

Install Guide - SetupWizard - Google BigQuery

WhereScape Enablement Pack for Google BigQuery - RED 10

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

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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 [Net.SecurityProtocolType]::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.

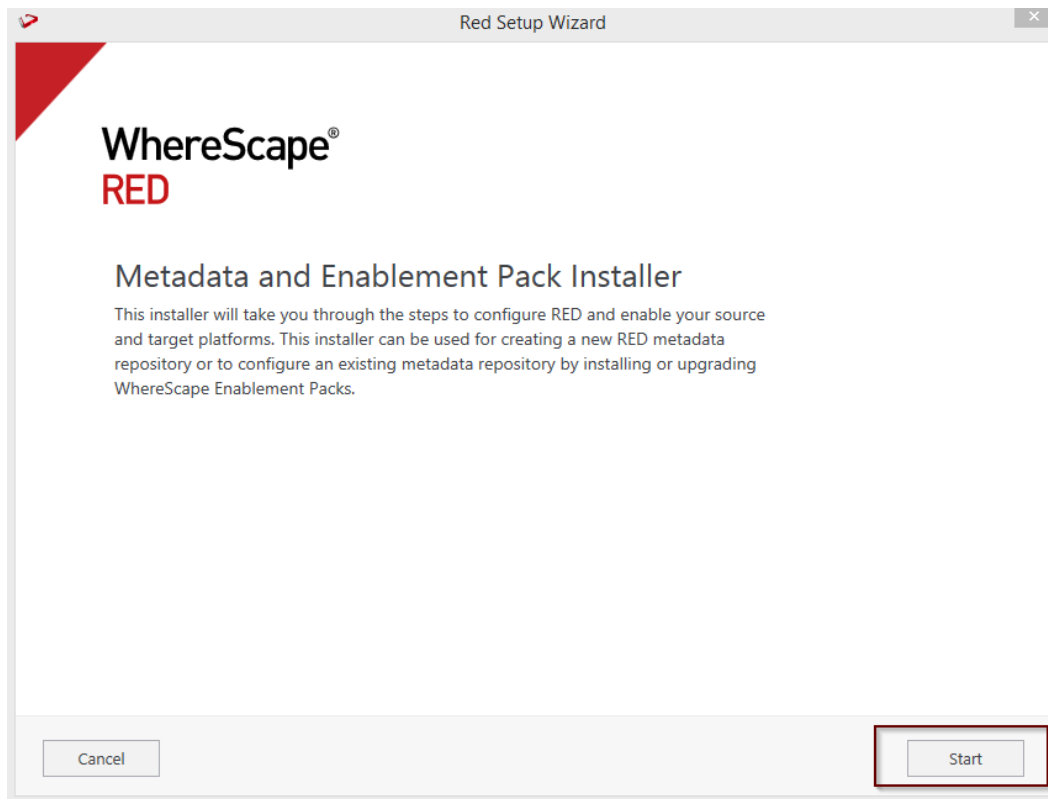
```
gcloud auth application-default login
```

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

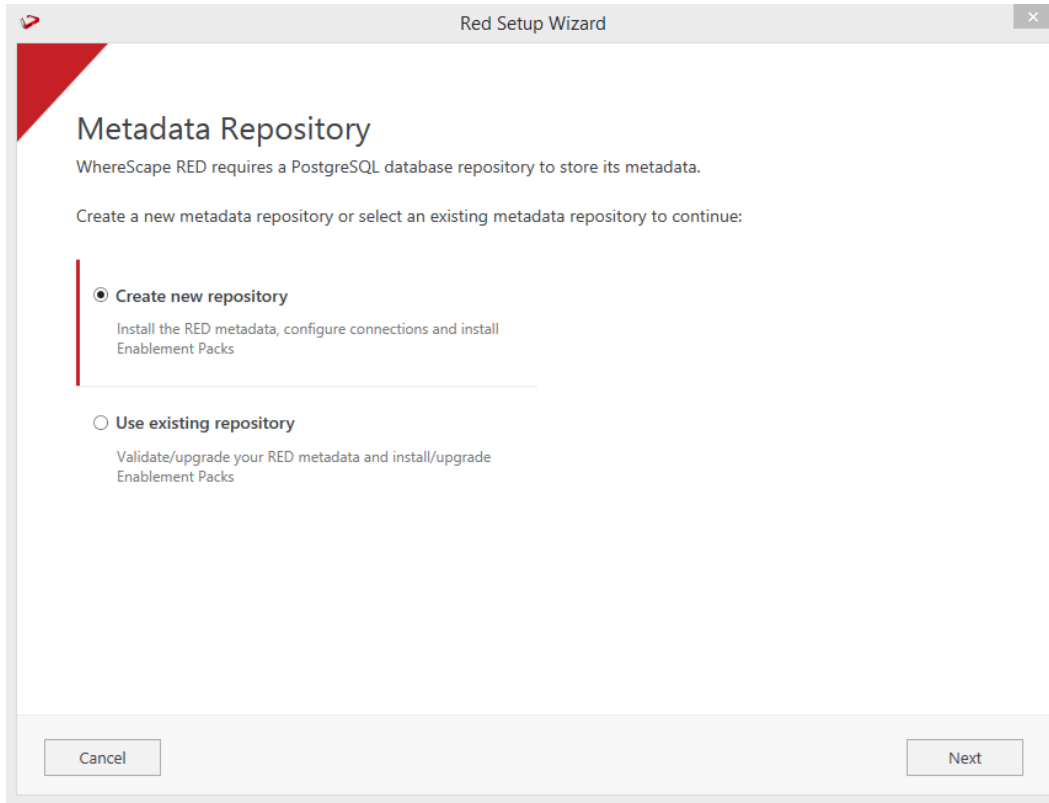
Note: Some of the libraries might be deprecated in the newer versions of python (Python 3.12 and higher)

Installation Through Setup Wizard

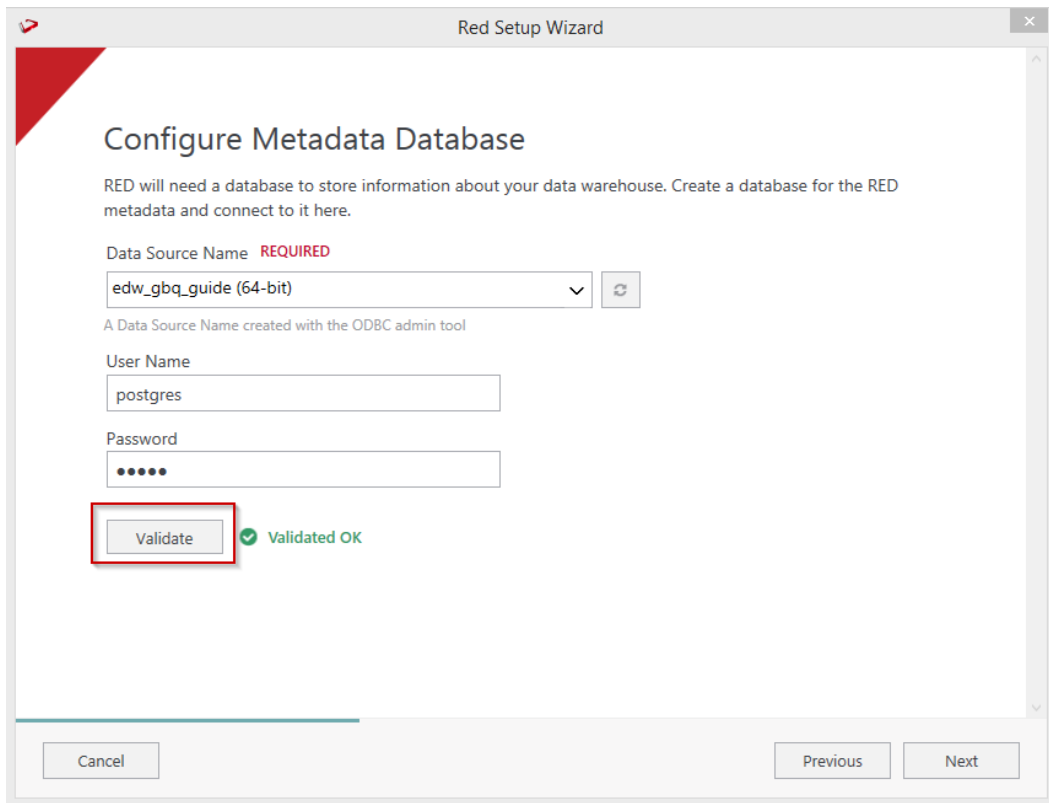
Run Setup Wizard as administrator



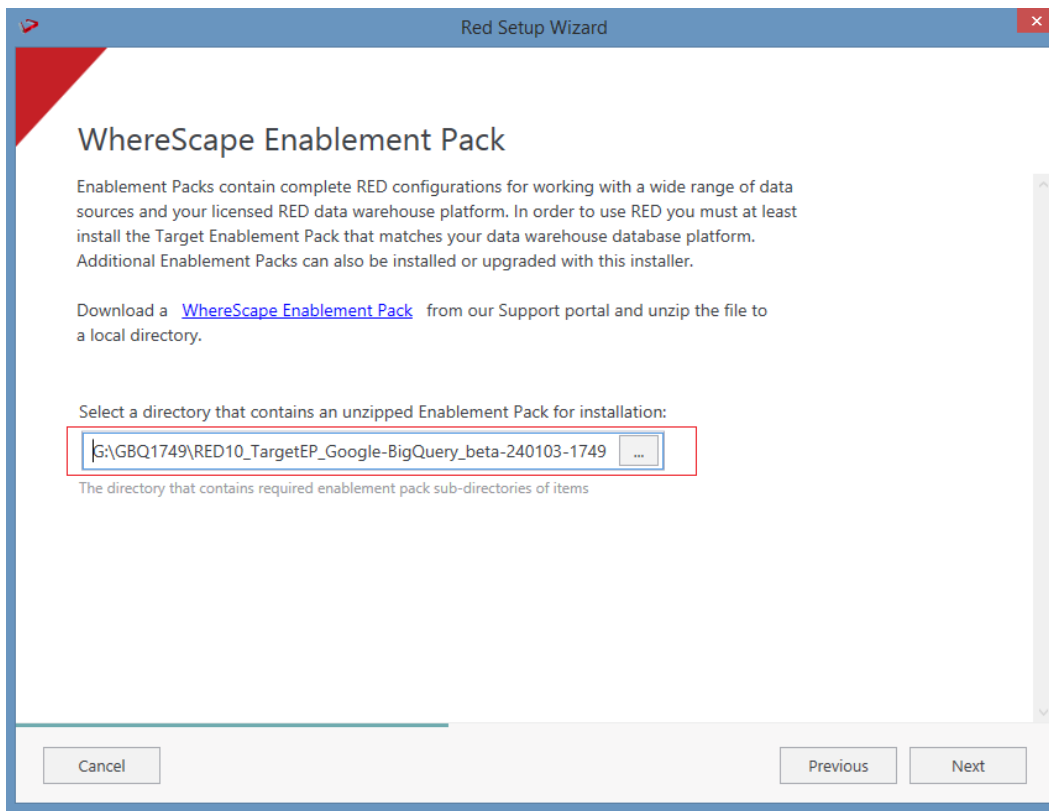
Create new repository or upgrade already existing repository.



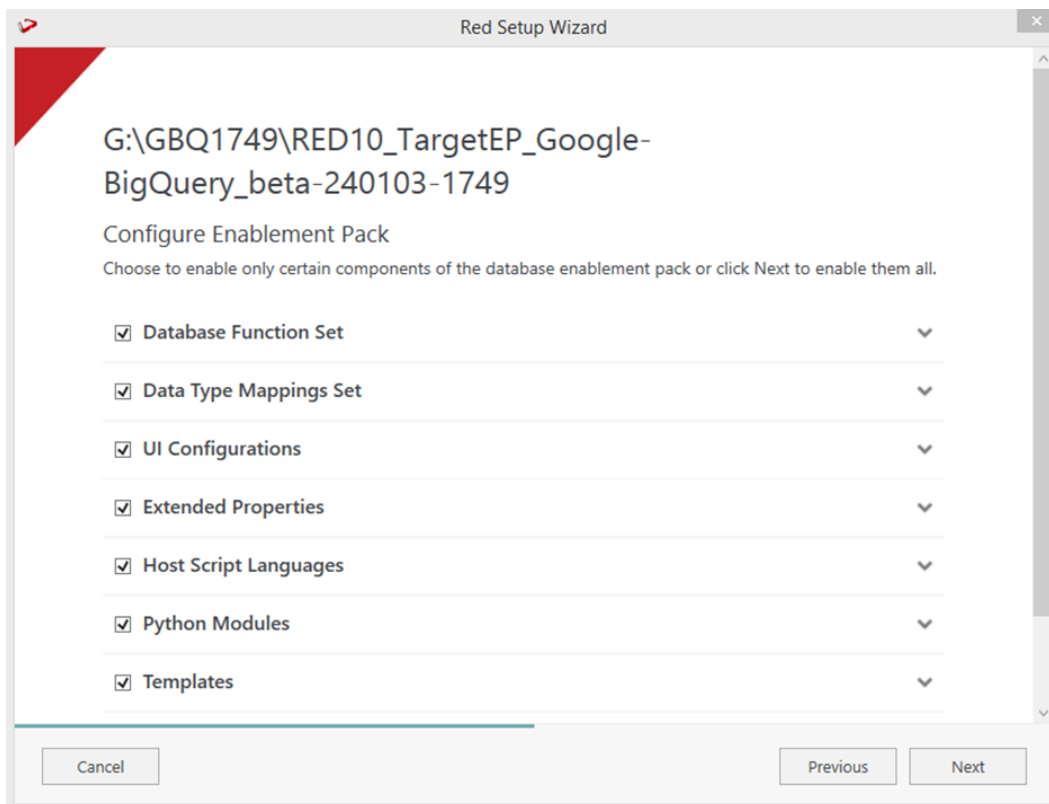
Select the created ODBC DSN, input login details and then select "Validate". Press Next



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.

Red Setup Wizard

Add Targets

Configure the connection where your data warehouse will live.

Connection Name **REQUIRED**
Data Warehouse
A unique name that identifies this connection

Data Source Name **REQUIRED**
GBQ10 (64-bit) [v] [refresh]
A Data Source Name created with the ODBC admin tool

User Name
[redacted]

Password
[redacted]

Target Storage Locations **REQUIRED**
Existing schema (or database names depending on platform) for object storage

+ Add Location

Validate Add

Cancel Previous Next

Validate and press ADD.

Red Setup Wizard

Data Warehouse
A unique name that identifies this connection

Data Source Name **REQUIRED**
GBQ10 (64-bit) [v] [refresh]
A Data Source Name created with the ODBC admin tool

User Name
[redacted]

Password
[redacted]

Target Storage Locations **REQUIRED**
Existing schema (or database names depending on platform) for object storage

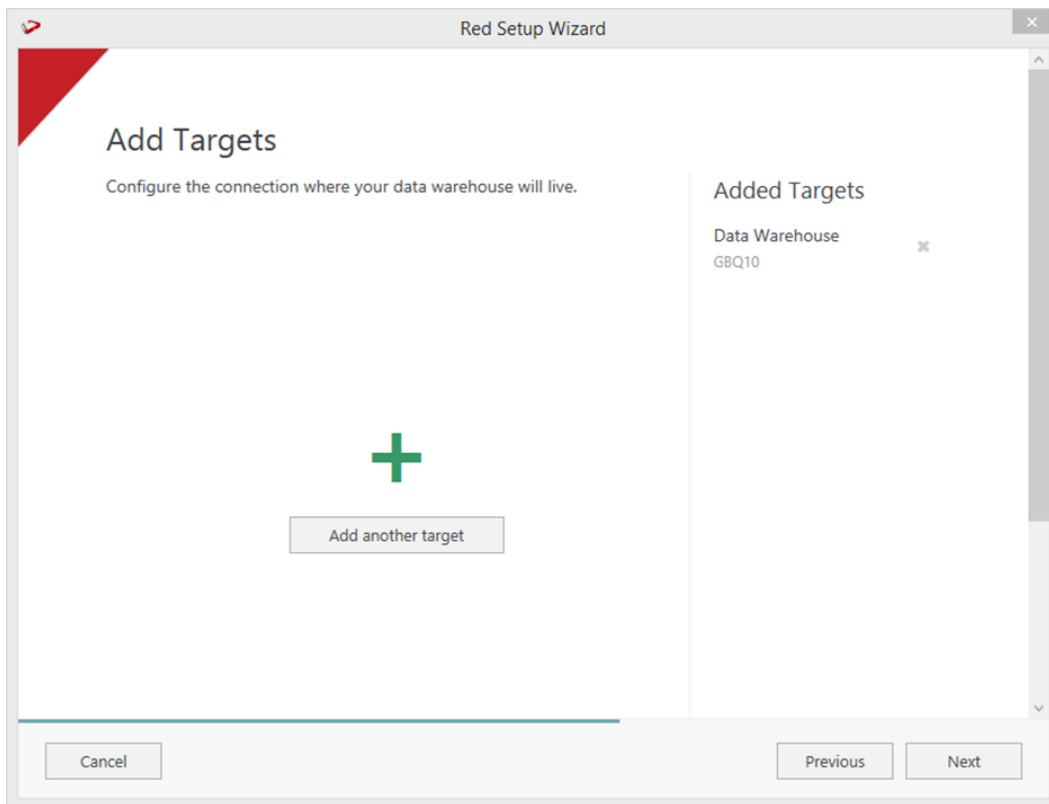
load [x]
stage [x]
edw [x]

+ Add another Location

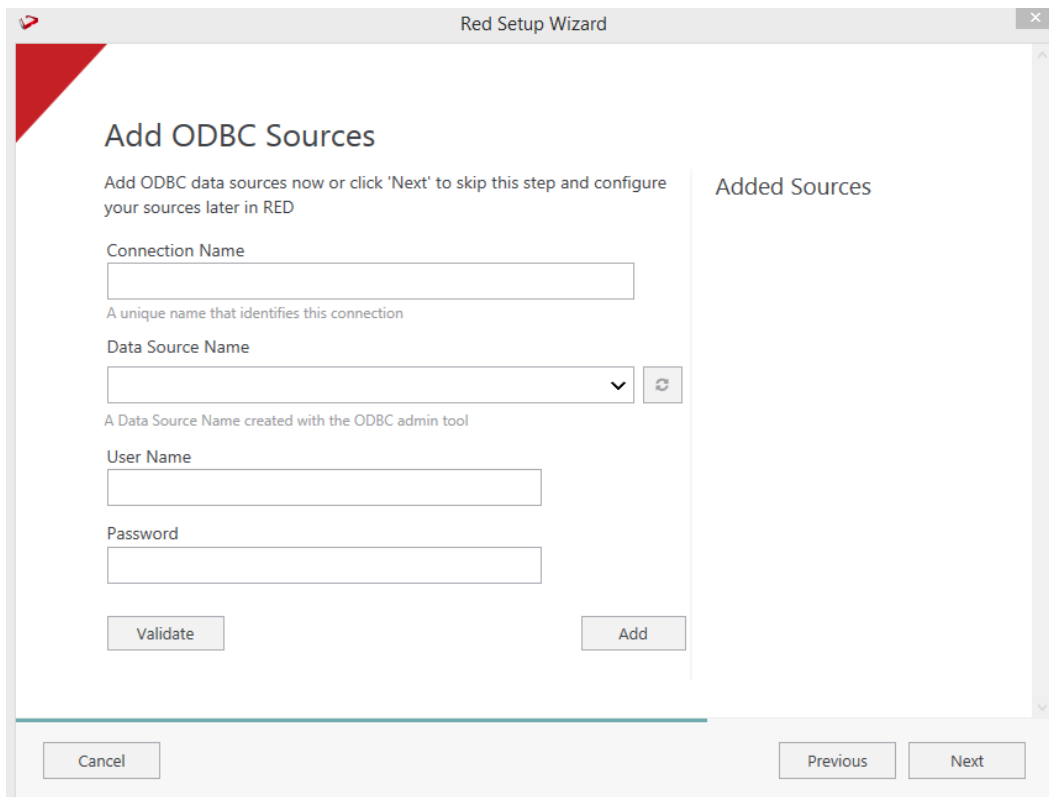
Validate ✔ Validated OK Add

Cancel Previous Next

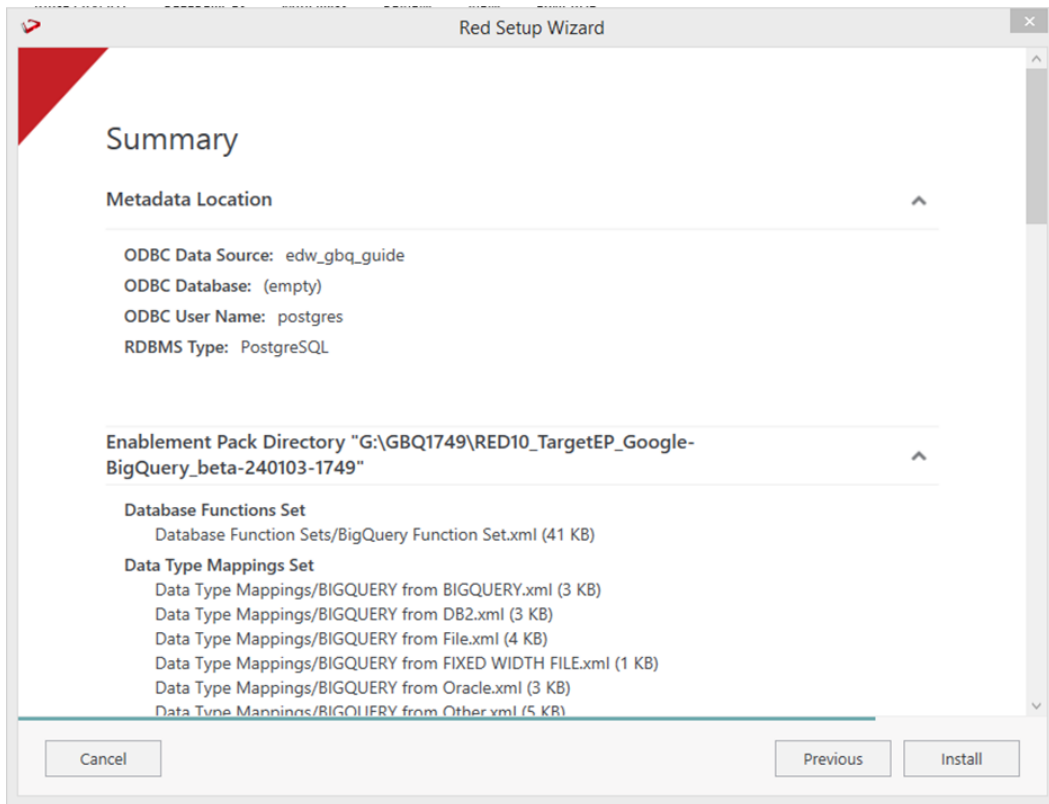
When done, press ADD and then Press Next to advance.



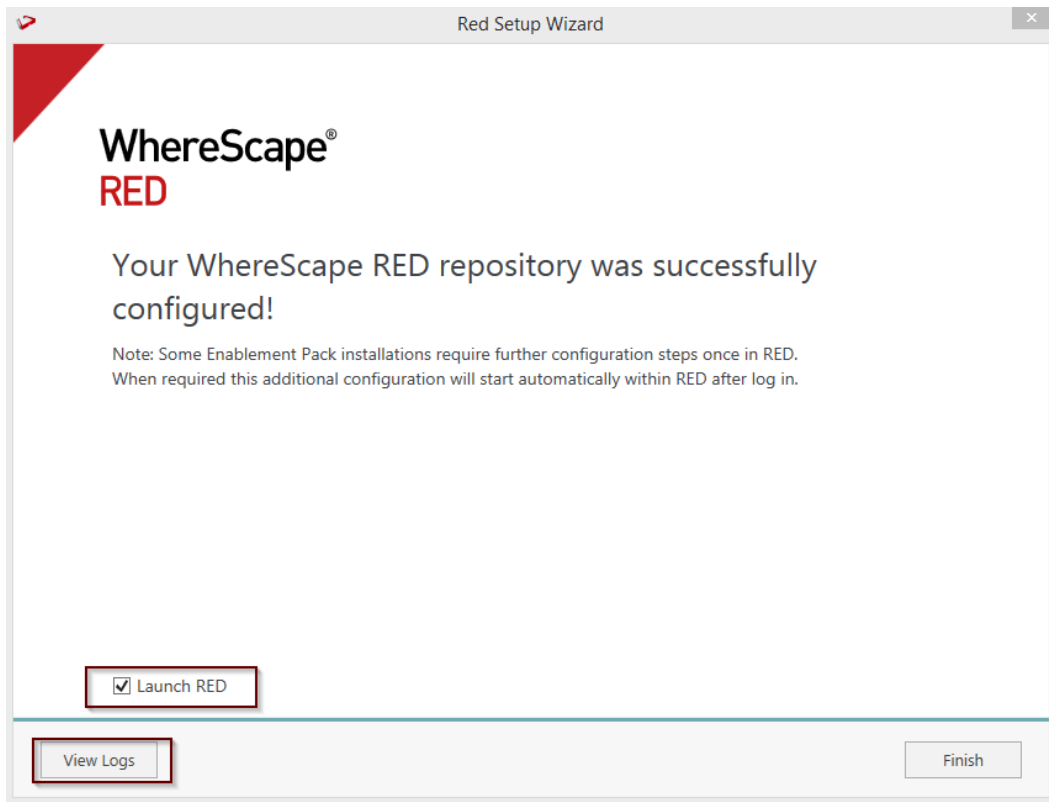
Configure a data source connection (optional) and its target locations. Validate and press ADD. Press Next to advance.



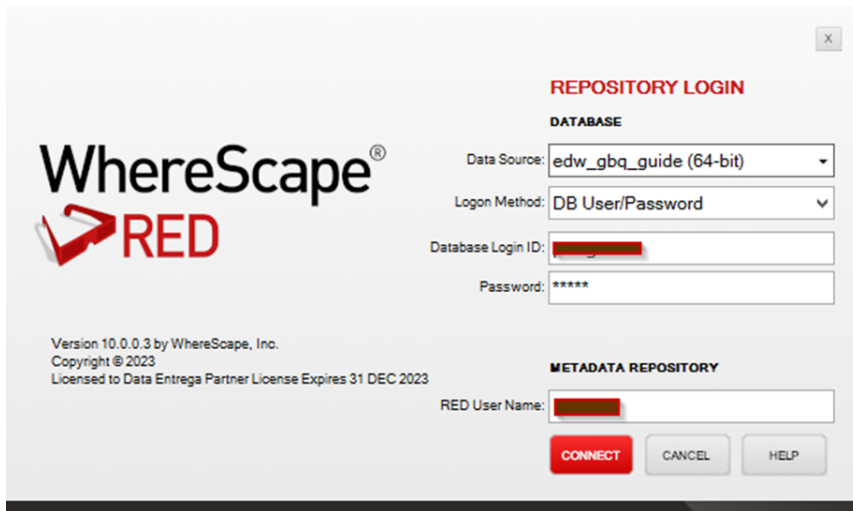
Review the installation summary and press Install



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

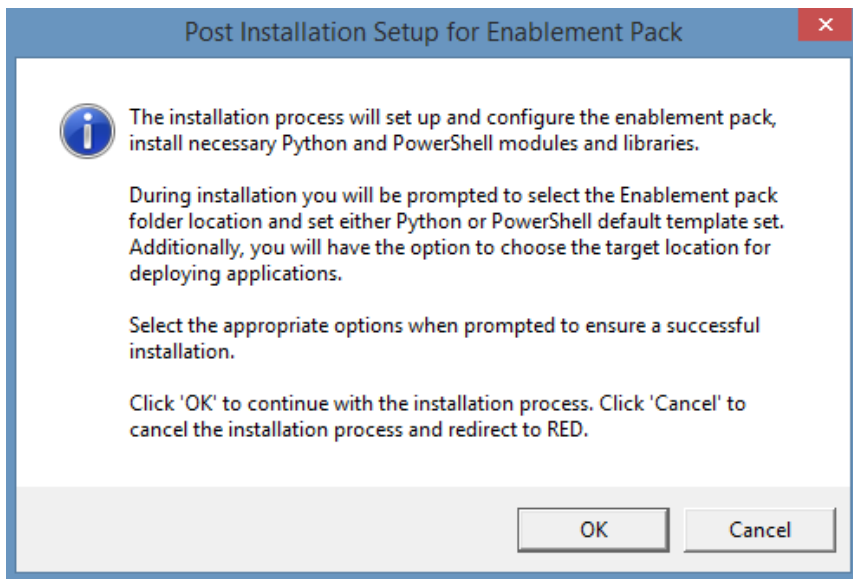


Login to WhereScape RED.



The image shows a 'REPOSITORY LOGIN' dialog box for WhereScape RED. On the left is the WhereScape RED logo. Below it, the version information reads: 'Version 10.0.0.3 by WhereScape, Inc. Copyright © 2023. Licensed to Data Entrega Partner License Expires 31 DEC 2023'. The main area is divided into two sections: 'DATABASE' and 'METADATA REPOSITORY'. Under 'DATABASE', there are fields for 'Data Source' (set to 'edw_gbq_guide (64-bit)'), 'Logon Method' (set to 'DB User/Password'), 'Database Login ID' (with a redacted value), and 'Password' (with six asterisks). Under 'METADATA REPOSITORY', there is a 'RED User Name' field (with a redacted value). At the bottom are three buttons: 'CONNECT' (highlighted in red), 'CANCEL', and 'HELP'.

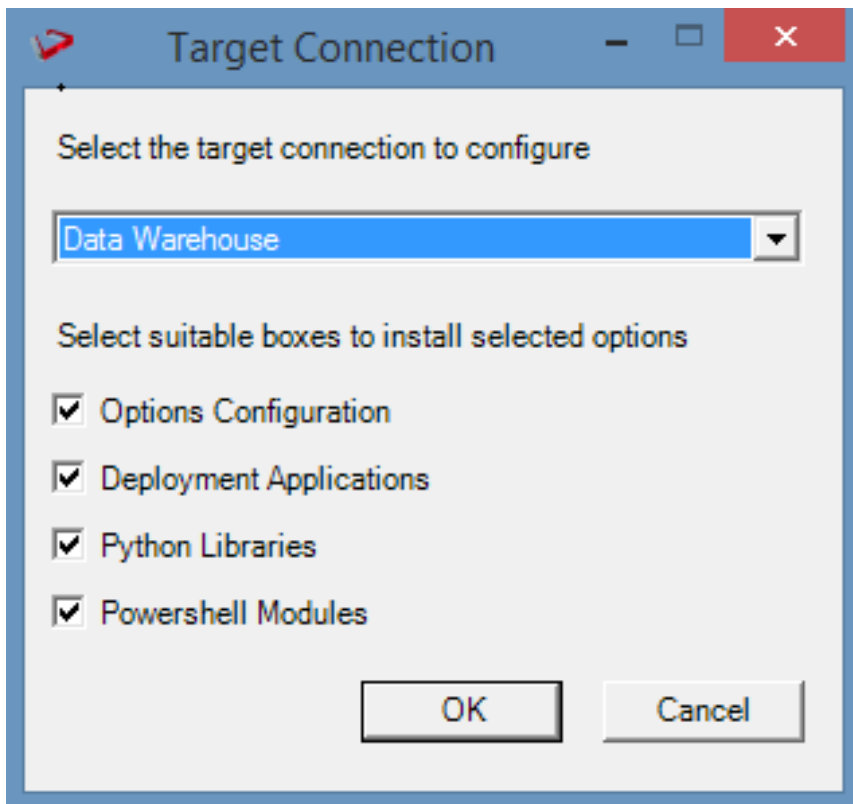
Note: There is a post-install script that will run at the first login to RED10 to complete the post setup wizard installation process. You will be directed to below PowerShell window which will give brief explanation about post installation process.



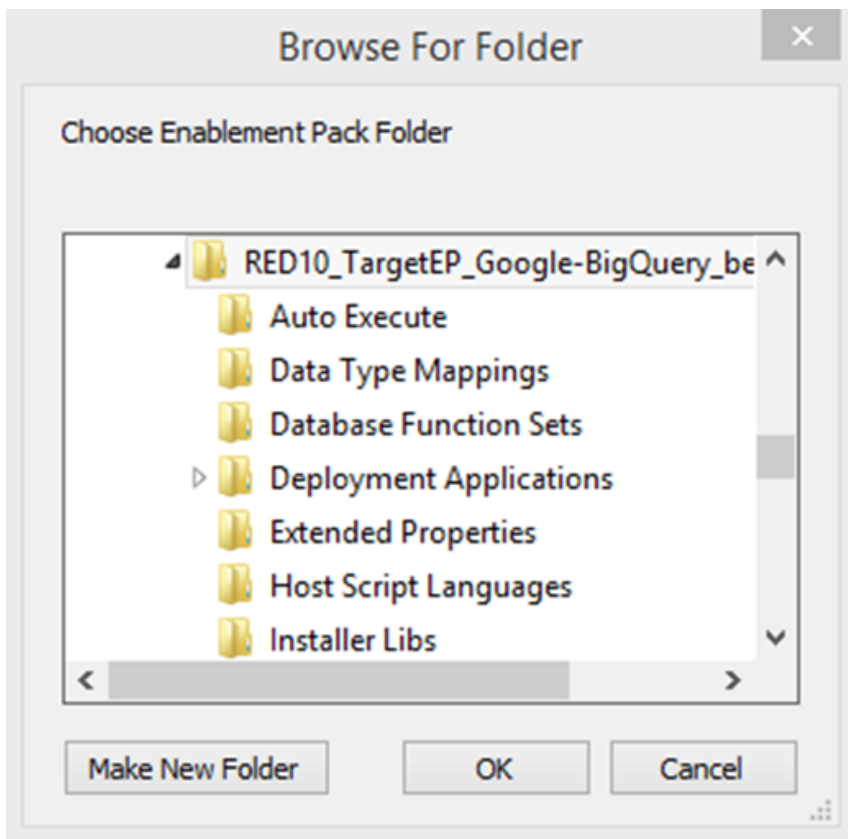
The image shows a 'Post Installation Setup for Enablement Pack' dialog box. It features a blue header bar with the title and a close button. Below the header is an information icon (i) followed by text: 'The installation process will set up and configure the enablement pack, install necessary Python and PowerShell modules and libraries.' This is followed by a paragraph: 'During installation you will be prompted to select the Enablement pack folder location and set either Python or PowerShell default template set. Additionally, you will have the option to choose the target location for deploying applications.' Another paragraph reads: 'Select the appropriate options when prompted to ensure a successful installation.' The final paragraph says: 'Click 'OK' to continue with the installation process. Click 'Cancel' to cancel the installation process and redirect to RED.' At the bottom are two buttons: 'OK' and 'Cancel'.

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

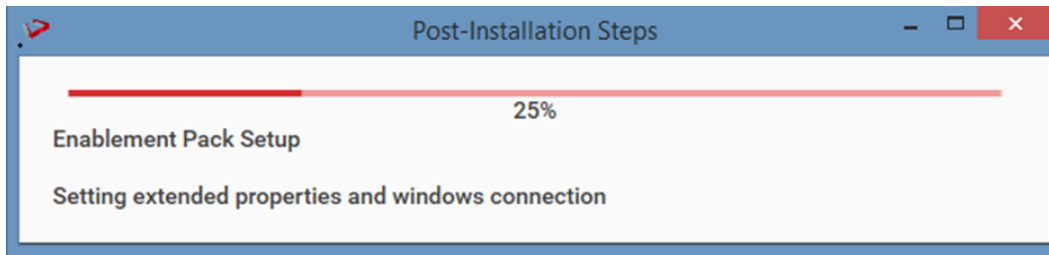
The user will be directed to the window below, where they have to select the target connection to be configured. Additionally, by deselecting the provided options, the user can choose not to install a particular option.



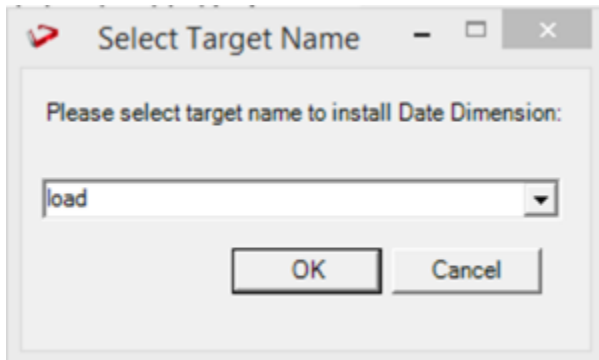
You will be directed to below PowerShell window. Provide the directory that contains unzipped Enablement Pack.



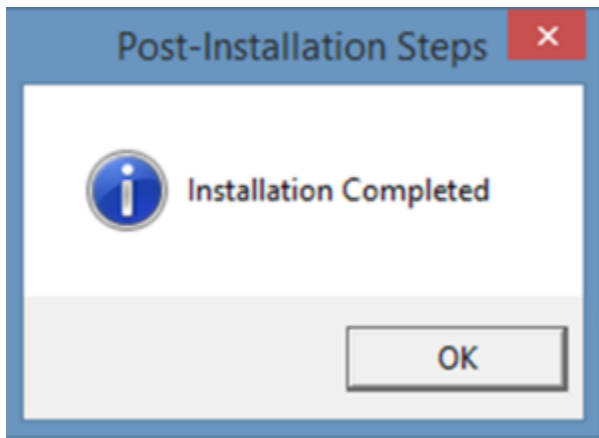
The progress bar will show the post installation progress.



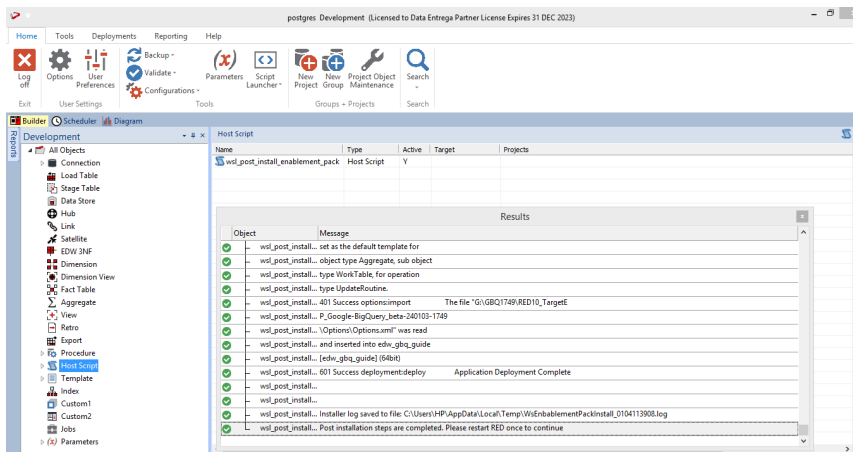
User will have to choose the schema for the target setting that were provided. One of such pop up will come for setting default target schema for Date Dimension.



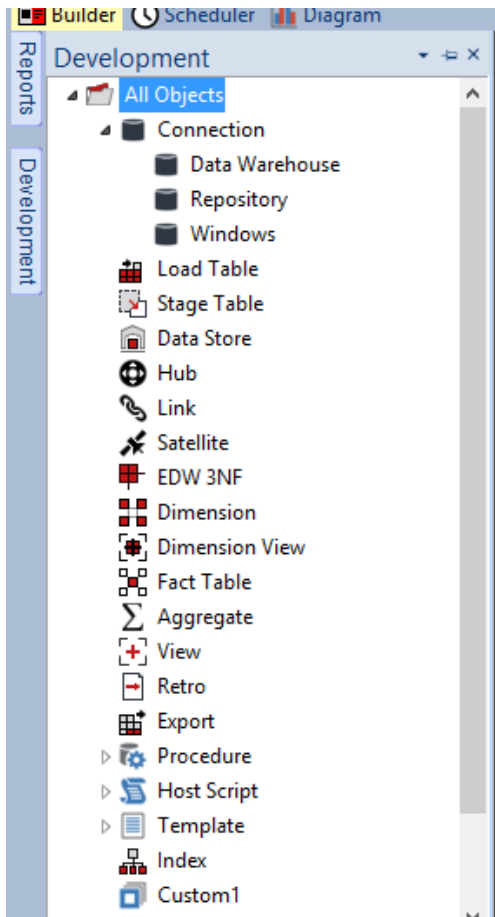
After selecting the target schema progress bar will show the progress for the installation and once it's completed, you will get the below pop up.



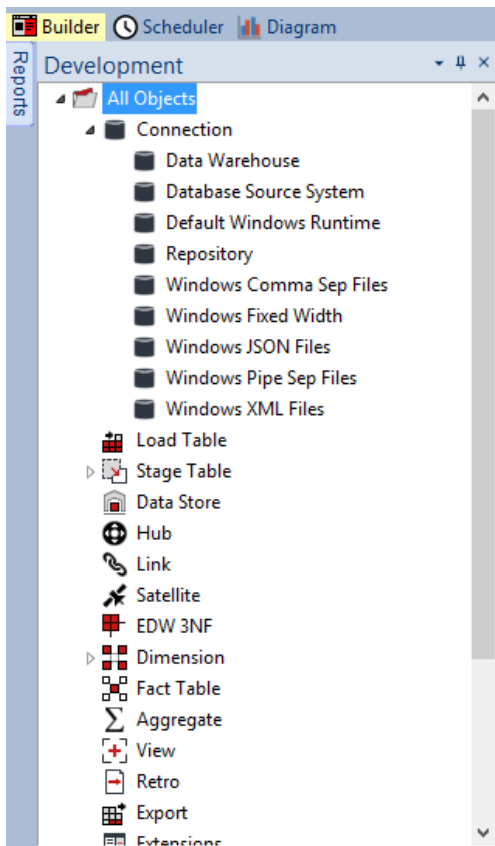
After pressing OK RED10 will open automatically.



User will need to restart RED once.



After Restart



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

The screenshot shows a 'Host Script' configuration window titled 'Host Script wsl_post_install_enablement_pack'. The window has a sidebar with 'Properties' and 'Notes' tabs. The main area contains the following fields:

- Name:** `wsl_post_install_enablement_pack`
- Type:** `Auto Execute - PowerShell` (highlighted with a red box)
- Purpose:** This script was inserted by WhereScape RED CLI
- Owner:** WhereScape RED CLI
- Last Update By:** (empty)
- Connection Name:** (empty)
- Edit Lock:** Locked For Edit By: (redacted), Edit Lock Reason or Last Update: New Script
- Timestamps:** Created: 05-MAY-2023 13:23:43, Last Update: 04-MAY-2023 13:23:43, Compiled: (empty)

Buttons for 'OK', 'Cancel', and 'Help' are at the bottom right.

Important Upgrade Notes

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:

- Connection: Data Warehouse ('Google BigQuery') - This connection was setup as per parameters provided in Setup Wizard
 - open it's properties and check extended properties tab, set it up for **GBQ_BUCKET** and **LOCATION**
- Connection: 'Database Source System' - this connection was setup as an example source connection,
 - open its properties and set it up for a source DB in your environment
 - 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	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

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 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_WslPowershell_Modules.bat
```

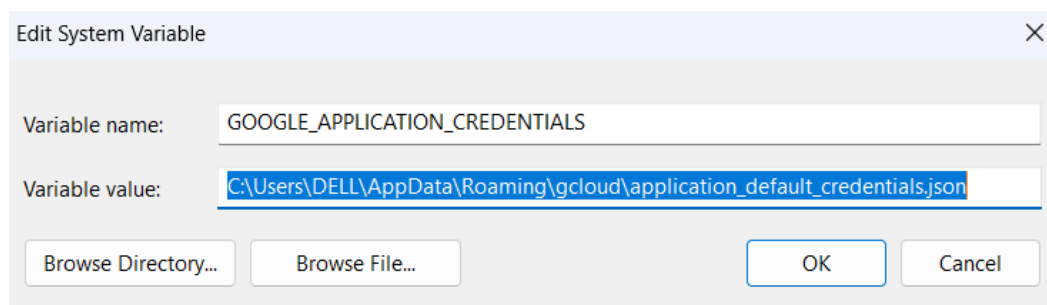
Run Powershell (.ps1) scripts from the administrator prompt by typing the Powershell run script command, for example:

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

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

Setting Up Google BigQuery Configuration

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

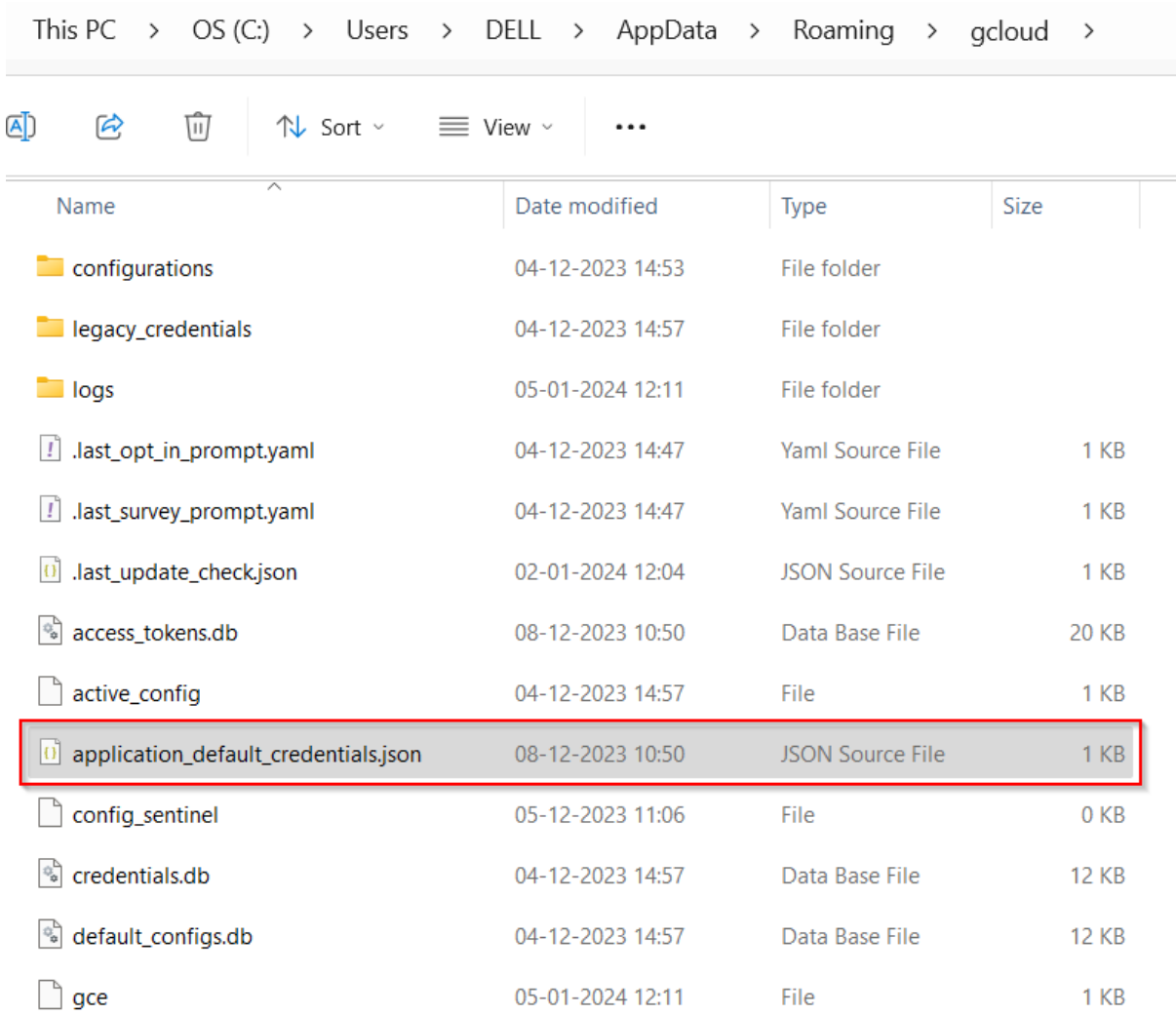


2. open command prompt and create Google BigQuery file using "gcloud auth application-default login"

```
C:\Windows\System32>gcloud auth application-default login
Your browser has been opened to visit:
https://accounts.google.com/o/oauth2/auth?response_type=code&client_id=764086051850-6qr4p6p16hn506pt8ejuq83di341hur.apps.googleusercontent.com&redirect_uri=http%3A%2F%2Flocalhost%3A8085%2F&scope=openid+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fuserinfo.email+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fcloud-platform+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fsqlservice.login&state=6Rui4561xzbt8TbFH3M-4vLx4ToI&access_type=offline&code_challenge=C1zabY8ppjg1YLSa_jF9R7uz0Y608x7F-Xb4JTD1WI&code_challenge_method=S256

Credentials saved to file: [C:\Users\DELL\AppData\Roaming\gcloud\application_default_credentials.json]
These credentials will be used by any library that requests Application Default Credentials (ADC).
WARNING:
cannot add the project "wt-d-development" to ADC as the quota project because the account in ADC does not have the "serviceusage.services.use" permission on this project. You might receive a "quota_exceeded" or "API not enabled" error. Run $ gcloud auth application-default set-quota-project to add a quota project.
C:\Windows\System32>
```

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



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 WhereScape 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 WhereScape 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"

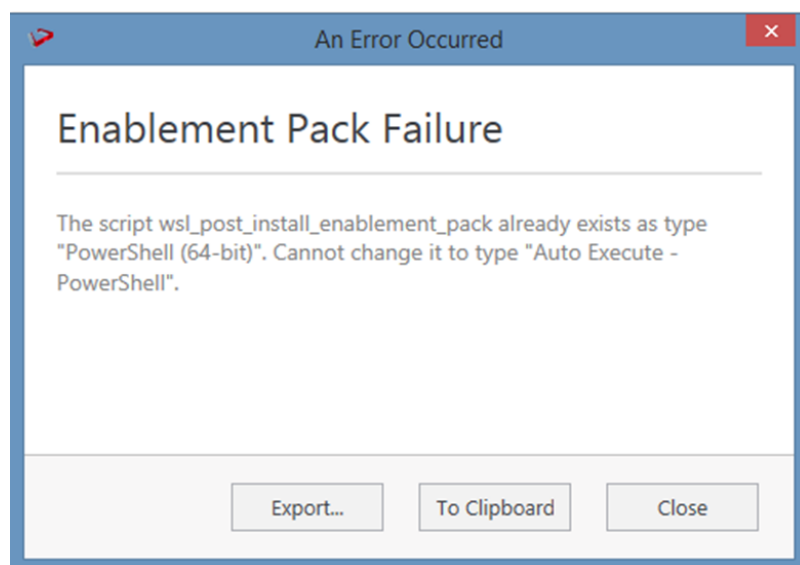
Now you have an admin prompt navigate to to the folder where you have unpacked your WhereScape Red Enablement Pack to using the 'cd' command:

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

Run the below command

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

For upgrade of existing repository



In upgrade of exiting 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 you 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.