

Install Guide - SetupWizard - Google BigQuery -RED 10.2+

WhereScape Enablement Pack for Google BigQuery - RED 10.2+

This is a guide to installing the WhereScape Enablement Pack for Google BigQuery for WhereScape RED10.2+

Table of Contents

[Prerequisites For PostgreSQL Metadata](#)
[Prerequisites For Google BigQuery](#)
[Installation Through Setup Wizard](#)
[Upgrade Of Existing Repository](#)
[Post Install Steps – Optional](#)
[Source Enablement Pack Support](#)
[Setting Up Google BigQuery Configuration](#)
[Troubleshooting and Tips](#)

Prerequisites For PostgreSQL Metadata

Before you begin the following prerequisites must be met:

- **Create Database and ODBC DSN :**
 - Supported* version of PostgreSQL (PostgreSQL 12 or higher)
 - A database to house the RED Metadata Repository.
 - A database for the Range Table DB (Optional)
 - A database to house scheduler (Optional)
- **Software Installations**
 - WhereScape RED10 with valid license key entered and EULA accepted
 - WhereScape Enablement Pack for target database version RED10
- **Windows Powershell (64 bit) version 4 or higher**
 - To check Windows Powershell Version:

- Run below command in Windows Powershell

```
Get-Host|Select-Object Version
```

- Run below command in Command Prompt

```
powershell $psversiontable
```

- **Run the following command using PowerShell**

- The security protocol TLS 1.0 and 1.1 used by PowerShell to communicate with PowerShell gallery has deprecated and TLS 1.2 has been made mandatory

```
[Net.ServicePointManager]::SecurityProtocol = [Net.ServicePointManager]::SecurityProtocol -bor TLS12  
Register-PSRepository -Default -Verbose  
Set-PSRepository -Name PSGallery -InstallationPolicy Trusted
```

- Progress bar placeholder info line

```
Install-Module -Name PoshProgressBar -SkipPublisherCheck -Force
```

* : RED supports the following versions for the metadata repository: PostgreSQL 12 or higher

Prerequisites For Google BigQuery

Before you begin the following prerequisites must be met:

- **Create Database and ODBC DSN :**
- Google BigQuery (ODBC driver version 3.00.xx.xxxx or higher(64-bit))
 - At least one schema available to use as a RED Data Warehouse Target
- **Software Installations :**
- Google Cloud SDK for utilities GSUTIL and BQ installed and on the Windows system path
 - Download and Install Google Cloud SDK Installer from <https://cloud.google.com/sdk/docs/quickstart>
 - Note: To use the Google Cloud SDK and its associated tools (GSUTIL and BQ), authentication, initialization, and project configuration are required.
Please refer to the provided instructions for completing this process from <https://cloud.google.com/sdk/docs/install-sdk>
 - Important: Google Cloud SDK and its associated tools (GSUTIL and BQ) must be authenticated again after installation.
For reauthentication please refer this process from <https://cloud.google.com/sdk/gcloud/reference/auth/application-default/login>
or run below command as admin in Command Prompt and follow prompted instructions.
A complete system restart is recommended after this process.

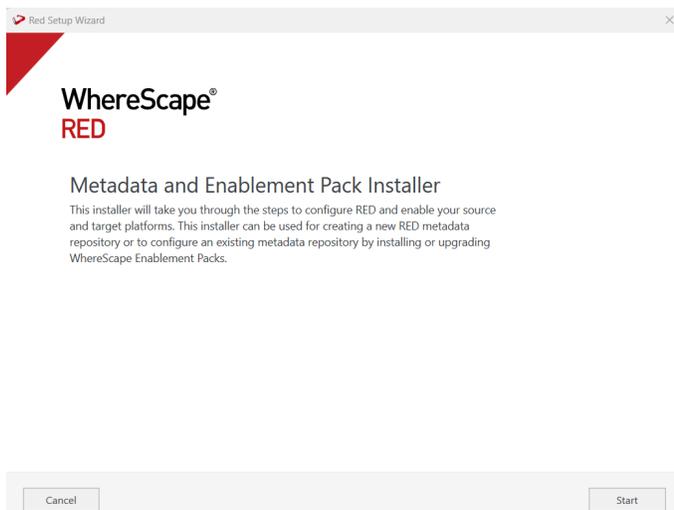
```
1 gcloud auth application-default login
```

- ODBC DSN created to connect to your RED Data Warehouse on Big Query
- Google Big Query Catalog Name
- At least one storage bucket needs to create on Google Cloud Storage.
 - Permission Required: Upload, Read and Delete File
- **Python 3.11 or higher**
 - Select "Add Python 3.8 to PATH" from installation Window
 - Pip Manager Install with command : `python -m pip install --upgrade pip`

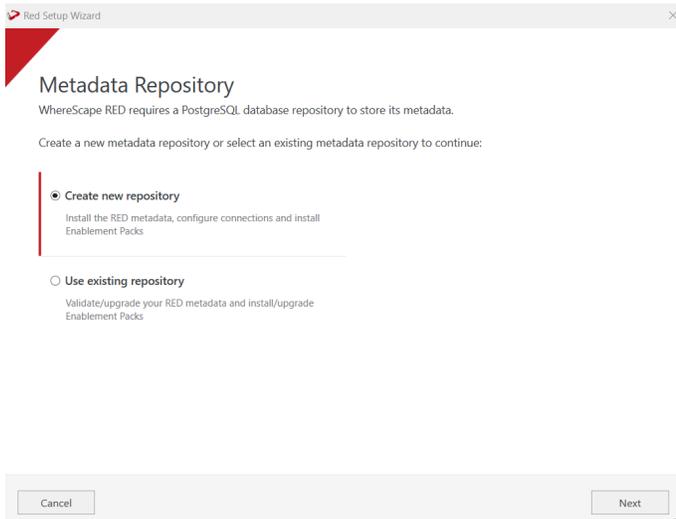
Note: Some of the libraries might be deprecated in the newer versions of python (Python 3.12 and higher)

Installation Through Setup Wizard

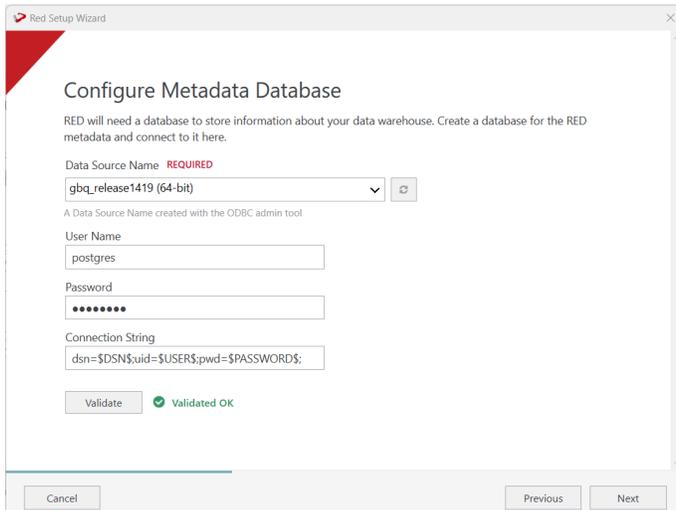
Run Setup Wizard as administrator



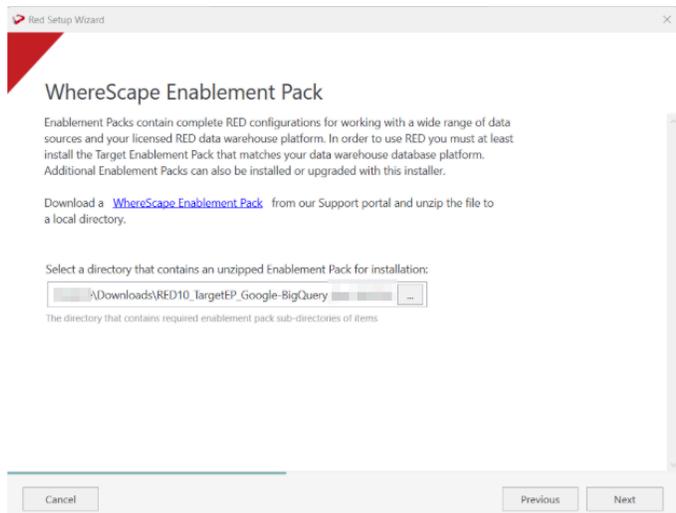
Create new repository or upgrade already existing repository.



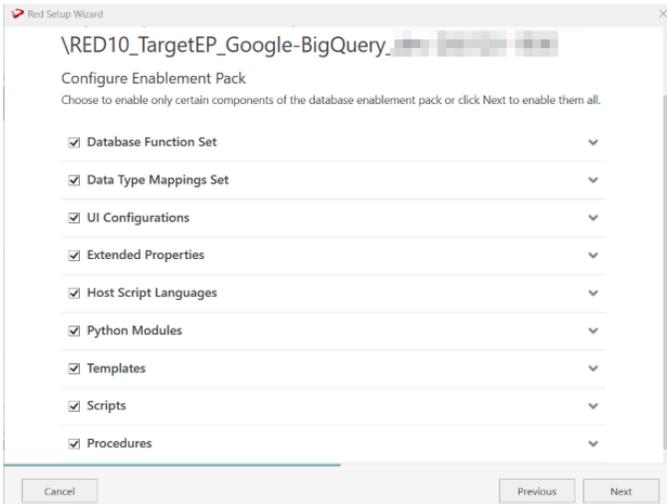
Select the created ODBC DSN, input login details and then select "Validate". Press Next



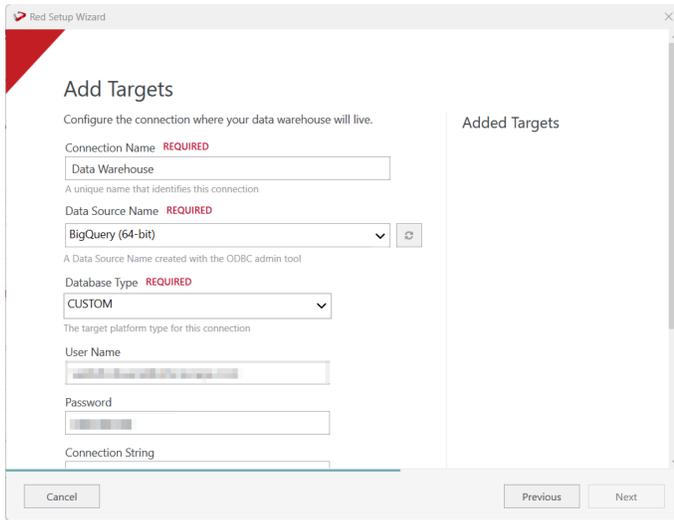
Select the directory that contains unzipped Enablement Pack for installation. Press Next



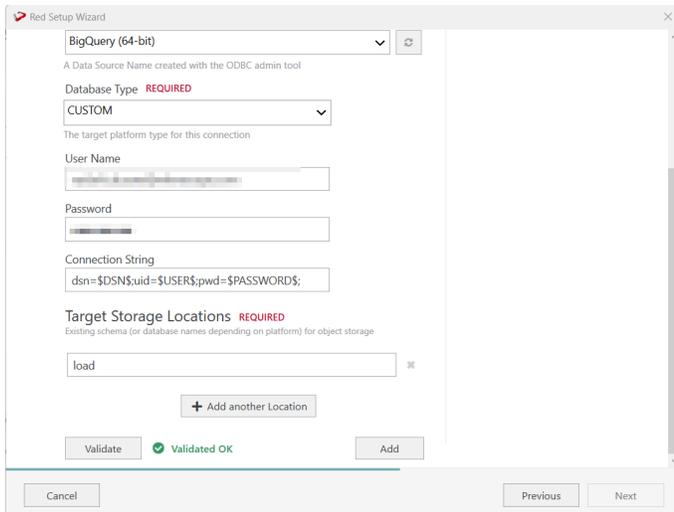
Using the check boxed list, include or exclude the components that are to be installed. Press Next



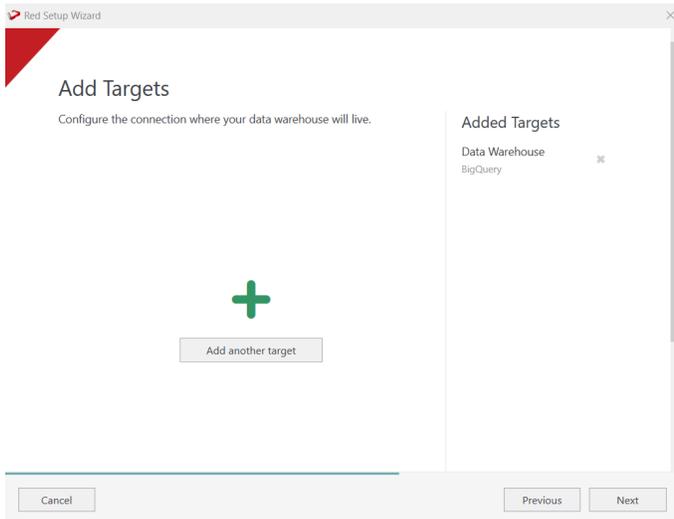
Configure a target connection (example, Data Warehouse) and its target locations.



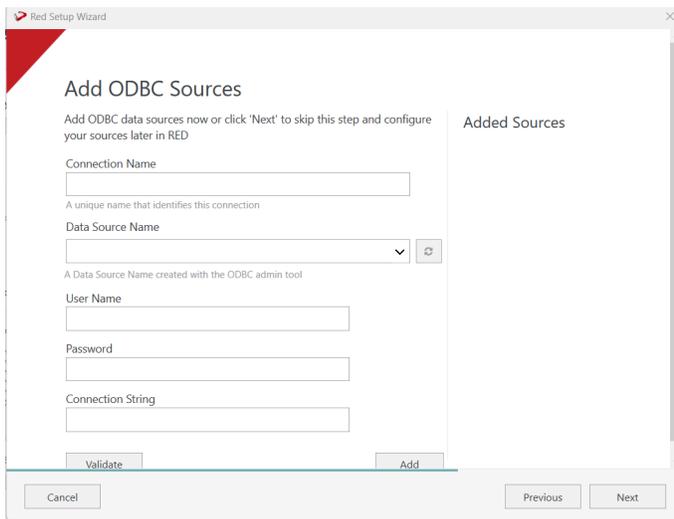
Validate and press ADD.



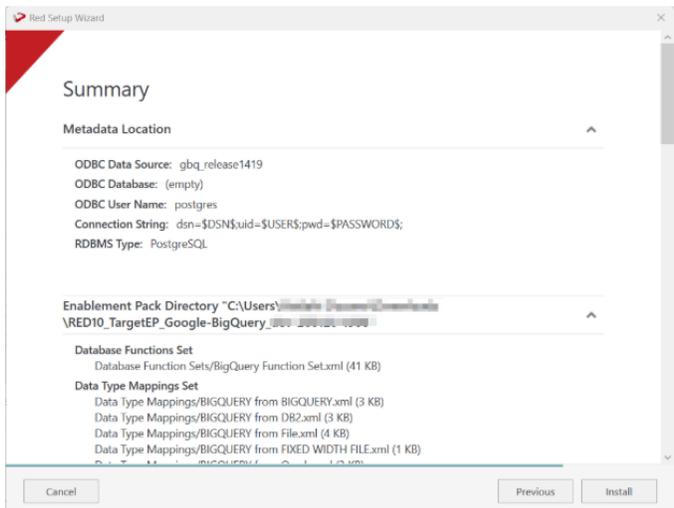
When done, press ADD and then Press Next to advance.



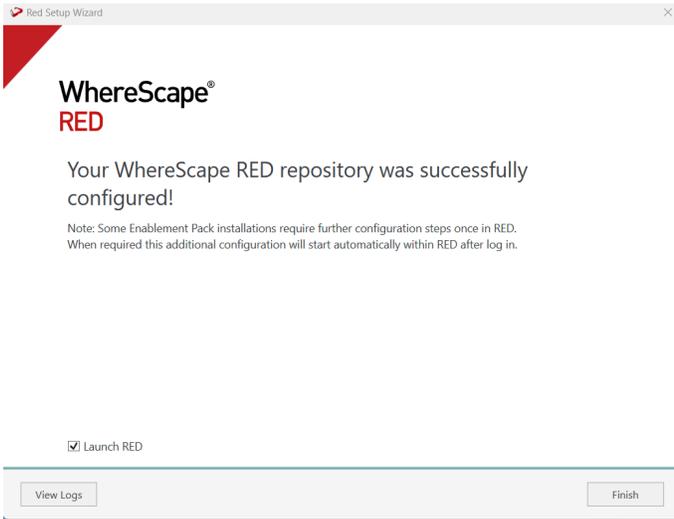
Configure a data source connection (optional) and its target locations. Validate and press ADD. Press Next to advance.



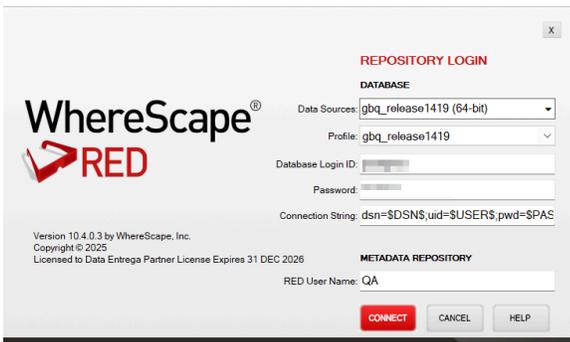
Review the installation summary and press Install



Clicking on the View Logs will take to the installation log. Click on Finish once the installation is completed successfully.

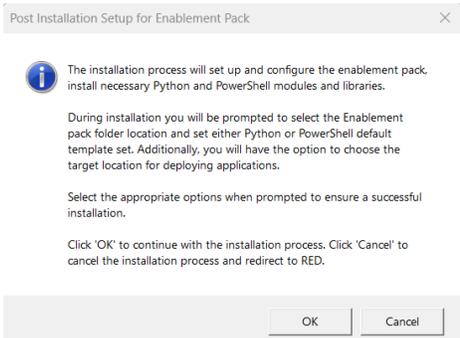


Login to WhereScape RED.



Note: There is a post-install script that will run at the first login to RED10 to complete the post setup wizard installation process.

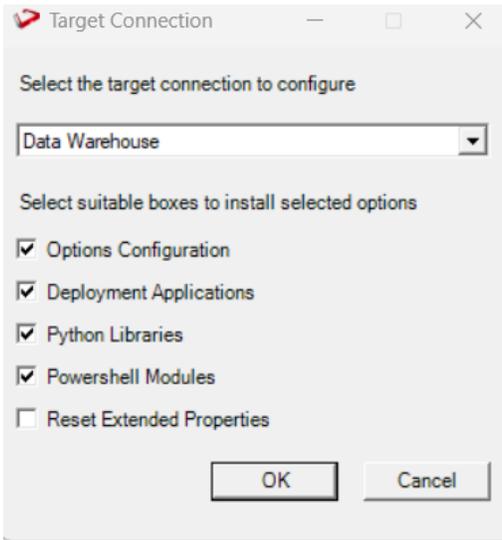
You will be directed to below PowerShell window which will give brief explanation about post installation process.



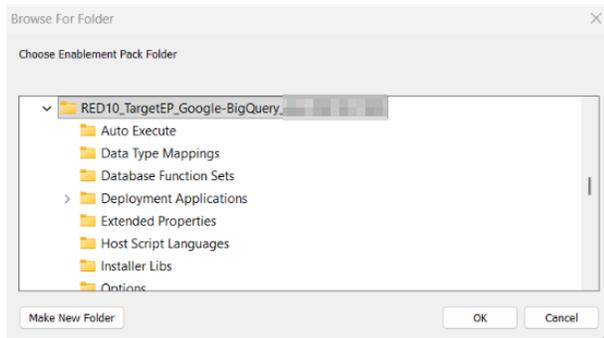
Press OK to start the post installation. If pressed Cancel installation will stop and user will be directed to RED.

The user will be directed to the window below, where they have to select the target connection to be configured.

Additionally, by deselecting the provided options, the user can choose not to install a particular option. "Reset Extended Properties" is deselected by default.

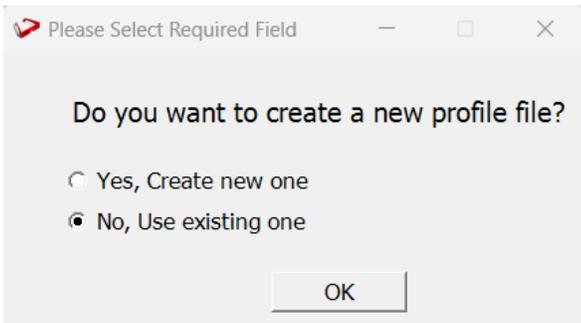


You will be directed to below PowerShell window. Provide the directory that contains unzipped Enablement Pack.



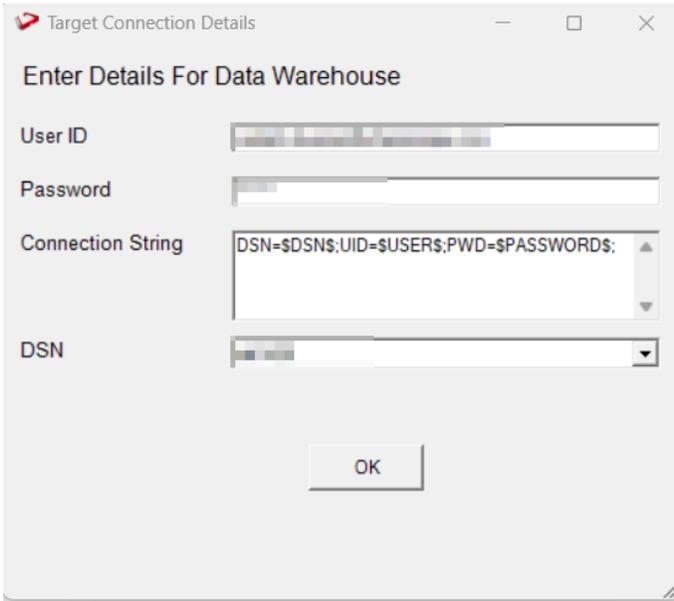
Press OK

The user will be directed to the window below, where they have to select if the user wants to create a new profile.

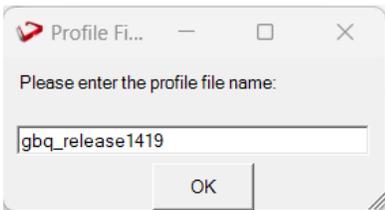


If the user selects 'Yes,' they must enter the data warehouse details.

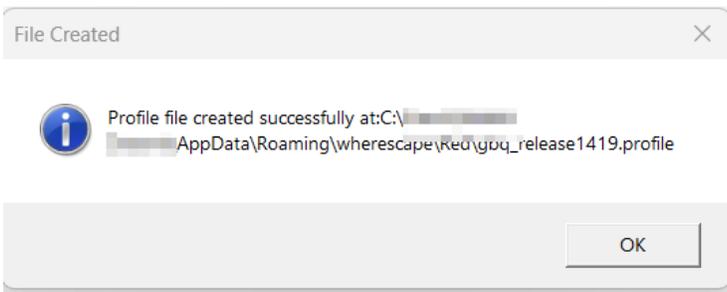
If the user selects 'No,' they must choose an existing profile file to use.



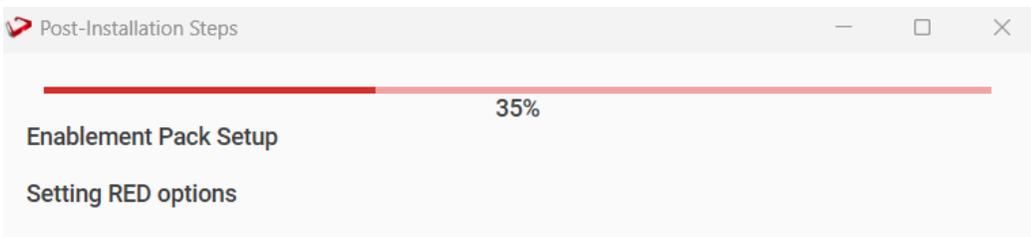
Enter profile file name



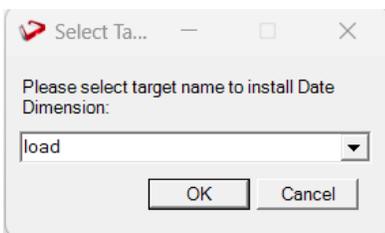
profile file gets created successfully



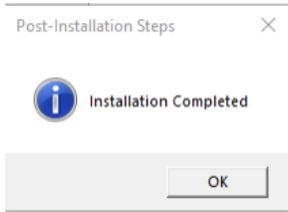
The progress bar will show the post installation progress.



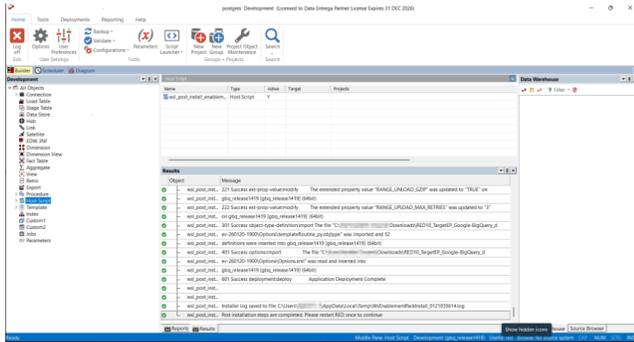
User will have to choose the schema for the target setting that were provided. One of such pop up will come for setting default target schema for Date Dimension.



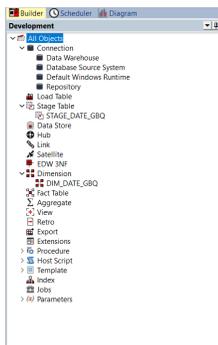
After selecting the target schema progress bar will show the progress for the installation and once it's completed, you will get the below pop up.



After pressing OK RED10 will open automatically.



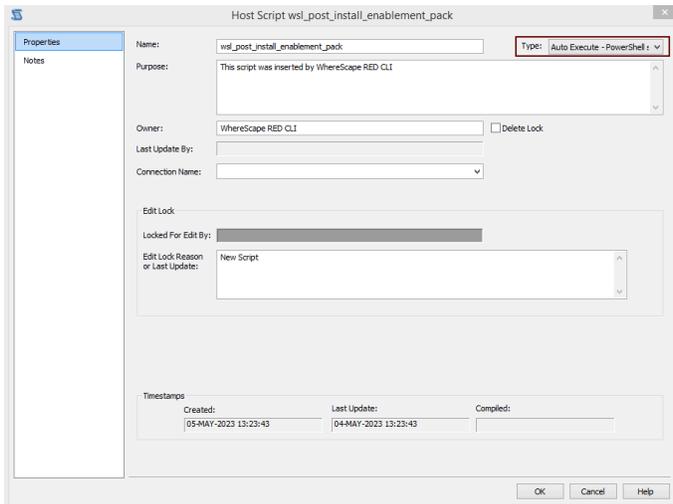
User will need to restart RED once.



Upgrade Of Existing Repository

For upgrade of existing repository

- From host script set script type of `wsl_post_install_enablement_pack` as Auto Execute - PowerShell Script



If RED repository exists, it will prompt to upgrade the repository.
 This enablement pack will overwrite any existing Source Enablement Pack UI Configs:

Amazon S3	Load From Amazon S3
Azure Data Lake Storage Gen2	Load From Azure Data Lake Storage Gen2
Google Cloud	Load From Google Cloud
REST API	Load From REST API

To ensure existing Source Enablement Pack connections and associated Load Tables continue to browse and load:
 Go into UI Configuration Maintenance in RED prior to installing this Enablement Pack and rename the affected UI Configurations.

While the updated Load Template will work with previous Source Enablement Pack's we recommend moving these previous versions of Load Tables to newly created Parser based connections following this install.

The earlier versions of the Source Enablement Pack will be deprecated following this release.

Post Install Steps – Optional

If you used the script Setup Wizard for installation then the following optional post install steps are available.

Configure Connections

There were Three connections added that will optionally require your attention:

1. Connection: Data Warehouse ('Google BigQuery') - This connection was setup as per parameters provided in Setup Wizard
 - a. open it's properties and check extended properties tab, set it up for **GBQ_BUCKET** and **GBQ_KEY_PATH**
 - b. Connection: 'Database Source System' - this connection was setup as an example source connection,
 - a. open its properties and set it up for a source DB in your environment
 - b. or you can remove it if not required

Enable Script Launcher Toolbar

There are a number of stand-alone scripts which provide some features such as "Ranged Loading", these scripts have been added to the Script Launcher menu but you will need to enable the menu toolbar item to see them.

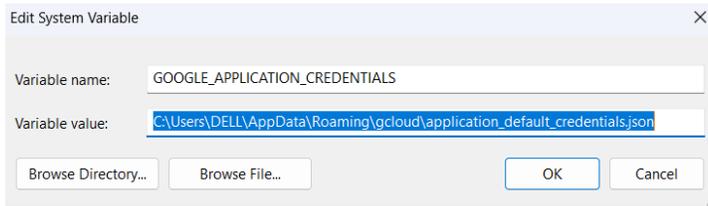
To enable the Script Launcher menu in RED: Select menu item 'View→Toolbars→Script Launcher'

Source Enablement Pack Support

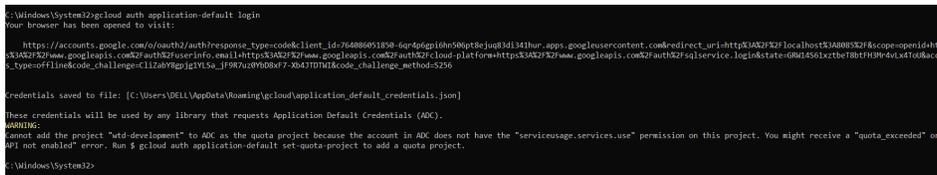
Source Pack Name	Supported By Google BigQuery	Supported Features	Prerequisites/Permissions Required Google Big Query
Google Cloud Storage	Yes	Download to local and load	None
Google Drive	No	N/A	None
Azure Data Lake Storage Gen2	Yes	Download to local and load	None
Amazon S3	Yes	Download to local and load	None
Windows Parser	<ol style="list-style-type: none"> 1. CSV 2. Excel 3. JSON 4. AVRO 5. ORC 6. PARQUET 	Load Template, Source Properties will have option to select parser type to load the files.	Refer to Windows Parser Guide

Setting Up Google BigQuery Configuration

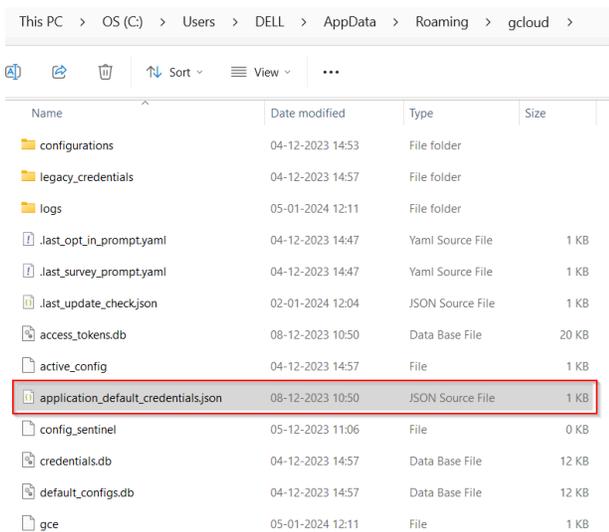
1. Add a system variable GOOGLE_APPLICATION_CREDENTIALS to point to a location where credentials get generated.



2. open command prompt and create Google BigQuery file using "gcloud auth application-default login"



3. On running this command, config file should be created in the location specified in the config file system variable



Troubleshooting and Tips

Run As Administrator

Press the Windows Key on your keyboard and start typing cmd.exe, when the cmd.exe icon shows up in the search list right click it to bring up the context menu, select "Run As Administrator"

Now you have an admin prompt navigate to the folder where you have unpacked your WhereScope Red Enablement Pack to using the 'cd' command:

- C:\Windows\system32> cd <full path to the unpacked folder>

Run batch (.bat) scripts from the administrator prompt by simply typing the name at the prompt and hit enter, for example:

- C:\temp\EnablementPack> install_WslPowershell_Modules.bat

Run Powershell (.ps1) scripts from the administrator prompt by typing the Powershell run script command, for example:

- C:\temp\EnablementPack> Powershell -ExecutionPolicy Bypass -File .\Setup_Enablement_Pack.ps1

Notes: In the event you cannot bypass the Powershell execution policy due to group policies you can instead try "-ExecutionPolicy RemoteSigned" which should allow unsigned local scripts.

Windows Powershell Script Execution

On some systems Windows Powershell script execution is disabled by default. There are a number of workarounds for this which can be found by searching the term "Powershell Execution Policy".

Here is the most common workaround which WhereScope suggests, which does not permanently change the execution rights:

Start a Windows CMD prompt as Administrator, change directory to your script directory and run the WhereScope Powershell scripts with this command:

- cmd:> Powershell -ExecutionPolicy Bypass -File .\<script_file_name.ps1>

Re-install Python Libraries

Press the Windows Key on your keyboard and start typing cmd.exe, when the cmd.exe icon shows up in the search list right click it to bring up the context menu, select "Run As Administrator"

Now you have an admin prompt navigate to to the folder where you have unpacked your WhereScape Red Enablement Pack to using the 'cd' command:

- C:\Windows\system32> cd <full path to the unpacked folder>

Run batch (.bat) scripts from the administrator prompt by simply typing the name at the prompt and hit enter, for example:

- C:\temp\EnablementPack>uninstall_WslPython_Modules.bat

For installation of Python libraries there are two methods

- **Method 1**

Press the Windows Key on your keyboard and start typing cmd.exe, when the cmd.exe icon shows up in the search list right click it to bring up the context menu, select "Run As Administrator"

Now you have an admin prompt navigate to to the folder where you have unpacked your WhereScape Red Enablement Pack to using the 'cd' command:

```
C:\Windows\system32> cd <full path to the unpacked folder>
```

Run batch (.bat) scripts from the administrator prompt by simply typing the name at the prompt and hit enter, for example:

```
C:\temp\EnablementPack>install_WslPython_Modules.bat
```

- **Method 2**

Press the Windows Key on your keyboard and start typing cmd.exe, when the cmd.exe icon shows up in the search list right click it to bring up the context menu, select "Run As Administrator"

Now you have an admin prompt navigate to to the folder where you have unpacked your WhereScape Red Enablement Pack to using the 'cd' command:

```
C:\Windows\system32> cd <full path to the unpacked folder>
```

Run the below command

```
python -m pip install -r requirements.txt
```

Python requirements for offline install

Additionally to the base Python installation being required, the WhereScape Python Template set also requires certain additional Python libraries. The install scripts uses the PIP (package manager) to download these libraries, however for offline installs you will need to install the required libraries yourself.

Required Python libraries/add-ons:

- pywin32-ctypes
- python-tds
- pywin32
- glob2
- gzip-reader
- regex
- pyodbc

Restarting failed scripts

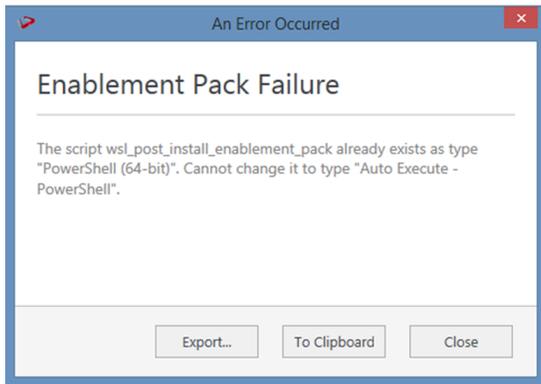
Some of the setup scripts will track each step and output the step number when there is a failure. To restart from the failed step (or to skip the step) provide the parameter "-startAtStep <step number>" to the script.

Example:

```
Powershell -ExecutionPolicy Bypass -File .\<script_file_name.ps1> -startAtStep 123
```

Tip: to avoid having to provide all the parameters again you can copy the full command line with parameters from the first "INFO" message from the beginning of the console output.

For upgrade of existing repository



In upgrade of existing repository if the user gets above error then it means the script type of *wsl_post_install_enablement_pack* is set to PowerShell(64-bit) change the script type to Auto Execute-PowerShell before upgrade or manually run the *wsl_post_install_enablement_pack* script from host script from RED after upgrade.

If a valid RED installation can not be found

If you have RED 10.x or higher installed but the script (Setup_Enablement_Pack.ps1) fails to find it on your system then you are most likely running PowerShell (x86) version which does not show installed 64 bit apps by default. Please open a 64 bit version of Powershell instead and re-run the script

Table name should be given in lowercase only

While loading the table, the table name should be given in lowercase, for example, load_tablename; otherwise, loaded data will not get displayed.