

# **Connect for Analytics**

Planon Software Suite Version: L105



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# About this Document

# **Intended Audience**

This document is intended for Planon Software Suite users.

# **Contacting us**

If you have any comments or questions regarding this document, please send them to: <a href="mailto:support@planonsoftware.com">support@planonsoftware.com</a>.

## **Document Conventions**

**Bold** Names of menus, options, tabs, fields and buttons are displayed in bold type.

*Italic text* Application names are displayed in italics.

CAPITALS

Names of keys are displayed in upper case.

## **Special symbols**

1	Text preceded by this symbol references additional information or a tip.
•	Text preceded by this symbol is intended to alert users about consequences if they carry out a particular action in Planon.

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# **About Connect for Analytics**

**Connect for Analytics** is a solution for creating powerful analytics flexibly and dynamically, combining the strength of the Planon application and the ease of use of external tooling.



**Connect for Analytics** extends the operational Planon system with a data lake and a data connector to external data analytics tools. This makes it easy to extract data for reporting, analytics and predictions with standard BI tools.

In order to use Connect for Analytics, you require a specific data license (P00700).
Connect for Analytics is available for Cloud- as well as for on-premise customers.

#### Costs

For using the data lake, you need to take into account costs incurred for:

- Hardware (the data lake itself)
- Data usage

Configuring the Planon application (Cloud)

Configuring the Planon application (on premise)

Process

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**Connect for Analytics** includes a number of components that together make it possible to use external business intelligence tooling for analyzing operational data (almost real-time) extracted from the Planon application.



The following image depicts the most important components:

- 1. On the left: the Planon operations side, producing operational data.
- 2. Bottom-right: the data lake and the connector.

Storing the operational Planon data and providing an access point to BI tooling. Once a connection is established, the Planon application's operational data is kept in sync with the data lake automatically.

3. Top-right: the (customer's) BI tool used for analyzing the operational data.

# Advantages

There are many advantages for using Connect for Analytics, it:

- Allows customers to create the best-of-class business intelligence reporting.
- Can be used by most BI tools as long as they support the OData protocol (version 4).

The added value here being that customers can use the tooling they are familiar with and have a license for.

- Is easy to set up getting up and running only requires a few configuration steps. Also, the data exchange is fully automated and nearly real-time.
- Requires no further data transformation because data is formatted correctly.
- Includes data model relations that are automatically provided by the data connector.

It is, therefore, easy to include fields of related business objects into the data set to be analyzed.

• Supports calculated fields.

In the regular Planon application, it was not possible to report on calculated fields; now this is possible.

- Will have a positive effect on operational performance because the load for reporting on Planon's operational database is decreased.
- Allows customers to combine data lakes for creating management information.

For example, by combining information from the Planon data lake with information from an ERP data lake in one report or dashboard.

- Implies less work for existing Planon Cloud customers who have implemented their own analytics solution by querying the data from the data lake, replacing and making Enterprise Talk data exports redundant.
- Enables customers who already have a data lake/warehouse to extend it by using Connect for Analytics to feed Planon data into this data lake/warehouse.

Connect for Analytics was developed to connect BI tools to Planon for reporting/analytics and is optimized for this type of use case.

# Concepts

The following topics describe the concepts that are key to understanding the functionality.

# Data lake

A system or repository of data stored in its natural format. A data lake is usually a single store of all enterprise data. For Planon, the data lake contains the operational data from Planon, which will almost real-time be kept in sync.



The Planon Cloud will automatically provide a data lake for Planon customers who have the appropriate license.

# Connector

A gateway between the data lake and the BI tool.

Customers can only access the data in the data lake via the connector, and currently only the OData protocol (version 4) is supported.

The OData protocol is supported by most BI tools.

The BI connector ensures that:

- Access to the connector is authenticated.
- Data is formatted correctly (a date field is a real date, not a string).
- Data model relations are included.
- Calculated fields are included.

# BI tool

Software designed to retrieve, analyze, transform and (graphically) report data for business intelligence. Planon is BI tool agnostic, which means that you can use any kind of BI tool as long as it supports the OData protocol.

- For customers, this is an important asset because they will not have to invest in acquiring and learning a new tool.
  - Note that not all BI tools provide the same level of support for the OData protocol

# Working with...

This section describes the various functions available.

# Getting started

The following topics will help you getting started using Connect for Analytics.

## Configuring the Planon application (Cloud)

#### Procedure

1. (\* optionally) Add the Data lake TSI to your navigation panel and log out/log in.

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\* If you are using Accelerator, this step is not required.

- 2. Give users access to the Analytics Connector.
- a. Go to Accounts > User groups.

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- b. Select the user group of the users you want to give access
- c. In the action panel, click Product definitions.
- d. Link them to the Analytics product definition.
- e. Click Save to apply your changes.

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Users in the user group now have access to the Connector.

3. Go to the Data lake TSI



4. Optional, check the connection between the **Planon application** and the **Data lake** 

To check if the connection between `the Planon application and the Data lake is working click on Validate Mongo connection.

If the connection is working, the version of MongoDB will be shown and the connection status will show **Valid** and a green check mark will be displayed.

If the credentials are invalid the version of MongoDB still will be shown but the connection status will be **Invalid**, **wrong credentials** and a yellow check mark will be displayed.

If no connection can be established, no information about MongoDB can be retrieved and the connection status will be invalid and a red check mark will be displayed.

If the connection is checked when the Data lake is operational and the check fails, the synchronization will

# automatically be stopped. Once the connection is restored the synchronization will commence again.

When encountering an invalid connection, please contact Planon Support to investigate and restore the cause of the connection failure.

5. Click Export to data lake

The export is started as a background action.



The initial export will now start by calculating the number of jobs needed to export the data to the data lake. When it is done calculating (about a minute), a dialog will appear saying that it is done creating background jobs to upload the data of Planon into the data lake.

During this time, any changes made to your Planon data will create synchronization "error" jobs. They can be resynchronized after the export to data lake is finished.

The system will synchronize these automatically, but just avoid this if you can.

You can follow the progress of the background jobs in the **Job details** step of the **Data lake** TSI. When this is done, all data between Planon and the data lake will be kept in sync

so updates in Planon will be reflected in the data lake with only a short time delay.

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When done you can start using the connector.

**About Connect for Analytics** 

## Configuring the Planon application (on premise)

#### Procedure

1. (\* optionally) Add the Data lake TSI to your navigation panel and log out/log in.

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\* If you are using Accelerator, this step is not required.

- 2. Give users access to the Analytics Connector.
- a. Go to Accounts > User groups.
- b. Select the user group of the users you want to give access
- c. In the action panel, click Product definitions.
- d. Link them to the Analytics product definition.
- e. Click Save to apply your changes.

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Users in the user group now have access to the Connector.

- 3. Prepare the data lake.
- a. Install a MongoDB instance that will host the data lake. You can download MongoDB from this location: https://www.mongodb.com/try/download/community.

It is good to note that the OData connector and the Mongo DB have a version dependency, see :Supported Configurations.

- b. Create a user and a password in MongoDB that has appropriate authorization for creating and deleting databases, creating, updating and deleting collections.
  - 4. Connect Planon to the data lake.
- a. Go to the Data lake TSI and add the Database, Host, User and Password.
- b. Verify whether you can make a connection by clicking on Validate Mongo connection.



If the connection is working, the version of MongoDB will be shown and the connection status will show Valid and a green check mark will be displayed.

If the credentials are invalid, the version of MongoDB still will be shown but the connection status will be **Invalid, wrong credentials** and a yellow check mark will be displayed. Check whether the **User** and **Password** are entered correctly and check the connection again.

If no connection can be established no information about MongoDB can be retrieved and the connection status will be invalid and a red check mark will be displayed. Check if the entered **Database**, **Host**,

**User** and **Password** are correct and adjust if necessary. After that, test the connection again.

Only when the connection is valid the **Export to data lake** becomes available.

c. Click Export to data lake

The export is started as a background action.



The initial export will now start by calculating the number of jobs needed to export the data to the data lake. When it is done calculating (about a minute), a dialog will appear saying that it is done creating background jobs to upload the data of Planon into the data lake.

During this time, any changes made to your Planon data will create synchronization "error" jobs. They can be resynchronized after the export to data lake is finished.

The system will synchronize these automatically, but just avoid this if you can.

You can follow the progress of the background jobs in the **Job details** step of the **Data lake** TSI. When this is done, all data between Planon and the data lake will be kept in sync so updates in Planon will be reflected in the data lake with only a short time delay.

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When done you can start using the connector.

#### About Connect for Analytics

## **Basic Settings PowerBI**

If you are using PowerBI as your tool of choice, please apply the following recommended settings.

- 1. Install PowerBl...
- a. Go to https://www.office.com/ and log in with your (company) Microsoft account.
- b. In All apps, search for PowerBI and download the desktop version.



2. For each new **PowerBI** file (.pbix) you must reset these settings:

# Deselect the Autodetect new relationships after data is loaded and Auto date/time check boxes. These slow down data loading and are not required.



#### Using PowerBI - Tips and Tricks

### Getting data

When you have configured the Planon application, you can proceed to retrieve data in your BI tool.

• When starting out, **Filter your data** to a limited set. Each time you edit your queries in your BI tool, it will be refreshed through the BI Connector. Consequently, if you are still deciding what columns you want in your dataset, it is good practice to work with a small set of data (faster and cheaper).

• Start with just one table, the related data can be automatically retrieved in the next steps.

1. Select Get Data, select the OData Feed and click Connect.

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	Certified Connectors

- 2. Enter the BI Connector URL <your Planon URL>/datalake/odata
- 3. Select Basic authentication.
- 4. Log in with your Planon user credentials, this account needs to be in the group you linked to the BI product definition earlier. If you forgot to do this, you will get an error.

	OData feed
Anonymous	https://lacoolwhatsnew-test.pdit.cloud/odataweb/D
Windows	If We couldn't authenticate with the credentials provided. Please try again.
Basic	User name Buyer
Web API	Password
Organizational account	Select which level to apply these settings to
	https://lacoolwhatsnew-test.pdit.cloud/
	Back Connect Cancel

5. Select a table, e.g. BaseOrders. Click Edit (do not click ENTER...if you do, click Cancel).

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6. Click on the column headers and make selections that you know will limit your result set to a small set. For example, filter on start date to select a certain time period (use e.g. InsertDateTime).



# Modeling your data

1. First select Edit queries in the main ribbon and select a table.

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2. Scroll to the right of the table and notice all the yellow columns.

These are all the references of your order, for example the order property, requestor etc. You can include fields from these references in your order table. E.g. property code and name, or cost group name.

3.	411P
	Click on the Expand button (
	include and click OK

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# Expand PropertyRef\_Prope... $\times$

Select the columns to expand.

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Address	
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AlternativeParentRef_Property	
AnnualDeprecation	
AreaBuiltOn	
AreaCalculationDateTime	
BaseServiceAgreements	
BaseTemperatureCDD	
BaseTemperatureCDD_BaseTemperature	
BaseTemperatureHDD	
BaseTemperatureHDD_BaseTemperature	
BeneficialOwnerRef	
BeneficialOwnerRef_Address	
Bim3DModel	
BimGuid	
BIMModelRef	~
BookValue	
Default column name prefix (optional)	
PropertyRef_Property	
OK Car	ncel

If you made a mistake or want to change the *prefix* of your expanded columns, you can change these/redo it by clicking the **Settings** icon in **Applied steps**.

- 4	APPLIED STEPS	
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When you are done, click Close and apply.

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BaseOrderAnswerLineHis	3 null	29-01-19	27,5	null
OrderLine	4 null	29-01-19	30	null
BaseOrder (2)	5 null	26-02-19	27,5	null
	6 null	26-02-19	30	null
	7 null	29-01-19	.15	null
	8 null	29-01-19	15	null
	9 null	29-01-19	9	null
	10 null	29-01-19	9	null
	11 null	29-01-19	25,6	null
	12 null	26-02-19	.15	null
	13 null	26-02-19	15	null

The data will be loaded shortly.

## Supported field types

The synchronization mode for fields can be specified on the field definition. By default, all fields are exported, *except* the following:

- Proxy views (m:n and regular)
- Filters
- Images
- Byte arrays
- Multi-select free fields
- Passwords
- · Some NLFC fields from life cycle aware business objects

See also Synchronizing life cycle data.

## Exporting data to the data lake

The data lake settings are preconfigured. You can immediately export the data from the Planon application to the data lake.

Before exporting data, make sure the **Data lake** TSI is added to the **System Settings** navigation group.

For more information about the data lake settings, see Data lake fields.

Procedure

1. Go to Data lake > Data lake settings step and click Export to data lake.

A message appears informing that the export is started as a background action.

# The data is assessed and the application calculates the number of jobs required to export the data to the data lake.

While the application is performing the analysis and executing the background jobs, any changes made to the Planon data will cause synchronization errors. The issues causing these errors can be resynchronized manually after the export to data lake. Note that putting business objects *Under construction* will cause the export to data lake to fail.

#### Two things happen:

- Jobs are created that run as a background action.
- The jobs synchronize the data from the Planon database to the data lake.
- 2. Go to Export jobs level to monitor the jobs' progress.

For more information about the jobs, select one and go to Job details level.

Click Refresh to update the list.

After the jobs have completed, all data between Planon and the data lake is kept in sync. Updates in the Planon application will subsequently be reflected in the data lake with only a short time delay.

#### Recovery

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Note that the Planon data lake does not have the same recovery policy as the Planon operational database.

The Planon data lake only contains information that is available in the operational database, so it can be restored from the operational database.

This means that in case of a restore of the operational database (for whatever reason), the data lake needs to be recreated as if you are starting with Planon Connect for Analytics for the first time, requiring a full initial synchronization. The time this takes depends on the amount of data in the operational database, it can be several hours.

#### Synchronization disabled

Synchronization is disabled if the data lake is unreachable for longer than 1 hour or if the number of BO changes while the data lake is unreachable is greater than 1000. When synchronization is disabled, an event log is created to notify the system administrator. To enable the data lake functionality again, a new data lake export needs to be executed.

### Synchronization errors

If synchronization errors occur, these will be listed on the **Synchronization errors** step.

On this step, you can also **Delete** the listed errors or click **Retry synchronization** to sync the data lake.

A new or updated data lake synchronization will remove the synchronization errors from the former synchronization since they are no longer valid.

## Performing an incremental export only

Whenever there are minor updates in your data configuration, you would want to only export the changes to the data lake rather than having to re-export all.

This could be the case, for example, when:

- Planon
- adds a new field to an existing business object
- adds a new business object.
- Customer
- changes a field to in use/not in use
- configures a new free field
- changes field type
- changes userpnname

To perform an incremental export only, proceed as follows.

#### Procedure

1. Whenever there is an initial synchronization of a root business object to the data lake, a record is created on the Data lake info step.

For each business object changes that comply with the ones described earlier, will automatically be detected. The status of the business object is then changed to *Has updates*.

2. For business objects having the status *Has updates* you can click Update in the action panel.

#### A dialog box appears listing all business objects that have updates.

3. Click OK to start a new export job for the selected business objects.

Only the business object that appear in the list will be exported. To check this:

- The **Full export?** field on export jobs will be set to **No** so that you can identify this export as an update only.
- There will be a list of business objects to be synchronized in the field Business objects to export (Data lake settings)

If for some reason an export fails without being completed, the export job is marked as *Failed*.

But, instead of marking ALL BOs in the **Data lake info** step to *Has updates*, only those BOs that are in the *Updating* or *Need indexing* statuses will be rolled back to *Has updates*. Then, instead of doing full export, this allows you to do an update only for all those **Data lake info** BOs that have the *Has updates* status.

# Synchronizing life cycle data

Life cycles of all Planon business objects that are life cycle aware (Contracts, Contract lines, Rentable units etc.) are also available in Connect for Analytics.

For each life cycle aware business object, there are two tables:

1) The *Now* table (e.g. BaseContract). This contains the contract values of 'today' (updated daily by a scheduled action). All changes during the day will also be updated in this table, so it is an up-to-date view of the life cycle business object for *today*. All business objects that refer to this life cycle aware BO, will refer to this table.

2) The *Life cycles* table (e.g. BaseContractLifecycle). This contains all the life cycles for the contract and contains the life cycle aware fields and a reference to the '*Now* table (BaseContractRef).

For example: for contracts, the BaseContract - contains the Now.

For life cycle BOs, we do not export the **IsPivotLifecycle** field and the non-life cycle reference field (Syscode\_NLFC) because these do not contain meaningful data for a BI user. Note that all the non-lifecycle fields are in the *Now* table.

There is a scheduled task (to be configured as a daily task) that will update *now* data of life-cycle-aware business objects with the values of the life cycles of *today*.

#### Procedure

- Go to System Settings > Scheduled tasks and look for SYSUPDATE\_LFC\_SNAPSHOT\_DATALAK in the list.
- 2. Make sure the status is set to Active.

The scheduler will synchronize the data with the data lake as specified.

## Viewing the data usage

The data usage costs by customers is incurred by the amount of MBs 'consumed'.

The amount of MBs is monitored and displayed on the Licence usage level.

#### Procedure

1. Go to License usage level.

This level has three steps:

Hits/MBs today

This step displays the amount of MBs incurred on the current day. At the end of each day, this list will be emptied and a new count is started.

• Daily summary

This step displays the a list of daily counts.

#### Total license usage

0

This step displays a yearly summary of all daily counts and shows the maximum vs. the total consumed amount of MBs. Here, you can also set a **Threshold**, which is a percentage that you can set and which can be used for notifications (alerts).

#### Understanding the consumption of hits

To understand how the incurrence of hits works, it is good to know which actions count against consuming hits and which do not.

- What counts against consuming hits?
  - When you make a connection with a third-party product such as Tableau, Excel, PowerBI and download data as part of that request.
  - Refreshing a query, this will keep on drawing data down from the data lake.
  - Using the data lake to populate your own data warehouse.
- What does not consume hits?
  - Synchronizing the data lake from the environment.

# Deleting the data lake

If you no longer wish to use the data lake, there is a process in place to delete it.

1. Go to Data lake settings and click Deactivate data lake synchronization on the action panel.

This will stop data synchronization between Planon and the data lake. No new data will be added to the data lake. However, data still exists in the data lake.

(If you would like to cancel this operation and resume synchronization, click **Export to data** lake again).

2. To delete this data as well, get in touch with Planon Support and inform them that the data lake and its data should be deleted.

Upon receiving this notification, the necessary steps will be taken to delete the data lake and its data.

# Using multiple application servers

When using multiple application servers, there is a need for alignment that makes sure the data is correctly synchronized with the data lake.

This requires a seamless coordination of processes. While specifying the design, the choice was made to opt for an *open model*, which means that no locking is used.

All data lake processes will be allowed to run at the same time, allowing multiple synchronization resulting in multiple exports or synchronization during exports.

Ultimately, the application server that has the last data change will equalize the situation.

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Running multiple exports at the same time might result in either one to fail and may cause the process to be slower, but the end result will be correct.

# Finding Planon data in the data lake

For Connect for Analytics we are using PNnames as column headers. This can be considered as inconvenient, because end users see translated names in their interface which do not match with the PNnames.

Using system names as our API was a deliberate decision. Because these names are fixed, they do not change.

This means that if you would can change the translated name of fields in Planon, it will not break your dashboards.

The following topics explain how the find the correct Planon data in the data lake.

## Finding your language code

The language code is the acronym of the language that is linked to your account in the Planon application.

Because it is a translation, you need to know which language you are using.

1. In the top-right, click My account.

This is where you can find your language.

Q	WEASLY	
	* User name	WEASLY
	Password expiry date	
	Change password	
	My personal data	
	Initials	
	First name	Adam
	Prefix	
	* Surname	Weasly
	Email	Adam.Weasly@planon.co.uk
	Phone number	
	Photo	
	My account settings	
	Contact's email address	
	<ul> <li>Use 24-hour notation</li> </ul>	Yes
	Planon ProCenter Language	English US
	<ul> <li>Displayed unit of length</li> </ul>	

Here you can see that English US is the language.

2. Go to the Languages TSI.

Here, you can see that the Code for this language is AME.

-PLANON-	Langua		
🖨 Home			
Q Search	No filter		
➡ Connect for Outlook	0		
🗧 Data lake	Language code	<ul> <li>Description</li> </ul>	
External data storage	Translations - langu	Jages (5)	
	AME	English US	
File locations	DEU	Deutsch	
📬 General	ENG	English	
- General	FRA	Français	
Improved Features	NLD	Nederlands	
A] Languages			
License			
Sutgoing email	1		

## Finding the translated name

The next step is to find the translated name of the business object.

If you want to make a report e.g. for Linked SLAs, how do you find the right table in the data lake?



#### 1. First, go to the Linked SLA step

	PLANON	TEST /				Today	8
۲	Home	Contracts					
Q	Search	Properties Components Contracts		Contract details	Contract line details	SLA scopes & activities	
13	Contracts	History of contract lines History of contract options History of contractual terms Financial event registration Contract lines - life cycle	s Fin	ancial commitments Ac	counting commitments	Contract service plans	
123	Data aggregation	T No liter * d	111	Conserval Aurist info			
fil	Documents	Code • Contains • X Q		General Douchto			1
	Hazard registry	网目	1	General			
5	Invoices		1	Code	E001		
?	Knowledge base	ISI E001, Premium response (external)	11	SLA service	E-RM01, RM Mechanical (external)	1	
5	Lease contracts (Lease acc	ISI E0011, Emergency (pest)	11	Urgency TTR			
P	Maintenance planner	ISI E0012, Urgent (pest) ISI E0013. Emergency call out	ш	Time to respond	FM-H2, Within 2 hours	1	
1	Meters	1950 E0014, Standard call out	ш	Urgency TTA			
~	Moves	BON E0019, Reprographics Silver	1.	Time to attend			
-	Orders	Net E0033, Service vending machines - Gold	ш	Urgency TTF			
	Bergersel	HM E0034, Service vending machines - Silver	ш	Time to fix			
	Personnel	BOU35, Service vending machines - Bronze      BOU 10015, Porterage Gold	11	Urgency TTC			
圍	Products	HDI 10016, Porterage Silver		Time to complete	FM-H8, Within 8 hours	1	
	Projects	10017, Porterage Bronze		Calendar			
Щ	Property details	nora, reprographica Gota	1	Calendar selection	2, Calendar for SLAs		
W	Purchasing	Count All None		SLA calendar	0004, SLA Calender	1	

The text you see at the top node of the element list is important. "Service Level Agreements" is the translated name of the "root" business object of the elements that are shown.

## Finding the Planon system name (PNname)

In the data lake...

- BaseBODefinition table stores the translations of business objects.
- BaseBOFieldDefinition table contains the field translations.
- BaseBOState table contains the status translations.
- 1. In the business objects, look up the translation for *Service level* agreements.

Here you will find that the Planon name (PNname) is ServiceLevelAgreement.

Consequently, the table you are looking for in the data lake is ServiceLevelAgreement.

		-			
Planon name	AME	DEU	ENG	FRA	Y Filters
AssetMtoNSLServiceAgreement 1	Service level agreements - assets	Service Level Agreements - Anlagen	Service level agreements - assets	Accords de niveau de service - actifs	Filters on this visual
ServiceLevelAgreement	Service Level Agreements	Service Level Agreements (SLA)	Service Level Agreements	Accords de niveau de service (SLA)	
ServiceLevelAgreementContract	Service Level Agreement contracts	SLA-Verträge	Service Level Agreement contracts	Contrats de niveau de service	AME ^ A
ServiceLevelAgreementCostRer lod	Service Level Agreement cost periods	Kosterzeiträume SLA	Service Level Agreement cost periods	Périodes de coûts SLA	is Contract lines - Ser & @
ServiceLevelAgreementCosts	Service Level Agreement costs	SLA-Kosten	Service Level Agreement costs	Colits SLA	Filter type ①
ServiceLevelAgreementEstimat e	Service Level Agreement estimates	SLA-Schätzkosten	Service Level Agreement estimates	Estimations SLA	Basic filtering •
ServiceLevelAgreementHours	Service Level Agreement hours	SLA-Stunden	Service Level Agreement hours	Heures SLA	O capica lauri agreementd
ServiceLevelAgreementInvento	Service Level Agreement assets	SLA-Anlagen	Service Level Agreement assets	Eléments d'inventaire SLA	>> service rever agreemental
ryttem					Service Level Agree 52
ServiceLevelAgreementVitoNC ontractLine	Contract lines - Service Level Agreement	SLA-Vertragspositionen	Contract lines - Service Level Agreement	Lignes de contrat - Accord de niveau de service (SLA)	Service level agree 10
ServiceLevelAgreementScope	Service Level Agreement scope	SLA-Umfang	Service Level Agreement scope	Portée du Service Level Agreement (SLA)	Service level agree 10
SpaceMtoNSLServiceAgreeme	Service level agreements - spaces	Service Level Agreements - Räume	Service level agreements -	Accords de niveau de service - espaces	all betree teres system to
et.			spaces		Contract lines - Servi 0
					Service Level Agree 0
					Service Level Agree 0
					Service Level Agree 19
					TR

2. When loading data, select the table **ServiceLevelAgreement**.

## Finding the right column

Suppose you are interested in the field Time to fix, which column should you use?

History of contract lines History of contract options History Financial event registration Contract lines - life cycle	y of contractual terms	Financial commitments Account	nting commitments Unked SLAs Contract service plan
No filter	• •	General Audit info	
Code   Contains   Search	େ ସ	General	
		* Code	E0013
Service Level Agreements		Description	Emergency call out
E001, Premium response (external)		* SLA service	E-CLEAN, Cleaning call out
ISI E0011, Emergency (pest)		Urgency TTP	
itsa E0012, Urgent (pest)		orgency rrik	
S E0013, Emergency call out		Time to respond	FM-IM, Immediate
(S) E0014, Standard call out		Urgency TTA	
E0019, Reprographics Silver		Time to attend	
E0020, Reprographics Bronze		1	
E0033, Service vending machines - Gold		Urgency TTF	
E0034, Service vending machines - Silver		Time to fix	
E0035, Service vending machines - Bronze		Urgency TTC	
📾 10015, Porterage Gold		Time to complete	EM IM Immediate
10016. Porterage Silver		<ul> <li>Time to complete</li> </ul>	rw-w, mmoutoe

The BaseBOFieldDefinition table stores all the field translations.

 In the following sample PowerBI chart, go to the Fields tab and filter on BO PNname "ServiceLevelAgreement" and find "Time to fix" in the AME column

Clipboard	Ext	ernal data		Insert	(	Sustom visuals	Themes	Relationships	Calculations	Share	
80.PriVame	Prillame	LangFieldDetailAME	LangfieldDetailDSU	Lang/TeldDetailEV/0	Lang/TeldDetail/MA	LangReldDetailNLD			~		Ξ.
Senical every Agreement	FreeDateTime6	Free date-time field 6	Freies Datums-/Zeitfeld 6	Free date-time field 6	Champ de date-heure libre	5 Vij veld datum 6				Y Filters (%)	2
SenicaLeve/Agreement	FreeDateTime?	Free data-time field 7	Relea Datuma-/Zaitfeld 7	Free date-time field 7	Champ de date-heure libre	7 Wij veld datum 7					
SenicaLevelAgreement	FreeDecimal1	Free numerical field 1	Freies numerisches Feld 1	free numerical field 1	Champ numérique libre 1	Vrj veld numeriek 1				Filters on this visual	
Senical evel Agreement	FeeDecimal2	Free numerical field 2	Freies numerisches Feid 2	Free numerical field 2	Champ libre 87	Wij veld numeriek 2				There of the troops	
SenicaLevelAgreement	FreeDecimal3	Free numerical field 3	Freies numerisches Feld 3	Free numerical field 3	Champ libre 00	Vrj veld numeriek 3				BO PoName A	4
Senical evel/Agreement	FreeDecimal4	Free numerical field IA	Preies numerisches Feld-4	Free numerical field IA	Champ numérique libre-4	Wij numeriak 4				bottimanie / E	4
SenicaLevel/Agreement	FreeDecimalS	Free numerical field 5	Freies numerisches Feld 5	Free numerical field 5	Champ numérique libre 5	Wj veld numeriek 5				is ServiceLevelAgree 🖉 🕫	8
SenicaLevelAgreement	TreeDecimal6	Free numerical field 6	Preies numerisches Feid 6	Pres numerical Reld 6	Champ numérique libre 8	Wij veld numeriek 6					
Sen/caleve/Agreement	FreeDecimal7	Free numerical field 7	Freies numerisches Feld 7	Free numerical field 7	Champ numérique libre 7	Wj veld numeriek 7				Filter type ①	
SenicaLevelAgreement	FeeDecimal8	Free numerical field 8	Freies numerisches Feld 8	Free numerical field 8	Champ numérique libre 8	Wj numeriek veld 8					
SenicaLevelAgreement	Freeintagent	Free reference field 1	Freies Verweisfeld 1	Free reference field 1	Champ de référence libre 1	Wij verwijzend veld 1				Basic filtering	۲I
SenicaLevel/Agreement	Freeintager2	Free reference field 2	Freies Verweisfeld 2	Free reference field 2	Champ de référence libre 2	Wj verwijzend veld 2					
SenicaLevelAgreement	Freeintager3	Free reference field 3	Preies Verweisfeld 3	Free reference field 3	Champ de référence libre 3	Wij verwijzend veld 3				Q	
Sen/caLeve/Agreement	Freeintager4	Free reference field 4	Preies Verweisfeld 4	Free reference field 4	Champ de référence libre 4	Wij verwijzend veld 4				-	-
SenicaLevelAgreement	Freeinteger5	Free reference field 5	Freies Verweisfeld 5	Free reference field 5	Champ de référence libre 5	Wj vervijbend veld 5				<ul> <li>Select all</li> </ul>	
SenicaLeve/Agreement	Feedbringt	Free Field 1	Freies Feld 1	Free field 1	Champ libre 01	Wj veld 1					
Senical evel/Agreement	FreeString2	Free Field 2	Preies Feld 2	Free field 2	Champ libre 02	Wij veld 2				AcceleratorCreator 10	
SenicaLevelAgreement	Freedoring3	Free Field 3	Preies Feld 3	Free field 3	Champ libre 03	Vrji veld 3				Account 30	
SenicaLevelAgreement	FreeDoingd	Free field &	Freies Feld &	Free field d	Champ libre 64	Wij veld 4				L Account 50	
Seniceleve/Agreement	FreeStringS	Free field 5	Freies Feld 5	Free field 5	Champ libre 05	Vrji veld 5				Account-AccountGr 5	
SenicaLevelAgreement	MultiCalendarRef	SLA calendar	SLA-Kalender	SLA calendar	Calendrier SLA	Kalender					
Senical evelopmement	Name	Description	Baschraibung	Description	Description	Omschuljving				AccountGroup 15	
SenicaLevelAgreement	ParantRef	Parent level	Obergeordnete Ebene	Parent level	Niveau parent	Bovenliggend niveau				AccountGroupAlast 4	
SenicaLeve/Agreement	PLCServiceOptionTypeRaf	Service option type	Art der Dienstleistungsoption	Service option type	Type (Coption	Optietype				<ul> <li>Accountercupwiert 4</li> </ul>	
SenicaLevelAgreement	PriorityRef	Time to complete	Zelt bis zum Abschluss	Time to complete	Urgence	Urgentie				AccountingPeriod 8	
SenicaLeve/Agreement	ServiceComment	Comment	Anmerkungen	Comment	Commentaire	Toelchting					
SenicaLevelAgreement	ServiceOptions	Service options	Dienstleistungsoptionen	Service options	Options de service	Opties					
SenicaLevelAgreement	SeniceQuestion	Service question	Diensteistungsfrage	Service question	Question	Vising				Require single selection	
Senical-evel/greement	SLASeniceRef	SLA service	SLA-Dienstleistung	SLA service	Service SLA	SLA-service				- medane angle selection	
Senical.eve/Agreement	Syscode	System code	Systemcode	System code	Code système	Systeencode					
Sen/csLevelAgreement	SysDataSectionRaf	Property set code	Mandantencode	Property set code	Code de gestionnaire	Seheerderscode				LanoFieldDetailAME	
SenicaLevelAgreement	SysServiceTypeRef	Service type	514-710	Service type	Type de service	Servicetype				Long resources the	
Sen/csLevelAgreement	SysUpdateCount	Update count	Anzahl Änderungen	Update count	Nombre d'utilisateurs	Update count				is (All)	
Senical.eve/Agreement	TimeToAttendRef	Time to attend	Telinahmepelt	Time to attend	Présent sur site	Op locatie aanweolg					
Senical.eve/Agreement	TomeToRicRef	Time to fix	Reparaturzeit	Time to fix	Solution temporaine disponi	ble. Tjiželjke oplossing b	eschildeer			1	
SenicaLeve/Agreement	TimeToResponsRef	Time to respond	Restionat	Time to respond	Réagir avant	Reageren voor				LangFieldDetailDEU	
SenicaLevelAgreement	ValidityCalendarRaf	Validity	Gültigkeit	Velidity	Validite	Geldigheid			w	ie (All)	
SenicaLevelAgreement	Weighting	Weighting	Gevichtung	Weighting	Coefficient	Weging				is (Par)	
									7 ⊠ …	LangFieldDetailENG is (All)	
										LangFieldDetailFRA is (All)	
										LangFieldDetailNLD	
Busines	s Objects	sids × States	+								

The PNname of the field is TimeToFixRef. This means it is a reference to another table, which you will need to find.

2. Click Edit queries.

File	Home	м	odelin	9	Hel	p														
Paste	Cut Copy Format Pair	nter	Get Data *	Ré	ecent rces •	Enter Data	Ec	dit ties	Refresh	Nev		New Ask isual Quest	A Buttor	) ns	Text box image Q Shapes *	Fi Mark	rom Fro retplace Fil	m Switch e Theme	Manage Relationships	New Measu
	Clipboard				Ext	ternal da	sta					ir	isert			C	stom visuals	Themes	Relationships	Calculatio
000	$\times$ $\checkmark$																			
	Syscode 💌	Priorit	yRef	*	Service	Options		Valid	ityCale	ndarRef	٣	SysUpdate	Count	*	SLAServiceRet	٣		Name		SysServiceTypeF
Ħ	1			7										0		- 4	Entrapmen	t-emergency	2 hours)	
-8	2			11										0		1	Non emerg	ency - main li	ft (2 days)	
唱	3			8										0		1	Non emerg	ency - second	ary lift (1 week)	
	4			7										0		2	Emergency	(pest)		
	5			5										0		2	Urgent (pe	st)		
	6			1										0		3	Emergency	call out		
	7			10										0		3	Standard c	all out		
	8			12										0		5	Premium re	esponse (exte	rnal)	
	9			6										0		5	Standard re	esponse (exte	mal)	
	10			12										0		6	Premium re	esponse (inter	nai)	
	11			6										0		6	Standard re	esponse (inter	nal)	
	12			11										0		5	M&E Non v	vorking days		
	13			12							5			0		5	M&E Mo-S	a < 08:00		
	14			12							6			0		5	M&E Mo-S	a > 18:00		
	15			20							4			0		5	M&E Mo-F	r 08:00 - 18:0	)	
	16			5							7			0		5	M&E Sa 08	:00 - 18:00		
	17			20							4			0		5	sub_sub			
	18			1										0		7	Porterage (	Sold		

3. Scroll to the right until you find a column that contains "records" that starts with "TimeToFixRef".

ondRef_Priority	he CostCentreRef_CostCentre	e 🖬 📰 TimeToFixRef_Prio	rity 🔂 PLCService(
	Record	Record	Record
	Descent	Deserved	Deserved

You will find that the column is called TimeToFixRef\_Priority. This means it is a reference to the Priority table. You do not need to load the Priority table, you can click the "expand button" to the right of the column.



#### 4. Select the fields of the Priority table you need.

	× √ fx - Table.Expan	dRecordColumn(ServiceLevelAgre	cement_table, "TimeToFixRef_Pr	iority", {"Code", "LangFieldDet	al144E"}, 🗸 🗸	Query Settings X
	+ AnignedByAddressRef_Address	TimeToRespondRef_Priority	CostCentreRef_CostCentre	Al <sub>C</sub> TimeToFixRef_Priority.Code -	H <sup>8</sup> C TimeToFiaRef_PriorityLangFieldDetailAME *	* PROPERTIES
1		Record	Record	nul	nui	Name
2		Record	Record	nul	nui	ServiceLevelAgreement
3		Record	Record	nul	nui	All Properties
- 4		Record	Record	nuit	nul	A AND COMPANY
5		Record	Record	nul	nui	* APPLIED STEPS
16		Record	Record	nuit	nul	Source S
7		Record	Record	null	nul	Navigation #
8		Record	Record	nuð	nul	× Expanded TimeToFixRef_Priori
9		Record	Record	nul	nul	
10	0	Record	Record	nuð	nut	
11	1	Record	Record	nuð	nul	
12	2	Record	Record	FM-D1	Within 1 working day	
13	3	Record	Record	FM-H6	Within 6 hours	
14	4	Record	Record	FM-H6	Within 6 hours	
12	5	Record	Record	EM-HA	Within 4 hours	

Now you have the **Time to fix** fields you wanted to report on.

## Finding communication logs

In the Planon relational database, communication logs are stored differently than in the data lake.

In the relational database, all communication logs are stored in one table: *PLN\_COMLOG* 

The link between the business object (e.g. Order X) and the comlogs of that order, are stored in the table

PLN\_COMLOGBUSINESSOBJECT table (apart from Assets, see below).

This intermediate table has three important fields:

- A reference to the comlog object in PLN\_COMLOG
- A reference to the BO definition in PLN\_BASEBODEFINITION, so that we know to which BO type the comlog belongs.
- A reference to the actual BO, in this case Order X.

Instead of having this intermediate table, the data lake stores the communication logs in a table per BO definition, they are named *CommunicationLog<BOname>*.

For assets, the intermediate table is in PLN\_COMLOGASSETS and the comlogs in the data lake are in CommunicationLogAsset.

# Importing data in a BI tool

The data exported to the data lake can be viewed in any BI tool, as long as it supports OData (version 4).



As this part is external to the Planon application, we will provide only the basic steps for importing the data from the data lake.

#### Procedure

- 1. Open your BI tool of choice (PowerBI, Tableau, Qlic, Excel, ...).
- 2. Get data from OData feed.
- 3. Log on:

Log on using **Basic Authentication** (not Windows Authentication nor Anonymous)!

a. URL: enter the URL of your Planon environment and extend it with: /datalake/odata

Some tools require you to further add the 'collection names' of the data to be shown. These 'collection names' are listed in the Data lake > Data lake settings step.

b. User name and password: enter the credentials of the Planon account

The data will be loaded. You can now visualize the data as required.



For information on data visualization, check the information that is provided by the vendor of your BI tool.

#### **Refreshing data**

Note that retrieving refreshed data is not free of charge. The BI tool determines how up-to-date the data in the tool is. Be smart with your refresh rate and only retrieve data you are interested in and only refresh as needed.

### Retrieving specific data

By amending the "service root URL", you can specify which data to display.

The <your root url>/datalake/odata is your service root URL. You can extend this URL to retrieve specific information.

#### Example

 To retrieve an *entity set* (which is a Planon table) such as base orders, your URL would be: <your root url>/datalake/odata/baseorder

To know which entity sets there are, you can look them up by either typing <*your root url>/datalake/odata/* or look up the list on the Data lake > Data lake settings step.

 Typing <your root url>/datalake/odata/\$metadata will give you all the fields of the entity sets.

For more information, see:

http://docs.oasis-open.org/odata/odata/v4.0/odata-v4.0-part2-url-conventions.html (not all features described here are supported).

For an overview of supported OData features, see: OData support.

### Sharing reports and dashboards

By using your BI tool, you can create reports and dashboards to share with the right people for analysis and management information.

There are multiple ways of sharing this content:

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- Include them in email
  - The data that is shared is static.
- Include links into your portal via the BI tools
- The data can be refreshed based on a schedule.
- This functionality depends on the BI tool and may cost extra.
- Embed the report/dashboard into Planon
- By requiring authentication, access to the report can be authorized from the BI tool.
- The data can be filtered, for example, based on the logged on user.
- The data can be embedded in a gadget on your portal/homepage.
- Further customizations can be applied.

# OData support

Connect for Analytics supports specific OData types and a subset of the OData protocol.

### **OData Types**

**Connect for Analytics** supports both *XML* and *JSON* formats and uses the following OData types:



When using tools such as PowerBI, we recommend to use *JSON* format (default for PowerBI).

- Edm.Int32
- Edm.String
- Edm.Decimal
- Edm.Boolean
- Edm.DateTimeOffset
- Edm.Date
- Edm.TimeOfDay
- Edm.GeographyPoint (only supported for JSON format.)

#### **OData Protocol**

In addition, **Connect for Analytics** supports a subset of the OData protocol:

- Only reading data is possible, Not creating or updating.
- \$filter queries of the form

/BaseOrder?\$filter=PropertyRef eq 4

• Filtering on navigation properties is **Not** supported. For example a query of the form will throw an error:

/BaseOrder?\$filter=PropertyRef\_Property/Name eq 'Columbus Square'

• When using \$select queries such as:

/BaseOrder?\$select=OrderNumber,OrderGroupRef,PropertyRef

Or

/BaseOrder?\$select=\*

The second query will select all fields of BaseOrder. If no \$select option is specified, all fields will be returned.

• \$expand queries with or without \$select. Nested expands are supported, but performance might suffer with increasing number of nested expands. For example a query of the form:

/BaseOrder?\$expand=PropertyRef\_Property(\$select=Name)

#### is supported, as well as:

/BaseOrder?\$expand=PropertyRef\_Property(\$select=Name; \$expand=ParentRef\_Property(\$select=Name))

Within \$expand, we support the system options \$select and \$expand.

• \$count which can also be used in combination with \$filter. For example, a query of the form

/BaseOrder?\$filter=PropertyRef eq 4&\$count=true

will return the number of orders where the PropertyRef field has the value 4.

 \$orderby- by default, results are sorted by Syscode (primary key field) ascendingly. The sorting can be changed by specifying a field name in the \$orderby option. When no asc or desc option is specified, ordering is done ascendingly.

/BaseOrder?\$orderby=OrderNumber desc

• \$skip,\$skiptoken and \$top. For example, queries of the form:

/BaseOrder?\$top=1000

/BaseOrder?\$skiptoken=1\*2000

/BaseOrder?\$skip=1000

are all supported. Note that every OData response will contain at most 2000 entries (prior to L54, this was 1000), and, if necessary, a link to the next page of results which will contain a \$skiptoken option.

• Supported String and Date filter functions are as follows:

String filter functions	DateTimeOffset / Date / TimeOfDay filter functions
contains	year
endswith	month
startswith	hour
length	second
concat	

### **More Information**

i

- For more information on the OData v4 standard specification see:
- http://docs.oasis-open.org/odata/odata/v4.01/odata-v4.01-part1-protocol.html
- http://docs.oasis-open.org/odata/odata/v4.0/os/part3-csdl/odata-v4.0-os-part3-csdl.html
- http://docs.oasis-open.org/odata/odata/v4.0/odata-v4.0-part2-url-conventions.html.

# Using PowerBI - Tips and Tricks

Connect for Analytics is BI-tool-agnostic. This means you can use your BI tool of preference. Since many customers are using PowerBI, the following section provides some useful tips.

For more resources on building queries, see also:

- https://www.sqlbi.com/
- https://daxstudio.org/

The OData connector does not support 'query folding'. This means that when working with large data sets (depending on how the report is set up), it could take a long time to calculate such a dashboard.

#### **Basic Settings PowerBI**

Views

PowerBI features three main views, featured in the left panel.



- 1. **Report** view: where you use queries to build visualizations.
- 2. **Data** view: where you see the data in your report in data model format (much like Excel). Here you can add new columns and caculations.
- 3. **Relationships** view: where you get a graphical representation of the relationships that have been established in your data model.

In The **Data** view, you can use the **edit query** mode, which is how you can model the data retrieved from Planon. The query language used here is slightly different. When you add a filter in **edit query** mode, it is "fixed" and will be applied every where and each time you refresh your data. If you add a filter in **Data** view, it is only applied in that view.

## Filter on syscode

By being able to filter on the syscode instead of having to join two tables, the search will be much quicker.

If a business object (BO) has a reference, we implemented 2 columns:

- The <BOsystemname>Ref field, that contains the syscode value of the row in the referenced table.
- The <BOsystemname>Ref\_BOsystemname> column, where you can expand the referenced BO to include the fields you need to show.

For example, Order has a reference to a Department. There are 2 fields:

- DepartmentRef
- DepartmentRef\_Department

	× √ ƒx = Table.5	SelectColumns(BaseOrder_table,
	↓ 1 <sup>2</sup> 3 DepartmentRef ▼	DepartmentRef_Department
1	21	Record
2	21	Record
3	14	Record
4	14	Record
5	14	Record
6	14	Record
7	6	Record
8	6	Record
9	6	Record
1	0 6	Record
1	1 6	Record
12	2 6	Record

To include, for example, the Department name in the Asset table, you can expand it to include the column DepartmentRef\_Department.Name.

$\times$	✓ fx = Table.E	xpandRecordColumn(#"Removed Other	Columns",	"DepartmentRef_Department",	{"Name"},	{"DepartmentRef_Department
	123 DepartmentRef	A <sup>B</sup> C DepartmentRef_Department.Na 👻				
1	1 21	Facility Management 2				
2	21	Facility Management				
3	14	Sales				
4	14	Sales				
5	14	Sales				
6	14	Sales				
7	б	Human Resources				
8	б	Human Resources				
9	6	Human Resources				
10	б	Human Resources				
11	б	Human Resources				
12	6	Human Resources				

Now, you can build a filter that, for example, only shows the HR department. You can build it on the syscode (column 1) or on the name column (2).

Filtering on the syscode column will be faster because the tool does not need to join 2 tables for your filter, it only has to search in one table.

### Sorting fields alphabetically

Press the AZ button next to a search field and the fields will be listed alphabetically.

se Remove ns * Columns	Keep Remove	Vhole Nu Row as	mber * Headers *	Merge Queries * Append Queries Combine Files	Ť			
age Columns	Choose Columns			Combine				
ure="tabl	Choose the columns to keep							
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n	(Select All Columns)	Natural Order						
n	AcceptedStateDateTime	V Name						
n	ActiveEstimatedCostsExcIVAT		)1					
n	ActiveEstimatedCostsIncIVAT		00					
n	ActualAttendDateTime		)1					
	ActualAttendPropertyDateTimeDate							
n	ActualAttendPropertyDateTimeTime		)1	)1				

## Go to column

Having many columns results in heavy scrolling. In the 'edit query' mode you can select **Go to Column** in order to navigate to it directly.

G	Properties			$\mathbf{X}$		Ý				
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	Query		Cho	ose Columns		duc	e Rows			
Go to Column										
RequestedFixPropertyDateTimeTime     A <sup>B</sup> FT EOM S <sup>-</sup>										

## Hierarchy

To perform an analyses at the top level of a hierarchy, proceed as follows. For this example, we are using Departments.

#### Procedure

- 1. Select the Department table.
- 2. Add a column (modelling, new column)

 enter namepath = PATH(Department[Name]; Department[ParentRef Department.Name])

This will give you a string that represents the whole "hierarchy path " of the field "department name" of this row, based on the relationship parentref.

lations	what if Son	τ	Formatting		Properties		Security Groups Calenda
namepath	<ul> <li>PATH(Department</li> </ul>	t[Name];	Department[Parent	Ref_	Department.Name])		
teTime 💌	LangFieldDetailENG	▼ Pare	ntRef_Department.Nam	e 💌	ParentRef_Department.Code	٣	namepath 👻
19 14:50:12							AT General
19 14:50:12							AT Sales
19 14:50:12							AT Services
19 14:50:12							BE General
19 14:50:12							BE HELPDESK
19 14:50:12							BE Sales
19 14:50:12							BE Services
19 14:50:12							NOT IN USE - Planon Building Management
19 14:50:12							BM Services
19 14:50:12							BM Solutions
19 14:50:12							NL Sales
19 14:50:13							NOT IN USE - Business Consultancy
19 14:50:13							NOT IN USE - Support NGA
19 14:50:13							NL Managed Services

4. Add a new column for each level you have.

Department (lvl1) = PATHITEM(Department[namepath];1)

Department (lvl2) = PATHITEM(Department[namepath];2) etc.

5. When you are done with this, you can make a hierarchy in your visualisation view by dragging the fields into a hierarchy.



If you now use this hierarchy as an X axis, you can zoom into lower levels of the hierarchy.

### Reference date aware/time filters

To filter on data data is relevant today, you need to fill in a begin date/end date.

This topic is about Planon reference data aware BOs (for example: Space usages, Accounts). Note that this excludes lifecycle aware BOs such as Contracts (these are treated differently).

Typically, Planon leaves the end date empty.

Fill the end date with a date in the future: in the data model view (3) you add a column with this functionEnddate replace empty values

= Replacer.ReplaceValue(Logical.From([EndDate]),null, Date.AddYears(DateTime.LocalNow(), 50))

Now you can filter on values between begin date and end date.

PowerBI also features a lot of relative date filters built in which you can use.

### Turn off fields/columns without data

There is a visual indication that directly shows if a column contains any values.

If you click 'edit query', you will see colors in the headers:

- green: has a value
- grey: emtpy



If the bar is totally grey, the column is empty for the first 1000 records.



It does not query the whole table, so it is possible there are values in this column, but it is an indication.

If you have fields that do not contain data, you can do 2 things

- 1. Do not put them "in use" in **Field definer**. If you do not put them in use, they will no longer be synced to the data lake and will automatically no longer appear.
- 2. Remove them from PowerBI (as shown in the following image).

fx	<pre>= Source{[Name="Person",Signature="table"]}[Data]</pre>											
e	-	AB <sub>C</sub> CardNumb	er	→ A <sup>B</sup> <sub>c</sub> Email								
	2		Ē	Сору								
	3		L J	Pemove								
	4		×	Kelilove								
	5			Remove Other Columns								
				Dunlicate Column								

## Data that is not updated often

You can configure PowerBI so that it does not refresh data that does not change often.

A dashboard is configured to show orders by department. The orders are updated often, but departments do not change often. So, for this report indicate that you do not want to update the departments, only the orders as shown in the following image:

File	Home	Transf	orm	Add Column	View	Help												
Close & Apply *	New R Source * Sou	ecent urces •	Enter Data	Data source settings	Manage Parameters •	Refresh Preview	Advanced Editor	Choo Colum	se Ri ns ▼ Co	emove lumns *	Keep Rows *	Remove Rows *	⊉↓ ≩↓	Split Column	Group By	Data Type: Use Fir <sup>1</sup> 42 Replac	Whole Numl st Row as Hr e Values	ber * eaders
Close	New	v Query		Data Sources	Parameters		Query	Man	age Col	lumns	Reduce	Rows	Sort			Transform	h	
Queri	es [18]		<	<ol> <li>This pre</li> </ol>	view may be	up to 23 o	days old. Refrest	n i										
📰 Pe	rson		- [	$\times \checkmark$	fx • 1	Table.Se	lectRows(#"Expan	ded Par	entRe	f_Depa	rtment",	each	([Sys[	DataSect	tionRef	) = "BEH	4"))	
III Me	easurepointS	ummari	ze		ode	<b>∀</b> A	<sup>B</sup> C Comment		A <sup>B</sup> C Co	omposit	eCode		A <sup>B</sup> C CAI	DViewerC	olourRef	▼ A <sup>B</sup> C	SysAuthori	ization
III Me	easurementP	ointDef	ini	1		21		null	Sal									~
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🔲 De	partment			3		23		null	Tra	9	laciy	FIO	pen	103				
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E Flo	orCode		- 1	7		28		null	Bui									٦
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	DarDay	511	- 1	9		30		null	Gen									
	reitay		- 1	10		31		null	Gen.									
	servations		- 1	12		2.4		null	Gen		Enable los	ad to co	nort					
E Pri	operty		- 1	12		35		null	01	×	Enable lo	ad to re	port					
E Ba	seReservatio	nUnit	- 1	14		36		null	02	×	Include in	report	refresh	0				
III As	signedSpace	5	- 1	15		37		null	03						_			
III Re	sUnit_Totalre	eservatio	ons	16		38		null	04							OK	Cancel	
III KN	IMI_2018123	1data	- 1	17		39		null	05									
SV SV	G firstFloor		- 1	10		40		null	05							null		

# Field descriptions

The following section(s) describe(s) the fields, their purpose and meaning.

# Data lake fields

Field	Description
Synchronization activated	When <b>Export to data lake</b> has been clicked in <b>System</b> <b>Settings</b> , this setting is set to <b>Yes</b> to indicate that the synchronization between the Planon application and the data lake is enabled.
Database	Displays the location of the data lake database.

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