WhereScape Enablement Pack for Redshift - SQL Server

This is a guide to installing the WhereScape Enablement Pack for Redshift for WhereScape RED 8.6.1.x

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Prerequisites For SQL Server Metadata

Before you begin the following prerequisites must be met:

- Create Database and ODBC DSN :
    - Supported* version of SQL Server or Azure SQL
        - A database to house the RED Metadata Repository.
          Note : This needs to be Empty Database with optional permissions SELECT,INSERT,UPDATE,EXECUTE
        - A database for the Range Table DB (Optional)
- Software Installations
    - WhereScape RED version 8.6.1.0 or higher with valid license key entered and EULA accepted
    - WhereScape Enablement Pack for target database version 8.6.1.0 or higher

- 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
          ```

* : *RED supports the following versions for the metadata repository: MS SQL SERVER 2012 to 2019 and Azure SQL DB*

Prerequisites For Redshift

Before you begin the following prerequisites must be met:

1. A supported* version of SQL Server or Azure SQL with
    - a database to house the RED Metadata Repository
    - (optionally) a database for the Range Table DB
    - ODBC DSN's created for these DB's
2. A Redshift environment with at least one schema available to use as a RED Data Warehouse Target
3. Redshift software installed
    - Amazon Redshift ODBC driver (64-bit)
    - ODBC DSN created to connect to your RED Data Warehouse on Redshift
4. Access to a Redshift System, with the following connectivity information:
    - Server Name
    - Database Name
    - Port
    - User Name
    - Password
5. Permission to access svv_table_info. Can be added by an Administrator using: --> GRANT SELECT ON svv_table_info TO yourUserName
6. Access to an S3 bucket in the same region as your Redshift system to be used for temporary files while load data from windows files and database tables.
   Specifically, you need to know:
    - Access Key, Secret Key, Region
    - Alternatively, instead of Access and Secret Keys, you could us an Arn Key in this format: arn:aws:iam::YOUR_AWS_ACCOUNT_ID: role/YOUR_RedshiftAccessRole
    - S3 temporary or work directory folder in this format: s3://bucketName/folderName
7. WhereScape RED version 8.6.1.0 or higher
    - Must be pre-installed with valid license key entered and EULA accepted

8. WhereScape Enablement Pack for Redshift version 8.6.1.0 or higher
   - Downloaded and unpacked to a local temp folder
9. Windows Powershell (64 bit) version 5 or higher
   - Start "Windows PowerShell" As Administrator, then run these commands:
     - [Net.ServicePointManager]::SecurityProtocol = [Net.SecurityProtocolType]::Tls12
     - Install-Module AWSPowershell

* : *RED supports the following versions for the metadata repository: MS SQL SERVER 2012 to 2019 and Azure SQL DB*

Enablement Pack Setup Scripts

The Enablement Pack Install process is entirely driven by scripts. The below table outlines these scripts, their purpose and if "Run as Administrator" is required.

#	Enablement Pack Setup Scripts	Script Purpose	Run as Admin	Intended Application
1	install_New_RED_Repository.ps1	Setup and configure a **new** RED Metadata Repository for Redshift	Yes	New RED installations ONLY
2	install_WslPowershell_Modules.bat	Installs or updates WslPowershell Modules on this machine	Yes	New and Existing installations
3	import_powershell_templates.ps1	Imports or updates the Powershell Templates to a RED Metadata Repository. Also includes any Script or Procedure Imports	no*	Existing installations
4	set_default_templates.ps1	Applies the RED Connection defaults in a RED Metadata Repository for Powershell templates	no*	Existing installations

* Note that on some systems executing Windows Powershell scripts is disabled by default, see troubleshooting for workarounds

Each Powershell script in the list above provides some help at the command line, this can be output by passing the "-help" parameter to the script.

Step-By-Step Guide

Setup and configure a new RED Metadata Repository for Redshift

 Run Script as Administrator

```
Script 1 > Powershell -ExecutionPolicy Bypass -File .\install_New_RED_Repository.ps1
Script 2 > install_WslPowershell_Modules.bat
```

Install or Update WhereScape Powershell Templates

Run as Administrator

```
Script 2 > install_WslPowershell_Modules.bat
Script 3 > . .\import_powershell_templates.ps1
Script 4 > . .\set_default_templates.ps1
```

Set Connection defaults for a Template Set

Run as Administrator

```
Script 4 > . .\set_default_templates.ps1
```

choose "Powershell" when prompted

Post Install Steps - Optional

If you used the script 'install_New_RED_Repository.ps1' then the following optional post install steps are available

Configure Connections

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

1. Target Connection (Redshift) - check the extended properties section.
   a. Add ACCESS_KEY and SECRET KEY for s3 bucket
   b. Add CLOUD_WORKDIR -this is the s3 bucket directory location
   c. Add REGION of the s3 bucket
2. 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
3. Connection: 'Range Table Location' - this connection is an example target connection for your Range Table DB on SQL Server,
   - if you do not intend to use the "Ranged Loading" templates then this can be removed
   - otherwise open it's properties and set it up to point to a suitable SQL DB target to store your control tables for Ranged Loading

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 Azure Synapse	Supported Features
Amazon S3	Yes	Batch load from s3 to Redshift
Azure Data Lake Storage Gen2	Yes	Download file from Azure Data Lake Storage Gen2 bucket and load to Redshift
Google Drive	No	None

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 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 .\install_New_RED_Repository.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.

If a valid RED installation can not be found

If you have Red 8.6.1.x or higher installed but the script (install_New_RED_Repository.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.