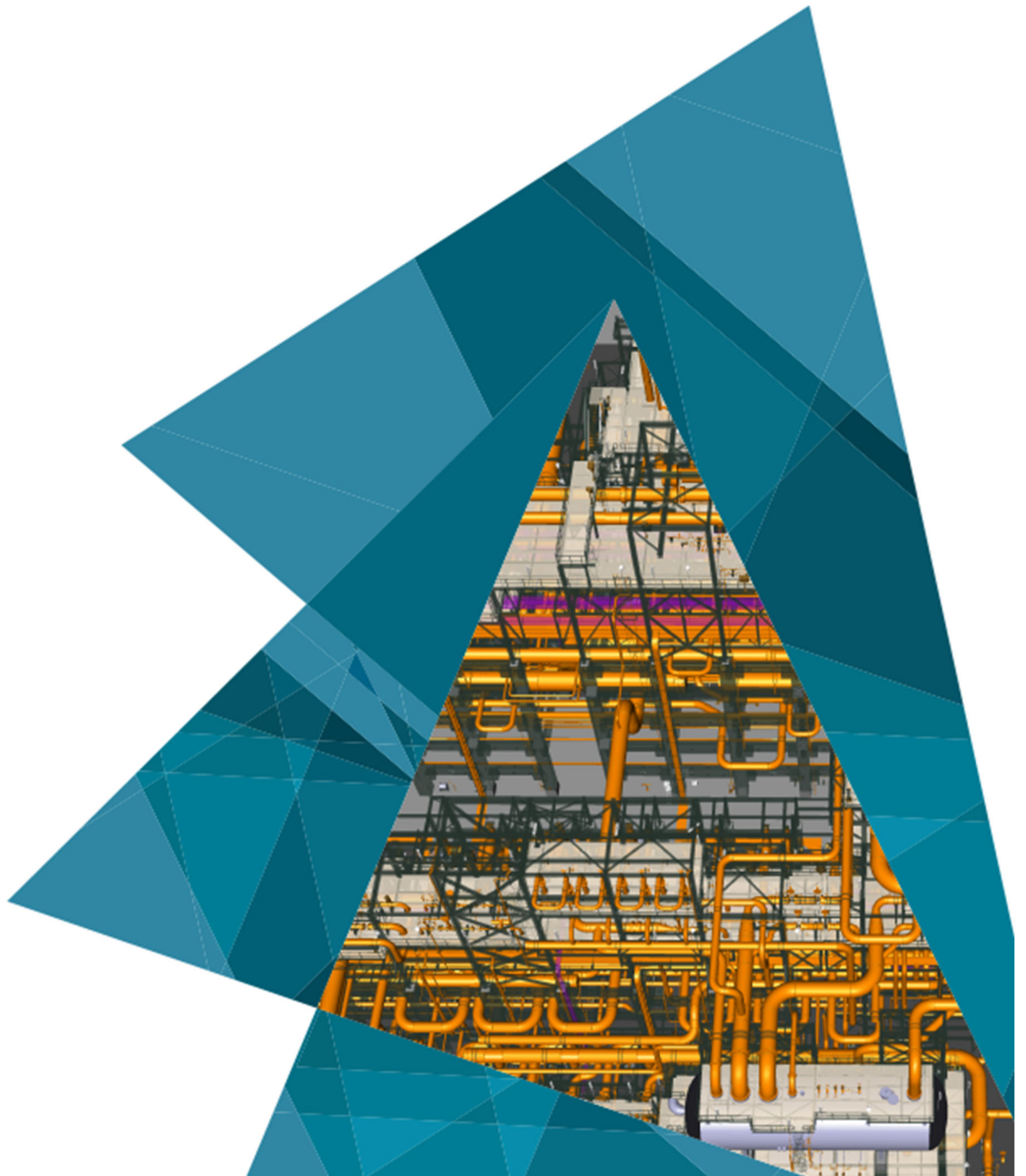




# HxGN EAM Data Lake Integration from Hexagon Cloud

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# HxGN EAM Data Lake Integration from Hexagon Cloud

This document serves as a guide for EAM customers in Hexagon cloud to migrate the connection point for Data Lake. This document is applicable to EAM customers in the Hexagon cloud who are currently using the Infor Data Lake and will continue its usage in their business operation strategy.

# Overview

This brief is intended for the system administrator or consultant who configures HxGN EAM in Hexagon cloud and Infor OS for use with Infor Data Lake.

You must have experience or knowledge in HxGN EAM, Infor Data Lake, Infor ION, and Infor API Gateway to understand the supporting concepts and how they relate to HxGN EAM.

In the Infor environment, most of the configuration details needed for integration of EAM with Infor OS were accomplished during tenant provisioning. However, for tenants deployed in Hexagon cloud, these tasks must be explicitly performed and completed by the customer administrator.

## Design overview

DLU uses 2 channels to transmit information to Infor Data Lake, and they are:

1. Publish schema changes to Infor DataCatalog
2. Publish table data to Infor Data Lake via IMS

**Access to DataCatalog from a non-Infor network is available only via the API gateway.**

Therefore, it is necessary to configure tenant environments post migration, to facilitate publish schema information. The following tasks must be performed **immediately**:

1. [Creating the backend authorized application](#)
2. [Saving the backend authorized application credentials in EAM](#)

## Design consideration for operational continuity

To ensure the transmission of table data to Infor Data Lake is uninterrupted, in the interim, post migration to the Hexagon cloud, HxGN EAM includes the install parameter **DLAUTH** (by default set to OAuth1). The Data Lake utility is configured to use the value of DLAUTH for data publication using IMS (Infor Message Service).

Currently, the IMS service is available for public access from a non-Infor network using OAuth1 authorization (not using API gateway), and the default value of DLAUTH supports this integration of HxGN EAM with Infor OS.

In the future, the current IMS service will not be available for public access from non-Infor networks, and this could disrupt the integration. To mitigate this risk long term, it is recommended to switch access to IMS via API Gateway at the earliest opportunity as outlined in this guide. The switch requires that the tenants carry out the following tasks:

1. Switch the value of Install Parameter DLAUTH to OAuth2
2. [Creating Connection points in Infor OS](#)
3. [Creating Dataflow in Infor OS](#)

### Transmission of data to multiple external interfaces

The Data Lake utility is capable of transmitting data to Databridge Pro in addition to the ION endpoint, this feature is supported only in the Hexagon cloud environment and is not available for Infor Cloud usage.

### Quick reference to the effect of DLAUTH values.

DLAUTH value	ION Destination	Integration Configuration screen in EAM	Notes
OAuth1	DataCatalog	All relevant field values must be populated	Schema is transmitted via API Gateway to DataCatalog, and does not depend on the Install Parameter Value
OAuth1	Datalake	Not applicable	
OAuth2	DataCatalog	All relevant field values must be populated	Schema is transmitted via API Gateway to DataCatalog, and does not depend on the Install Parameter Value
OAuth2	Datalake	All relevant field values must be populated	Table data is transmitted via API Gateway to Data Lake, and depends on the Install Parameter Value

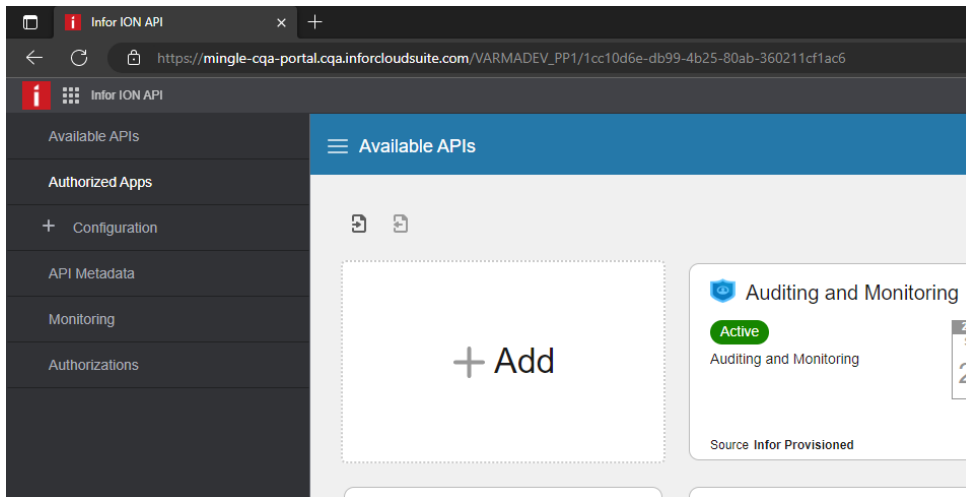
### DLU response to DLAUTH values

Install Parameter	Value	Effect
<b>DLAUTH</b>	OAuth1 (case sensitive)	DLU will use eam_ims connection point for data transfer
<b>DLAUTH</b>	OAuth2 (case sensitive)	DLU will use, the user created Connection point for data transfer
<b>DLAUTH</b>	invalid value	DLU will log an exception and the data transmission will fail.

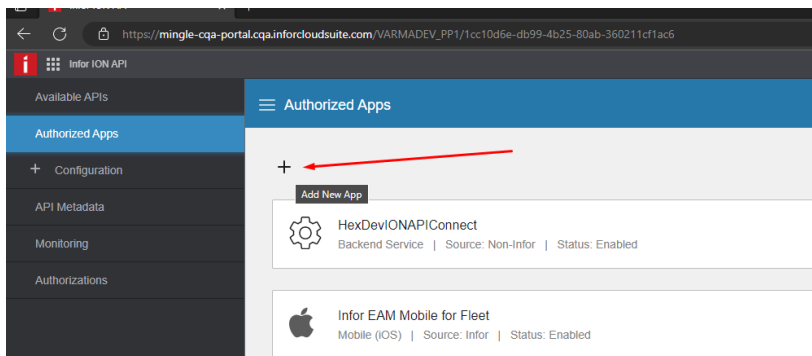
## Creating the backend authorized application

Creating a Backend (BE) application using Infor's API Gateway, is one of the initial tasks for enabling successful integration with IOS. Services like IMS and DataCatalog are accessible through the API Gateway, and BE is the conduit providing access to these services to non-Infor applications. The following steps will create the Backend application, also called the authorized app.

1. Navigate to the Infor API Gateway home page and click the Authorized Apps link on the left corner.



2. On the Authorized Apps page, click on the + button to add an app.



- Specify the details in the mandatory columns and select Backend Service in the check list options.

The screenshot shows the 'Authorized Apps' configuration page in the Infor ION API. The page has a sidebar on the left with navigation options: Available APIs, Authorized Apps (selected), Configuration, API Metadata, Monitoring, and Authorizations. The main content area is titled 'Authorized Apps' and contains a form for creating a new app. The form fields are: Name (Tenant-BE App), Type (Backend Service selected), Description (To integrate EAM with Infor Datalake), Use Bridge Authentication (unchecked), Client ID (empty), Secret (empty), and OAuth 2.0 Access Token (2 Hours). Red arrows point to the Name, Backend Service, and Description fields.

- Click Save..

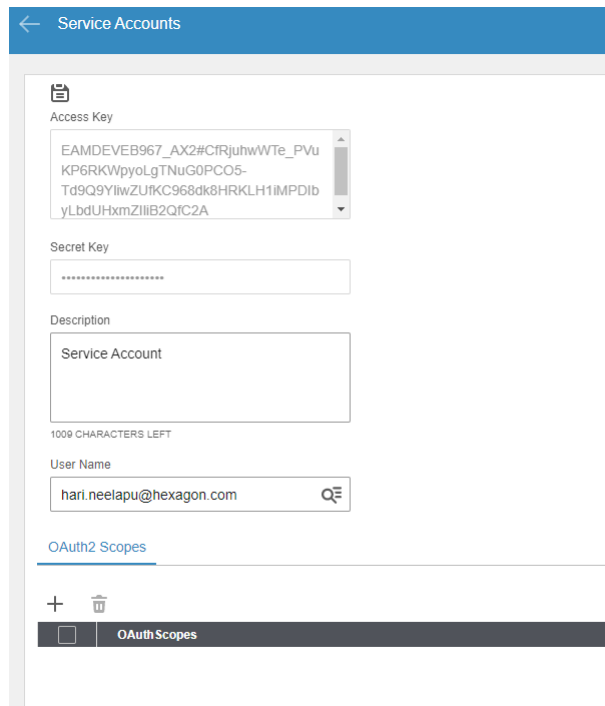
## Saving the backend authorized application credentials in EAM

The DLU and Datalake Delete services refer to these values by connecting to the EAM tenant database and access security related information needed for connecting to Infor OS, from an external environment.

### Creating service account details

Service account details are required to enable external applications like the HxGN EAM and HxGN DLU to access Infor API gateway services for Data Lake integration. While the service account needs to be created, the client ID is system generated by the gateway and is available in the downloaded .ionapi file.

1. Create a service account for the user who will .run the integration in the User Management -> Manage -> Service Accounts section under User Menu in Infor OS.
2. Add a new service account by clicking the '+' button, then select the username and click Save.



The screenshot shows the 'Service Accounts' configuration page. At the top, there is a blue header with a back arrow and the text 'Service Accounts'. Below this is a form with several fields: 'Access Key' (a text area containing a long alphanumeric string), 'Secret Key' (a text area with masked characters), 'Description' (a text area containing 'Service Account'), and 'User Name' (a text area containing 'hari.neelapu@hexagon.com'). Below the 'User Name' field, there is a section for 'OAuth2 Scopes' with a plus sign and a trash icon, and a table with one row containing a checkbox and the text 'OAuth2Scopes'.

3. In the Download Service Account Credentials pop-up,click DOWNLOAD to download the service account information (.csv file) which will be used later in the ION Configuration.

**Note:** We recommend first creating a user not associated with an individual person and then creating a service account for that user.

# Saving the backend authorized application credentials in EAM

The screenshot shows the 'Service Accounts' configuration page. A modal dialog titled 'Download Service Account Credentials' is displayed, containing the text: 'Your service account credentials are available for download. This will be your only opportunity to download your credentials. You are responsible for storing these credentials securely.' Below the text are two buttons: 'DOWNLOAD' and 'CANCEL'. A red arrow points to the 'DOWNLOAD' button.

Service Accounts

Access Key

EAMDEVEB967\_AX2#nlZIM1onzl1FT011IM  
VQupFkv7yw5tlzuZ6DJ0qey2N\_Pn2lm3Bos  
vZySHZlyBxnZo892N2uQELOnco042qrPPg

Secret Key

.....

Description

for EAM/ION IMS integration

997 CHARACTERS LEFT

User Name

hari.neelapu@hexagon.com

OAuth2 Scopes

Download Service Account Credentials

Your service account credentials are available for download. This will be your only opportunity to download your credentials. You are responsible for storing these credentials securely.

DOWNLOAD CANCEL

The screenshot shows the 'Service Accounts' management page. A sidebar on the left contains a 'Manage' menu with options: Users, Client Access, Service Accounts (highlighted), ERP Person IDs, Contacts, Contact Groups, Groups, and SCIM Groups. The main content area shows a table of service accounts.

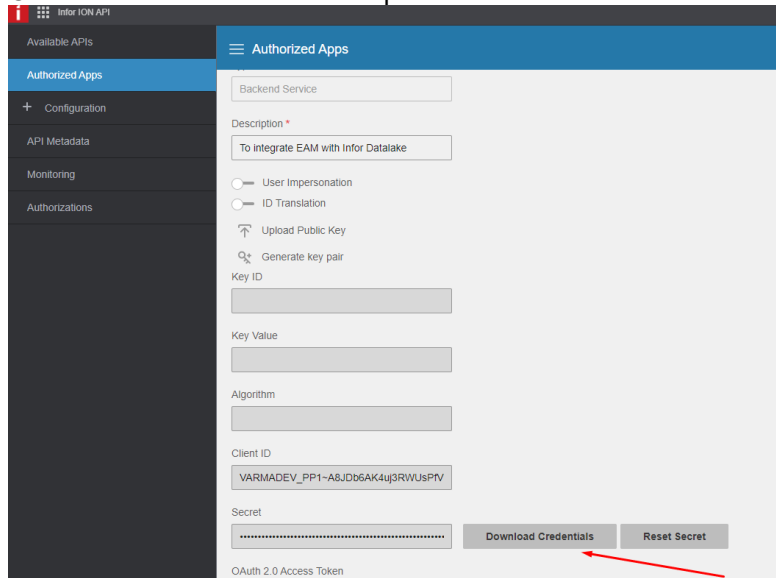
Manage / Service Accounts

		Access Key	Description
<input type="checkbox"/>		EAMDEVEB967_AX2#NON0zMJR116SR4IRID9hz-Ra0mCMuhAPx5Vickz-iKOZ3NBRYLj0mHPodRzSecdX6cPM_uwjDq_7ICgE_TYQZw	Service
<input type="checkbox"/>		EAMDEVEB967_AX2#pqCCiGIBMxtIVYU0xkldRQJEmqZsEXZU_HvOIZS9GIUFUfaPLGJFG9kkYcrzswdAaChi2FX6ZoxEy9XKUQswQ	EAMIMS -

## Downloading credentials of the BE app

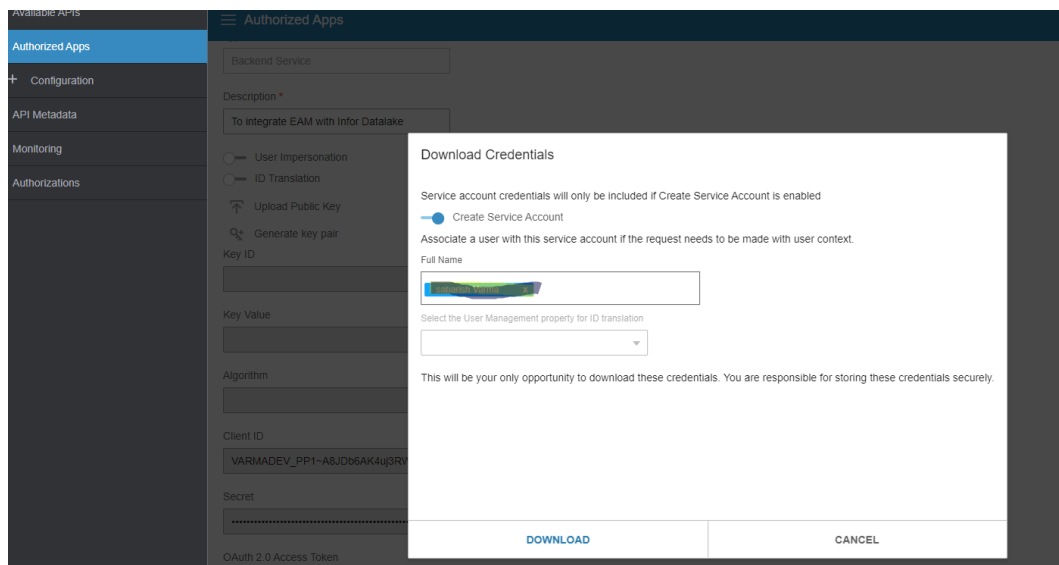
The following steps will export the BE app attributes which will be saved in EAM for securing Datalake integration.

1. Click the Download button to export the data.



2. Slide the Create Service Account slider to the right and provide the service account created in the [Service Account](#) section before submitting the form.

**Note:** The file is downloaded with an extension of .ionapi.



## Saving details in EAM

This step is mandatory. The details from the .ionapi file should be saved in EAM using the Integration Configuration screen. DLU and Delete cron jobs read details from this screen for successful integration with Infor IOS. See HxGN EAM Configuration for Infor ION for information on understanding this feature.

The following mapping between the contents of the file and the fields in the screen are provided for reference.

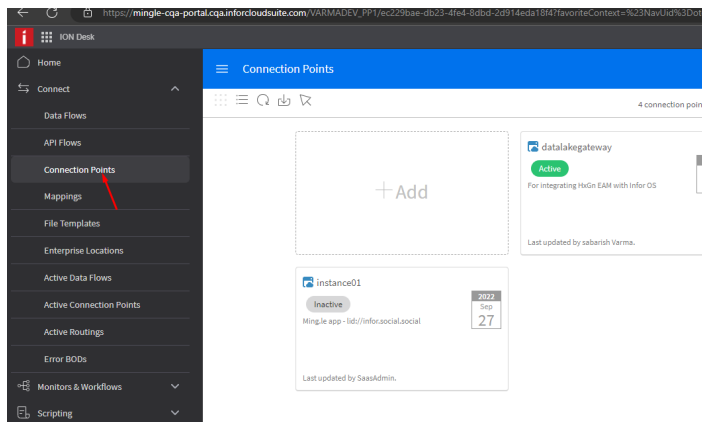
Property in .ionapi file	Field in Integration Screen
ci	Client ID
cs	Client Secret
iu	Base URL
oa	Authorization Path
or	Revoke Token Path
ot	Access Token Path
pu	Client Authorization URL
saak	User Name
sask	Password

Select IONAPI as the application name on the Integration Configuration screen. See HxGN EAM Configuration for Infor ION for more information.

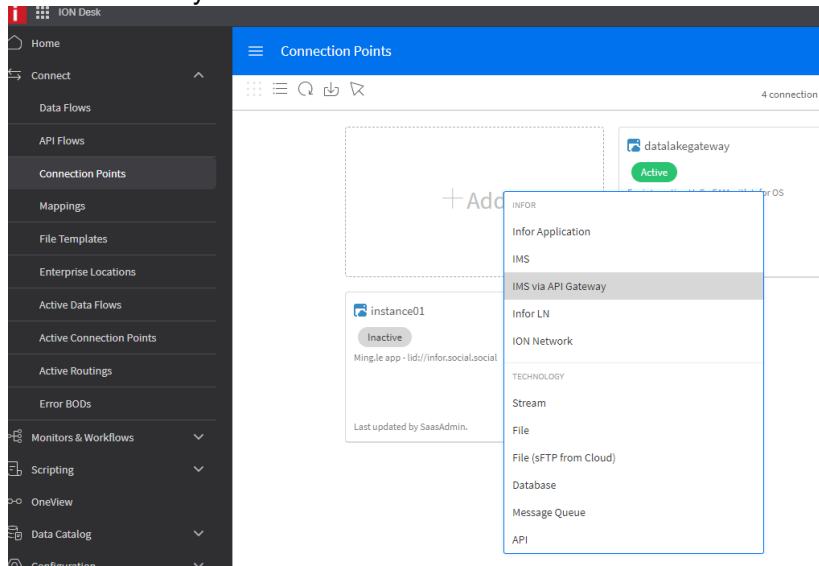
## Creating Connection points in Infor OS

Note: the logical id for the connection point should be of the form **lid://infor.eam.datalakegateway**, else data will not be transmitted to Data Lake. . These steps will create the connection point from the ION home page

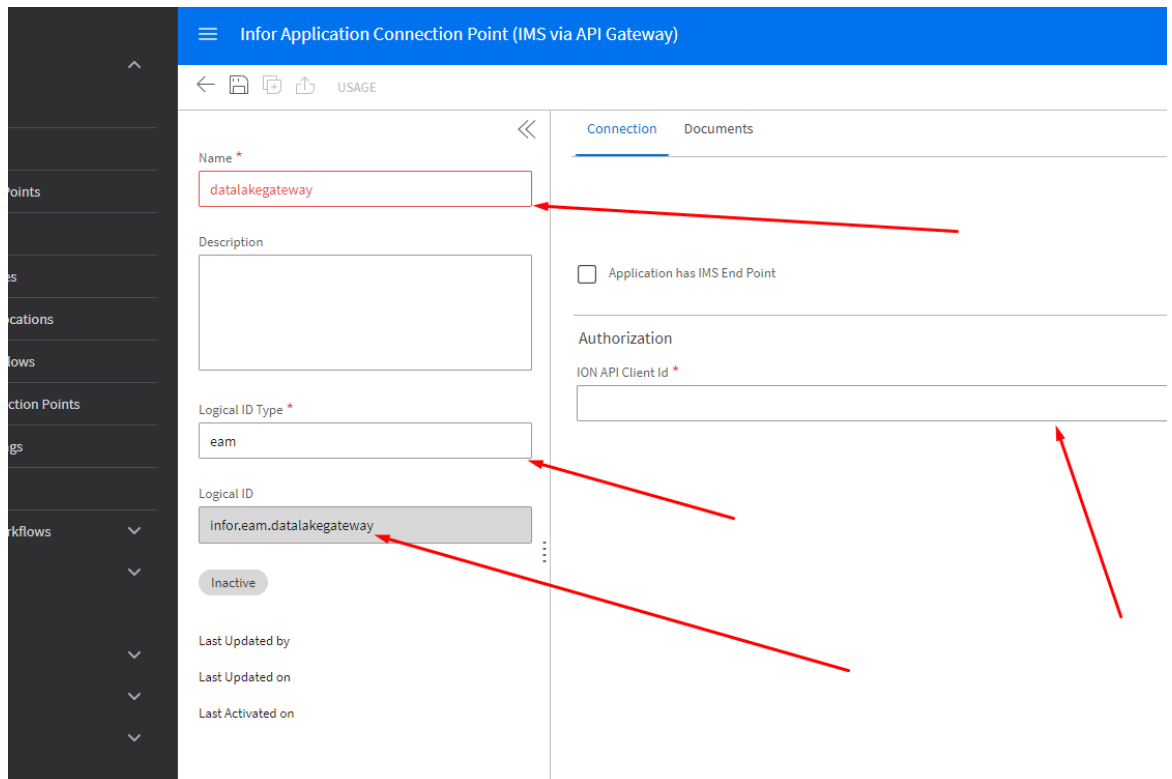
1. Click on the Connection points link on the ION home page.



2. Add a new connection point by clicking the Add button on the screen and then select IMS via API Gateway



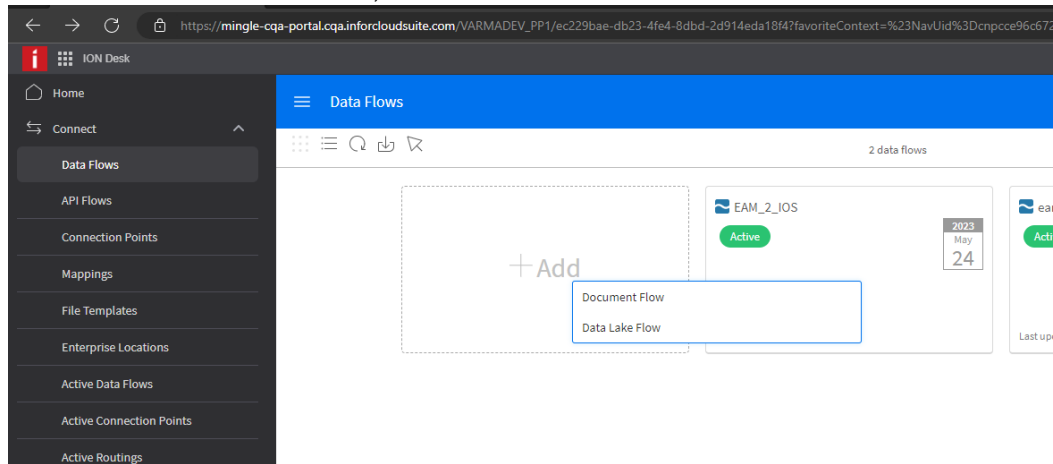
3. The logical ID type should be **eam**, the name of the connection point should be **datalakegateway**, and the authorization should be the Client ID found in the .ionapi (ci) or Client ID from the Integration screen (if it is already populated).



## Creating Dataflow in Infor OS

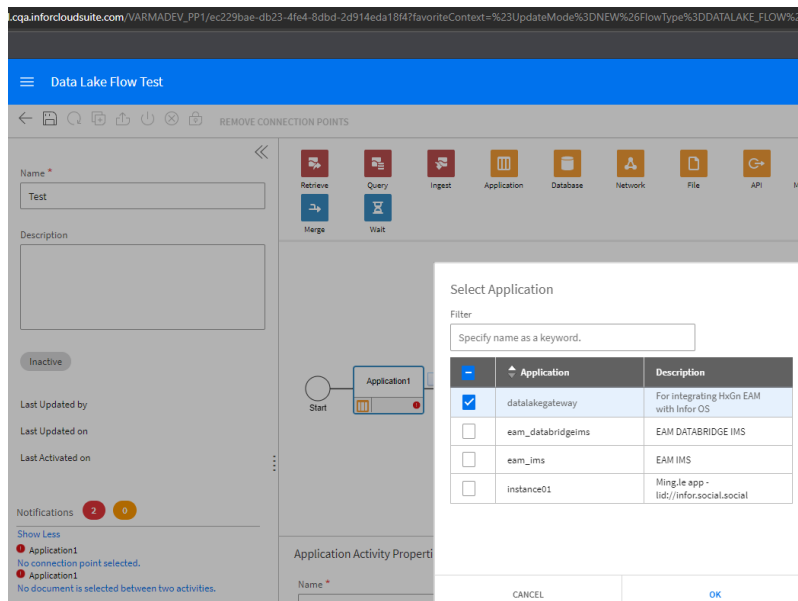
The dataflow entity creates the necessary link between the connection point and Data Lake. The following steps will create and configure a dataflow element in ION.

1. Select Connections > Dataflow, and then click the Add button

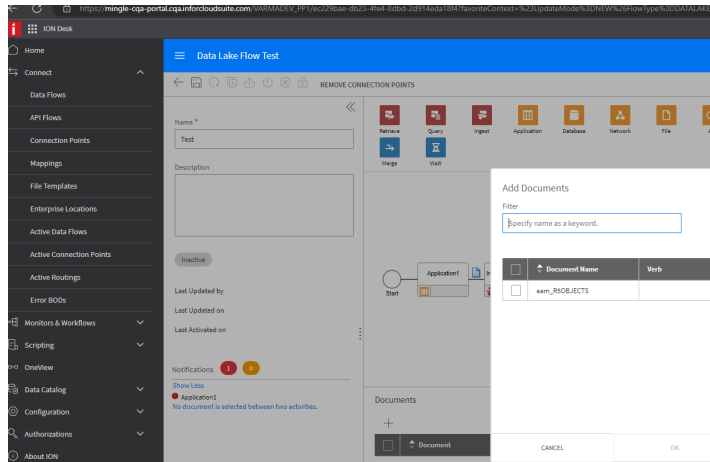


2. Select Data Lake Flow in the popup.

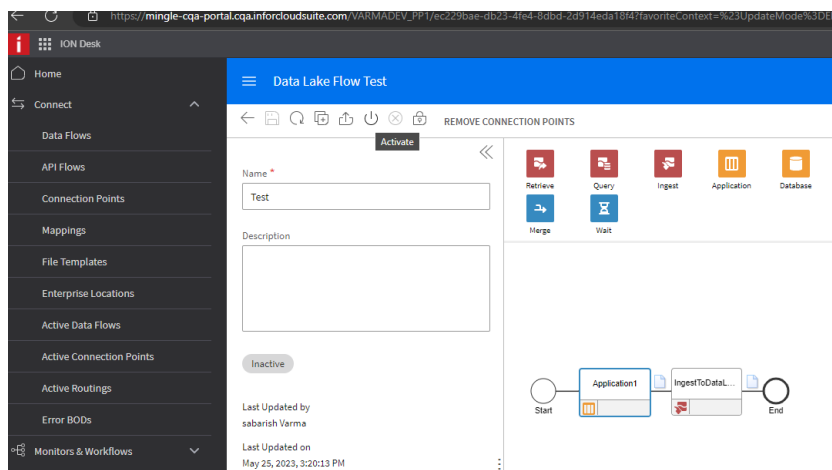
3. Specify information in the required fields and add application and ingest icons to the flow. Click on the application and add the connection point created in the previous steps.



- Click on the documents to be added to the flow.  
NOTE: The documents should be added to the connection points first to be available for selection in this task.



- Save the workflow and then activate the dataflow. This completes the integration configuration tasks.



## Integration with Databridge Pro

The Data Lake utility can transmit data to Databridge Pro in addition to ION endpoints. To enable transmission of data to this new interface point, the EAM install parameter DLUTXDBP should be set to YES. Currently, DLU transmits data in JSON format only and does not transmit schema details.

## Authorization

The authorization policy set between the two components for communication uses Basic Authorization. No administrative action is needed by the tenant to establish the policy since this is provisioned during deployment of the tenant.

## Conclusion

It is possible the data or schema may not flow to data lake after completing the above activities. This is expected since renewed deployment of DLU will disrupt an existing running process thereby leaving the status of a schedule in a transient state (e.g. InProgress, InQueue). We recommend that the scheduled status be reset from Data Lake screens in the app, after a new release of EAM.