

Install Guide - SetupWizard - SQL Server -RED 10.3

WhereScape Enablement Pack for SQL Server - RED 10.3

This is a guide to installing the WhereScape Enablement Pack for SQL Server for WhereScape RED10

Table of Contents

- [Prerequisites For PostgreSQL Metadata](#)
 - [Prerequisites Target Database](#)
 - [Installation Through Setup Wizard](#)
 - [Upgrade Of Existing Repository](#)
 - [SSIS - Connection String Generation](#)
 - [Post Install Steps – Optional](#)
 - [Source Enablement Pack Support](#)
 - [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 [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

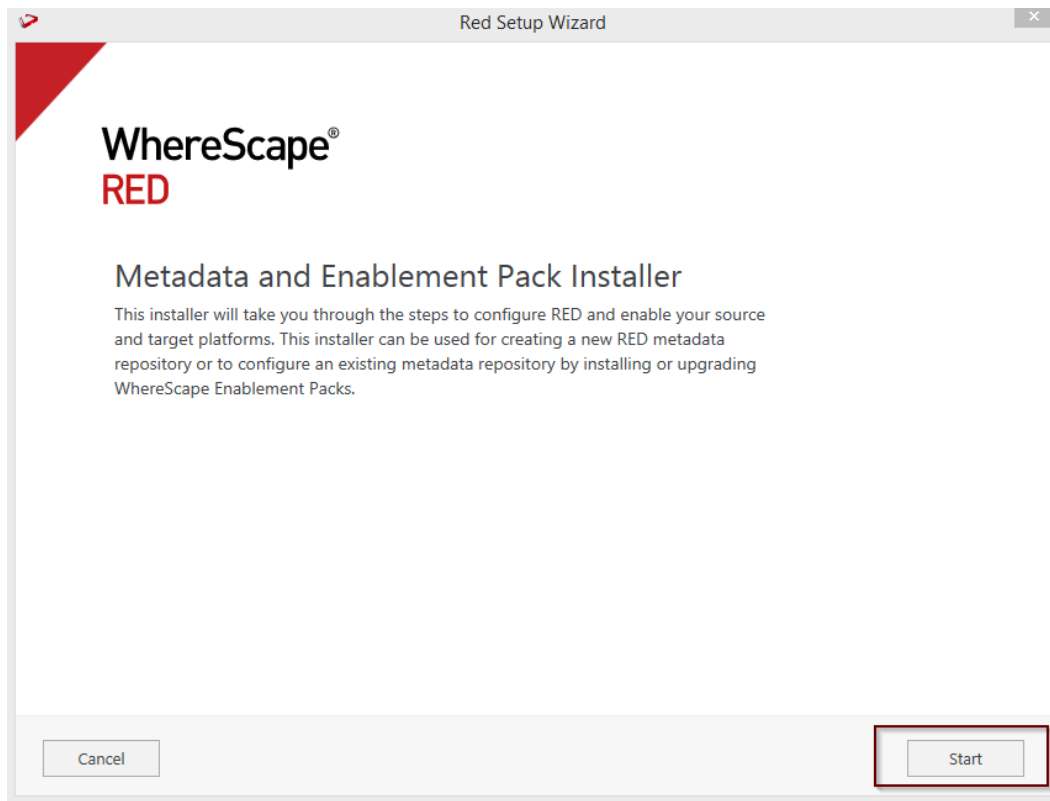
Prerequisites Target Database

Before you begin the following prerequisites must be met:

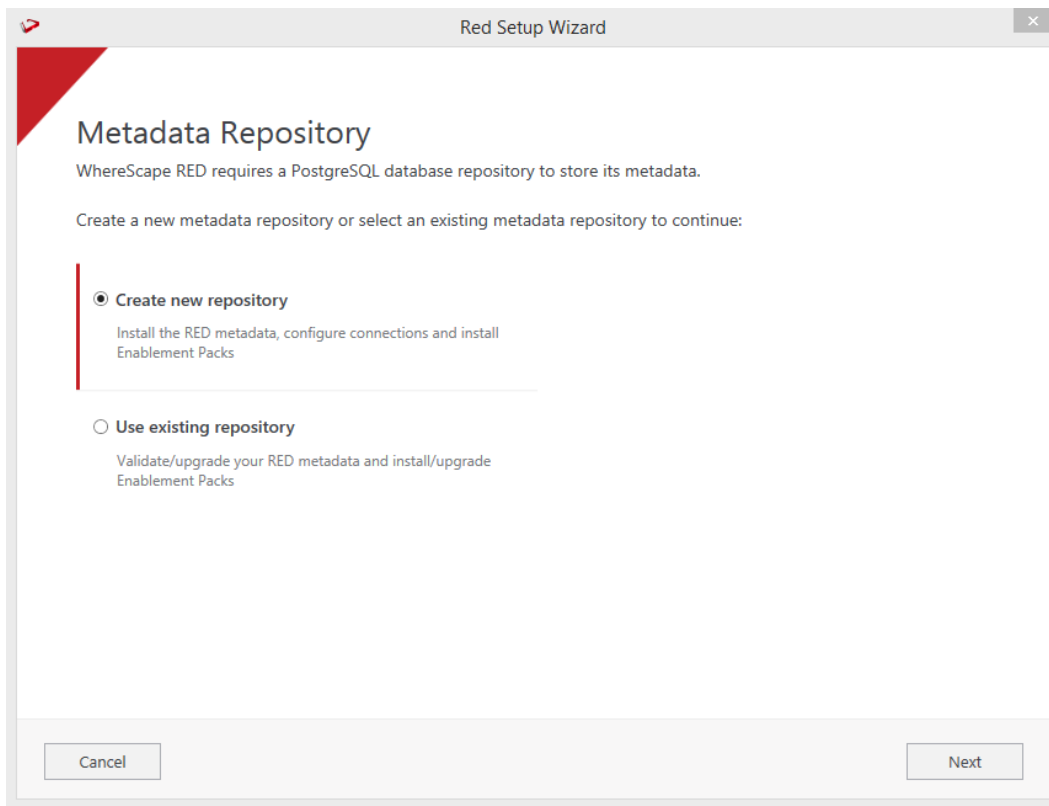
- Access to an SQL Server (Target Environment), with the following connectivity information :
 1. Server Name
 2. Database Name
 3. User Name
 4. Password
 5. At least one schema available to use as a RED Data Warehouse Target
- SQL Server software installed
 - SQL Server ODBC driver (64-bit)
 1. Add ODBC DSN for SQL Server Target Database
- SQL Server software installed
 - SQL Server ODBC driver (64-bit)
 1. Add ODBC DSN for SQL Server Target Database
- [Python 3.8 or higher](#)
 - Select "Add Python 3.8 to PATH" from installation Window
 - Pip Manager Install with command : `python -m pip install --upgrade pip`

Installation Through Setup Wizard

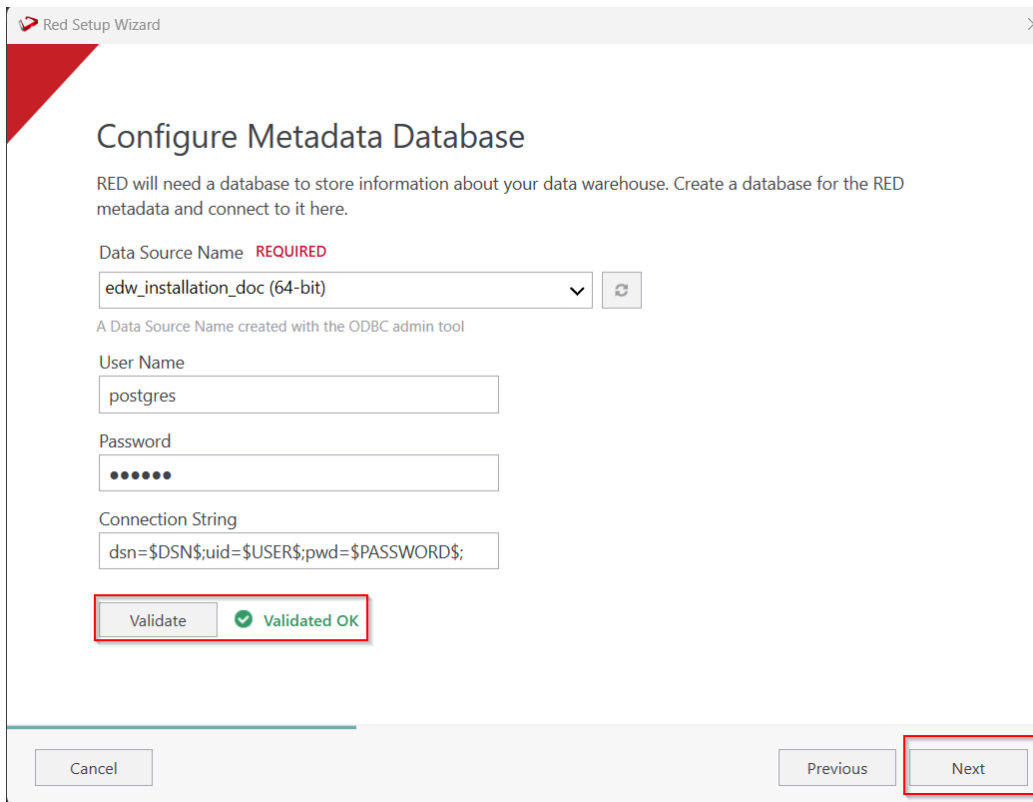
Run Setup Wizard as administrator



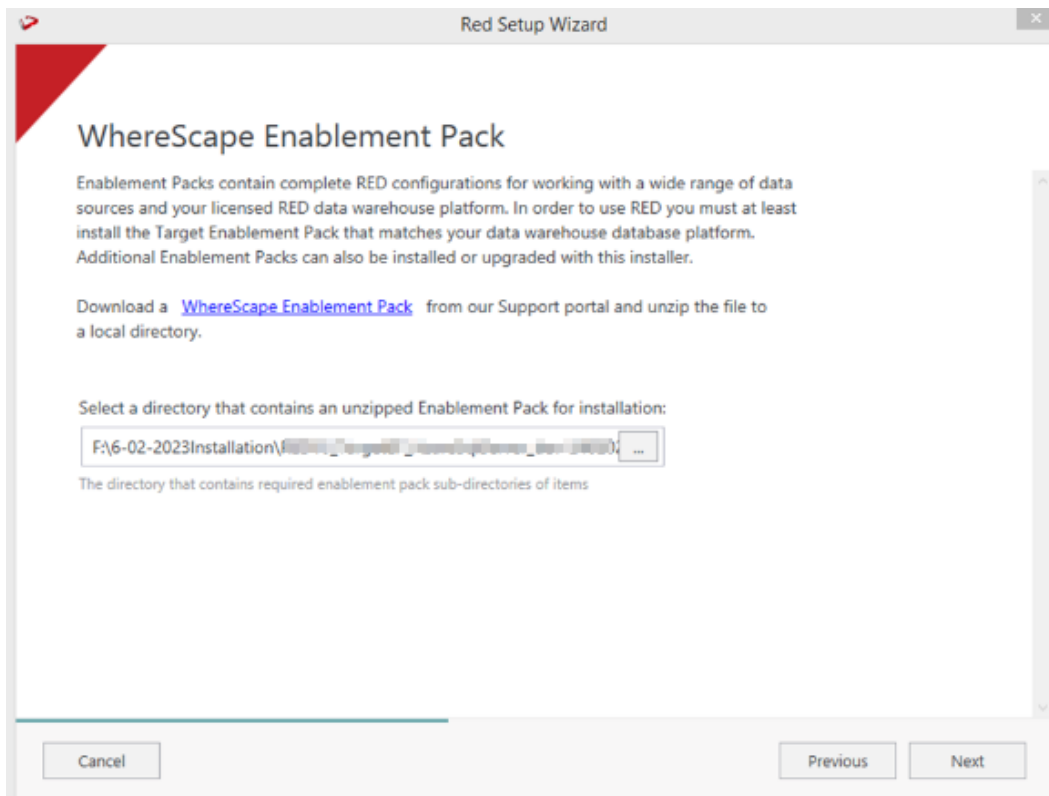
Create new repository or upgrade already existing repository.



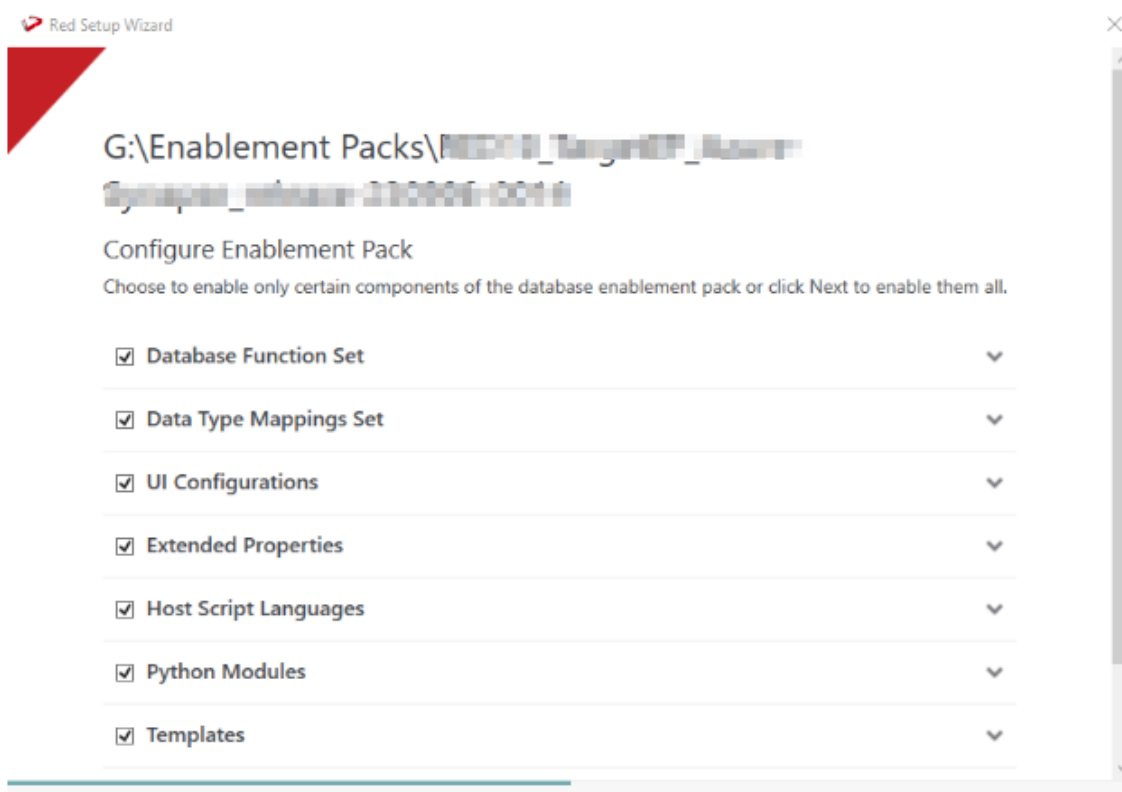
Select the created ODBC DSN, input login details and then select "Validate". Press Next



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.

Red Setup Wizard

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

Data Source Name **REQUIRED**
target_red10 (64-bit) [v] [refresh]
A Data Source Name created with the ODBC admin tool

Database Type **REQUIRED**
SqlServer [v]
The target platform type for this connection

User Name
sql

Password
•••••

Connection String
dsn=\$DSN;uid=\$USER;pwd=\$PASSWORD;

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

+ Add Location

Cancel Previous Next

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

Red Setup Wizard

Add Targets

Configure the connection where your data warehouse will live.

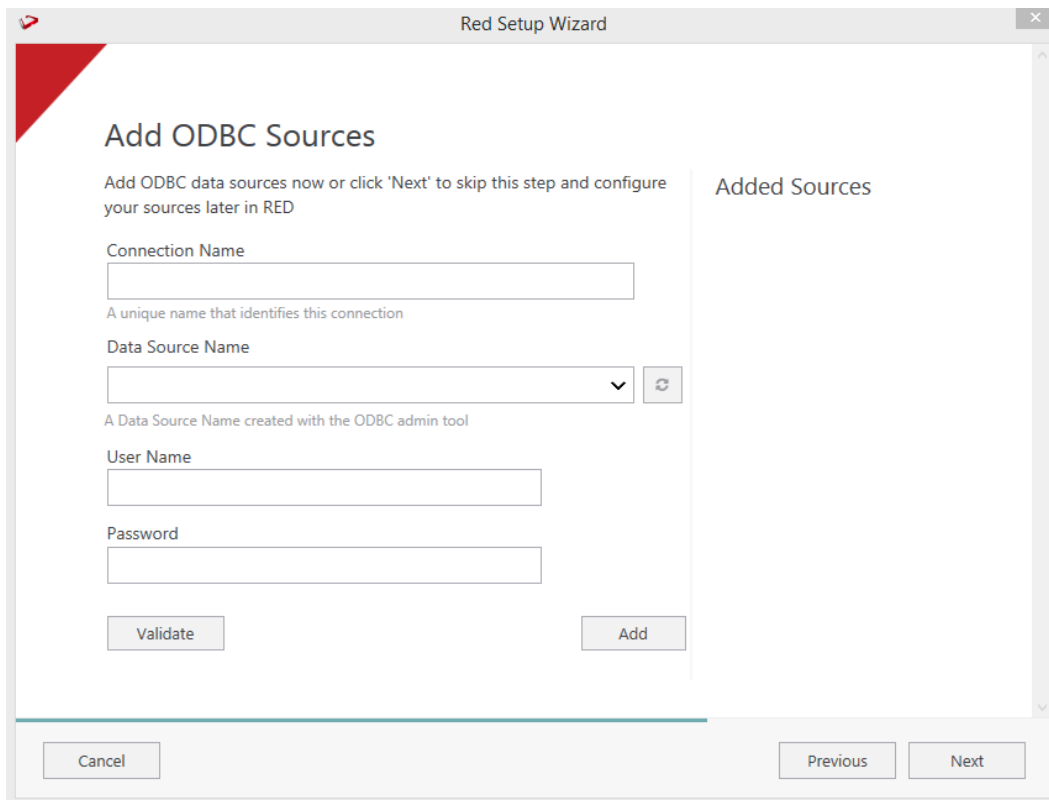
Added Targets

- Data Warehouse
target_red10 [x]

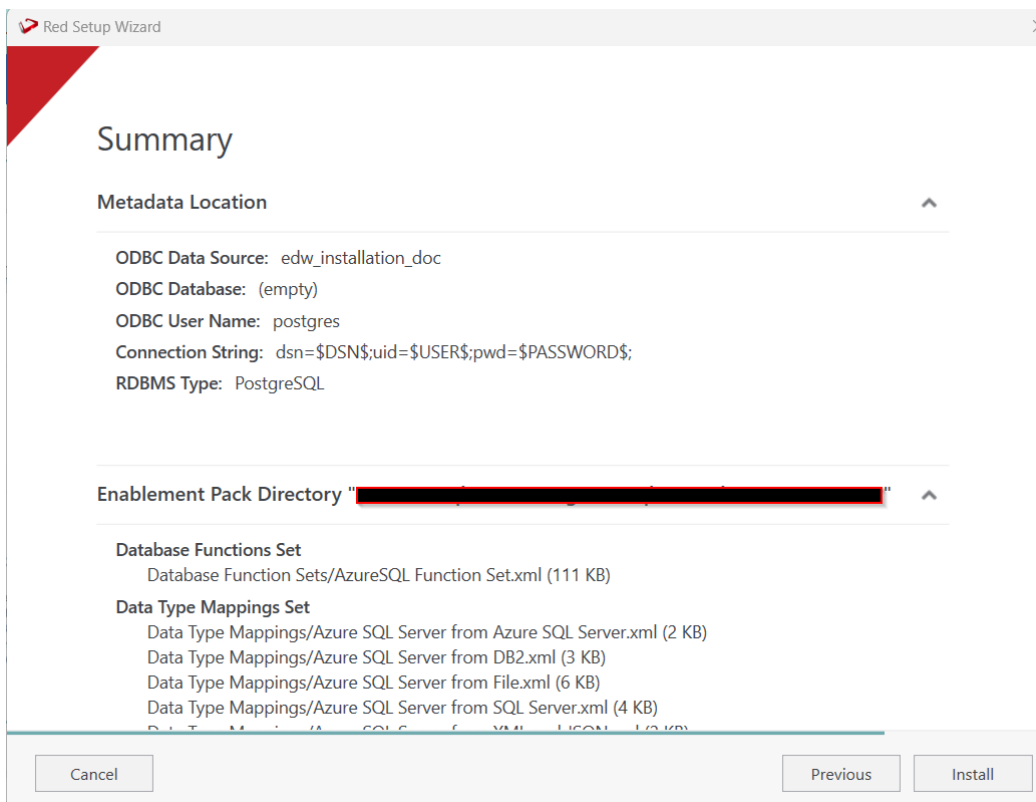
+
Add another target

Cancel Previous Next

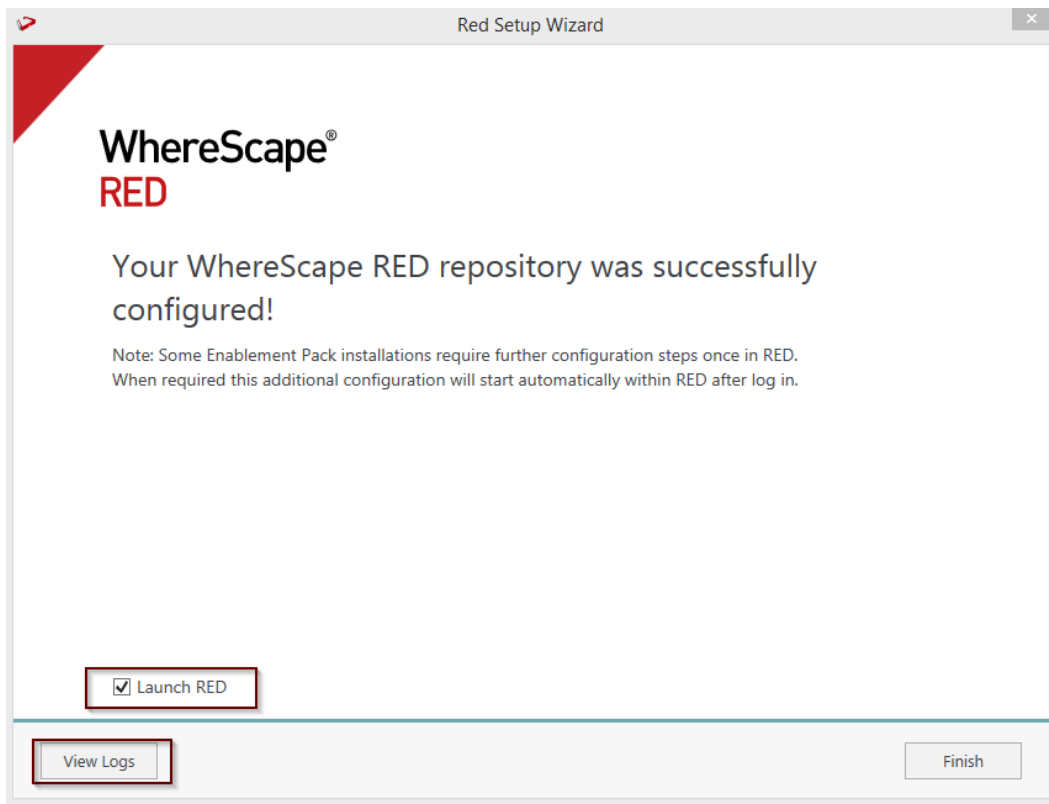
Configure a data source connection (optional) and its target locations. Validate and press ADD. Press Next to advance.



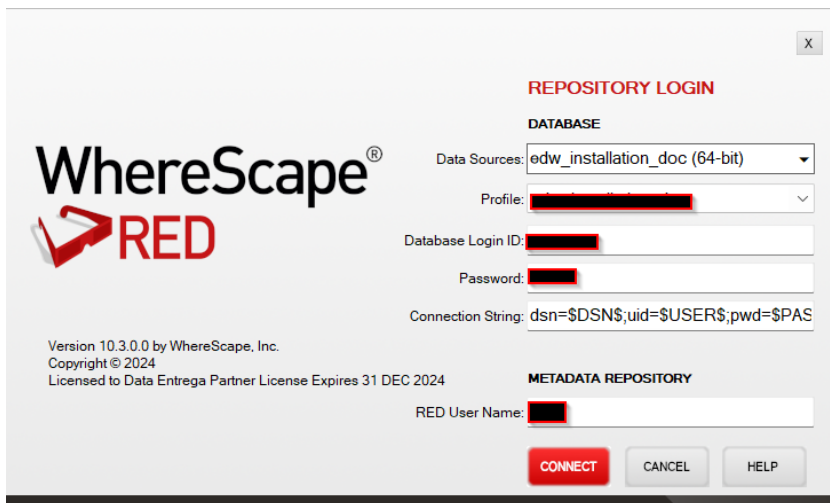
Review the installation summary and click Install



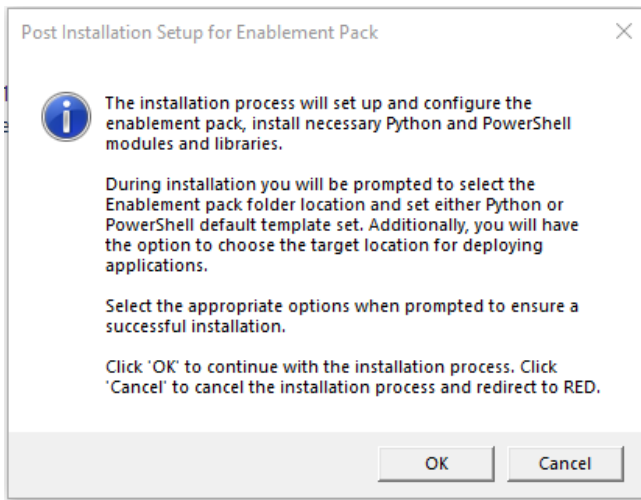
Clicking on the View Logs will take to the installation log. Click on Finish once the installation is completed successfully.



Login to WhereScape RED.

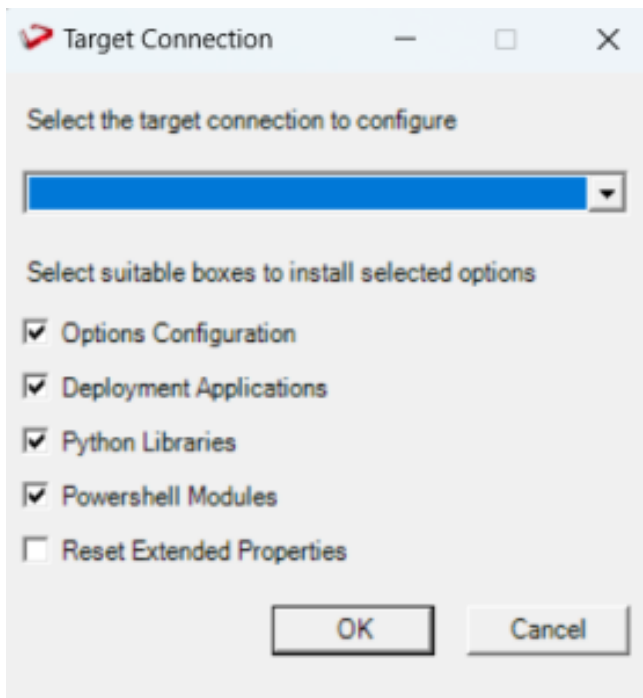


Note: There is a post-install script that will run at the first login to RED10 to complete the post setup wizard installation process. You will be directed to below PowerShell window which will give brief explanation about post installation process.

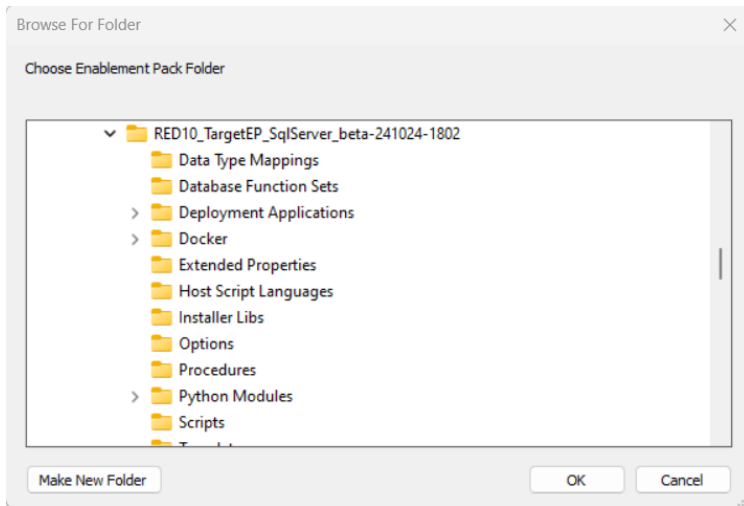


Press OK to start the post installation. If pressed Cancel installation will stop and user will be directed to RED.

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.

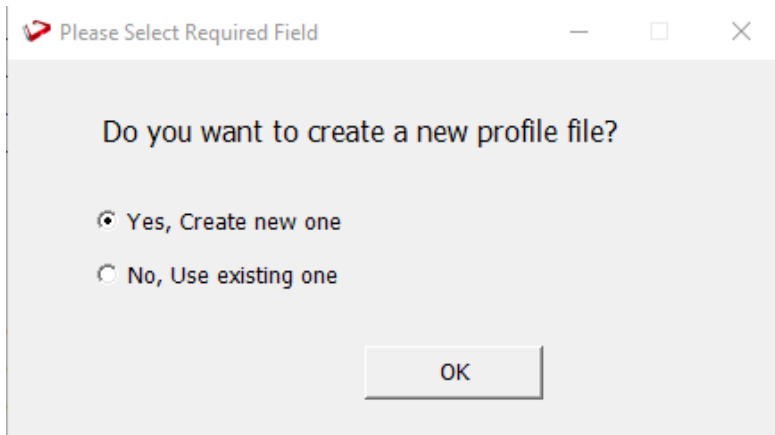


You will be directed to below PowerShell window. Provide the directory that contains unzipped Enablement Pack.



Press OK

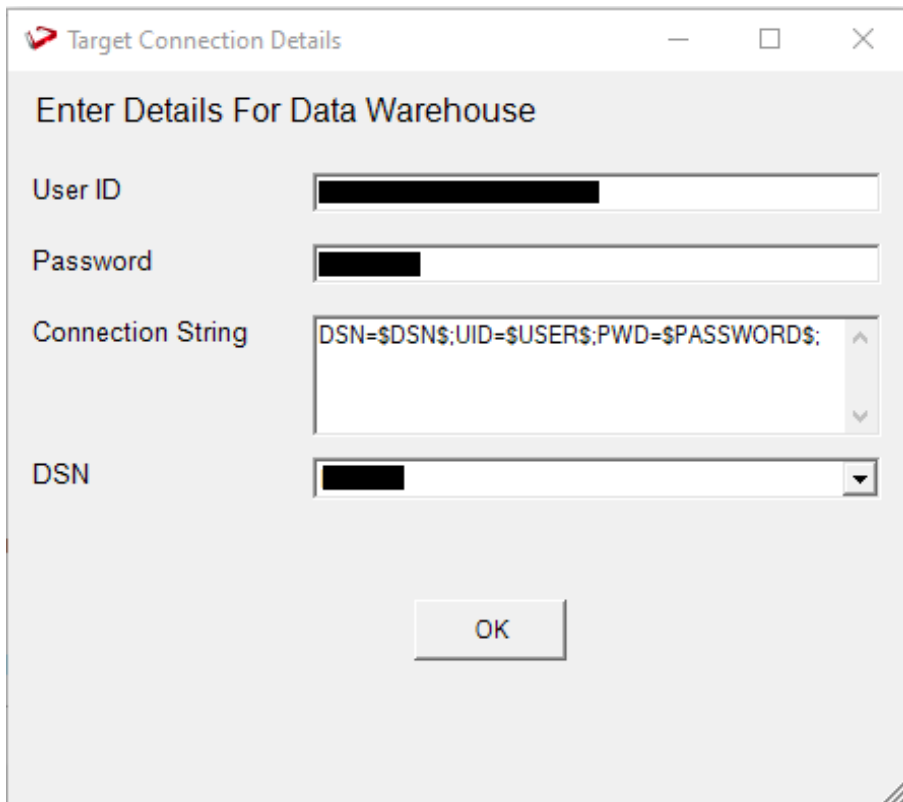
The user will be directed to the window below, where they have to select the Create new profile or use existing one option.



Note: For fresh installation RED will create profile file with same name as DSN, which the user can use or choose to create new profile file.

Press Ok.

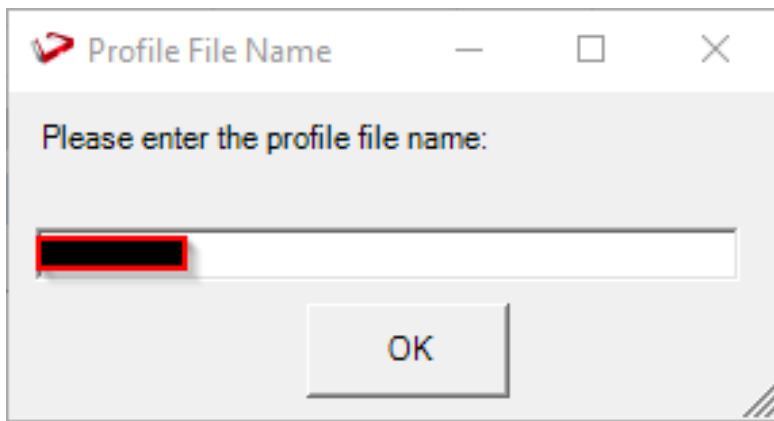
For "Yes, Create new one" option , user will be directed to the window below.



Note: User can use default connection string or input new one.

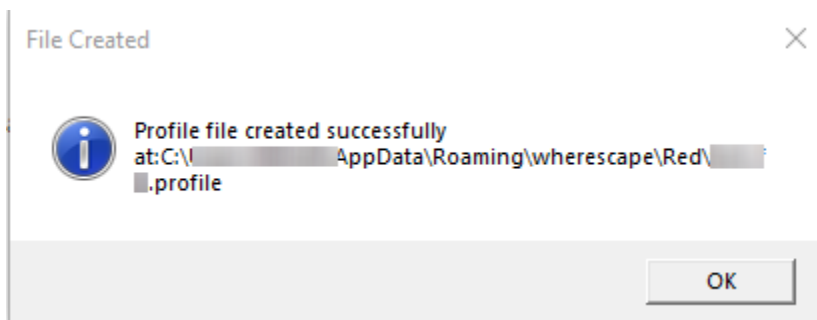
Press OK

The user will be directed to the window below, where user can add profile name.



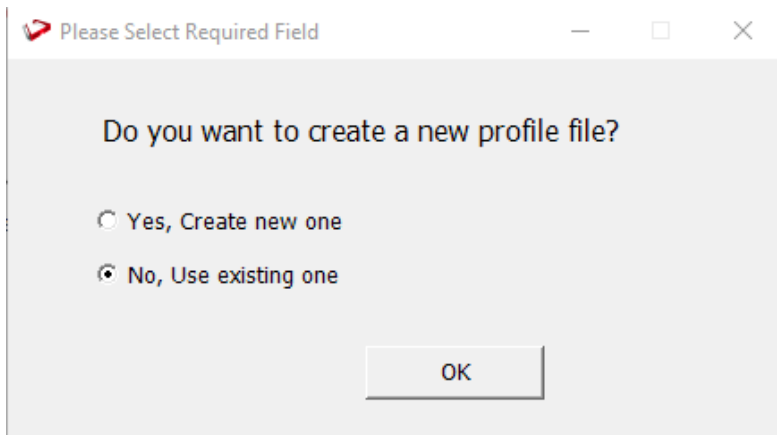
Press Ok.

The below pop up will come to confirm the user that profile is created at that location



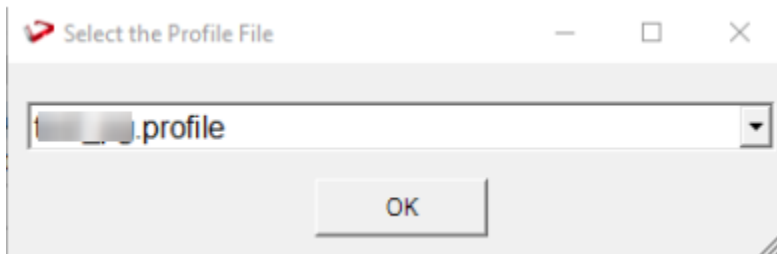
Press OK.

If the user choose "No, Use existing one" option.



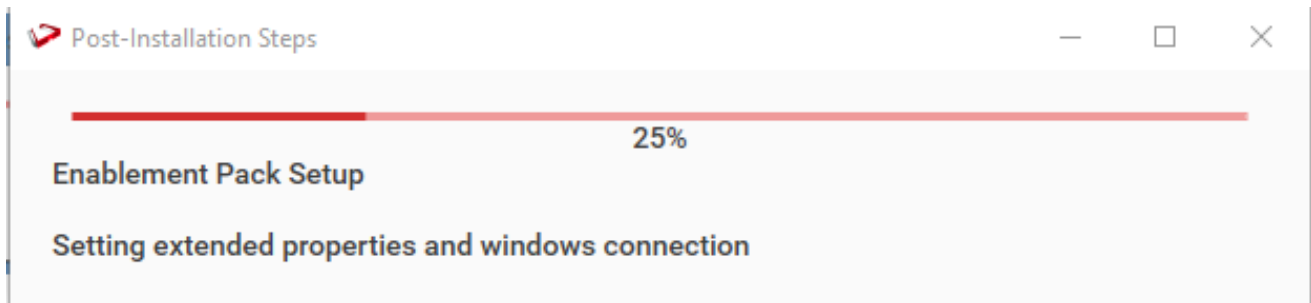
Press OK

The user will be directed to the window below ,where user can select the exiting profile file.

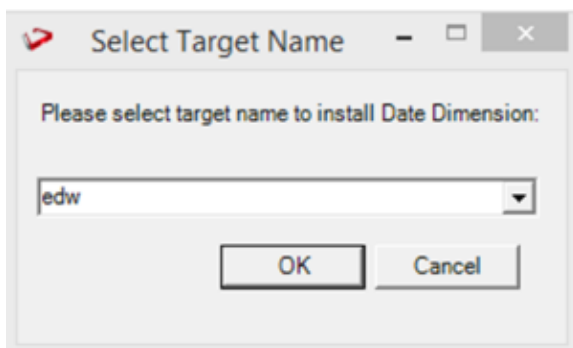


Press OK.

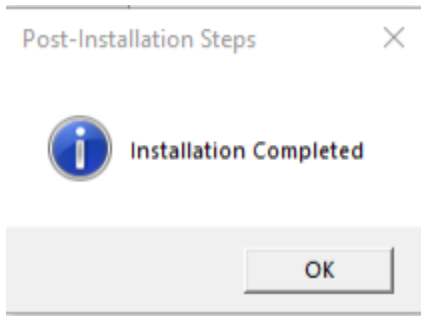
The progress bar will show the post installation progress.



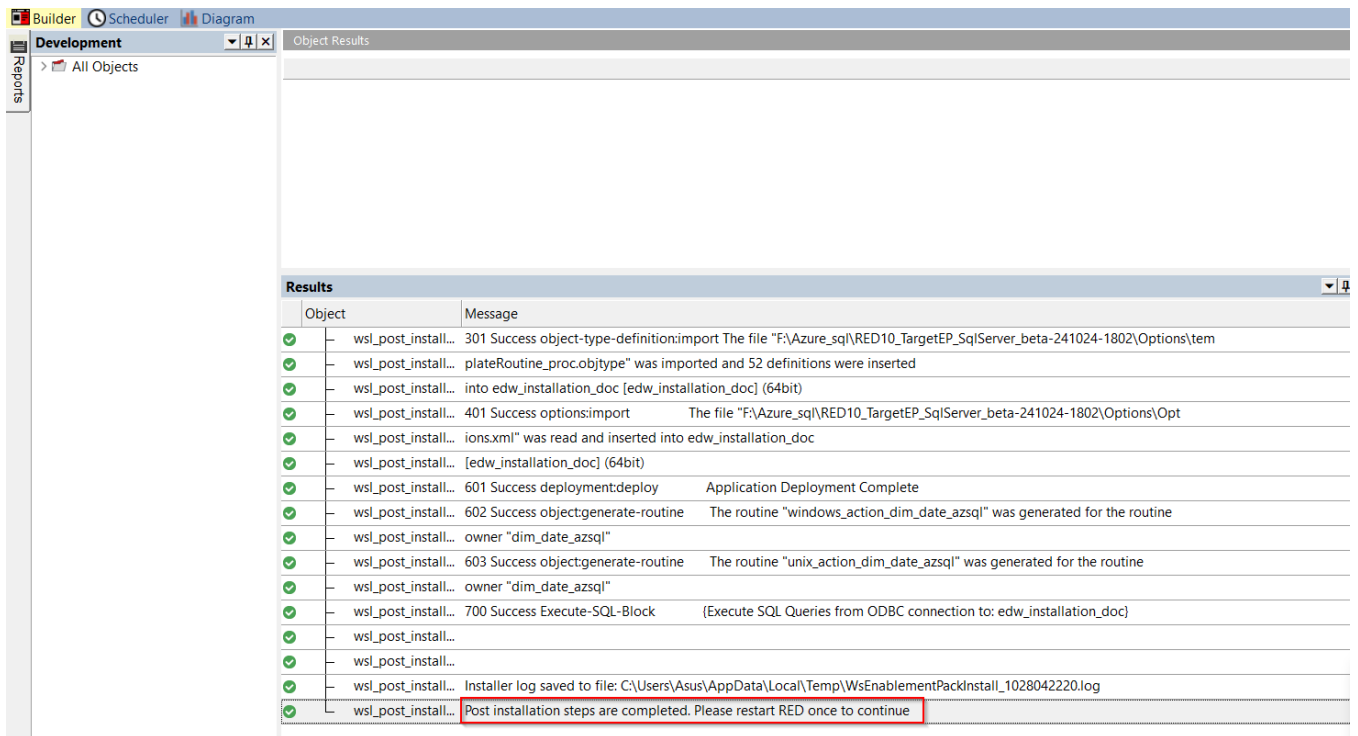
User will have to choose the schema for the target setting that were provided. One pop up will come for setting default target schema for Date Dimension.



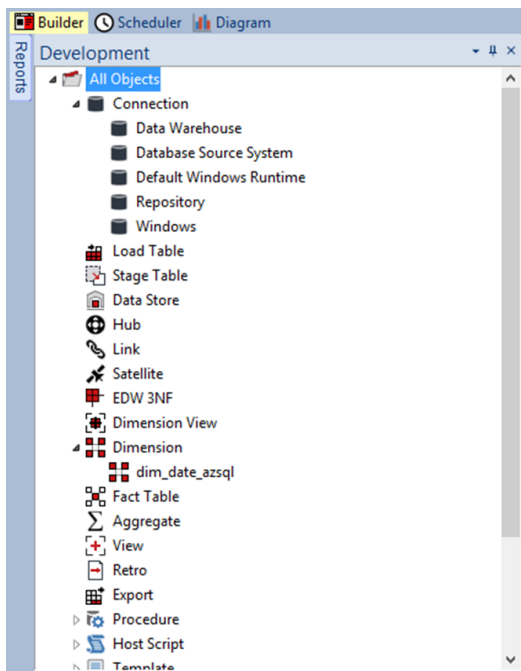
After selecting the target schema progress bar will show the progress for the installation and once it's completed, you will get the below pop up.



After pressing OK RED10 will open automatically.



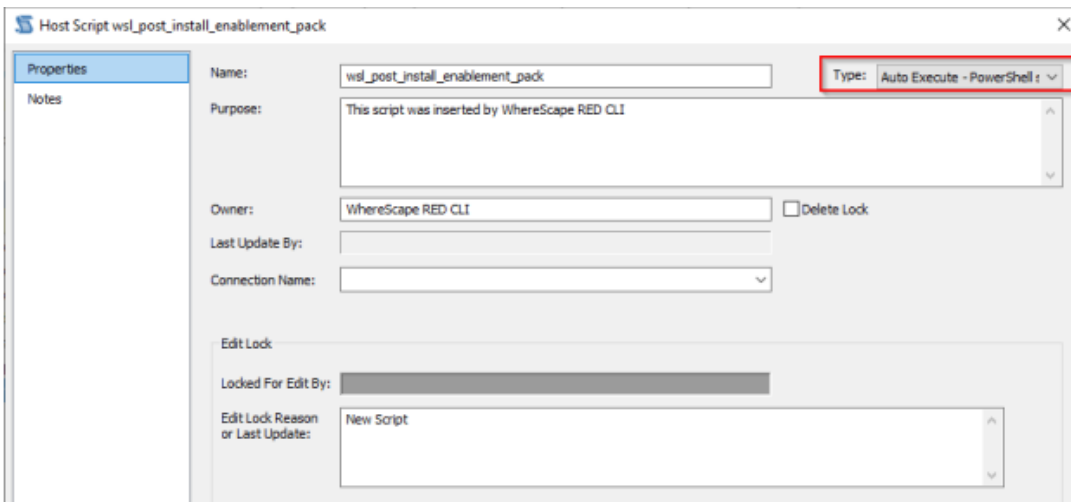
User will need to restart RED once.



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



Important Upgrade Notes

If RED upgrade the repository option is chosen.

This enablement pack will overwrite any existing Source Enablement Pack UI Configs:

Connection UI Config	Load UI Config
Amazon S3	Load From Amazon S3
Azure Data Lake Storage Gen2	Load From Azure Data Lake Storage Gen2
Google Cloud	Load From Google Cloud

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.

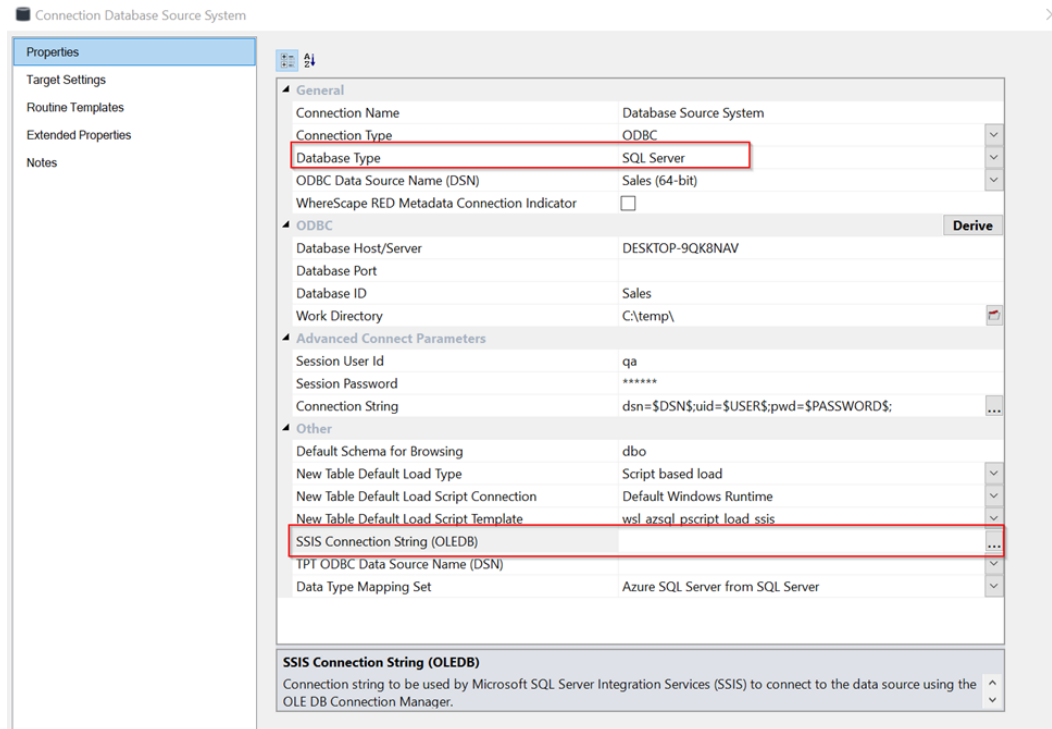
SSIS - Connection String Generation

- **Prerequisites:** -

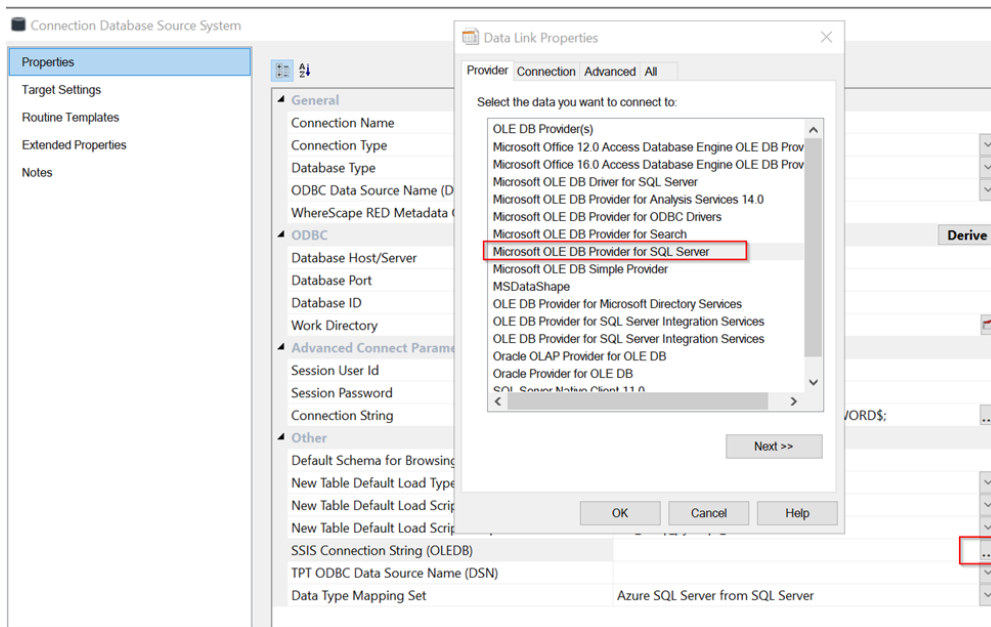
Install Visual Studio and Add Integration service Exception.

- **With SQL Server As Source:** -

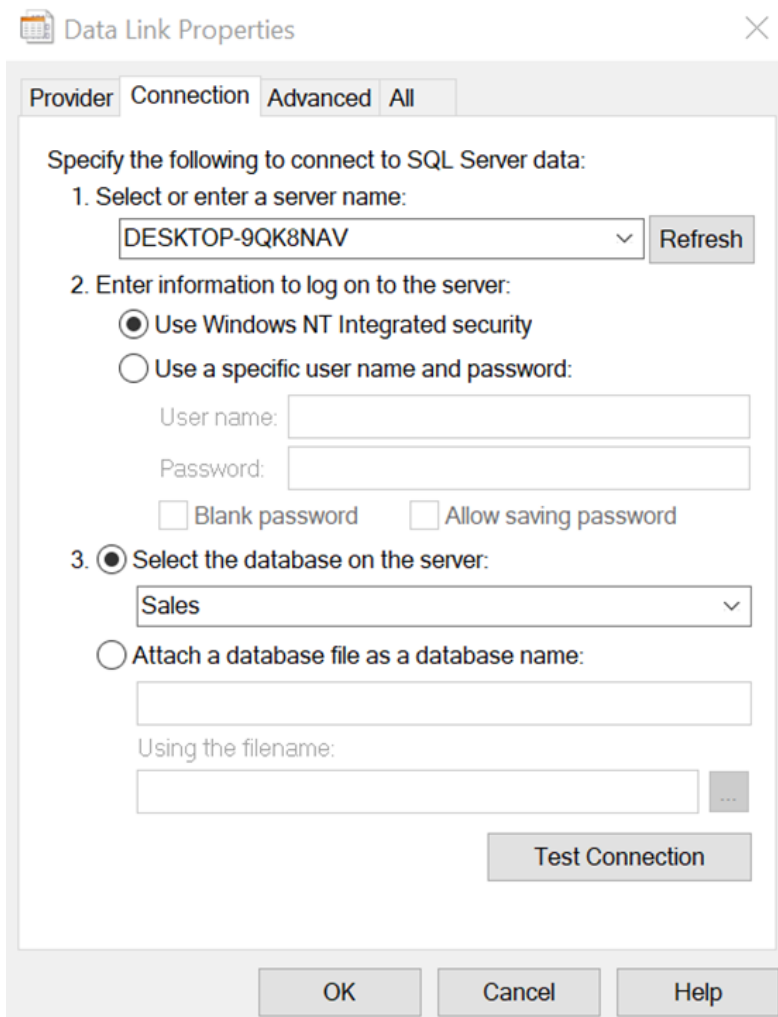
In the Source connection with database type as SQL Server, click on three dots in the SSIS connection string (OLEDB) option as below:



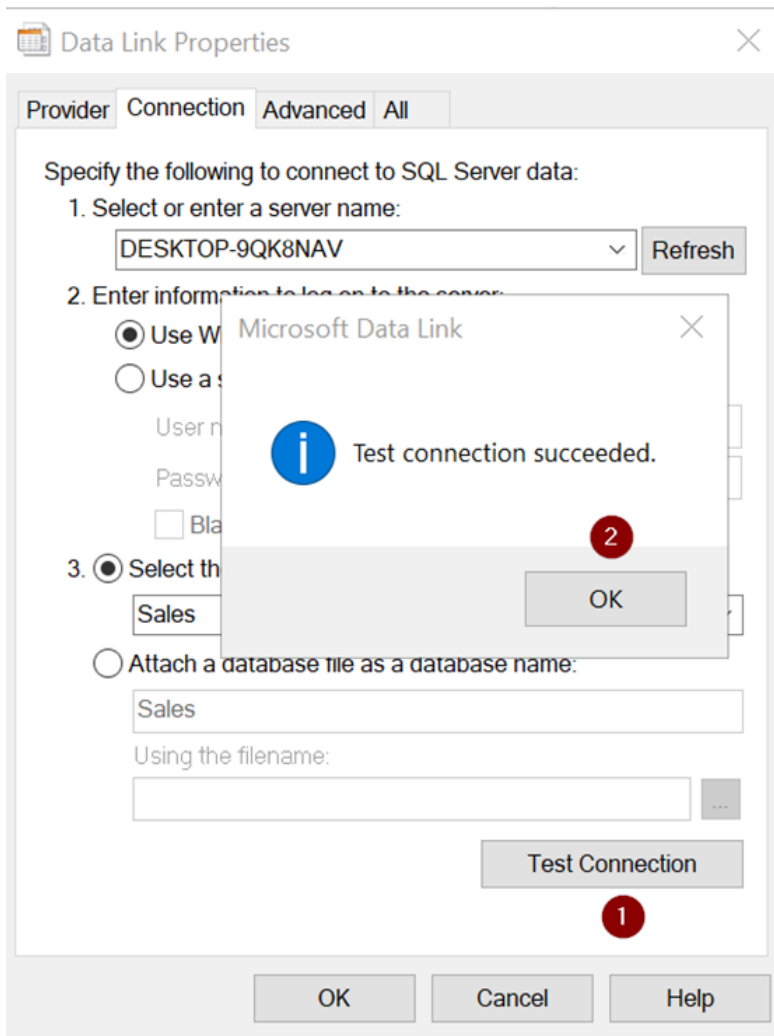
In the Data Link Properties window, select Microsoft OLE DB Provider for SQL Server:



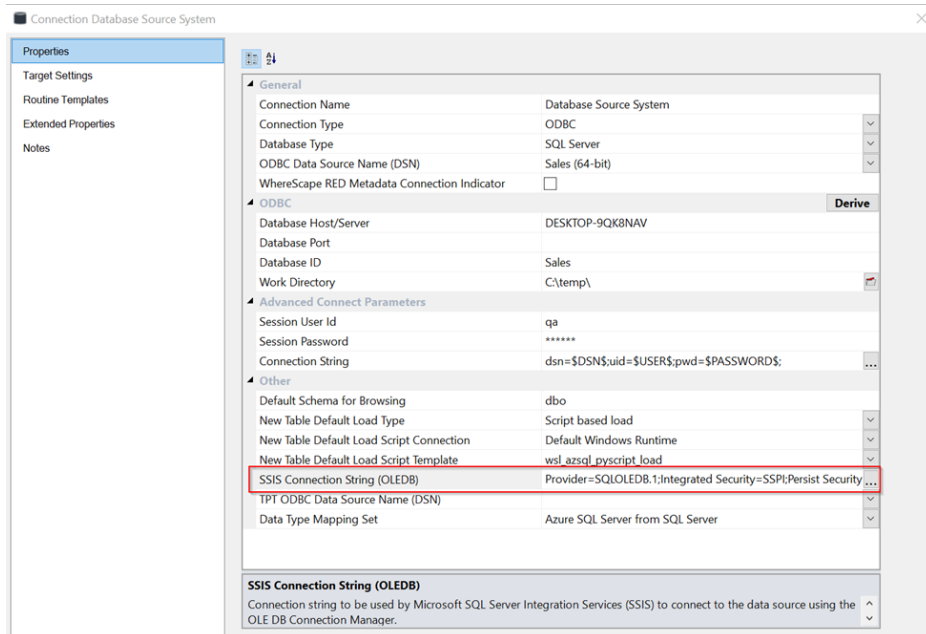
Provide Server and database details:

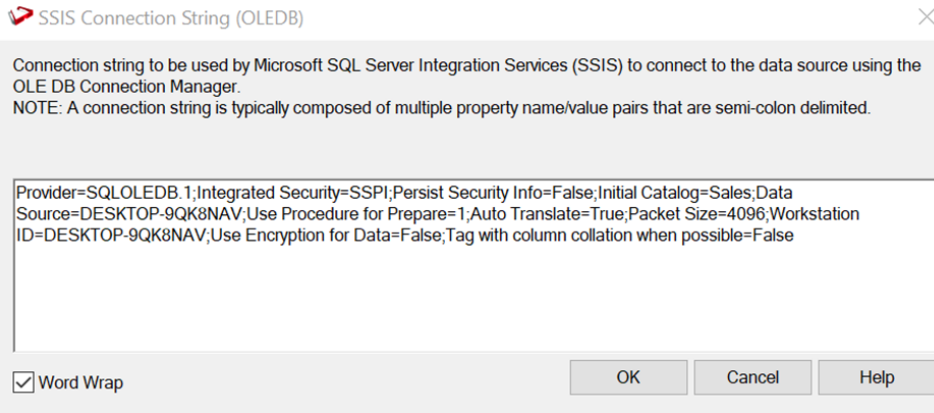


Test the connection:

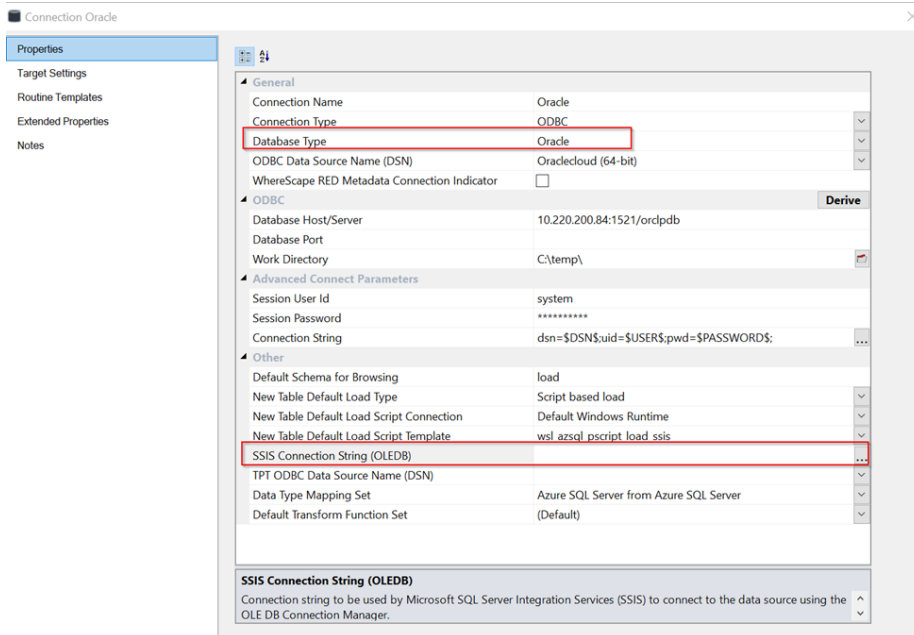


SSIS Connection String generated successfully.

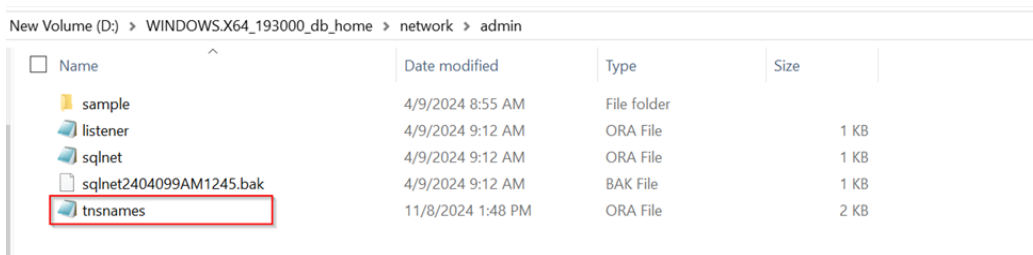




With Oracle As Source: -

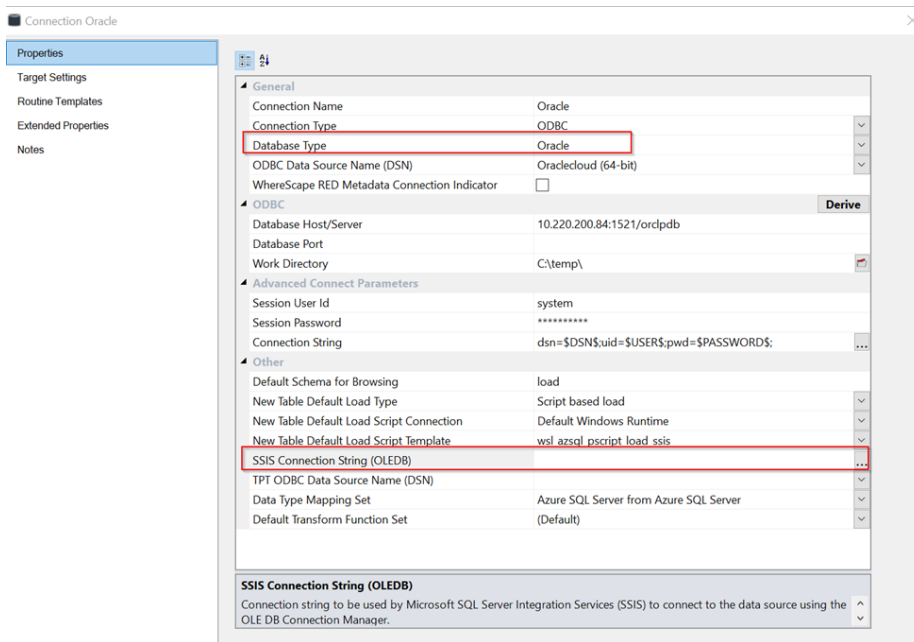


In tnsnames.ora file , define database connection details as below:

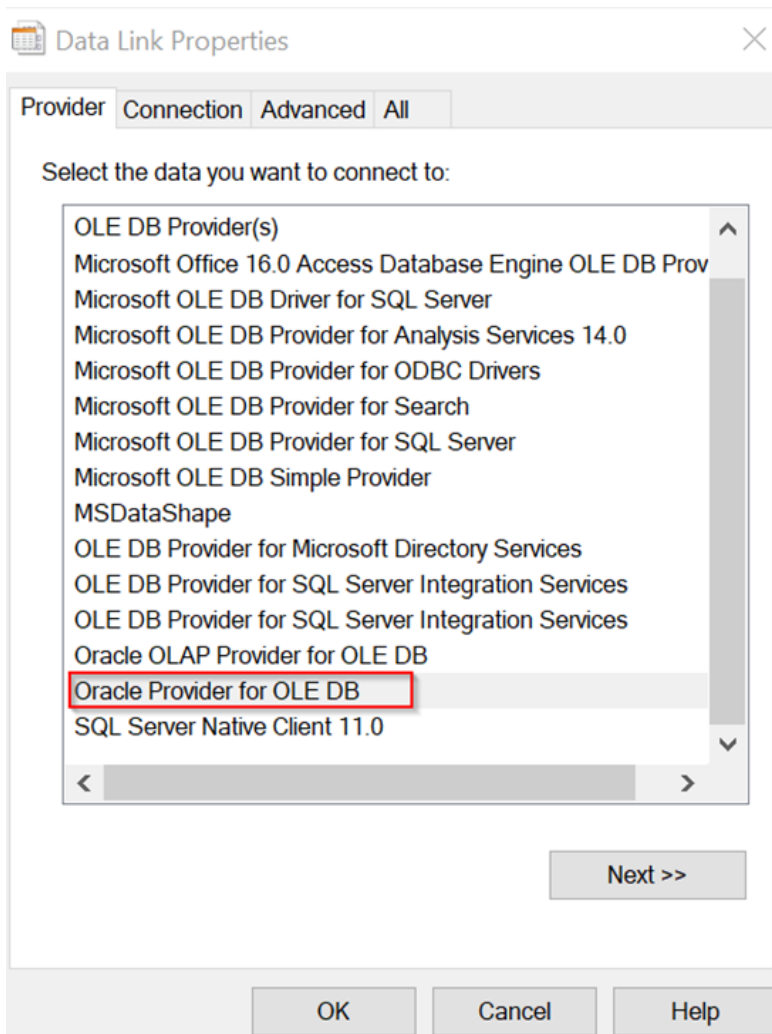


```
ORACLE =
(DESCRIPTION =
  (ADDRESS = (PROTOCOL = TCP)(HOST = 10.220.200.84)(PORT = 1521))
  (CONNECT_DATA =
    (SERVER = DEDICATED)
    (SERVICE_NAME = orclpdb)
  )
)
```

Open Oracle Source connection and click on three dots in SSIS Connection string option:



Select Oracle Provider for OLE DB option in Data Link Properties window:



Provide the credentials as below:

Provider Connection **Advanced** All

Specify the following to connect to this data:

1. Enter the data source and/or location of the data:

Data Source:

Location:

2. Enter information to log on to the server:

Use Windows NT Integrated security

Use a specific user name and password:

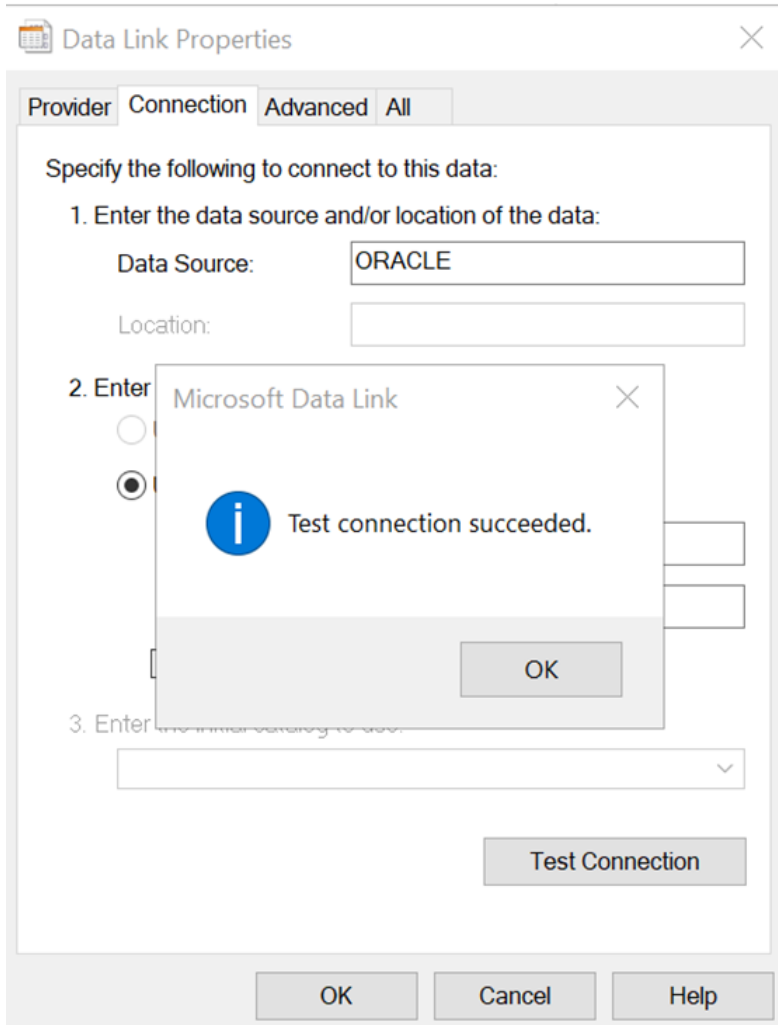
User name:

Password:

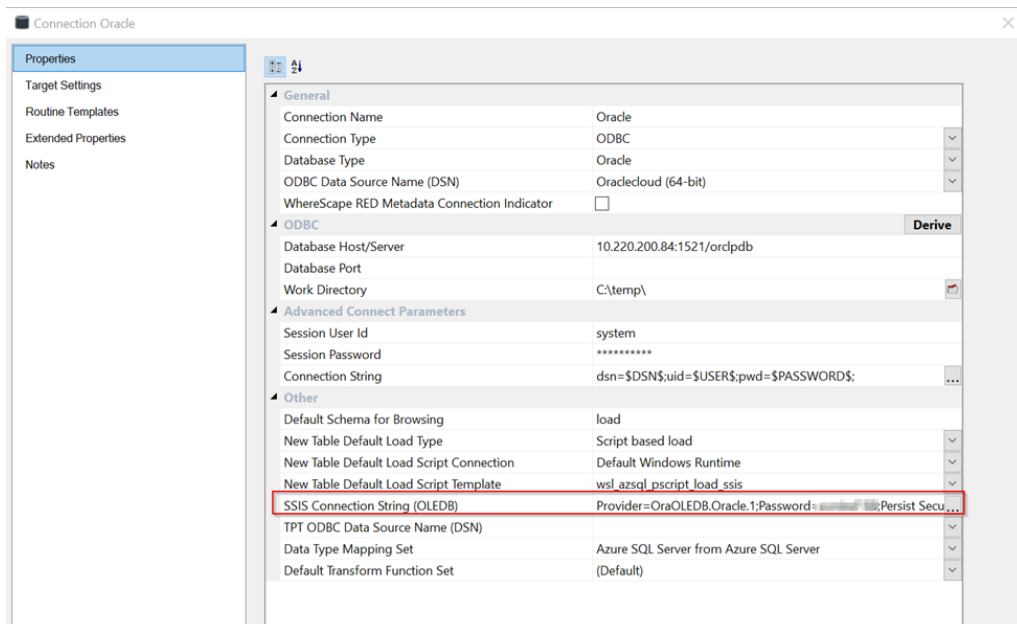
Blank password Allow saving password

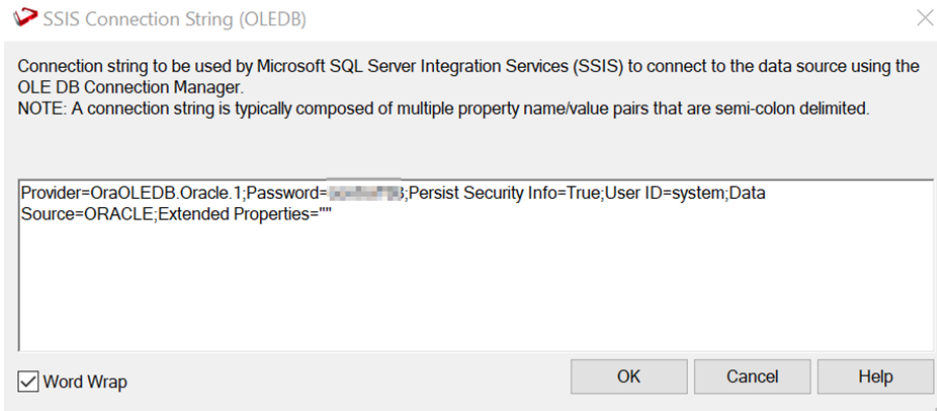
3. Enter the initial catalog to use:

Test the connection:



Connection string generated successfully:





Post Install Steps – Optional

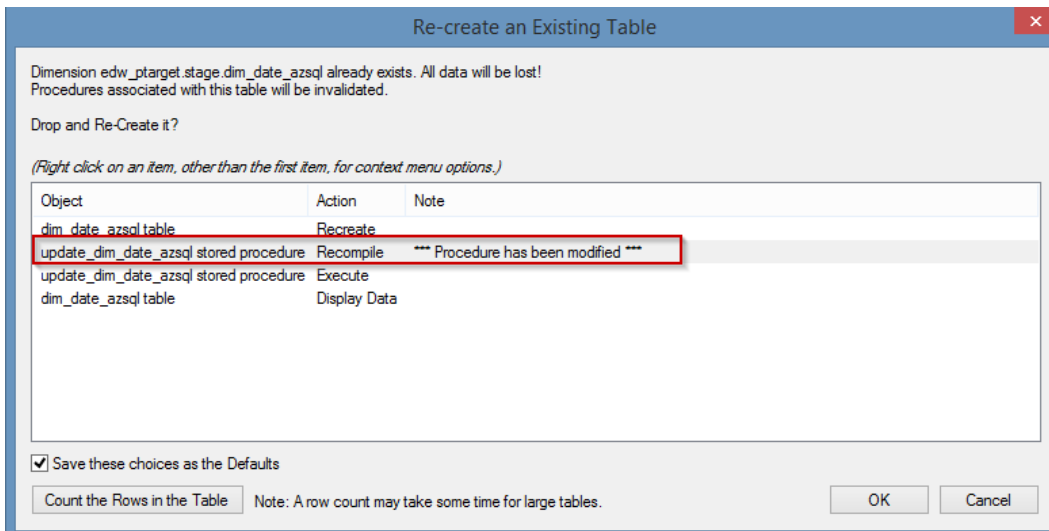
If you used the script Setup Wizard for installation then the following optional post install steps are available.

Configure Connections

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

Below two are common for SQL Server

1. Connection: 'Database Source System' - this connection was setup as an example source connection,
 - open it's properties and set it up for a source DB in your environment
 - or you can remove it if not required
2. Execute Update Procedure for dim_date_azsql to **Initialize Date Dimension for Target**



NOTE: Please avoid regenerating the procedure update_dim_date_azsql as it is a custom procedure.

Source Enablement Pack Support

Source Pack Name	Supported By SQL Server	Supported Features	Prerequisites
------------------	-------------------------	--------------------	---------------

Cloud File Parser 1. Amazon S3 2. Azure Data Lake Storage Gen2 3. Google Cloud Storage	1. CSV 2. Excel 3. JSON 4. XML 5. AVRO 6. ORC 7. PARQUET	Bulk load	Refer to Windows Parser Guide
Windows Parser	1. CSV 2. Excel 3. JSON 4. XML 5. AVRO 6. ORC 7. 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 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.

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>

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.

Bulk load error on SQL SERVER

Interactive load

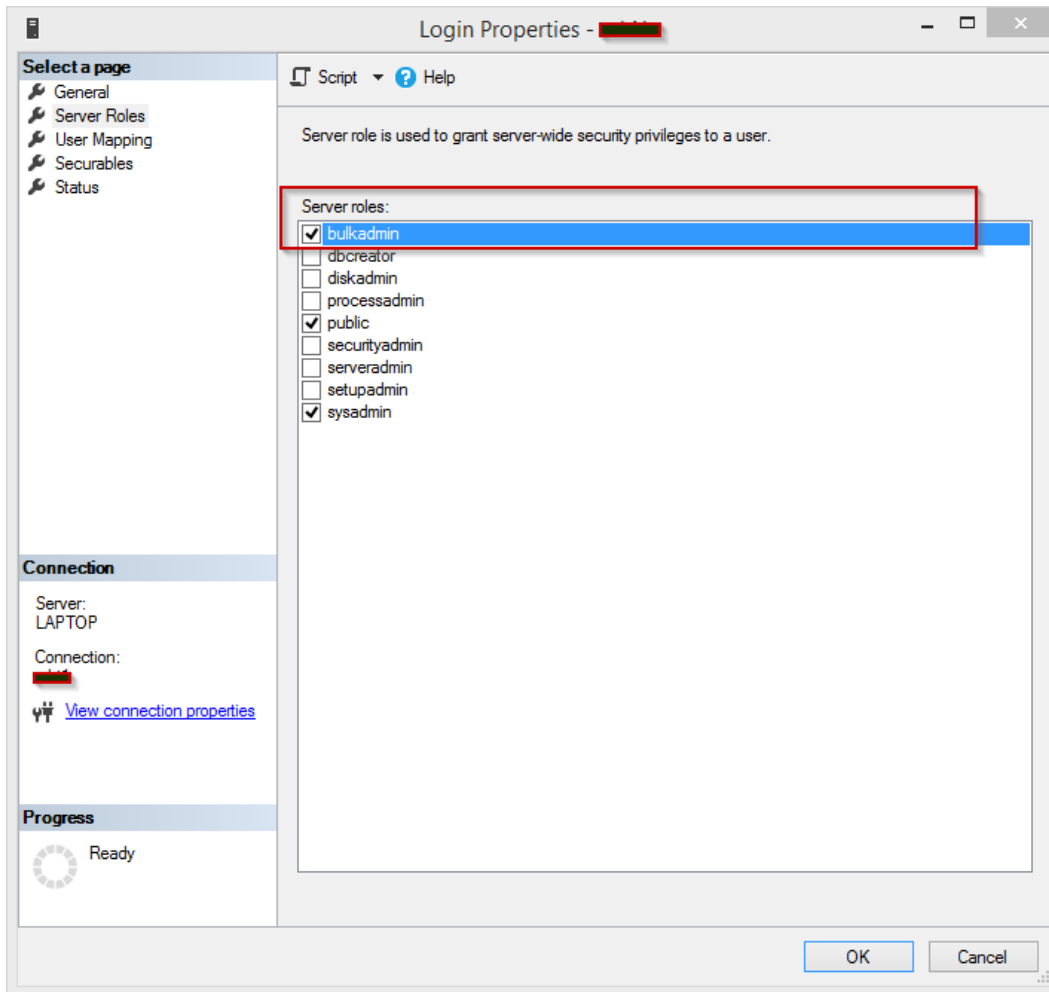
Results	
Object	Message
load_currency	FROM 'C:\temp\wsl_load_currency_32\wsl_load_currency_32.csv'
load_currency	WITH (
load_currency	FORMAT = 'CSV',
load_currency	FIELDTERMINATOR = ' ',
load_currency	ROWTERMINATOR = '\n',
load_currency	FIELDQUOTE = '',
load_currency	FIRSTROW = 2,
load_currency	KEEPNULLS,
load_currency	CODEPAGE = 'RAW')
load_currency	
load_currency	=====
load_currency	Failed to load data: ('42000', '[42000] [Microsoft][ODBC Driver 17 for SQL Server][SQL Server]You do not have permission to use the bulk load statement. (4834) (SQLExecDirectW)')

Scheduler load

Task	Status	Seq	Timestamp	Message
load_currency	S	16	2024-02-14 14:20:57.986627	BULK INSERT load_currency_TMP
load_currency	S	16	2024-02-14 14:20:57.989799	FROM 'C:\temp\wsl_load_currency_16\wsl_load_currency_16.csv'
load_currency	S	16	2024-02-14 14:20:57.992282	WITH (
load_currency	S	16	2024-02-14 14:20:57.995242	FORMAT = 'CSV',
load_currency	S	16	2024-02-14 14:20:57.997697	FIELDTERMINATOR = ' ',
load_currency	S	16	2024-02-14 14:20:58.000023	ROWTERMINATOR = '\n',
load_currency	S	16	2024-02-14 14:20:58.003199	FIELDQUOTE = '',
load_currency	S	16	2024-02-14 14:20:58.006097	FIRSTROW = 2,
load_currency	S	16	2024-02-14 14:20:58.008663	KEEPNULLS,
load_currency	S	16	2024-02-14 14:20:58.011907	CODEPAGE = 'RAW')
load_currency	S	16	2024-02-14 14:20:58.016231	
load_currency	S	16	2024-02-14 14:20:58.0199	=====
load_currency	E	16	2024-02-14 14:20:58.098715	Failed to load data: ('42000', '[42000] [Microsoft][ODBC Driver 17 for SQL Server][SQL Server]You do not have permission to use the bulk load statement. (4834)...
load_currency	I	16	2024-02-14 14:20:58.180042	Executing command: C:\Users\DELL\AppData\Local\Programs\Python\Python311\python.exe "C:\Windows\TEMP\wsl_16\script_load_currency.py" 8
load_currency	I	16	2024-02-14 14:20:58.184597	Overriding environment: WSL_SCRIPT_1_COMMAND -> WSL_COMMAND
load_currency	I	16	2024-02-14 14:20:58.187506	Overriding environment: WSL_SCRIPT_1_WORKDIR -> WSL_WORKDIR

For bulk load error, the 'bulkadmin' permission is required.

SQL SERVER -> SECURITY -> LOGINS -> USER -> PROPERTIES -> SERVER ROLES



For bulk load error Operating system error code 5(Access is denied)

Failed to load data: ('42000', '[42000] [Microsoft][ODBC Driver 17 for SQL Server][SQL Server]Cannot bulk load because the file "C:\WhereScape\Temp\...\xxxx.csv" could not be opened. Operating system error code 5(Access is denied.). (4861) (SQLExecDirectW)')

1. Grant SQL Server access to the bulk load folder by adjusting folder permissions. Navigate to the folder, right-click, select "Properties," go to the "Security" tab, click "Edit," then "Add." In the new window, select "Advanced," click "Find Now," and locate the appropriate SQL Server user (e.g., SQLServerMSSQLUser\$UserName\$SQLExpress). Confirm by clicking "OK" through all opened dialogs.
2. If the first fix doesn't resolve the issue, verify if permissions are applied to subfolders as well. Navigate to the advanced settings, and check the 'Inheritance' status. If it's 'Disabled,' enable it by using the "Allow Inheritance" button.

Row Terminator For Linux

- load_vs_actor	S	103	2024-02-05 11:52:54.622049
- load_vs_actor	S	103	2024-02-05 11:52:54.623561
- load_vs_actor	E	103	2024-02-05 11:52:54.672828	Failed to load data: ('42000', '[42000] [Microsoft][ODBC Driver 17 for SQL Server][SQL Server]Cannot obtain the required interface ("IID_IColumnInfo") from OLE D.
- load_vs_actor	I	103	2024-02-05 11:52:54.677089	Executing command: python "7/tmp/ssl_103/script_load_vs_actor.py" 8

Error Message:

Failed to load data: ('42000', '[42000] [Microsoft][ODBC Driver 17 for SQL Server][SQL Server]Cannot obtain the required interface ("IID_IColumnInfo") from OLE DB provider "BULK" for linked server "(null)". (7301) (SQLExecDirectW)')

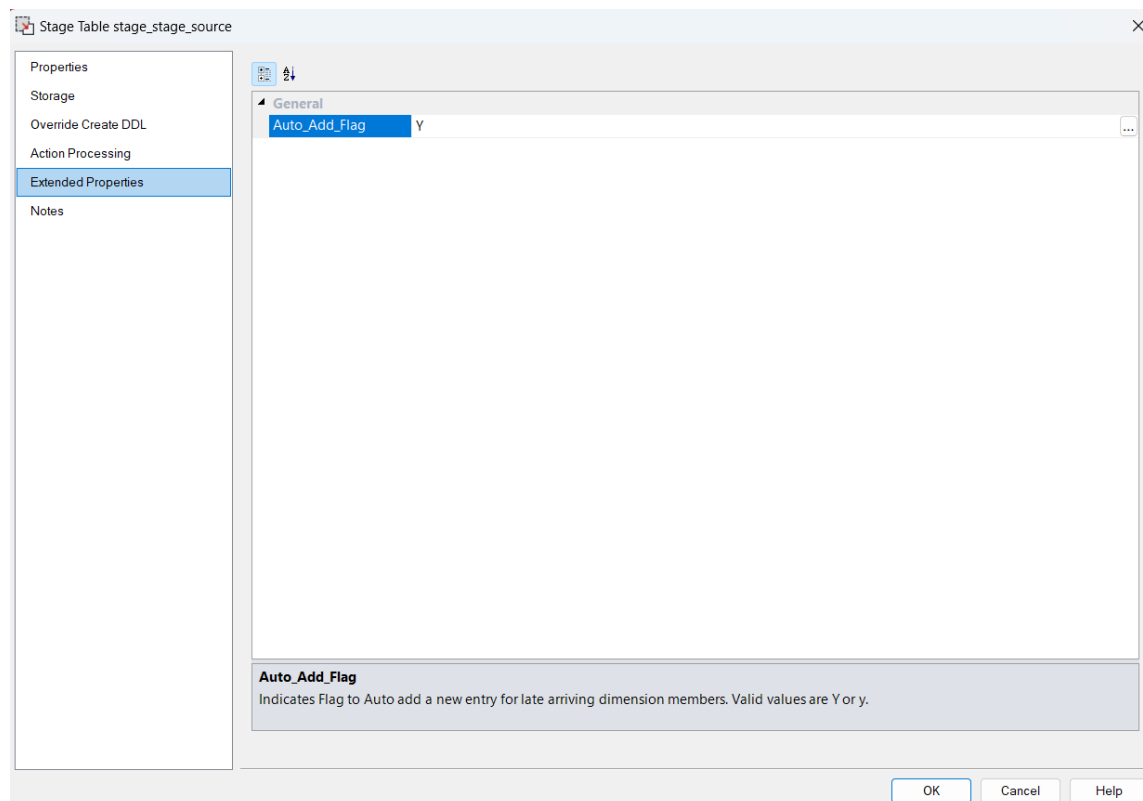
When you specify '\n' as a row terminator for bulk import in *UNLOAD_RECORD_CHAR* extended property or source properties, or implicitly use the default row terminator, BULK INSERT statement expects a carriage return-line feed combination (CRLF) as the row terminator. If your source file uses a line feed character only (LF) as the row terminator - as is typical in files generated on Unix and Linux computers - use hexadecimal notation to specify the LF row terminator. For example use '0x0A' in *UNLOAD_RECORD_CHAR* extended property or source properties for Unix and Linux machines.

Note: The hexadecimal notation is not required for Parquet file for Unix and Linux machines

Auto add a new entry for late arriving dimension members

Set This Extended property of stage table Named **Auto_Add_Flag** to Y/y to add a new entry for late arriving dimensions.

If this flag holds any thing other than Y/y , it works as a normal stage table.



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

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.