Qlik DataTransfer Hands-On

Practize August 06, 2020

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PREREQUISITE

- You should have access to a Qlik Machine Image (QMI) name "Image Name" or your own Virtual Machine.

- Software: Qlik DataTransfer Installation software.

- For the ability to generate an API you must have a "Developer" role in the Qlik Cloud tenant.

- Windows administrator rights to perform the installation on a Microsoft Windows machine.

- Create a File Share folder

INTRODUCTION

As of August 2020, Qlik release a free tool known as Qlik DataTransfer. It is a lightweight tool that provides the ability to collect data from various data sources. Its purpose is to help drive Qlik SaaS adoption by connecting to on-premise data sources and pushing that data into the Qlik Cloud.
Data collected from one or various data sources can be uploaded to the customer Qlik Cloud tenant predefines space. Besides manually upload, date upload can also be accomplished by setting a predefined scheduled routine or by making use of the file trigger mechanism that upload the data based on a file change. To make use of the latest data, the Qlik DataTransfer can set a trigger that reloads any Qlik application in the cloud that is associated to that updated data set.

Qlik DataTransfer will be particularly useful for new or native Qlik cloud customers. Qlik DataTransfer offers multiple ways to retrieve data:

1. Qlik DataTransfer can create a connection to an ODBC or REST to data sources: a selection can be made from the desired tables and fields. Once Qlik DataTransfer has retrieved data from the source system, that data can now be upload to the Qlik Cloud tenant.

2. Through Qlik Sense Desktop: a customer can create a Qlik Application (QVF) using one or more data sources and performing whatever data transformation logic you would like. Qlik DataTransfer, you can create a dataset that will extract all the tables from this app (using a binary load) and upload them to QCS.

3. Create a Data Folder that Qlik DataTransfer will monitor for new or updated files. Files in this folder will be uploaded to the Qlik Cloud Tenant.
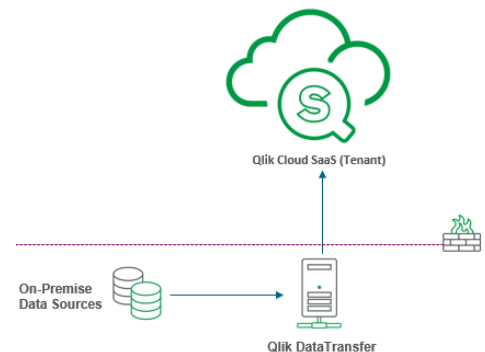
Enablement Qlik DataTransfer

This technical enablement exercise consists of two sections. In the first part you will;

1. Perform the installation of Qlik DataTransfer

2. Get acquainted with the product file structure and log files

In the second part of the exercise you will;

3. Make the preparations on your own Qlik Cloud Tenant

4. Create a trust between Qlik DataTransfer and your Qlik Cloud Tenant

5. Configure and execute an on-premise data to your tenant.

Note: the intention of these hands-on exercises it to deliver on-premise data to the Qlik Cloud tenant. It is not about building a complete Qlik Sense Application. More information on how to build Qlik Sense applications can be found on Confluence and Qlik e-learning modules.

Installer file

- The download the installation file should be local available on your windows desktop using the name Install Qlik DataTransfer.exe. With the release of the GA version, the downloadable version will be from the Qlik Cloud hub under the Username > Settings menu.

Prerequisite Qlik Machine Image

For the exercise we be using Qlik Machine Image (QMI) Qlik Sense & Qlik DataTransfer. You find the image in the Menu, under the Enablement Tab.

To get account and file information, click on the **i** information button.

This scenario is a basic installation of Qlik Sense. Qlik Data Transfer is downloaded but not installed. Qlik DataTransfer should show up on the desktop as 'Install Qlik DataTransfer'. If for some reason the download fails (i.e. you lost VPN connection) you can re-download this using the desktop link 'Download Qlik DataTransfer'.

Two QVFs are provided:

- SqlDW.qvf - This runs a regular reload from SQL Server and is designed to be used with the QVF functionality in Qlik DataTransfer
- SqlDW - QVD Generator.qvf - This loads several tables from SQL server then writes them to c:\QVDs. This is designed to be used with the file watcher in Qlik DataTransfer.

These folders are available from in the directory

- c:\installation\apps (within the VM)
- ..\QlikMachineImages\qmi-qs-qdt\files\apps (From your PC)
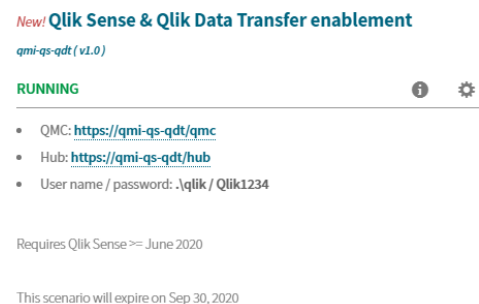
Prerequisite Qlik Cloud SaaS Tenant

For the exercise you will be using your personal Qlik Cloud SaaS tenant. If you already have your own Qlik Cloud SaaS tenant, make sure you have the URL and your login information available.

For those who have not created a tenant, you can create a Qlik Cloud SaaS tenant through Qlik Okta.

https://qlik.okta.com and choose *Qlik Internal Employee Tenants*. Follow the steps to setup your own tenant.

More information about Qlik Cloud SaaS can be found on Confluence on Global Technical Enablement Area link

The URL to your tenant should be like https://*tenantname.yourchoosenregion*.qlikcloud.com.

The possible regions are US, EU and AP.

Exercise 1: Qlik DataTransfer installation

During the installation Qlik DataTransfer will create a windows service. By default, the windows service will run with "Local System" user account. The service account used should have administrative privileges. During installation Qlik Sense Desktop or Qlik Sense Enterprise Client Managed should not be running.

Qlik Sense Enterprise Client Managed - Windows Services

a. Stop the Qlik Sense Enterprise Windows Services. Click on Windows Start > Run > Type services.msc.

b. Go to the Qlik Sense Repository Database services and click on the stop service. Stop the Qlik associated windows services

Qlik Logging Service
Qlik Sense Engine Service
Qlik Sense Printing Service
Qlik Sense Proxy Service
Qlik Sense Repository Database
Qlik Sense Repository Service
Qlik Sense Scheduler Service
Qlik Sense Service Dispatcher

File Share
During the configuration you will have to select a folder that will be used for the "File Share". That Qlik DataTransfer folder must be able to (administrator rights) access the shared path
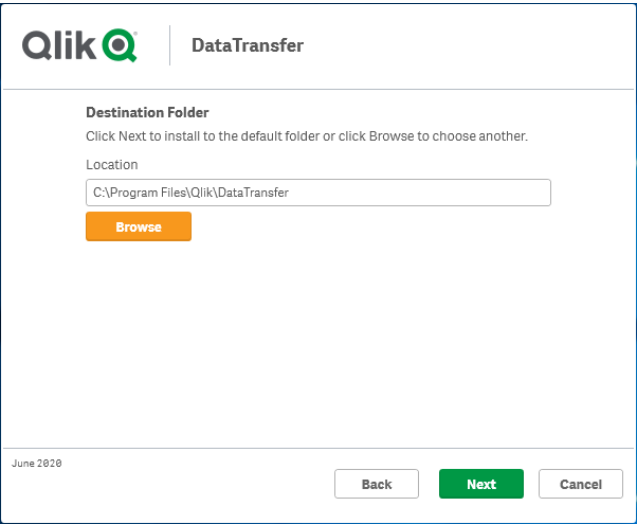
Let's start with the first exercise.

1. The QMI will automatically login using the Vagrant account. To simplify the process, use the Vagrant account. If so desired, you also can log out of Microsoft windows and login using Qlik account. (password Qlik1234)

2. Validate Qlik Sense Enterprise Client Managed Windows Services are stopped

3. Double click the installation file **Qlik DataTransfer**. The installation process will take you through 5 steps. In case Microsoft .Net 4.7 isn't installed you first must go through that installation. After the installation of .Net, the QMI image needs to restart before the actual installation of Qlik DataTransfer can begin.
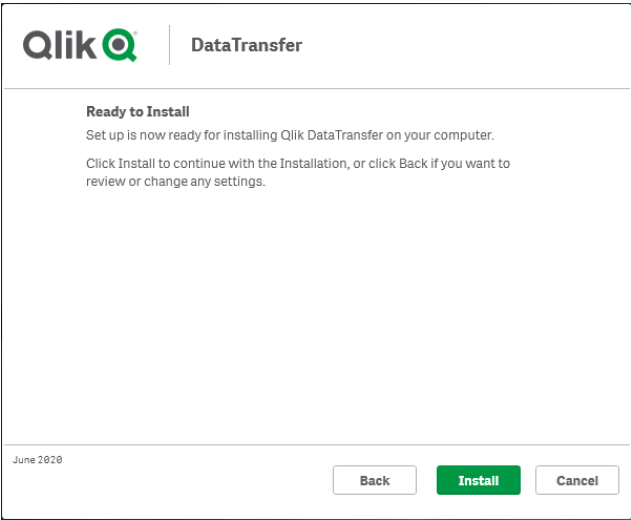
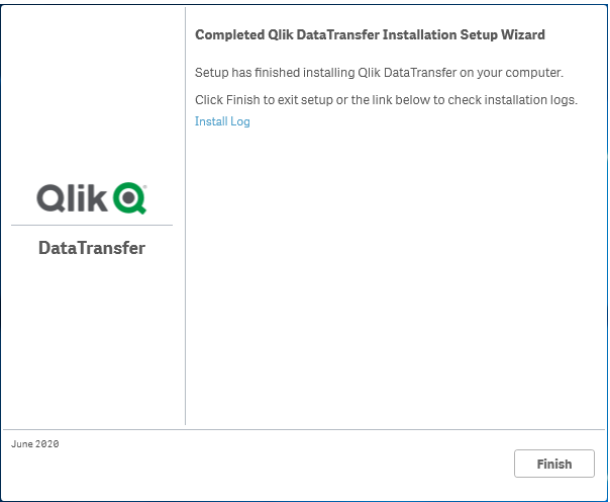Welcome to Qlik DataTransfer Setup Wizard

This will install Qlik DataTransfer on your computer. It is recommended that you close all other applications before continuing.

Qlik Q
DataTransfer

June 2020

Next   Cancel

Click **Next**

Qlik Q | DataTransfer

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June 2020

Back   Next   Cancel

Click **Next**

Qlik Q | DataTransfer

Destination Folder
Click Next to install to the default folder or click Browse to choose another.

Location

C:\Program Files\Qlik\DataTransfer

Browse

June 2020

Back   Next   Cancel

Click **Next**

Qlik Q | DataTransfer

Ready to Install

Set up is now ready for installing Qlik DataTransfer on your computer.

Click Install to continue with the Installation, or click Back if you want to review or change any settings.

June 2020

Back   Install   Cancel

Click **Install**

Completed Qlik DataTransfer Installation Setup Wizard

Setup has finished installing Qlik DataTransfer on your computer.

Click Finish to exit setup or the link below to check installation logs.
Install Log

Qlik Q
DataTransfer

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Finish

Click **Finish**

Installation of Qlik DataTransfer in now completed. The next step is to validate if the installation has been successful.

Installation Validation (Optional Activity)

You have now installed Qlik DataTransfer. You can validate that the installation has been successful. The first option is the Qlik DataTransfer windows service. The Qlik DataTransfer windows services should be visible and running in the Windows services list.

How to validate the windows services command:

- Use the keyboard combination ⊞ + R

- Type *services.msc*

- click on **OK**

You should see the windows services "Qlik DataTransfer" with the status "Running"
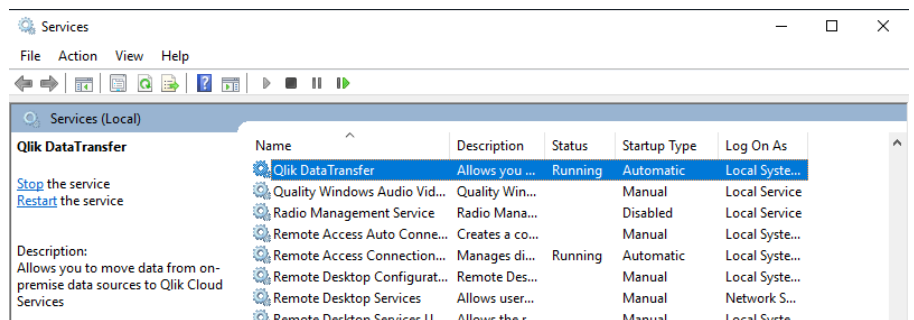
This concludes the installation of Qlik DataTransfer.

Exercise 2: Installation Information

As part of this exercise you should get an understanding of the folder structure and location of data and log files

Folder Locations

Using the default installation settings, the following folders have been created. The files and folders you Installation Path, Configuration Path, Configuration Files and Microsoft Windows Temp Path

Installation Path
C:\Program Files\Qlik\DataTransfer\
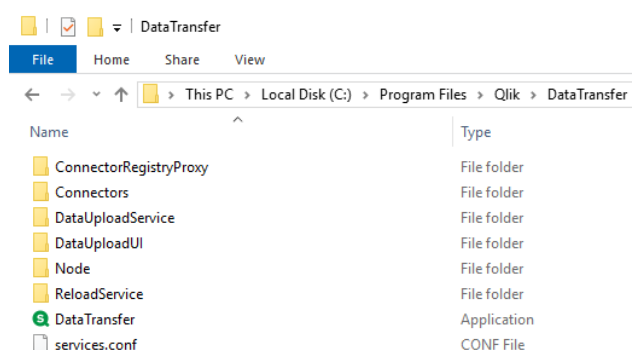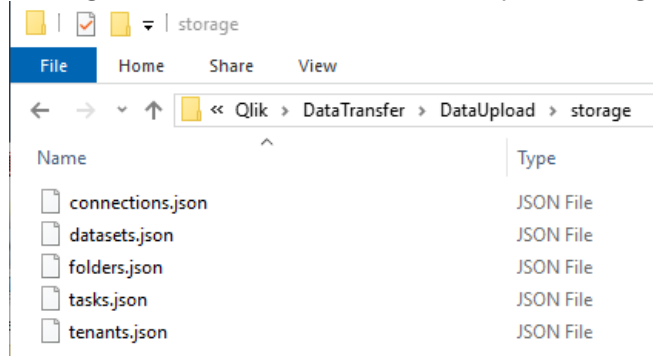
Configuration Path
C:\ProgramData\Qlik\DataTransfer
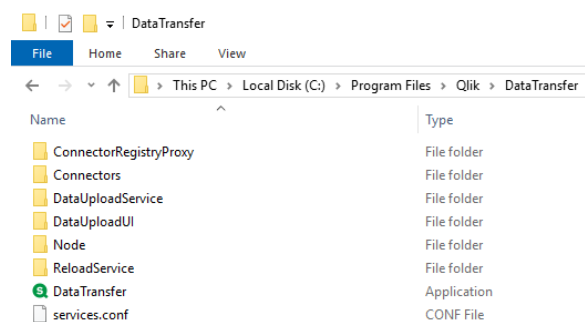
The files and folders you should be aware of are the local data storage, services.conf, JSON setting files and the log files

Configuration files
C:\ProgramData\Qlik\DataTransfer\DataUpload\storage\
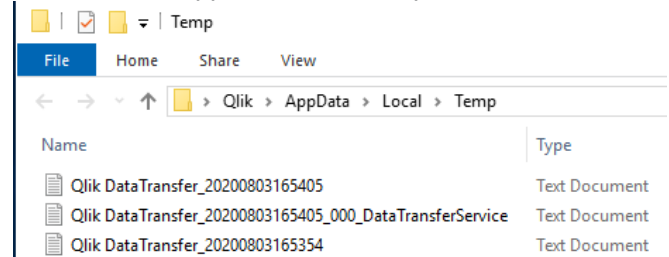
Temp Path
C:\Users\Qlik\AppData\Local\Temp

Services.conf

The services.conf file contains the default locations for log and configuration files and default port used. In this file you can change the default ports used.

```
[globals]
LogPath="${ALLUSERSPROFILE}\Qlik\DataTransfer\Log"
StoragePath="${ALLUSERSPROFILE}\Qlik\DataTransfer"
DataUploadServicePort=5505
EnginePort=5506

ConnectorRegistryPort=5507
```

Local Data Storage

Qlik DataTransfer store all created Data connections and Qlik application and are locally transformed into QVDs. The QVDs are stored in the "qixdata" folder. The folder is located here C:\ProgramData\Qlik\DataTransfer\DataUpload\qixdata\

Log Files

The log files created by Qlik DataTransfer can be found in C:\ProgramData\Qlik\DataTransfer\Log\. There are four folders. ConnectorRegistryProxy, DataUploadService, Engine and Script.

The windows service also creates log files in windows temp folder. To quickly get to that folder type %temp% in the windows "run menu" and hit enter.

Command: Use the Microsoft windows key combination ⊞ + R type %temp% and click on OK

.

Configure Qlik DataTransfer

Qlik Sense Cloud Tenant

A trust relationship must be configured between Qlik Sense Cloud tenant and Qlik DataTransfer. That trust relationship is created by using the API key created on the Qlik Sense Cloud tenant.

Exercise 3: Prepare Qlik Cloud Tenant

One of the requirements to configure Qlik DataTransfer is to have the API from your Qlik Sense SaaS tenant. In this exercise you will create and retrieve that API key.

1. Log in to your Qlik Sense Cloud tenant.

   The URL that you would be using should be something like https://yourname.region.qlikcloud.com. You should change *yourname* and *region* with your own tenant.

2. Enable API key in the Management Console of Qlik Cloud SaaS tenant. Under your username click on Administration, In the left menu scroll down to Settings under Configuration Menu. Now check the **Enable API keys** option
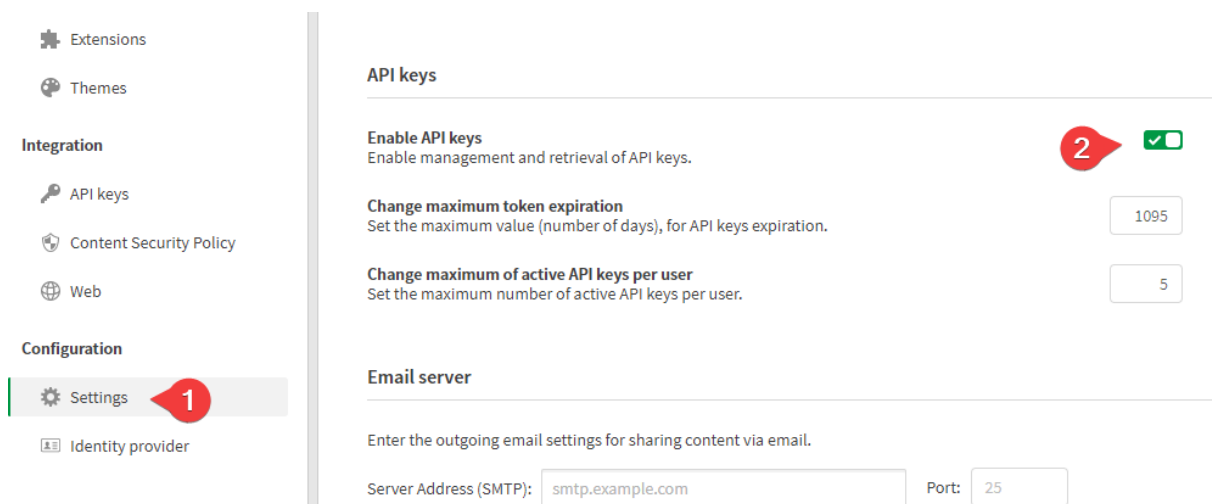
3. Qlik Sense SaaS tenant Developer Role. A tenant admin can assign roles. This step will activate the "developer role" for your user account.

   go to the top right of the page. Click the user icon (Figure 1), select "Settings". You should see the API keys. The webpage doesn't show the "API keys" option (Figure 2). You can skip this exercise if you see the API keys option.
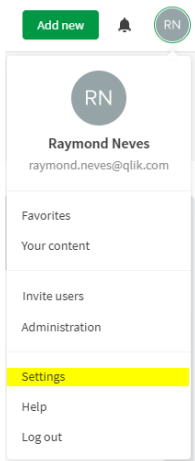
Picture 1   Picture 2
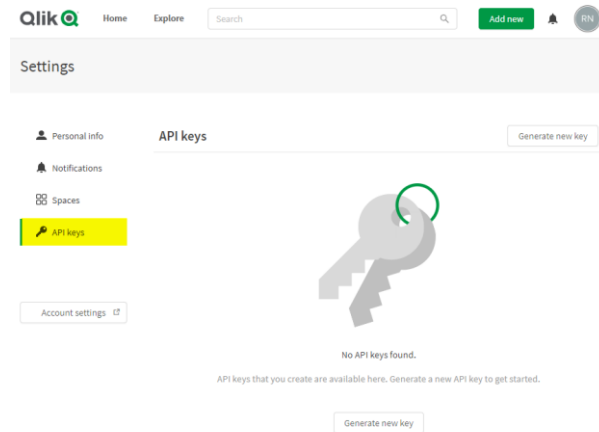
4. To give yourself the "Developer" role go to the management console

   Under your Name select Administration (Figure 3) > Select Users (Figure 4)
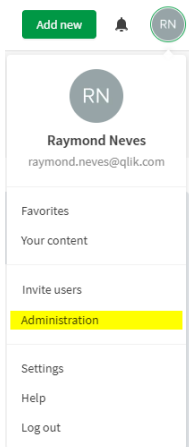
Picture 3   Picture 4
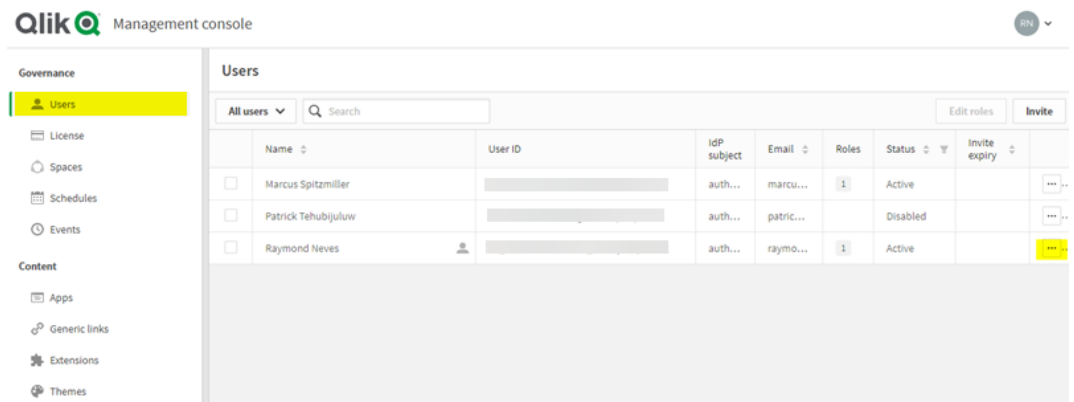
Go to your account name and edit your role (Figure 5). Select the three dots and select the Developer role (Figure 6)
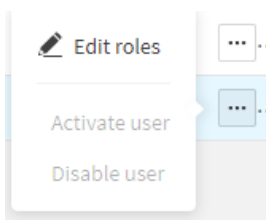
Picture 5   Picture 6
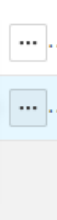
Edit roles ✕

☑ **Tenant admin**   (1/1) users
Has full access to the management console

☑ **Developer**   (1/1) users
Is allowed to create API keys

Cancel   Save

5. Go back to the Hub.

   In the top right of the page, click on your name and select "Hub". You are now ready to create the API key.

RN

Raymond Neves
raymond.neves@qlik.com

Hub
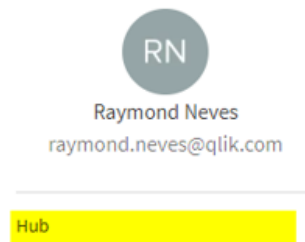
Exercise 4: Create an API key

Using the user with the Developer role go from the Hub page to the Settings page.

1. In the top right of the page, click on your name and select "Hub". On the hub page, under your account name, select "settings"

2. On the left side of the page select API keys. (Figure 6)

3. Type in a useful name in the API key description to "**Qlik DataTransfer**" Set the API expiration date of the API key to a year. Click Generate.
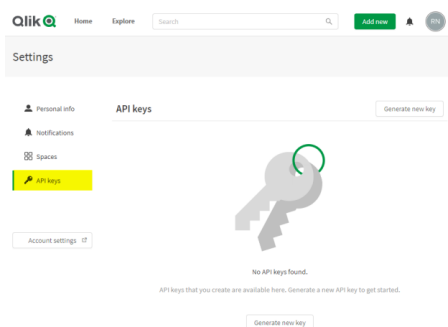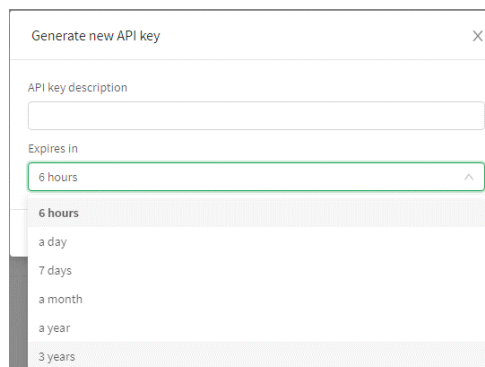
Picture 7   Picture 8   Picture 9
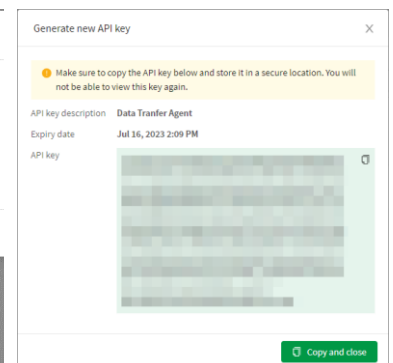
4. Click on Copy and Close.

You are now ready to configure
and connect Qlik DataTransfer
to your Qlik Sense SaaS
tenant.

Qlik Q   Home   Explore   [Search]   Add new   🔔   RN

Settings

👤 Personal info

🔔 Notifications

⊞ Spaces

🔑 API keys

Account settings ⧉

API keys   Delete all   Generate new key

Your generated Qlik API keys.

Description	Created	Expiry	Actions
Data Tranfer Agent	Jul 16, 2020 2:09 PM	Jul 16, 2023 2:09 PM	...

Exercise 5: Setup Qlik DataTransfer

On your desktop you find a new icon. Double click Qlik DataTransfer icon
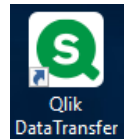
1. On your desktop you find a new Qlik icon. Double click Qlik DataTransfer icon to start the configuration setup

2. The Setup of Qlik DataTransfer requires

   a. **API Key**: Paste the API Key that you just copied into windows memory. keyboard combination **CTRL + V**

   b. Provide a **Display Name**,

   c. **URL**: Type in your Qlik Cloud Services URL.

Based on the user you used, the setup of Qlik DataTransfer has now created a trusted relationship between Qlik DataTransfer and the Qlik Sense Cloud Tenant.

Exercise 6: Upload of a Qlik Application

For this exercise you will upload a Qlik Sense application data to your Qlik Sense Cloud Services.

1. Select Qlik Apps

2. Click on the **Add** button

3. Provide a name **QlikApp01**

4. Select the destination space **personal**, where the app will be uploaded to
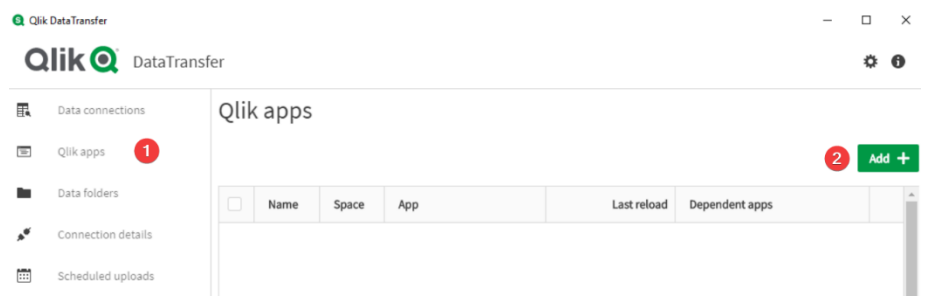
5. Select the Qlik Sense App SqlDW.qvf in the folder C:\vagrant\files\apps
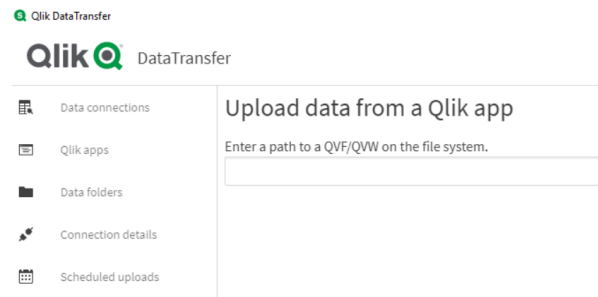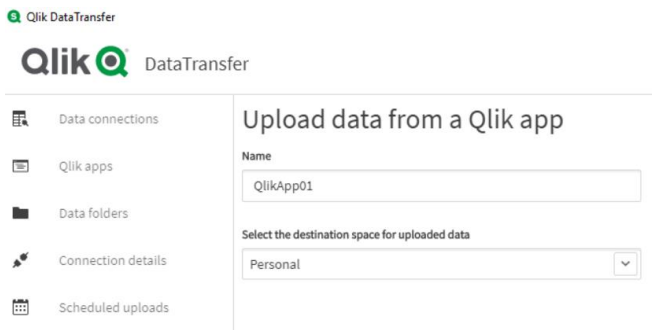
6. Enter the foldr path of the QVF file. In this scenario no dependend application is selected. Click Confirm
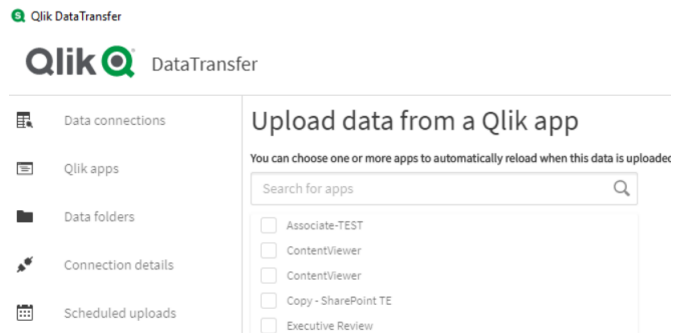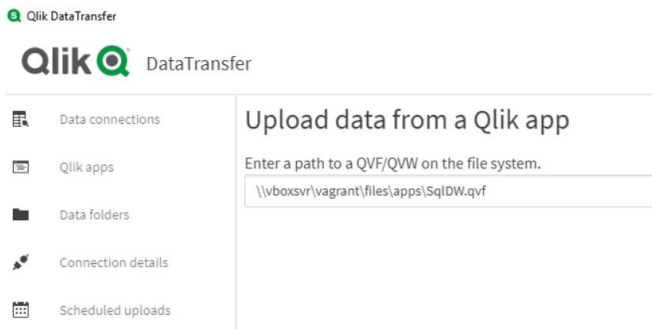
7. Reload the Qlik Application by selecting the three dots
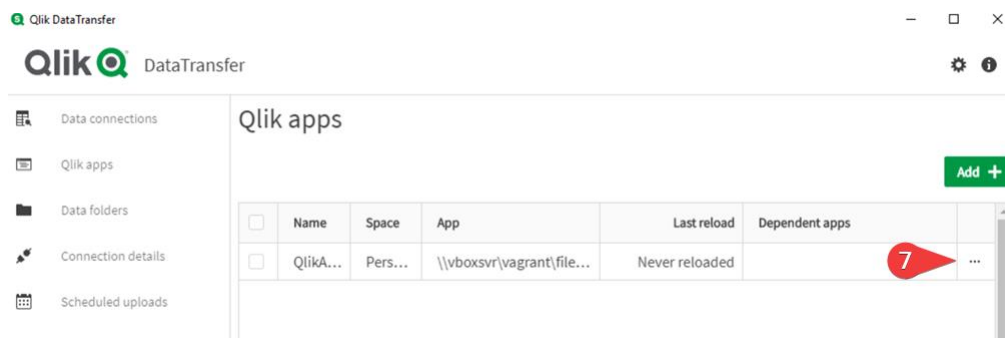
8. Click Upload
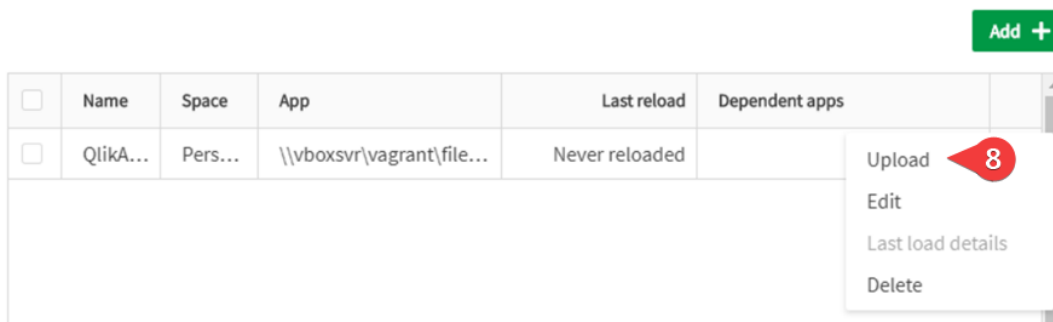
9. The data upload is now complete
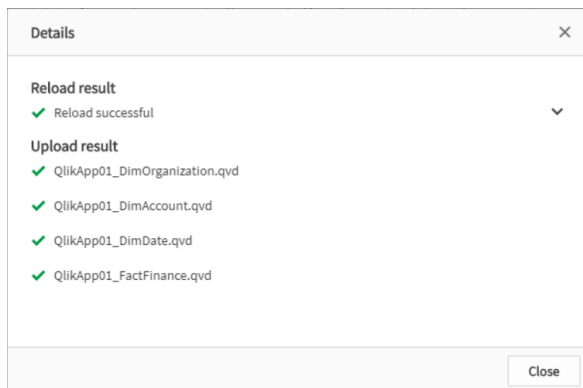
10. Validate that the data has been uploaded to the Qlik Cloud Tenant.

    a. Open an existing or a new App.

    b. Select Add data from files or other sources

    c. Choose the file location Data files. You should have 4 new QVDs available
QlikApp01_DimAccount.qvd,
QlikApp01_DimData.qvd,
QlikApp01_DimOrganization.qvd
and QlikApp01_FactFinance.qvd
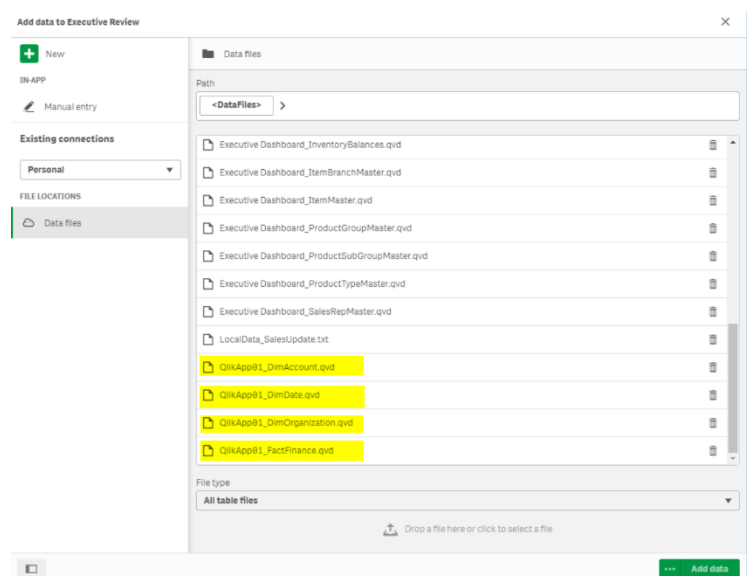
Exercise 7: Configure Data Folders

You can transfer data from a network shared folder. The folder is watched, and new or updated files are transferred automatically to the tenant.

1. Create the folder c:\Data

2. Select Data Folders and click the Add button [nr.2]
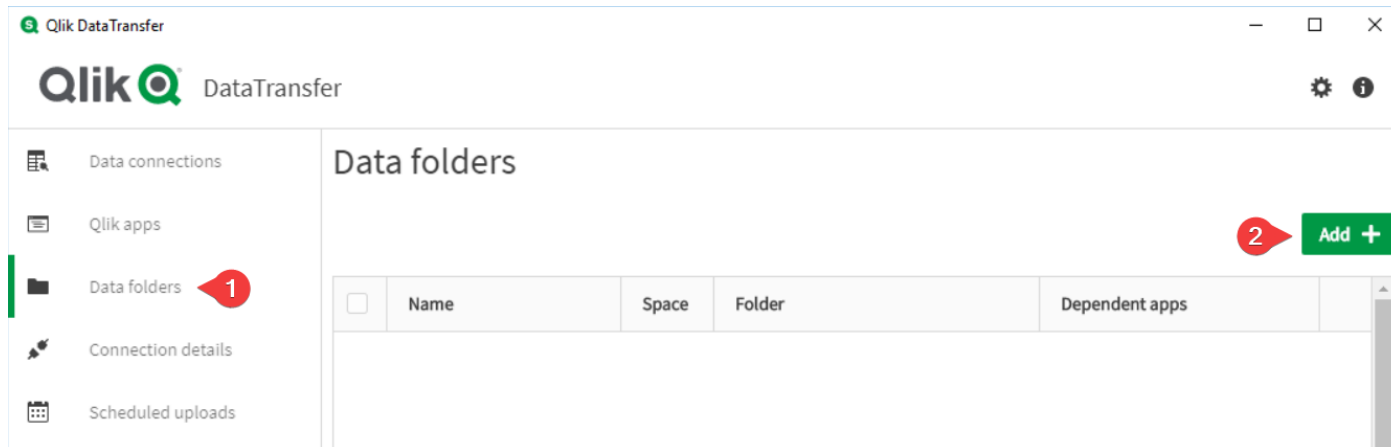
3. Set name to DataFolder
    Full path C:\Data
    Destination Space Personal
    Click Confirm
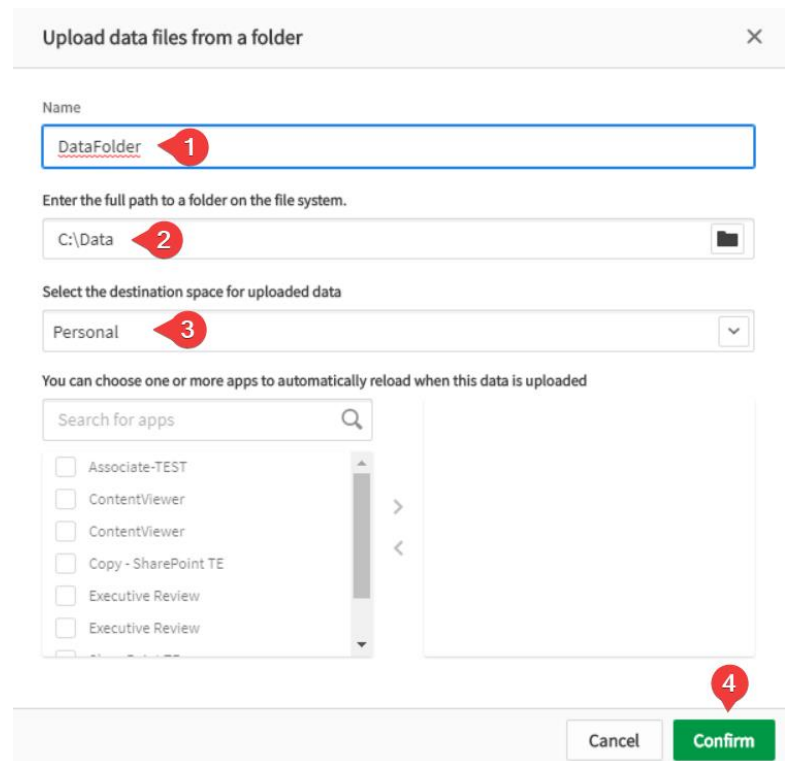
4. Create a text file with the name SalesUpdate.txt and save the file to c:\Data Folder

Example

Sales Region, Sales
EMEA,1000000
AMERICAS,2000000
APAC,500000
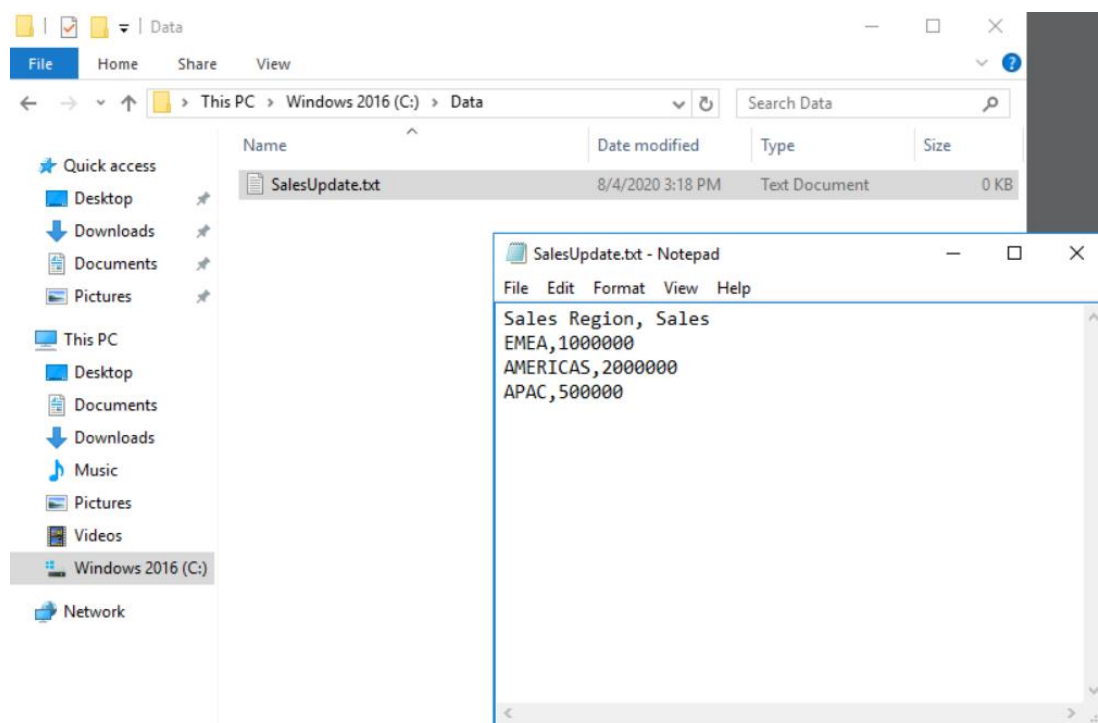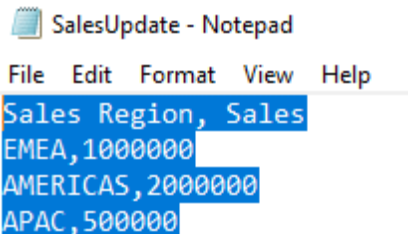
5. Run a manual upload. Select the DataFolder. Select the three dots and click Upload under Data folders

6. Check the Upload Finished Details. The upload result should show a positive result.

7. From your browser, go to Qlik Cloud tenant and validate that the data is available in the tenant.

    a. In the Qlik Cloud SaaS tenant create or open an existing Qlik Sense App.

    b. Click on either **Add data from files and other sources** or open the **Script editor**.
    c. Select Data Files and validate the existence of **DataConn_SalesOrderHeader.qvd** file.
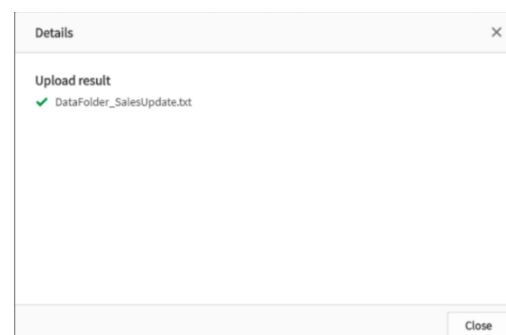
Exercise 8: Configure Connection details

We will use the sample database as part of the installed SQL Server express. The connection details are;

Settings	SQL Server
Host	QMI-QS-QDT\SQLEXPRESS
Port	1433
Database	AdventureWorksDW
user	qmi
password	Qlik1234

1. Setup the connection. Before your click on Create, use the test button to validate the database connection. When successful click Create button

Server = QMI-QS-QDT\SQLEXPRESS

Username = qmi password= Qlik1234

2. You now have created a SQL Server connection.

Connection details

Exercise 9: Configure Data Connections

With Qlik DataTransfer, you can connect to your data connection, load the data, and then upload the data as a QVD file to your tenant. Data connections can use new or existing connections. You can create

new connections when you add connection data. You can also create and view connections in Connections details We will use the existing SQL connection.
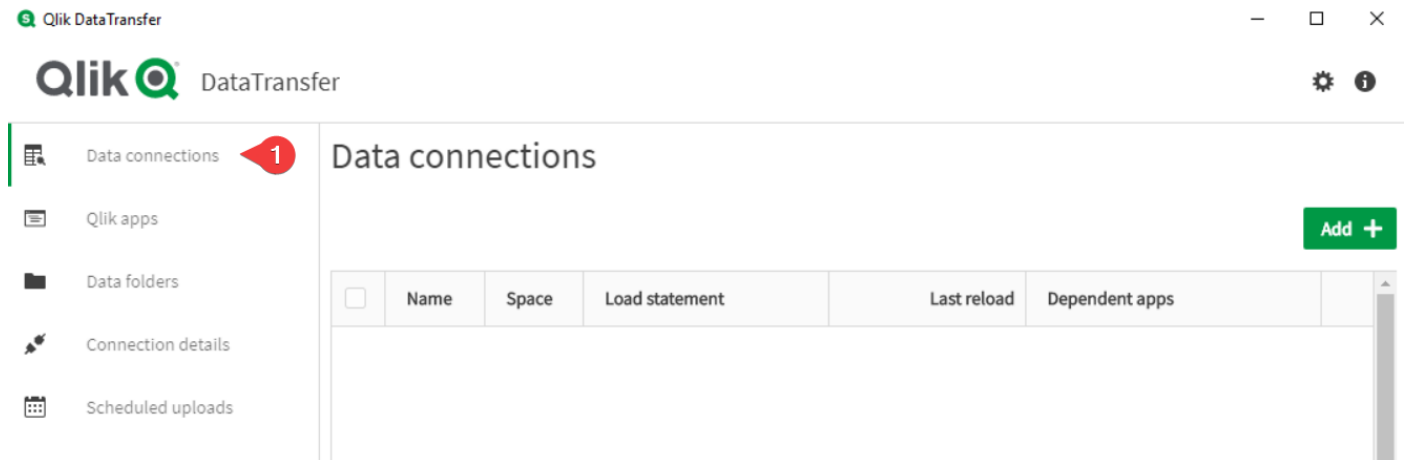
2. Define a name **DataConn** and select the destination space **Personal**. Click Next
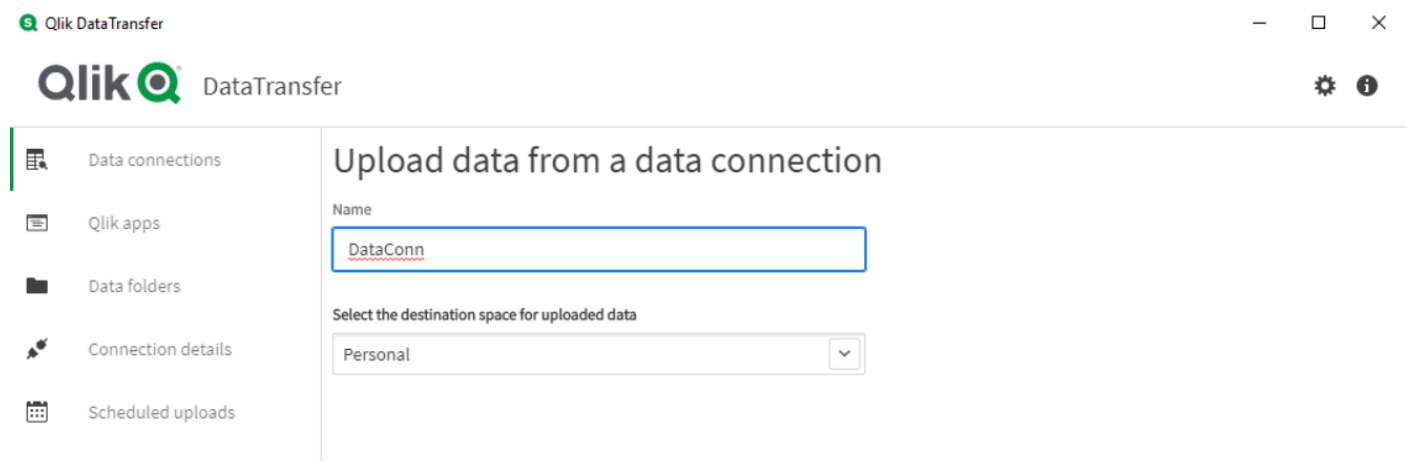
3. Use the previously created SQL connection

4. Select database AdventureWorksLT2019 [nr.1] and Owner SalesLT [nr.2], Select SalesOrderHeader [nr.3] and deselect Comment, rowguid and ModifiedDate [nr.4].

5. Click on Select Data and click on Confirm.

6. You have now created a Data Connection. Manual upload the data to your registered Qlik Cloud Tenant.

7. Opening the details should show you a successful upload of your on-premise data to the Qlik Cloud Tenant.

Details   ×

Reload result
✔ Reload successful   ⌄

Upload result
✔ DataConn_SalesOrderHeader.qvd

                                                  Close
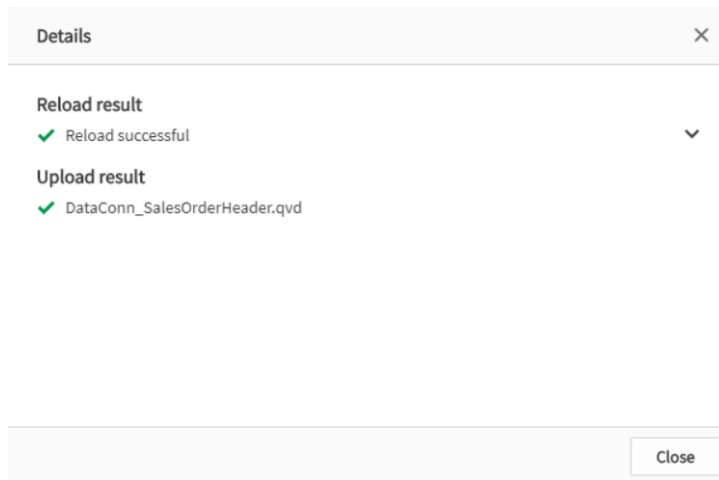
8. From your browser, go to Qlik Cloud tenant and validate that the data is available in the tenant.

   a. In the Qlik Cloud SaaS tenant create or open an existing Qlik Sense App.

   b. Click on either **Add data from files and other sources** or open the **Script editor**.

   c. Select Data Files and validate the existence of **DataConn_SalesOrderHeader.qvd** file

Exercise 10: Scheduled Uploads

In this exercise you will schedule a data upload

1. Select Scheduled uploads and click on the Add button
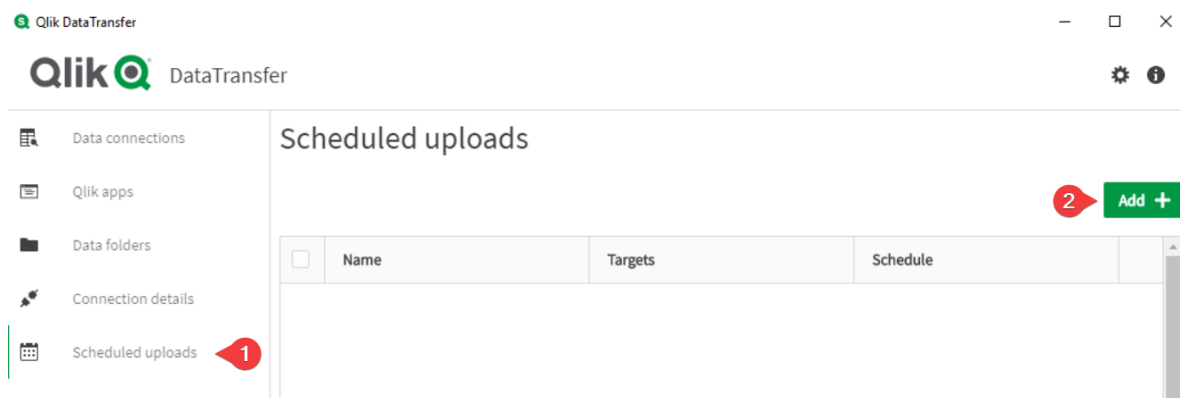
2. Create a schedule definition

    a. Name: DataConn scheduled upload

    b. Data source: DataConn

    c. Repeat: Daily

    d. Every: Day

    e. Click on the schedule icon [nr.1] and set the time to 06:00 AM

When completed, click Save

3. Add another schedule for your Qlik App. This time, edit the time manually here [nr.1]

4. Validate

This concludes the hands-on exercises.

Frequent Asked Questions on Confluence

A frequent Asked Questions page has been made available on Confluence Global Technical Enablement Area. You find the FAQ page in the Solutions section under Qlik DataTransfer.

The page provides various categories: (1) General, (2) System Configuration, (3) Data, (4) Security and (5) System Administration.

FAQ Page URL: https://confluence.qliktech.com/x/KYaKD

The FAQ Page is a subpage from Qlik Sense under Qlik DataTransfer
URL: https://confluence.qliktech.com/x/KYaKD

Content from this Practize Enablement event can be found on the Practize August 6, 2020 page.
URL: https://confluence.qliktech.com/display/GTEA/Practize+August+6+2020

Practize event overview

A list of the latest practize events can be found on Confluence Global Technical Enablement Area.

How to the this Practize page:

1. From the left menu select Practizes
2. Select the event Practize August 6 2020

https://confluence.qliktech.com/display/GTEA/Practizes

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About Qlik

Qlik's vision is a data-literate world, where everyone can use data and analytics to improve decision-making and solve their most challenging problems. Qlik provides an end-to-end, real-time data integration and analytics platform to close the gaps between data, insights and action. By transforming data into active intelligence, businesses can drive better decisions, improve revenue and profitability, and optimize customer relationships. Qlik does business in more than 100 countries and serves over 50,000 customers around the world.

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