



HOW TO USE A VERACITY CONTAINER AS DATA SOURCE IN POWER BI AND HOW TO SET IT UP FROM VAP – VERACITY ADAPTER FOR POWER BI

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Change history			
Version	Date	Comment	Who
	August 2019	Created the first draft version of the documentation	Anita Strøm Eriksen
	August 2020	Adjusted and recommend 'OData feed' and not Web	Anita Strøm Eriksen
	August 2020	Web connection documentation updated	Chris Bell
	November 2020	OData limitation max 2000 rows of data added and recommended to use Web and not OData based on the max row limitation	Anita Strøm Eriksen
	December 2020	Added How-to for setting up Veracity container	Anita Strøm Eriksen
	May 2021	Updated the Power BI Desktop Odata connector limitation from Microsoft Power BI. With answer from their support team. In addition, did changes to be aligned with the latest VAP release.	Anita Strøm Eriksen
	June 2021	Changed to DNV template from DNVGL	Anita Strøm Eriksen

1 FIRST YOU NEED TO HAVE A DATACONTAINER

A data container is a storage brought to you by Veracity Data Fabric team.

It might be that your department/unit has a subscription for Data Fabric. Then you can ask that person to create the container for you. You can also contact Product Owner in Veracity that can elevate your access level to "Data Manager". Allowing you to create containers and upload/download, etc within that subscription.

If your department/unit does not have a subscription, then that can easily be bought online on the Veracity marketplace. Please see the following link: <https://store.veracity.com/veracity-data-fabric-secure-data-sharing>

Help on Data Fabric can be found here: <https://intercom.help/veracity/en/> This is the link you also find on Veracity.com in the footer called Help center.

DNV Headquarters, Veritasveien 1, P.O.Box 300, 1322 Høvik, Norway. Tel: +47 67 57 99 00. www.dnv.com

If you need any help in addition to the description above I recommend that you contact the Product Manager for Veracity Data Fabric Christian.Skjelbred@dnv.com

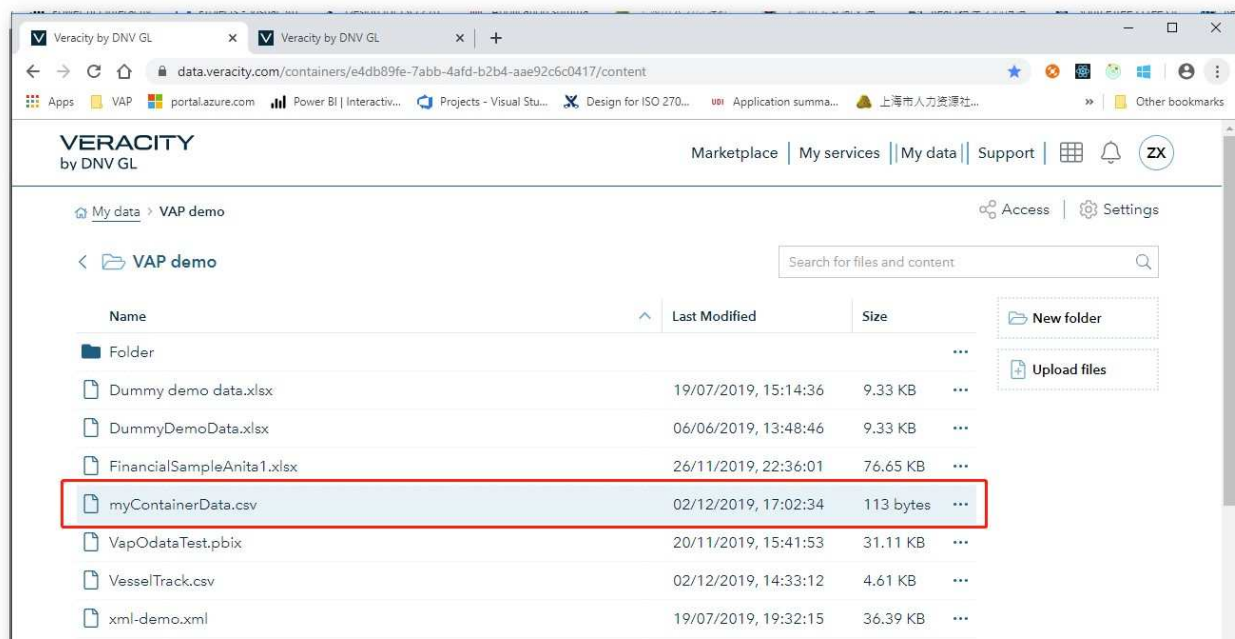
2 WHAT DO YOU NEED TO DO IN THE CONTAINER?

When you develop your Power BI report to use data from a Veracity container there are some steps to be aware of. When this description is written there are limitations in functionality both from Microsoft Power BI REST API used by VAP and from Veracity. This document describes how you currently can set it up both from a Veracity Container, from Power BI and from VAP (version number in the footer).

When you build a Power BI report on top of data from a container, the data source, access key and file name are stored as settings in your Power BI report. The Veracity container access key used when building the report has a maximum validity of 6 months. Once the key in your report expires, it will not be possible to refresh the report. Here you will learn the steps you have to take to make sure VAP can always refresh your report.

2.1 Upload data source file to your container

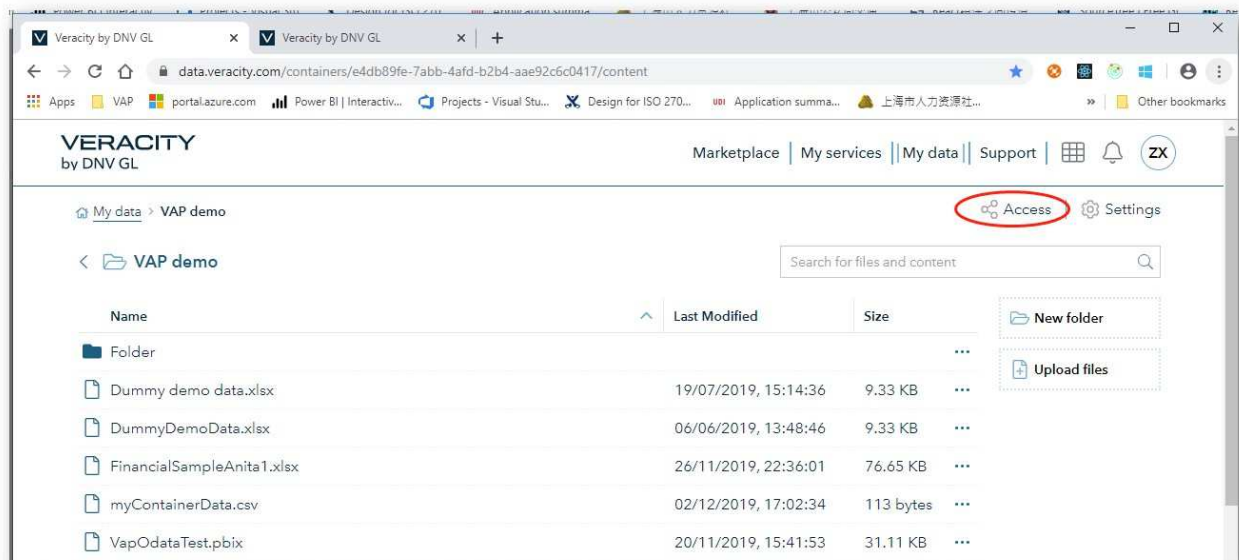
We assume you have Data Steward access to a container on Veracity (if not, please contact Veracity). Make sure you have uploaded at least one file to your Container. We will use myContainerData.csv as an example. If data changes make sure you upload a new file to the container and overwrite the file you used when building your report. The file name is case sensitive, so you must replace the old file. In VAP you can set up scheduled refresh. If you know when the data has changed you could also refresh OnDemand in VAP.



2.2 Share access to VAP service account

A Veracity container access key has a maximum validity of 6 months. When you develop a Power BI report and use data from a Veracity container you use your own access key. When you upload the file into Veracity Adapter for Power BI, VAP needs to have access to your container in order to refresh the report.

To allow VAP to get a new access token/key to the container automatically you have to share a key from your container to the VAP Service account VAP@veracity.com. Please click Access as shown in the image below.



When sharing the key, please select '**Set key as recurring**', set access level to '**Read, write and list**' and set **duration to the longest period**. Then click Share.

VERACITY
by DNV GL

[My data](#) > [VAP demo](#) > [Share access](#)

[< VAP demo](#) | **Share access** | [User management](#)

Share with ⓘ

E-mail

name.surname@email.com

vap@veracity.com ✕

Share settings

☒ Set key as recurring

Read, write and list ▼

6 months ▼

☐ Comment

☐ Set IP-range

+ Add people to another key type

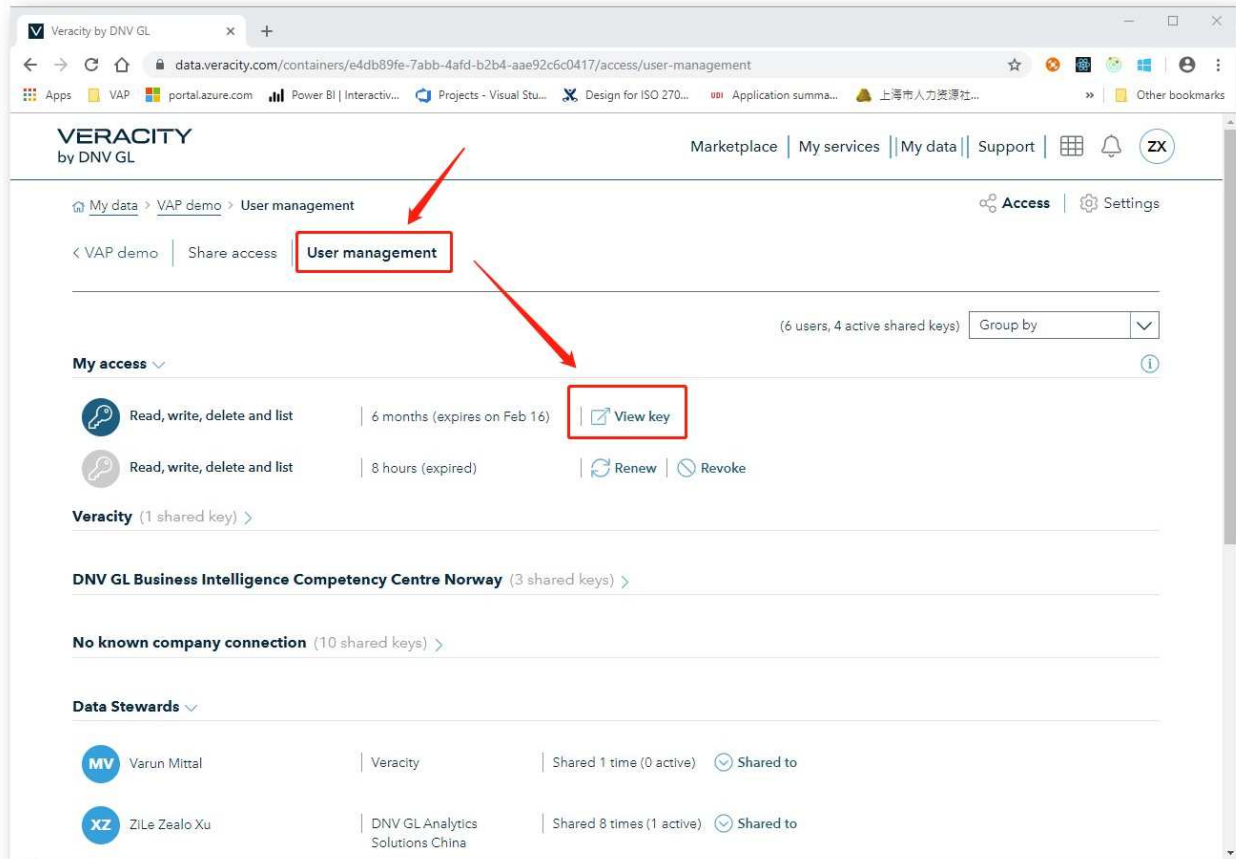
Share

3 FOR VERACITY CONTAINER THE FILE URL NEEDS TO BE USED IN YOUR POWER BI REPORT

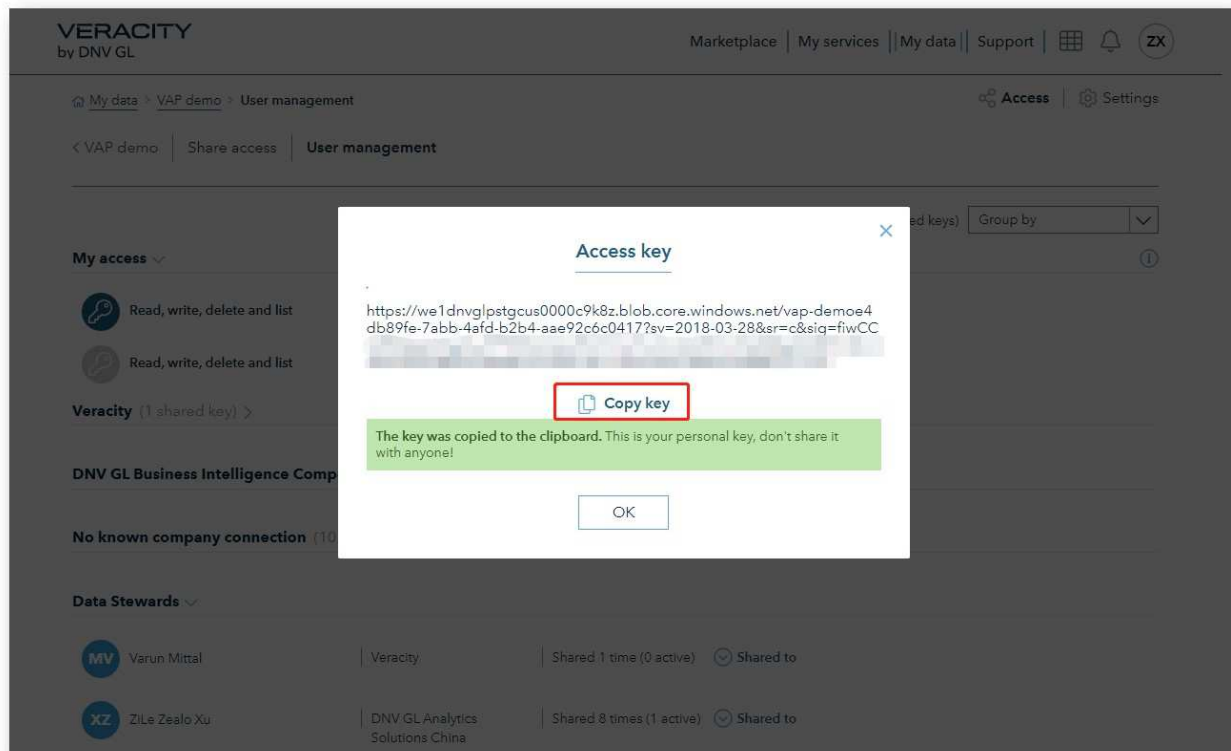
You will later use the key when building the report from Power BI Desktop.

3.1 First, we need to find the key

Click User management, then click “View key” to copy your key.



Click Copy key



The key you copied contains of 3 parts

1. Resource part: <https://we1dnvglpstgcs0000c9k8z.blob.core.windows.net/vap-demoe4db89fe-7abb-4afd-b2b4-aae92c6c0417?sv=2018-03-28&sr=c&sig=fiwCC>
2. Container part: /vap-demoe4db89fe-7abb-4afd-b2b4-aae92c6c0417
3. Key part: ?sv=2018-wCCK7E5WgdTJqby7KPNNkw6gxKVzSmerSw4w.....

3.2 Second you need to add the filename and path into the key

Now we have the key to the container. But to build a Power BI report you also need the filename to your data source. Please add / type your file name and path into the key. In our example the filename is myContainerData.csv and the folder name simply is just Folder.

So the file URL to be used in your Power BI Desktop when building your report should consist of: Resource part + Container part + Folder + filename + key

The correct file URL is:

<https://we1dnvglpstgcs0000c9k8z.blob.core.windows.net/vap-demoe4db89fe-7abb-4afd-b2b4-aae92c6c0417/Folder/myContainerData.csv?sv=2018&sr=c&sig=fiwCCK7E5WgdTJq.....>

Please note the URL is case-sensitive

4 CREATE YOUR POWER BI REPORT USING THE FILE URL

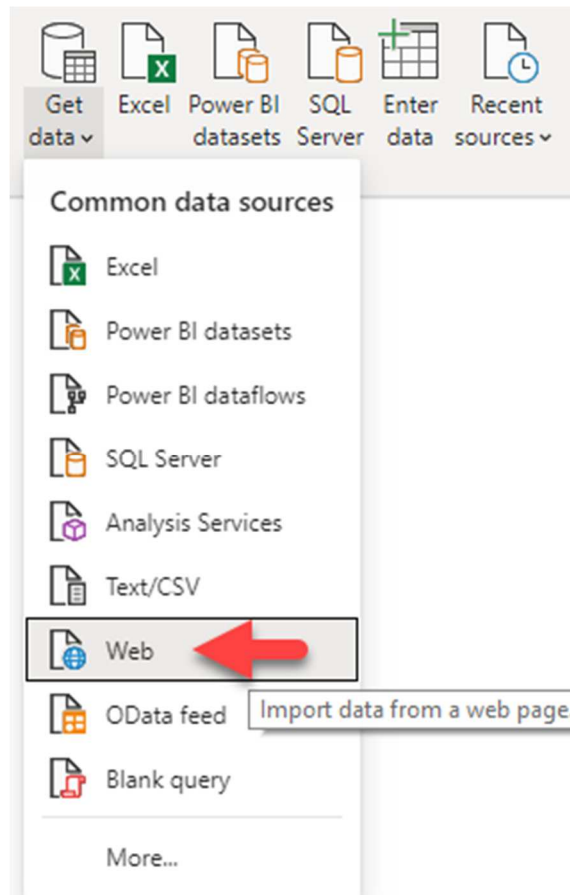
Go to Power BI Desktop, to create your report

There are two ways to connect to a Veracity data source when building a power BI report

You can select either 'Web' or use 'OData feed'. This section will describe what to do for both cases. Both alternatives require workaround actions due to limitations from Microsoft, but both ways let you connect to the data in the container, renew the access key and set up scheduled refresh to refresh the data in the Power BI report.

4.1 Get data from 'Web' is the recommended way

The Veracity container have limitation on how long the Veracity container can be valid. Max 6 month. The current limitation from Microsoft is that the data source information stored in your Power BI file can only be changed if you define a Parameter when building your report in Power BI. Because of this we must do some workaround steps as described here.



Select the menu 'Edit Queries' to define your parameter.

The next selection is 'Manage Parameters' - select 'New Parameter'. Define a Parameter and add the file URL in the field named 'Current Value'. How to find the file URL is described in section 3. You can give the parameter a name of your choice, preferably something that describes the content of the file as it will be the default name on your data table. Set other options as in below image.

From Web

×

☐ Basic ☒ Advanced

URL parts ⓘ

url of file from data container

key ...

Add part

URL preview

url of file from data containerkey

Command timeout in minutes (optional)

HTTP request header parameters (optional) ⓘ

Enter or select a value

Add header

OK

Cancel

Note: For top level items Veracity automatically includes a content folder “/content/” this text field must be removed for

×

From Web

☐ Basic ☒ Advanced

URL parts ⓘ

https://ne1dnvglpstgus0005m7hg6.blob.core.windows.net/og-uk-premier

?sv=2018-03-28&sr=c&sig=kwrBOnp4X996a2NoGPhH%2BsqyvWqcVWR

Add part

URL preview

https://ne1dnvglpstgus0005m7hg6.blob.core.windows.net/og-uk-premieroil

Command timeout in minutes (optional)

HTTP request header parameters (optional) ⓘ

Enter or select a value

Add header

OK

Cancel

files to be located by Power BI.

<https://ne1dnvglpstgcus0005m7hg6.blob.core.windows.net/og-uk-premieroilde...>

File Origin
Delimiter
Data Type Detection

1252: Western European (Windows) ▾
Comma ▾
Based on first 200 rows ▾

	Date/Time*	Event Type_x	Category_x	Area_x	Node_x	Unit_x	Module_x	Module Description_x	Pa
0	04/01/2020 15:31:39	SIS_CHANGE	USER	75_FIRE_AND_GAS	SLNOPWS1	FGS_FIREWTR	FGS_FIREWATER_02	Firewater Pump	HS
1	04/01/2020 15:31:39	SIS_EVENT	PROCESS	75_FIRE_AND_GAS	FGS04	FGS_FIREWTR	FGS_FIREWATER_02	Firewater Pump	
2	04/01/2020 15:31:39	SIS_EVENT	PROCESS	75_FIRE_AND_GAS	FGS04	FGS_FIREWTR	FGS_FIREWATER_03	Firewater Pump	
3	04/01/2020 15:31:41	SIS_EVENT	PROCESS	75_FIRE_AND_GAS	FGS04	FGS_FIREWTR	FGS_FIREWATER_03	Firewater Pump	
4	04/01/2020 15:31:49	SIS_EVENT	PROCESS	75_FIRE_AND_GAS	FGS04	FGS_FIREWTR	FGS_FIREWATER_02	Firewater Pump	
5	16/01/2020 08:35:25	SIS_CHANGE	USER	75_FIRE_AND_GAS	SLNOPWS1	FGS_FIREWTR	FGS_FIREWATER_02	Firewater Pump	HS
6	16/01/2020 08:35:25	SIS_EVENT	PROCESS	75_FIRE_AND_GAS	FGS04	FGS_FIREWTR	FGS_FIREWATER_02	Firewater Pump	
7	16/01/2020 08:35:26	SIS_EVENT	PROCESS	75_FIRE_AND_GAS	FGS04	FGS_FIREWTR	FGS_FIREWATER_03	Firewater Pump	
8	16/01/2020 08:35:28	SIS_EVENT	PROCESS	75_FIRE_AND_GAS	FGS04	FGS_FIREWTR	FGS_FIREWATER_03	Firewater Pump	
9	16/01/2020 08:35:35	SIS_EVENT	PROCESS	75_FIRE_AND_GAS	FGS04	FGS_FIREWTR	FGS_FIREWATER_02	Firewater Pump	
10	20/01/2020 17:05:38	SIS_CHANGE	USER	75_FIRE_AND_GAS	SLNOPWS1	FGS_FIREWTR	FGS_FIREWATER_02	Firewater Pump	HS
11	20/01/2020 17:05:38	SIS_EVENT	PROCESS	75_FIRE_AND_GAS	FGS04	FGS_FIREWTR	FGS_FIREWATER_02	Firewater Pump	
12	20/01/2020 17:05:39	SIS_EVENT	PROCESS	75_FIRE_AND_GAS	FGS04	FGS_FIREWTR	FGS_FIREWATER_03	Firewater Pump	
13	20/01/2020 17:05:41	SIS_EVENT	PROCESS	75_FIRE_AND_GAS	FGS04	FGS_FIREWTR	FGS_FIREWATER_03	Firewater Pump	
14	20/01/2020 17:05:48	SIS_EVENT	PROCESS	75_FIRE_AND_GAS	FGS04	FGS_FIREWTR	FGS_FIREWATER_02	Firewater Pump	
15	21/01/2020 08:09:50	SIS_CHANGE	USER	75_FIRE_AND_GAS	SLNOPWS1	FGS_FIREWTR	FGS_FIREWATER_02	Firewater Pump	HS
16	21/01/2020 08:09:50	SIS_EVENT	PROCESS	75_FIRE_AND_GAS	FGS04	FGS_FIREWTR	FGS_FIREWATER_02	Firewater Pump	
17	21/01/2020 08:09:50	SIS_EVENT	PROCESS	75_FIRE_AND_GAS	FGS04	FGS_FIREWTR	FGS_FIREWATER_03	Firewater Pump	
18	21/01/2020 08:09:53	SIS_EVENT	PROCESS	75_FIRE_AND_GAS	FGS04	FGS_FIREWTR	FGS_FIREWATER_03	Firewater Pump	
19	21/01/2020 08:10:00	SIS_EVENT	PROCESS	75_FIRE_AND_GAS	FGS04	FGS_FIREWTR	FGS_FIREWATER_02	Firewater Pump	

<
>

Load
Transform Data
Cancel

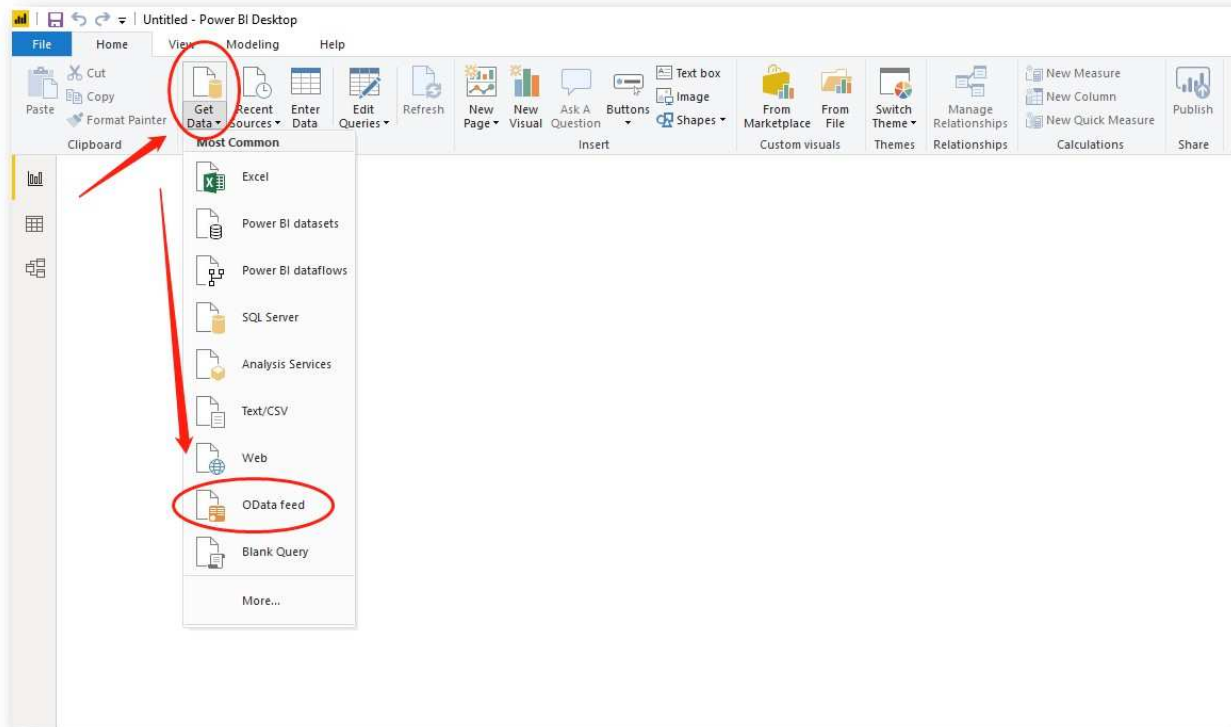
Click **'Load'**.

Then save your parameter and click 'Close & Apply'

If you have several files in the container you must repeat all these steps for each file.

4.2 Get data from OData Feed

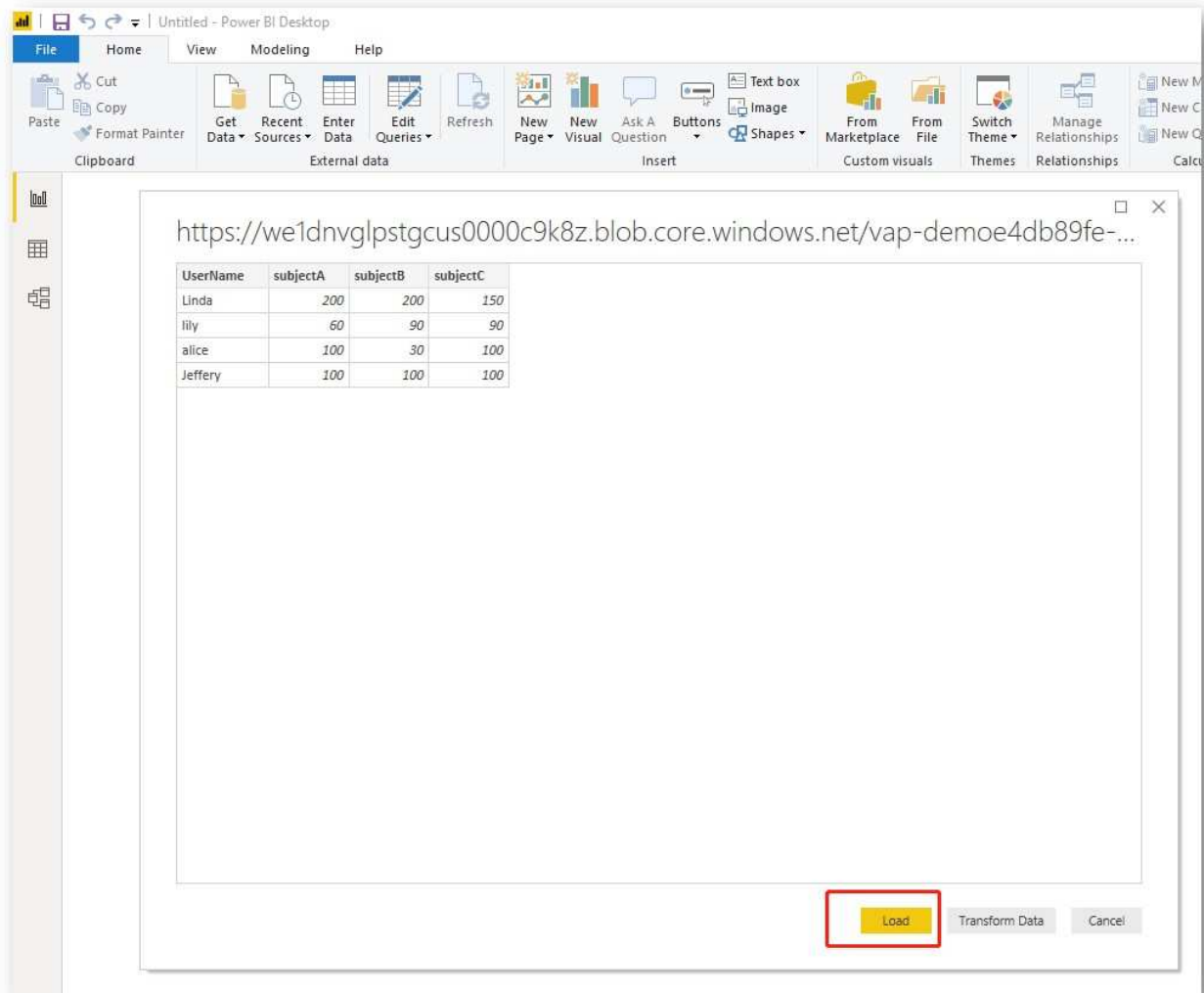
Click Get Data in Home panel, then select OData feed, if you cannot find it, please click More...



Paste the file URL into the URL area.



It's successfully set up if you can see the data shown. Please click Load the data to be used.



4.2.1 There are two issues if you use OData

There are two issues if you use OData when you create your Power BI report, and you must do some workaround to get it work.

1. When using OData feed the file cannot have above 2000 rows of data
2. When using OData feed the file content type cannot be text or csv

On issue 2, comes the current Veracity Container limitation into play. You cannot change the file content type when uploading a file into you're a Veracity container. That's why we must do some workaround steps as described here.

4.2.1.1 OData feed the file cannot have above 2000 rows of data

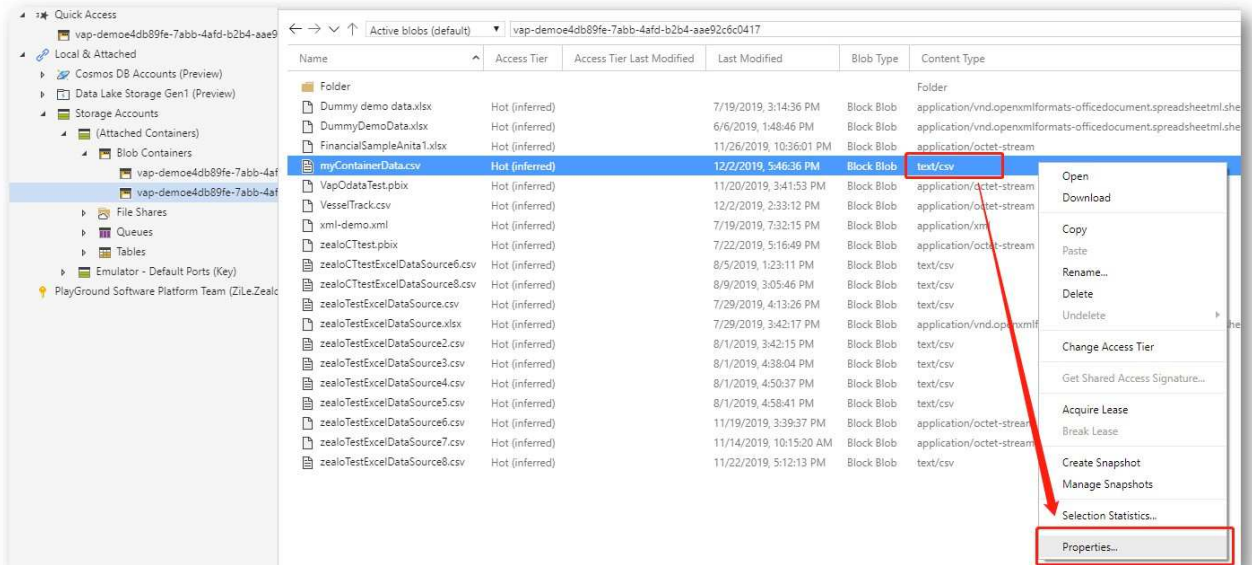
If your file has more than 2000 rows of data, you must use the WEB way.

This is the answer VAP team receives from Microsoft support 7th May 21: *As verified by the product department, the CSV file stored in Azure Blob Storage is not within the scope of the Odata connector. It is recommended to use the web connector instead.*

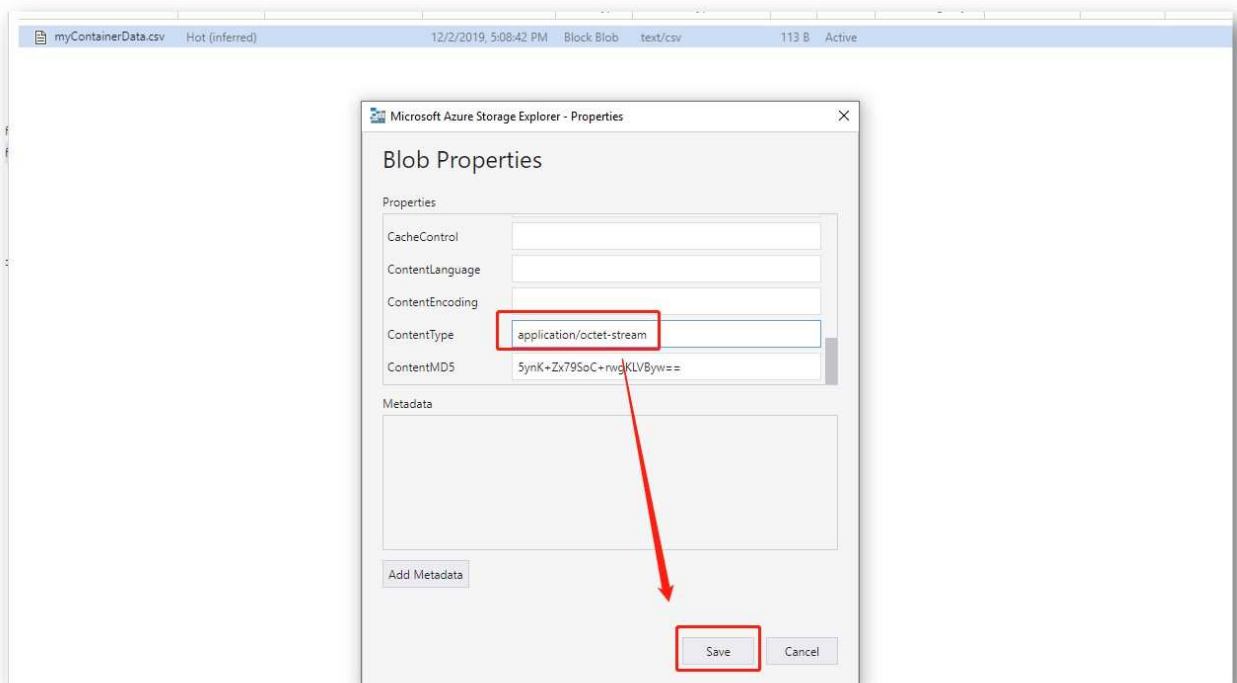
In the answer from Microsoft they write 'Azure Blob Storage' this is what we in this document refer to as Veracity Container.

4.2.1.2 Change file content type

Open Microsoft Azure Storage Explorer to check your file. If the Content Type is not **application/octet-stream**, it must be modified. Please click the file, then select Properties. From the example below you see the content type is text/csv and how to modify it.



Change to application/octet-stream, then click Save button

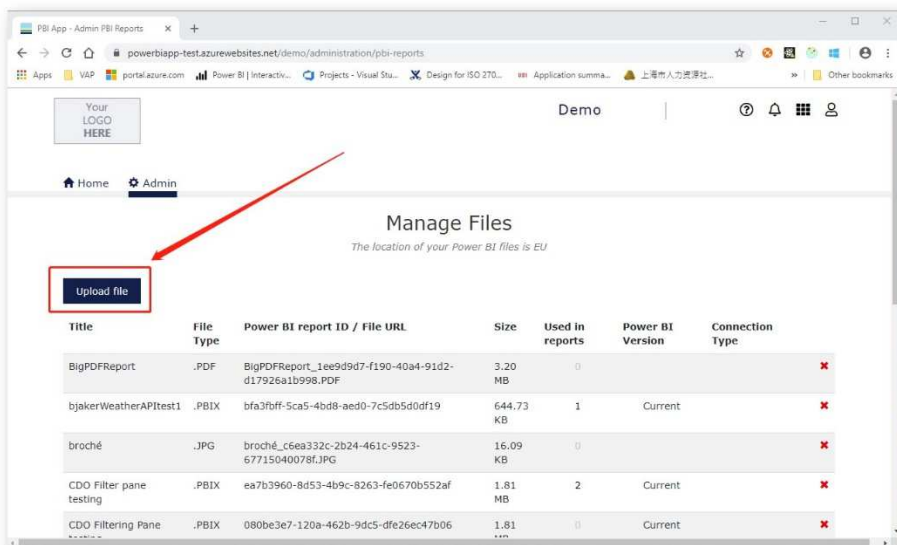
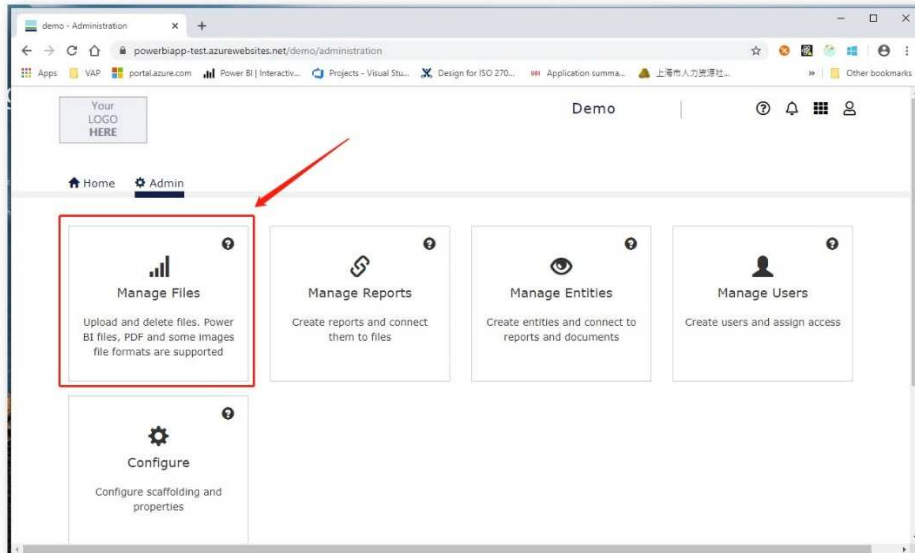


4.3 Build your visuals and save the file as usual

Finally it's time to build your visuals in the report. Save the file to your favorite storage folder as a .pbix file.

5 UPLOAD THE POWER BI FILE IN VAP

Log in to your VAP service. Click 'Manage Files' to upload the file.



Choose your .pbix file

Click show more to read the terms and tick on "I accept and understand that I'm responsible for the content I share in my report". Give it a name.

The access key to Veracity Container is only available 6 months after you created the Power BI report.

VAP check it the Veracity Container access key needs to be renewed and renew it when needed. That's why you had to share access to the VAP in the container and set the key as recurring in this section 2.2 Share access to VAP service account

