WhereScape® RED

WHERESCAPE RED RELEASE NOTES

6.8.4.0

www.wherescape.com

WhereScape®

TABLE OF CONTENTS

WhereScape RED 6.8.4.0 July Release Update 1

Significant New Features RED 6.8.4.0 3

RED 6.8.4.0 - Oracle Loads from Hadoop - UNIX/Linux script based via OSCH (Oracle SQL Connector for HDFS) and OLH (Oracle Loader for Hadoop) 4
RED 6.8.4.0 - Teradata TPT Loads from Hadoop - UNIX/Linux script based 7
RED 6.8.4.0 - New Oracle multiple user login method enabled for the RED repository 9
RED 6.8.4.0 - SQL Server Integration Services (SSIS) as load method for Flat Files from Windows connections 13
RED 6.8.4.0 - SQL Server Integration Services (SSIS) loads enabled for Teradata 23
RED 6.8.4.0 - SQL Server Integration Services (SSIS) Exports 31
RED 6.8.4.0 - Greenplum Exports 34

Detailed list of changes for RED 6.8.4.0 39

Significant New Features - Previous Versions 47

Significant New Features 6.8.2.0 49
Significant New Features 6.8.1.0 60
Significant New Features 6.7.5.0 65
Significant New Features 6.7.2.0 67
Significant New Features 6.7.1.0 69
Significant New Features Version 6 71

Index i

WhereScape®

WHERESCAPE RED 6.8.4.0 JULY RELEASE UPDATE

July 2015

WhereScape is pleased to announce that the WhereScape RED 6.8.4.0 is now available.
The 6.8.4.0 release notes document details the changes since the last release.

Upgrading to version 6.8.4.0

To upgrade to version 6.8.4.0, login to **http://www.wherescape.com** to download RED from the downloads page in the **Support** section.
A full list of WhereScape RED's previous release notes is also available for download on the website.

Important Messages

1) **Upgrading:** when upgrading from previous versions of RED, it is necessary to update each RED metadata repository to complete the upgrade. This is done by completing a **validate and recompile of all metadata procedures** in WhereScape Administrator.

2) The **Oracle Individual User login method** has been enabled for the RED repository to allow Oracle users wanting each developer to log in to Oracle using their own username and password. This method then allows multiple users, with the appropriate permissions, to log into WhereScape RED and operate as the RED schema.

3) For **UNIX/Linux exports and loads**, the logic used for defining the SID value for connecting to the repository has been modified. If the ORACLE_SID environment variable is set in your Unix/Linux environment, this will be the variable used. If this environment variable is not set then the value from the Linux/Unix connection object will be used.

4) **Linux Scheduler scripts** have been altered and need to be manually applied.

5) It is recommended that users **copy the new meta_backup_680.sh** file to use Datapump's expdb/impd instead of the deprecated exp/imp tools. This version uses the data pump export executables expdp/impdp. It assumes that the scheduler and the Oracle database reside on the same server.

6) **Teradata:** WhereScape will only be supporting Teradata 13.10 or greater database platforms from RED release 6.8.2.0. Teradata Tools and Utilities 13.0 is no longer supported by Teradata.

Kind Regards,

WhereScape RED Team

WhereScape®

SIGNIFICANT NEW FEATURES RED 6.8.4.0

1. MAPS PDW as a target for a number of objects and associated stored procedures
2. Oracle Loads from Hadoop - UNIX/Linux script based via OSCH (Oracle SQL Connector for HDFS) and OLH (Oracle Loader for Hadoop)
3. Teradata TPT Loads from Hadoop - UNIX/Linux script based
4. New Oracle multiple user login method for the RED repository
5. SQL Server Integration Services (SSIS) as a load method for Flat Files from Windows connections
6. SQL Server Integration Services (SSIS) loads enabled for Teradata
7. SQL Server Integration Services (SSIS) Exports
8. Greenplum Exports
9. Models exported from WhereScape 3D as a "RED Builder Model" can now be imported into Oracle Databases via the RED Application Deployment tool
10. Models exported from WhereScape 3D as a "RED Builder Model" can now be imported into Teradata Databases via the RED Application Deployment tool
11. Maximum Groups have been increased to 250; and maximum Projects increased to 1000
12. RED is now handling tables with more than 512 columns

WhereScape®

RED 6.8.4.0 - ORACLE LOADS FROM HADOOP - UNIX/LINUX SCRIPT BASED VIA OSCH (ORACLE SQL CONNECTOR FOR HDFS) AND OLH (ORACLE LOADER FOR HADOOP)

WhereScape RED allows loading data from Hadoop into an Oracle repository using Oracle's Big Data Connectors **Oracle SQL Connector for HDFS (OSCH)** and **Oracle Loader for Hadoop (OLH).** Hadoop Data is loaded into RED using Oracle's Big Data connectors via a Hadoop connection on UNIX/Linux from which users can then do script based loads using RED's drag and drop functionality.

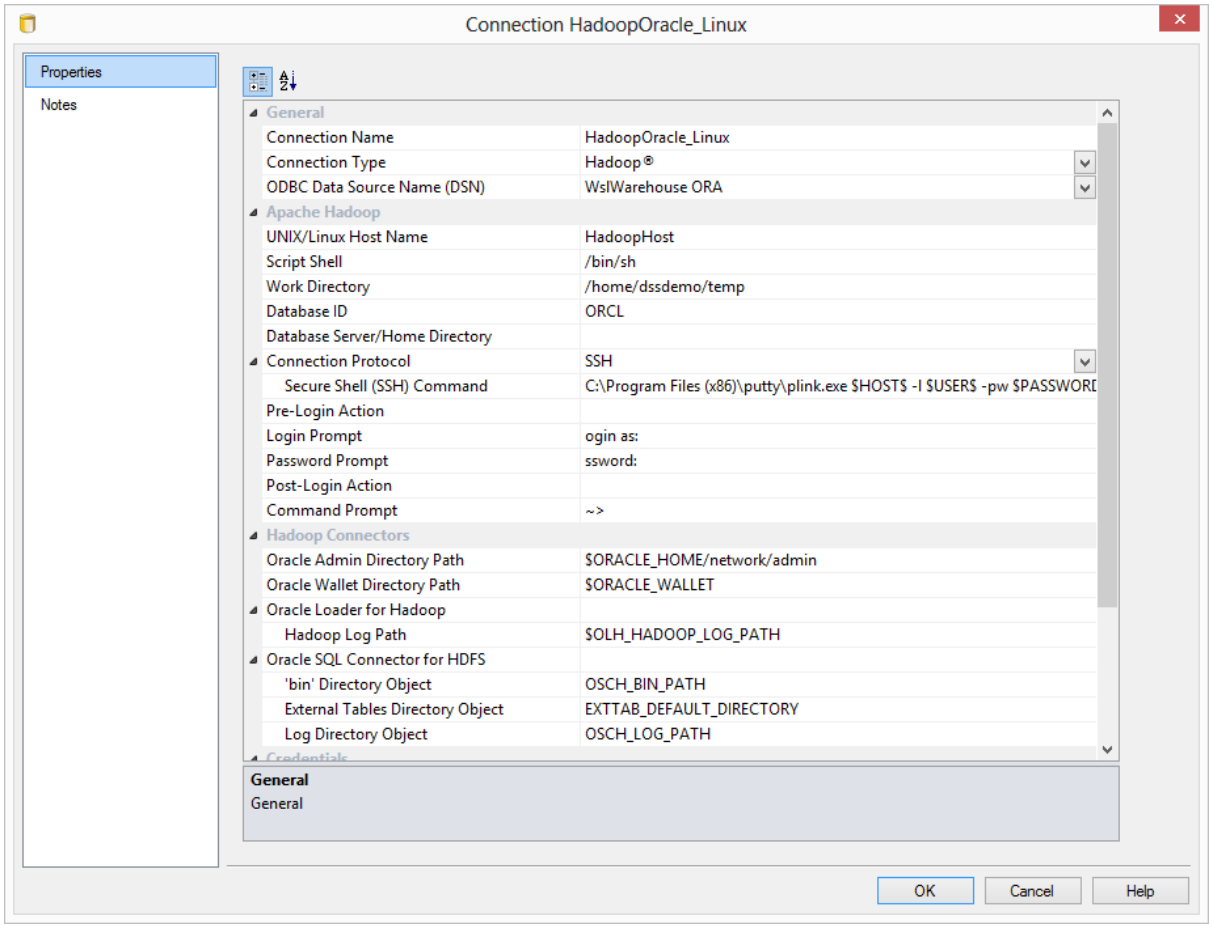
To process Hadoop loads from Oracle using the **OSCH** or **OLH** connectors, users will need to have the following system prerequisites before setting up a connection within RED:

- Oracle on UNIX/Linux Hadoop tools installed on the Oracle Server and configured to connect to the Hadoop client
- **OSCH** installed and/or
- **OLH** installed
- **OSCH** and/or **OLH** configured to connect to the Hadoop cluster and the Oracle database
- Hadoop client installed
- Oracle Wallet created and configured
- For **OSCH** - Oracle Directory Objects configured for the database user
- User permissions

For more details about loading data using Oracle's Big Data Connectors and scheduler configuration settings for the database user, see section **7.1.6.1.1 Hadoop Oracle Connection** of the RED User Guide and section **9.8.1 Unix Scheduler for Hadoop loads using Oracle's Big Data Connectors** of the WhereScape Installation Guide.

---

1 After the relevant prerequisites have been set up, create a Hadoop connection in RED, filling in the required fields, including the **Hadoop Connectors** fields for using either **OSCH** or **OLH**.

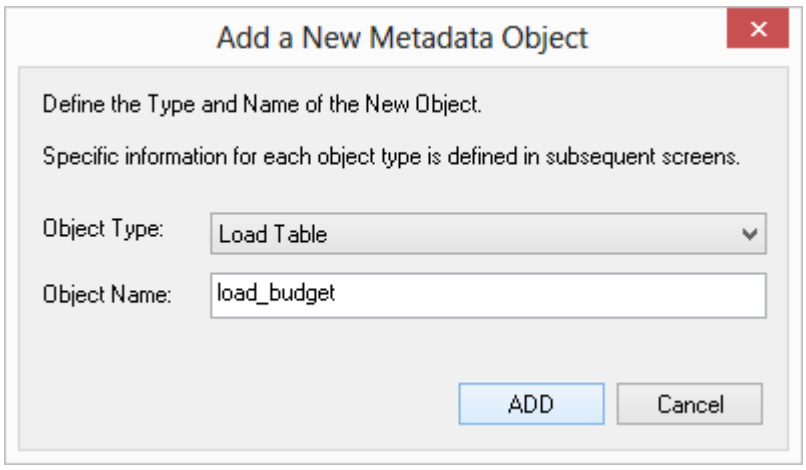


2 Browse the **Hadoop** connection to the directory and file.

3 Double-click on the **Load Table** object in the left pane to create a drop target.

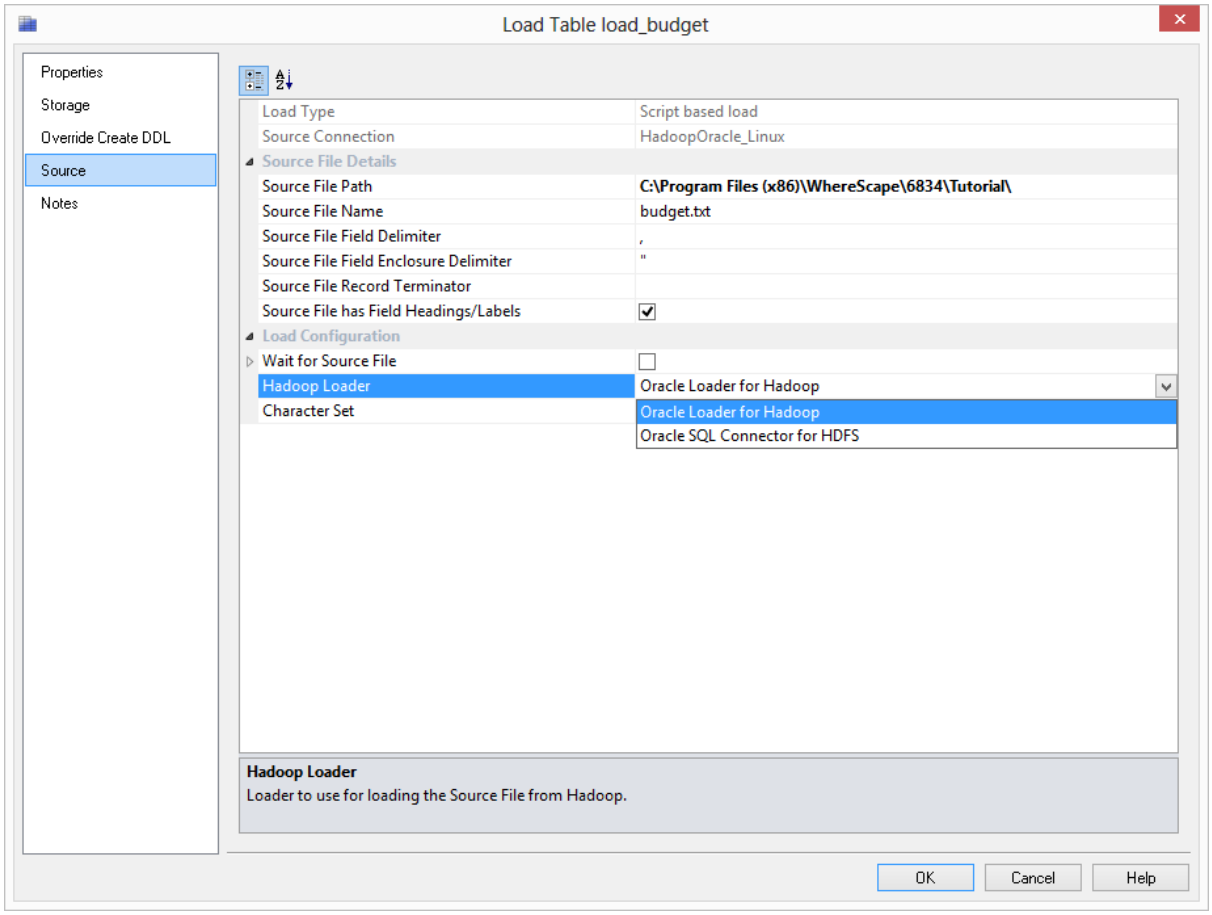
4 Drag the file from the right pane and drop it into the middle pane.

- If the object needs to be renamed, rename it, otherwise click **ADD** to continue.



5 Go through the **Data Load Wizard** and when the Properties screen is displays, click the **Source** tab to select the relevant connector for loading the table.

- Select either **Oracle Loader for Hadoop** or **Oracle SQL Connector for HDFS** from the **Hadoop Loader** drop-down list.



6 Click **OK** on the New Script dialog and then click **Yes** to Create and Load the table.

WhereScape®

RED 6.8.4.0 - TERADATA TPT LOADS FROM HADOOP - UNIX/LINUX SCRIPT BASED

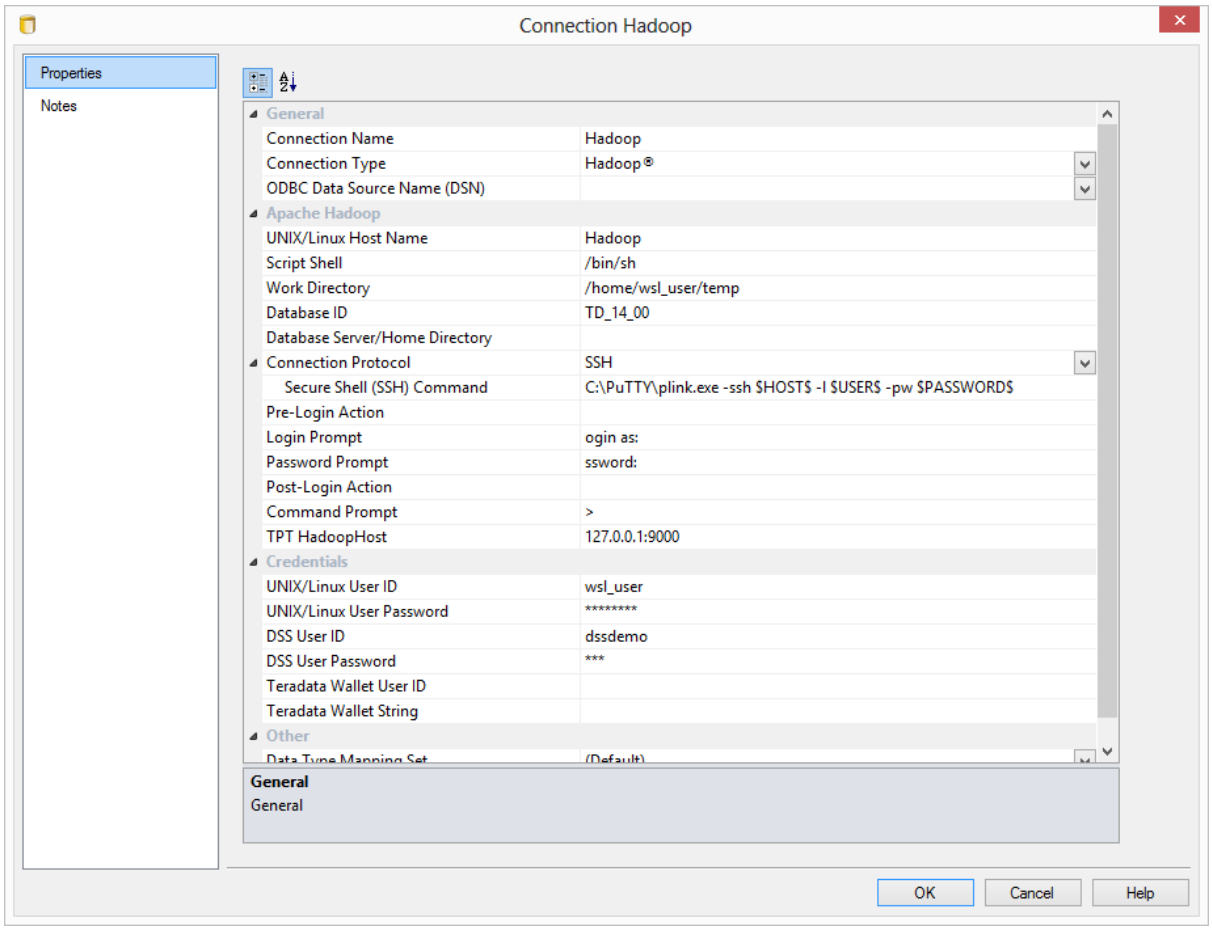
Teradata TPT Loads from Hadoop are now enabled in WhereScape RED for loading data directly from a Hadoop System into a Teradata repository.
Hadoop data is loaded into RED via a Hadoop connection on UNIX/Linux from which users can then do TPT script based loads using RED's drag and drop functionality.

To be able to process **Teradata TPT Loads from Hadoop**, users will need to have the following system prerequisites before setting up a connection within RED:

- Install **Hadoop**
- Include Hadoop Client Jar files in **Classpath**

To set up a **Hadoop** connection in RED:

- Select **Hadoop** as the connection type and fill in all the relevant fields, including the **TPT Hadoop Host** field.
  TPT HadoopHost is the IP address or host name (and optional port number) that identifies the Hadoop Host to a TPT load routine, in order to connect to the Hadoop file system from the machine you run TPT from. e.g, **HadoopHost:9000** or **127.0.0.1:9000**.
  If this is not specified, then the UNIX/Linux Host Name will be used as the Hadoop Host to the TPT load routine.
- After browsing the Hadoop connection, users can **drag and drop** files to do TPT script-based loads.



WhereScape RED Tip:

When doing Teradata TPT Loads from Hadoop, RED supports loading multiple files based on a file name wildcard. To load multiple files, users will need to select the **Update TPT** load routine option from the Load table's **Source** screen and enable the **Script Load supports File Name Wildcards** option.
When this option is enabled and the **Source File name** contains a wildcard, the RED generated script will loop to load each matching file while preserving the contents of the load table as each file is loaded. In addition the Archived Source Path and/or Archived Source File Name properties must be specified to allow each successfully loaded file to be archived before loading a subsequent file.

Example
Add * to the **Source File Name**. e. g. **hadoop_customer.csv***

WhereScape®

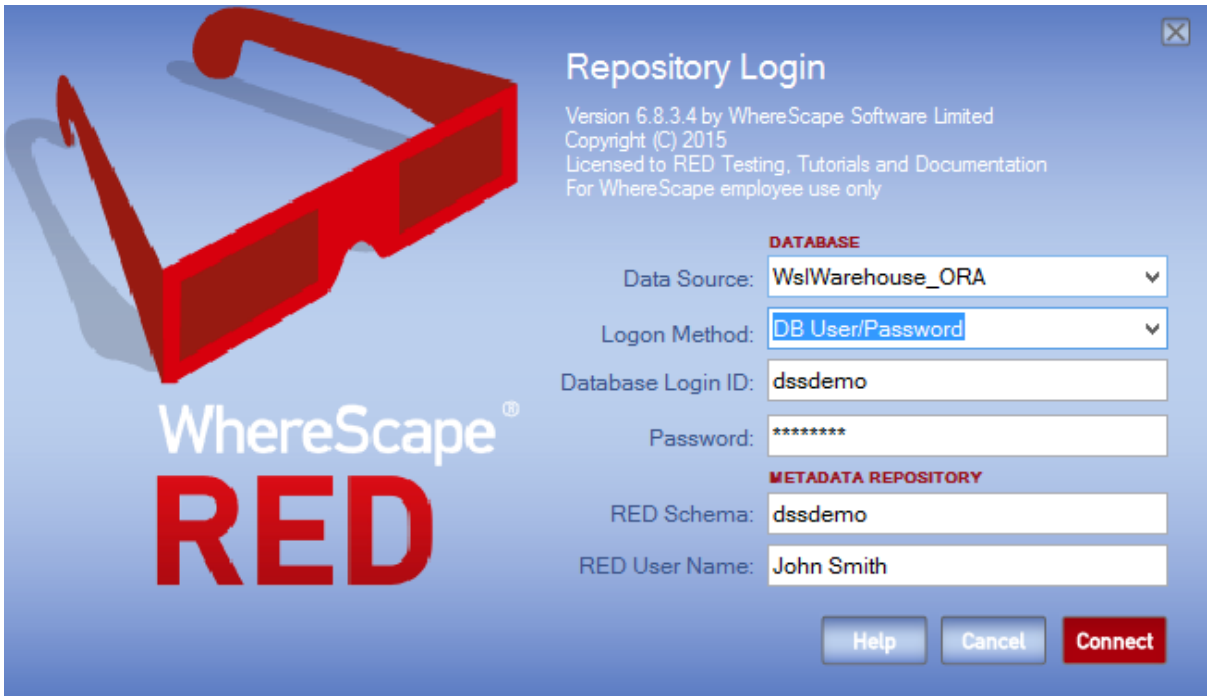
RED 6.8.4.0 - NEW ORACLE MULTIPLE USER LOGIN METHOD ENABLED FOR THE RED REPOSITORY

For Oracle users wanting each developer to log into Oracle using their own username and password, WhereScape added the new **Oracle Individual User** Logon Method.
WhereScape's Oracle Individual User option allows a user, with the appropriate permissions, to log into WhereScape RED and then operate as the RED schema.
This method enables customers to configure RED ensuring that users logged in via this method cannot edit the metadata user password in the connections, and also ensuring that the password is encrypted in **Tools>Options**.
To authorize users to log in to RED using the Oracle Individual User method, a DBA will need to grant users select on the **ws_dbc_connect** table, as well as the **CREATE SESSION** system privilege.
This is also a useful method for tracking individual WhereScape RED user activity in the Oracle database. Their authenticating user name is now stored in the CLIENT_IDENTIFIER field of v$session which can be used by Oracle's auditing, functioning to track individual developer activity.

Oracle individual users will need to be created and granted certain privileges. Alternatively, for existing Oracle database users, they just need to granted the following privileges below:

```
grant create session to oracle_user1
grant select on dssdemo.ws_dbc_connect to oracle_user1
```

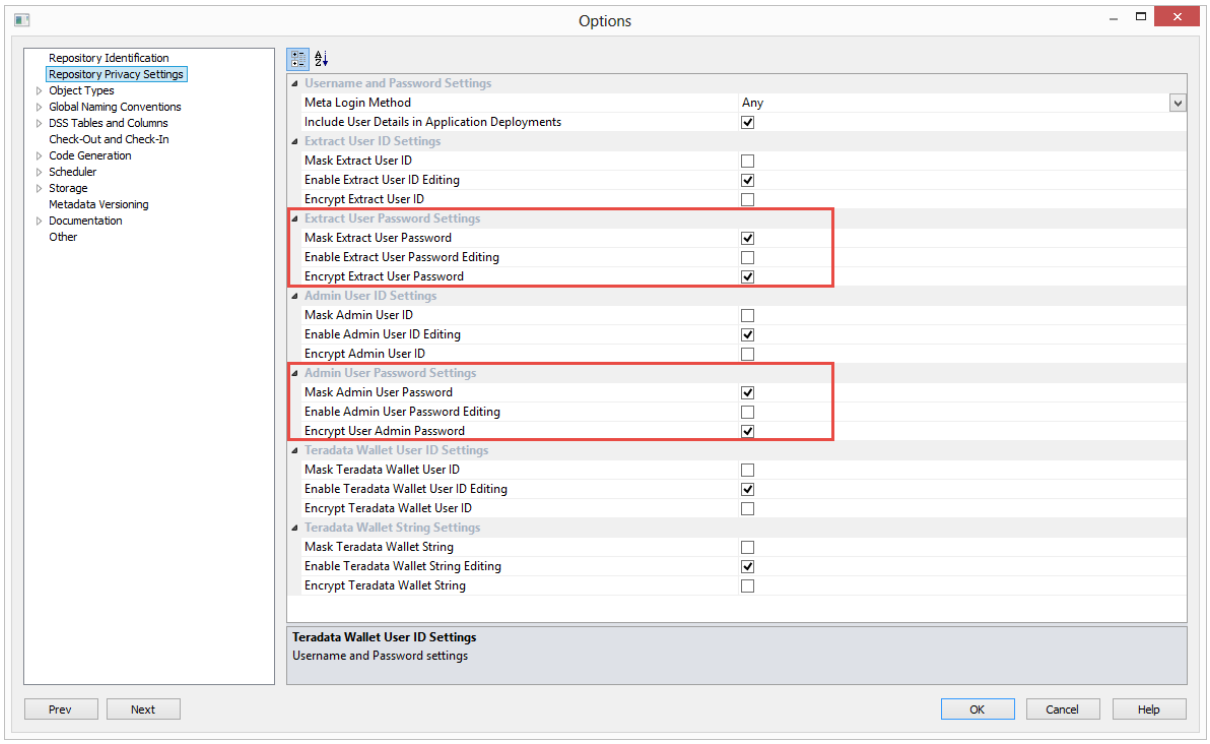
1 To ensure the **Repository Privacy Settings** is locked in **Tools>Options**, the RED metadata user needs to log in to RED before any individual user. To log in:
   - Select the **DB User/Password** option from the Logon Method drop-down menu.
   - Enter the user name and password for the metadata user.
   - Enter the RED **schema**.



2 Once logged in to RED, the metadata user needs to do the following in **Tools>Options>Repository Privacy settings**:

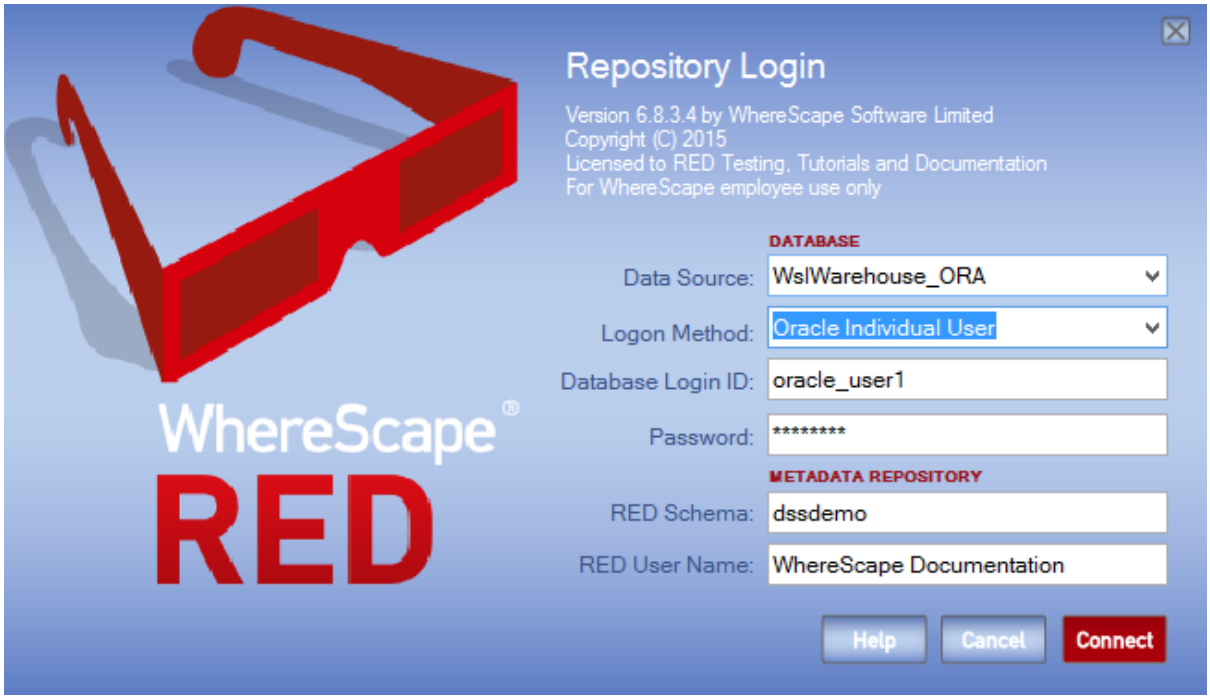
- Check the option to enable the **Mask Extract User Password**.
- Un-check the option to disable the **Extract User Password Editing** (this will lock down the metadata user password in the connections).
- Check the option to enable the **Mask Admin User Password**.
- Un-check the option to disable the Enable **Admin User Password Editing** (this will lock down the Admin/Dss User Password in the connection properties).

NOTE: Encrypt User/Admin User Password Options
Users should also check the options to enable **Encrypt User Password** and **Encrypt Admin User password** as shown in the example screenshot below.
For **UNIX/Linux scheduler** processing User and Password Encryption implications, please see section 5.1.1.2 Settings - Repository Privacy Settings in the RED User Guide.

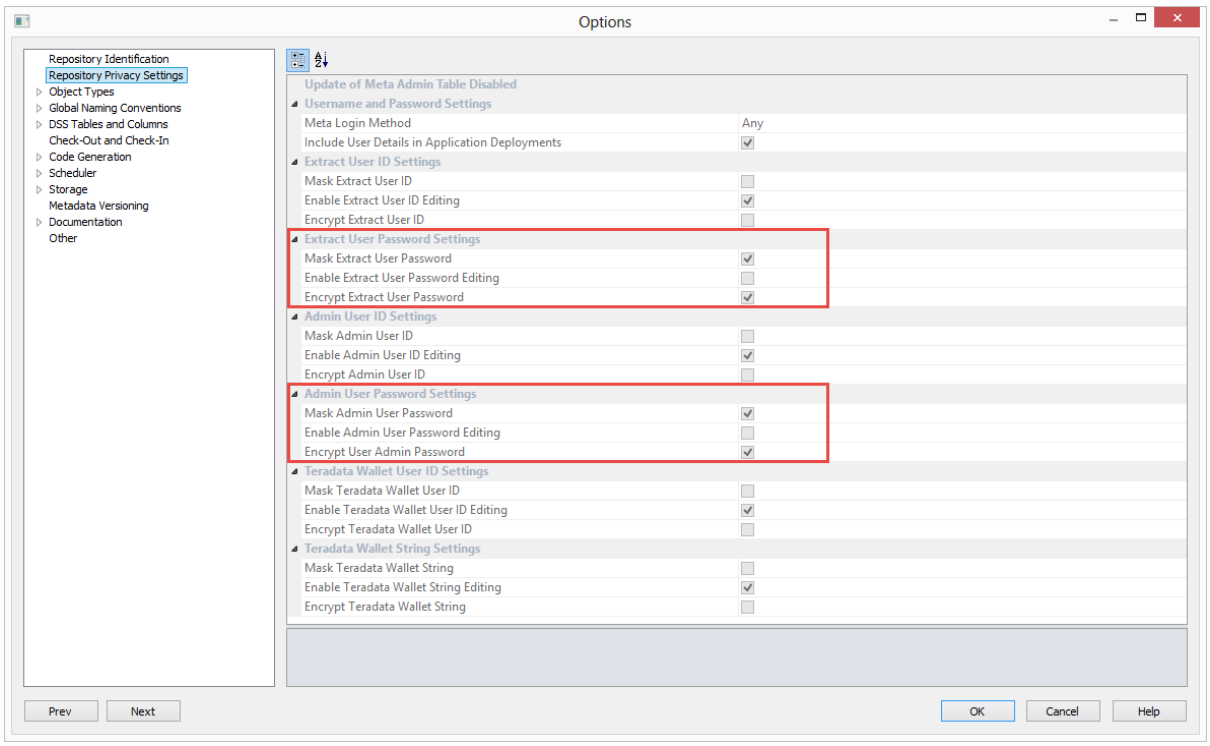


3 Multiple users can then login to RED using their own credentials by:

- Selecting the **Oracle Individual User** option from the **Logon Method** drop-down menu.
- Entering their user name and password.
- Entering the RED schema.



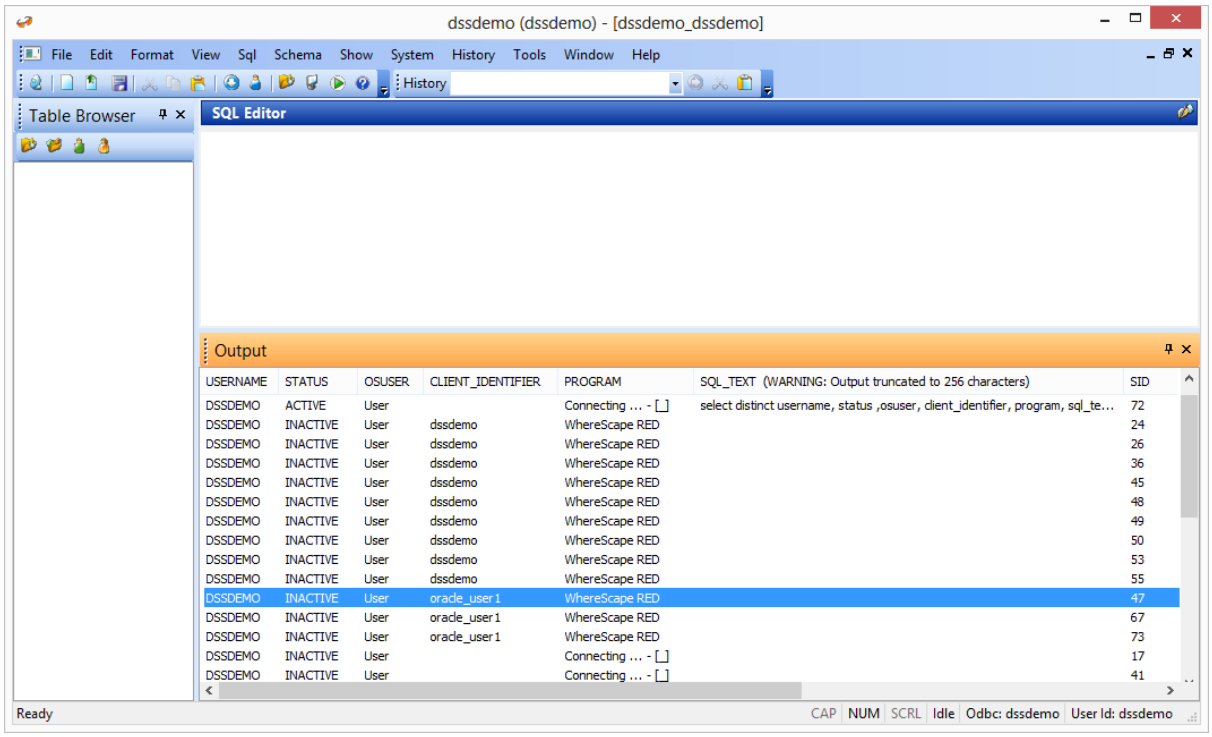
4 Users that log in to RED via the **Oracle Individual User** method will have their **Repository Privacy Settings** completely disabled.



WhereScape RED TIP: Oracle Individual User System Information

The permissions below are required to list and see user session, session locks and user locks information for Oracle individual users.

```
grant select on sys.v_$sql to dssdemo;
grant select on sys.v_$sess_io to dssdemo;
grant select on sys.v_$locked_object to dssdemo;
grant select on sys.v_$lock to dssdemo;
```



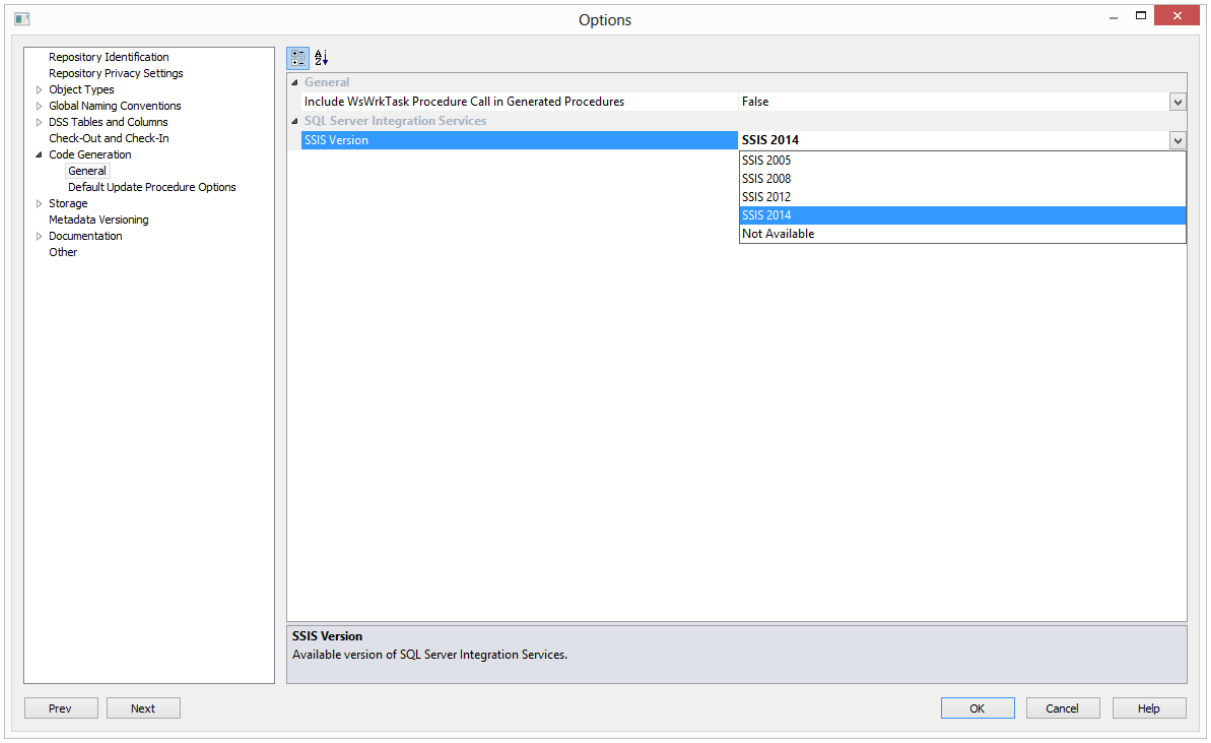
WhereScape®

RED 6.8.4.0 - SQL SERVER INTEGRATION SERVICES (SSIS) AS LOAD METHOD FOR FLAT FILES FROM WINDOWS CONNECTIONS

Flat files can now be loaded into RED from a Windows Connection using SQL Server Integration Services (SSIS).
For more details about this new feature which is also available for Teradata databases, see section **8.9.1 Loading Data from Flat Files using SSIS - BETA** of the Teradata User Guide.

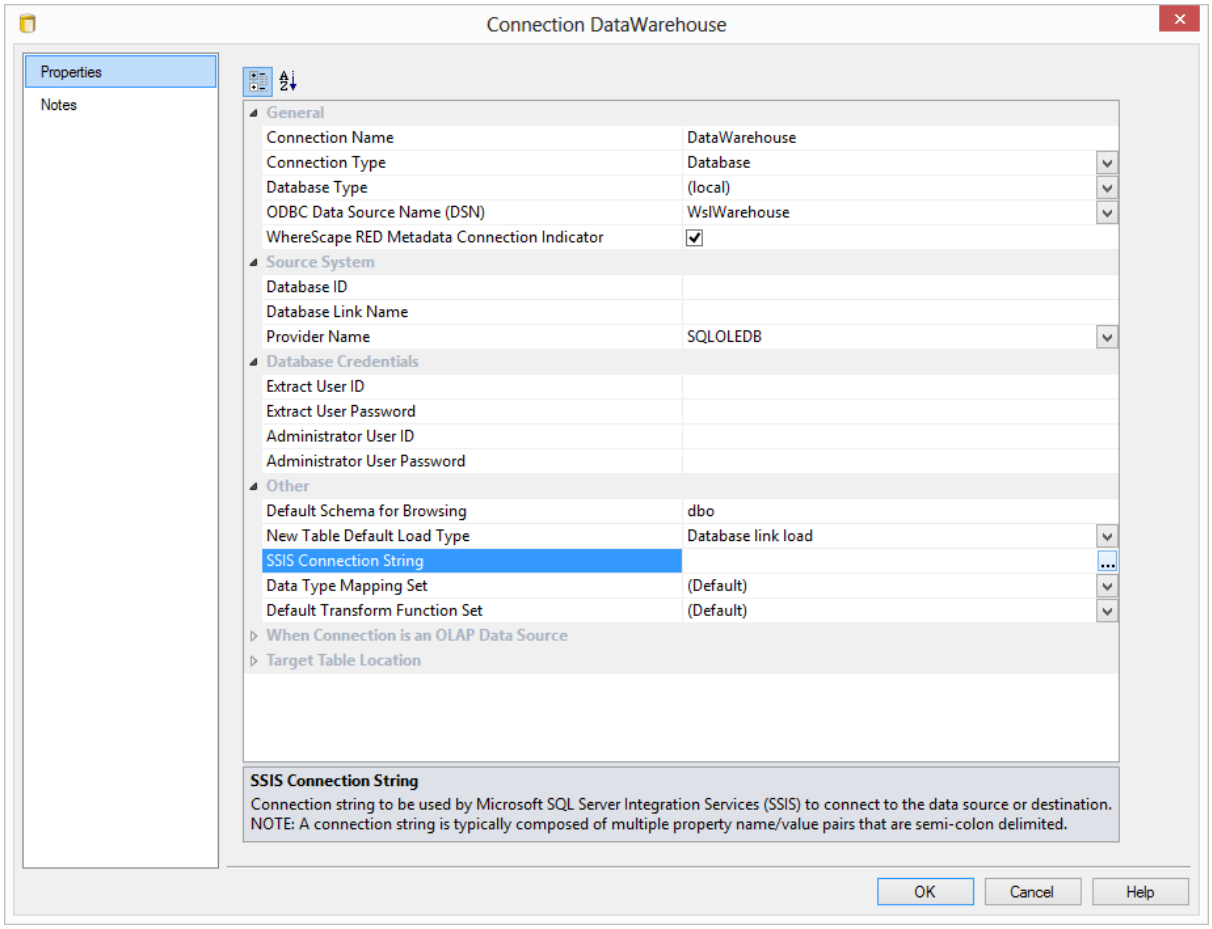
The instructions below detail how to add the SSIS connection string to the data warehouse connection and load flat files using the **drag and drop functionality** to create load tables.
To load files via SSIS, the SSIS connection string must be defined in the DataWarehouse connection.

To use SSIS loading, ensure that SSIS loads are enabled by selecting the relevant SSIS version in **Tools>Options>Code Generation>General>SSIS Version.**

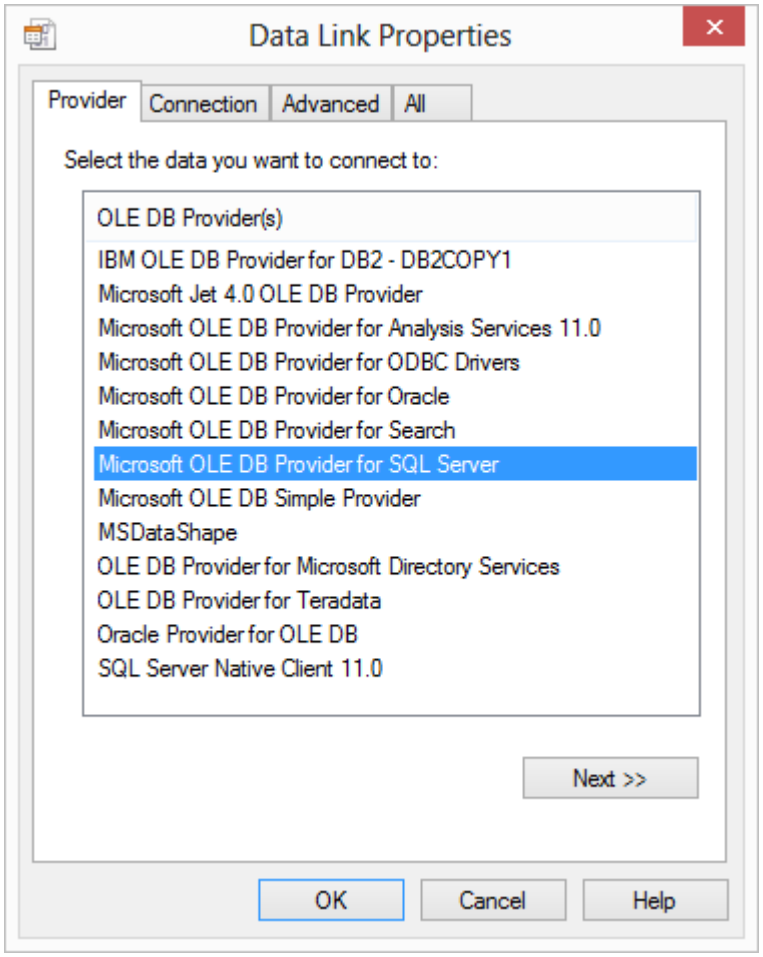


1 To load files via SSIS, the SSIS connection string must be defined in the DataWarehouse connection for the **Destination** connection to be specified:

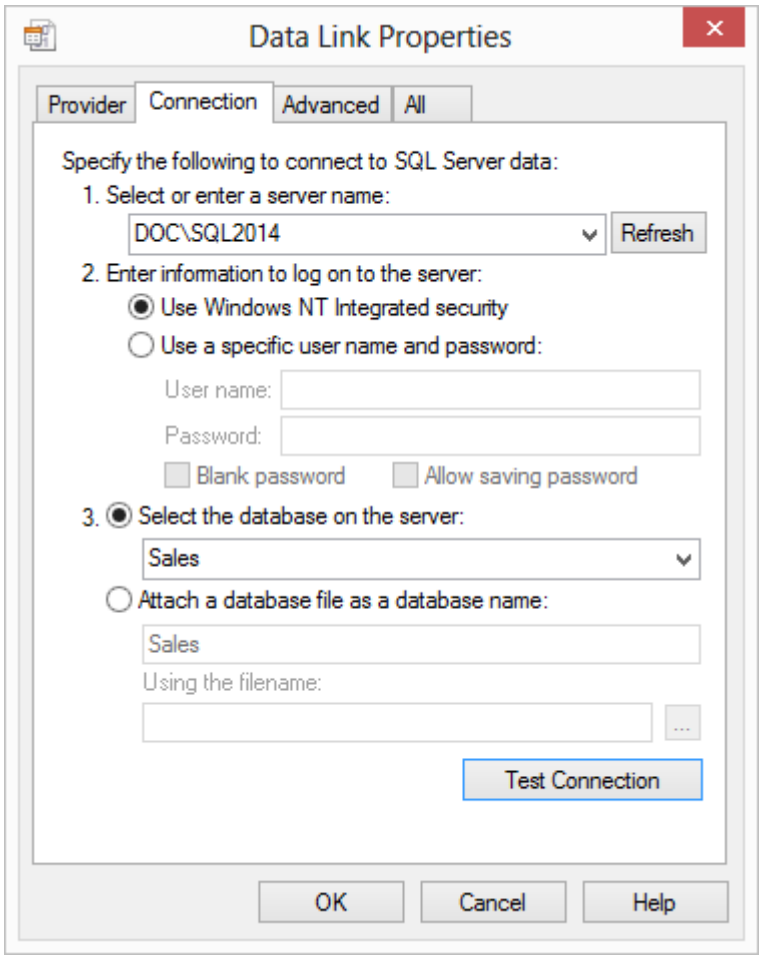
- Double-click on the **DataWarehouse** connection in the object explorer to open up the Properties dialog.
- Click on the ellipsis button to open the wizard and define the SSIS connection string.



2 On the Provider tab, select the relevant **OLE DB Provider** and click **Next**.



3 On the **Connection** tab, select the **server name**, enter the information to log on to the server and select the **database** on the server. Click **Test Connection**.

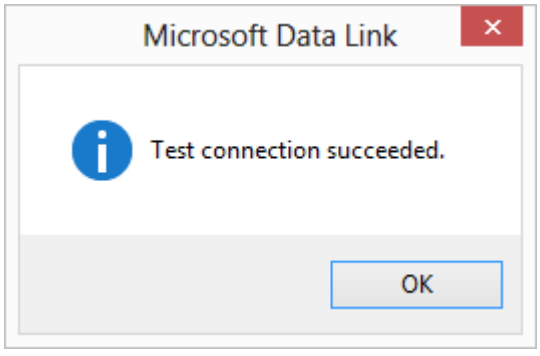


NOTE: When using a specific **user name** and **password** to connect to the server instead of using Windows integrated security, the **Allow saving password** check-box must be ticked.

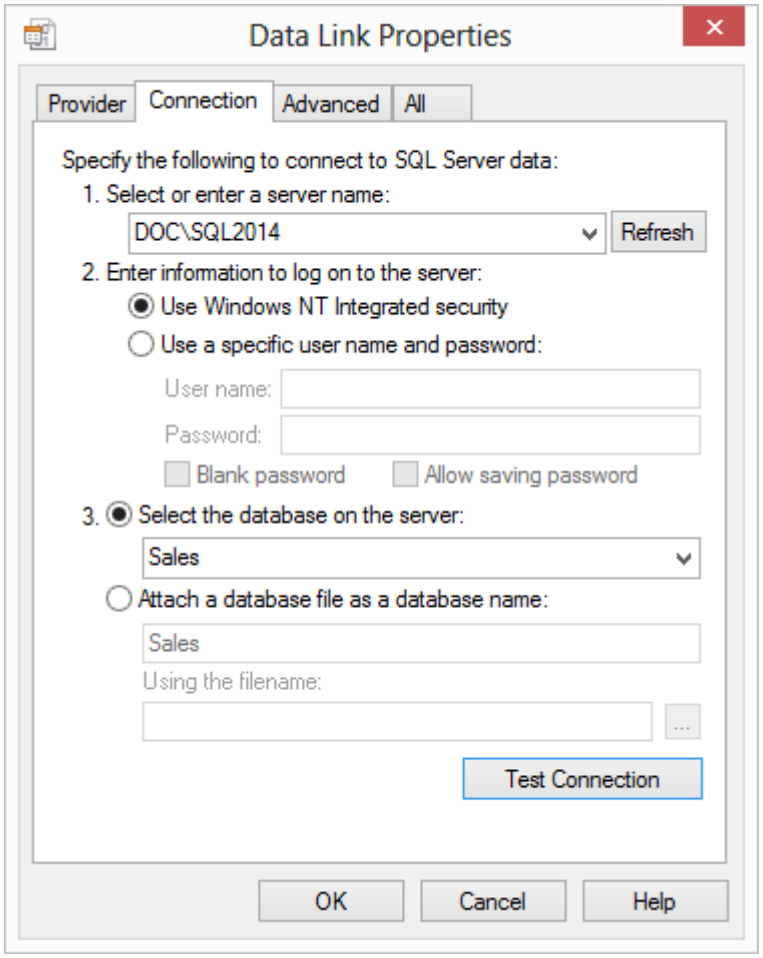
It is also recommended that the password on the SSIS connection string field that is displayed in the connection properties is replaced with the **$PASSWORD$** token that is substituted at runtime.

---

4 Click **OK**.



5 Click **OK** on the Data Link Properties dialog.



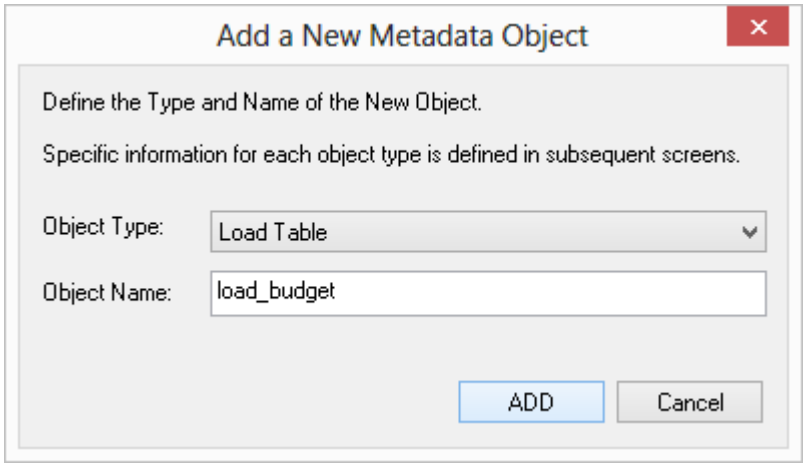
6 Click **OK** to save the changes on the Data Warehouse connection.

7 Browse to the directory and file from the **Windows** connection.

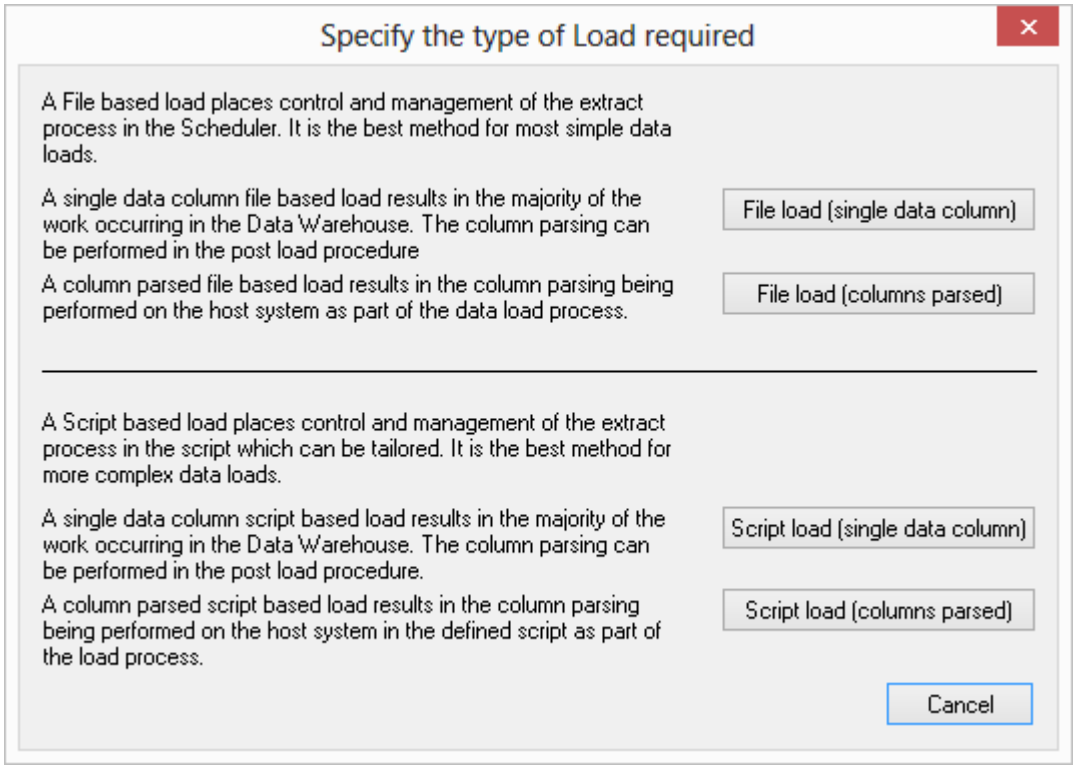
8 Double-click on the **Load Table** object in the left pane to create a drop target.

9 Drag the file from the right pane and drop it into the middle pane. The dialog below appears.

10 Click the **ADD** button.



11 The following dialog appears.



12 There are four options on this screen (buttons at right).

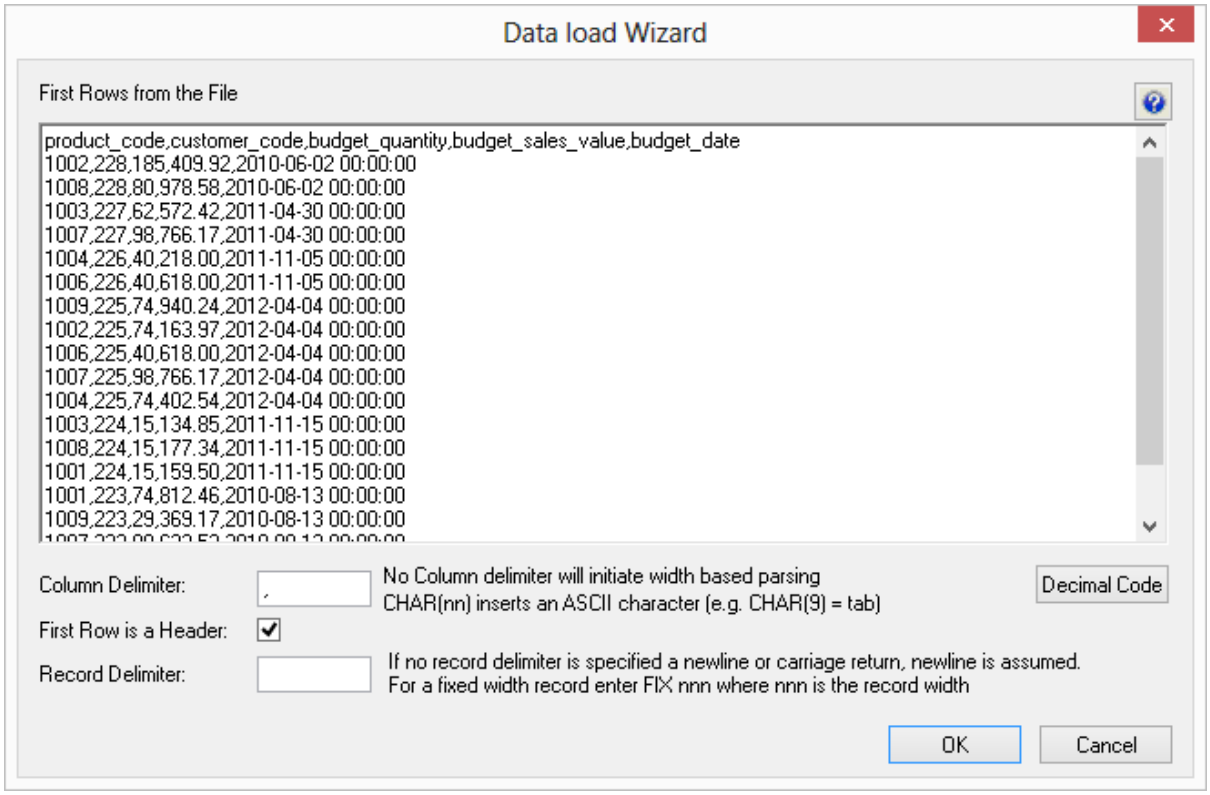
- The first two options result in a **File based load** where the bulk of the load management is handled by the scheduler.
- If you select either of the last two options, then WhereScape RED will generate a host script and the load table will be a **Script based load**. This host script is executed by the scheduler to effect the load.

Single data column

As stated beside the button, the majority of the work in terms of parsing the file must occur in a subsequent procedure within the data warehouse. The data is dumped into a single column. The task of coding a procedure to parse the data must then be undertaken. Three columns are created under Oracle. These include the data column, a sequence column (row_sequence) and the file name column (row_file_name). The file name and sequence columns can be deleted if they are not required for a File based load.

Columns parsed

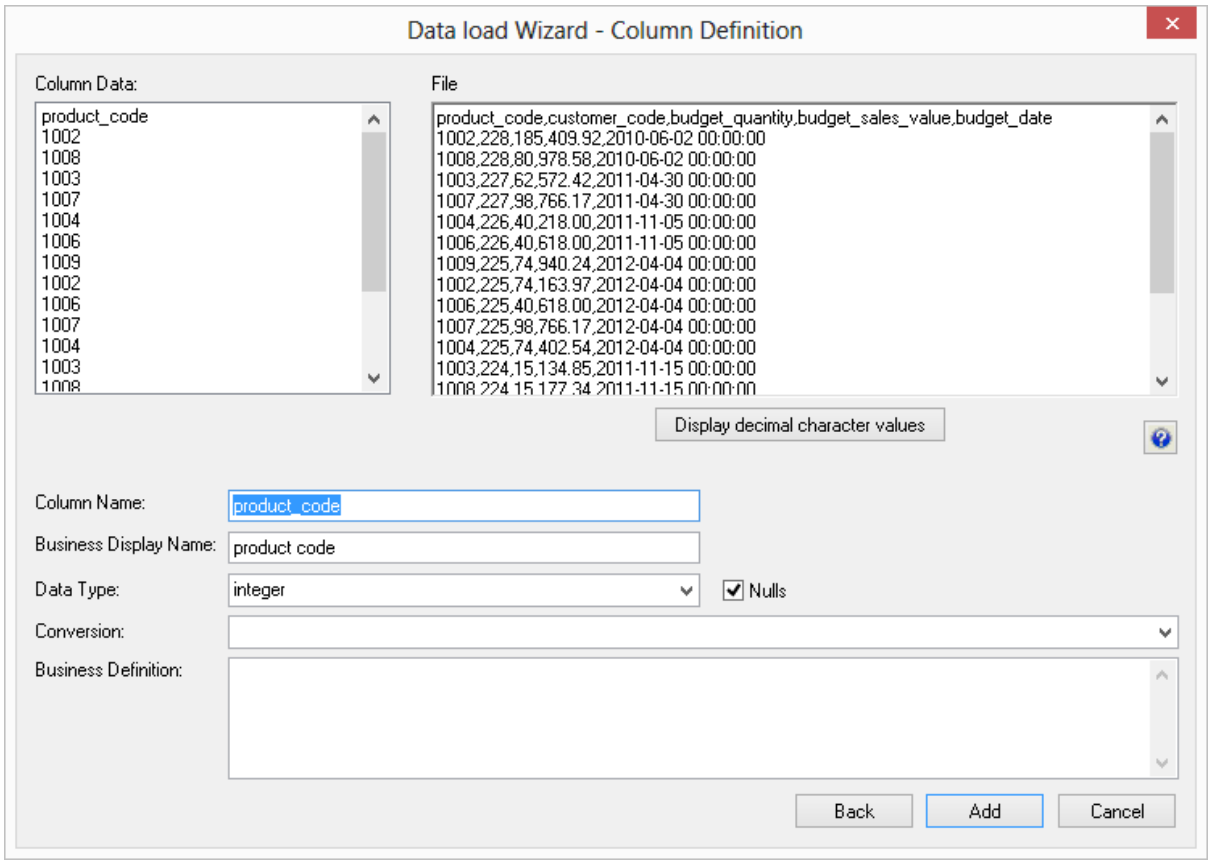
WhereScape RED attempts to parse the columns. You will be asked for details and for the column delimiter.
You then step through the columns providing names and data types. WhereScape RED attempts to guess the data type, but it needs to be checked and the field length will probably need to be adjusted.
The following screen shot shows the initial file parsed screen.



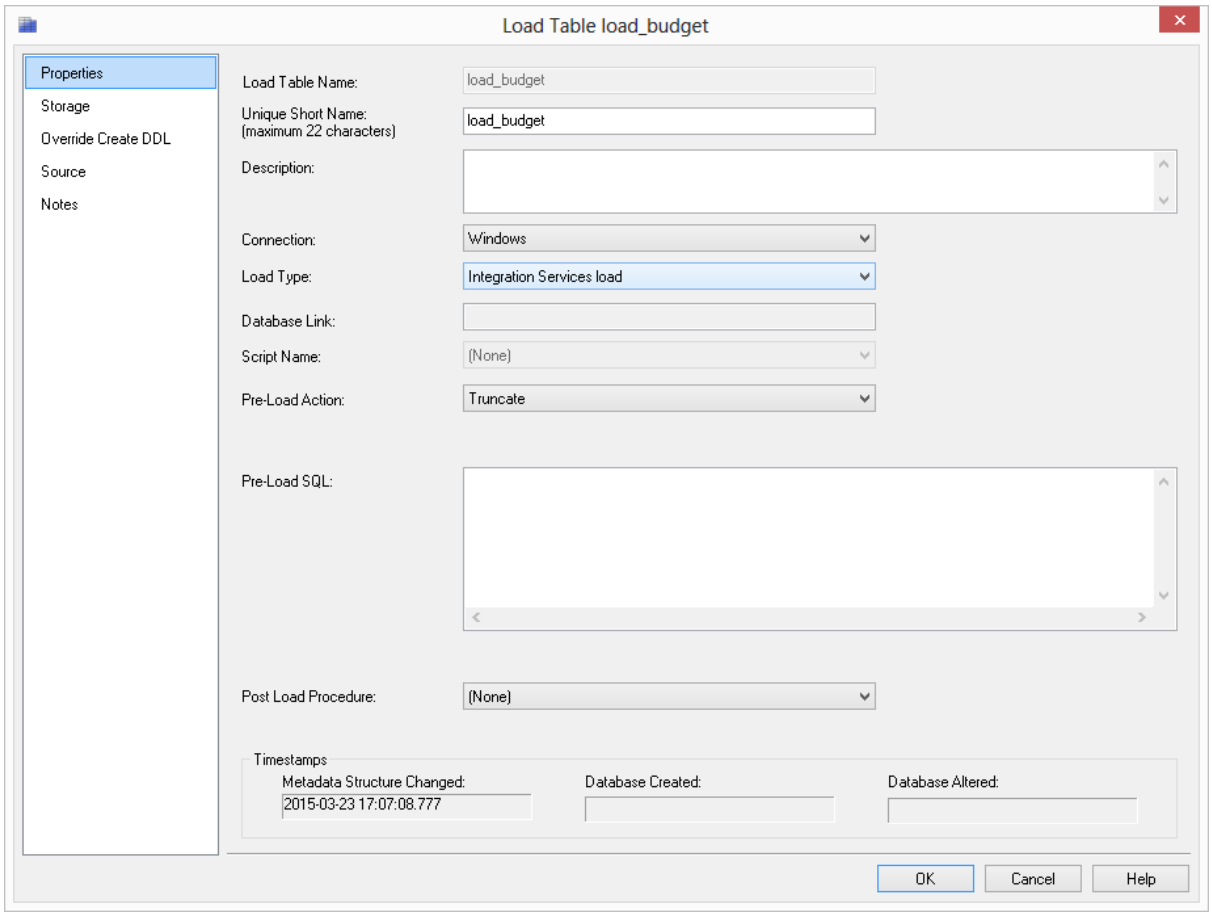
NOTE: DB2 databases do not support data import from files with header row.

The **Decimal Code** button will display the decimal value of each character in the lines retrieved from the source file. These decimal codes will be shown below each line and are green.

13 Once the screen above is completed a screen will appear to allow the breakdown of the source data into columns. If no delimiter is entered then width based parsing is assumed and an addition width size is prompted for.
Use the **Back** button to revert to the previous column if an incorrect width or delimiter is entered.
The following screen is an example of the file parsing technique.



14 On the **Properties** screen for the new load table, select **Integration Services Load** as the Load Type. Click **OK**.
This will create and execute a SSIS package at run time to load data into the data warehouse load table.



NOTE: If the table is changed to an Integration Services load and has been set up using the wizard for the "File load (columns parsed)" flow, some columns might have transformations set up that will not work.

In RED 6.8.3.4 date/time fields have transformations that are invalid for SSIS and will make the load fail.
Since SSIS does not provide any configuration for the parsing of date/time fields, if users have any date/time field special requirements, file or script-based loads are a better load option instead.

---

15 Click **Yes** to Create and Load the table.

RED 6.8.4.0 - SQL SERVER INTEGRATION SERVICES (SSIS) LOADS ENABLED FOR TERADATA

RED can now load data using SSIS from database tables or flat files (via a Windows connection) into Teradata databases. As with any load into RED a connection to the source data needs to be created to provide extraction details.
The **SSIS Connection String** is a valid SSIS connection string that can be used to connect to the data source or destination.
Currently, SSIS Loads for Teradata can only be processed using a Windows Scheduler.

To use SSIS loading, ensure that SSIS loads are enabled by selecting the relevant SSIS version in **Tools/Options/Code Generation /General.**
The relevant connections will also need to be created in RED. For more information about this new feature see section **8.8 SSIS Loader** in the Teradata User Guide.

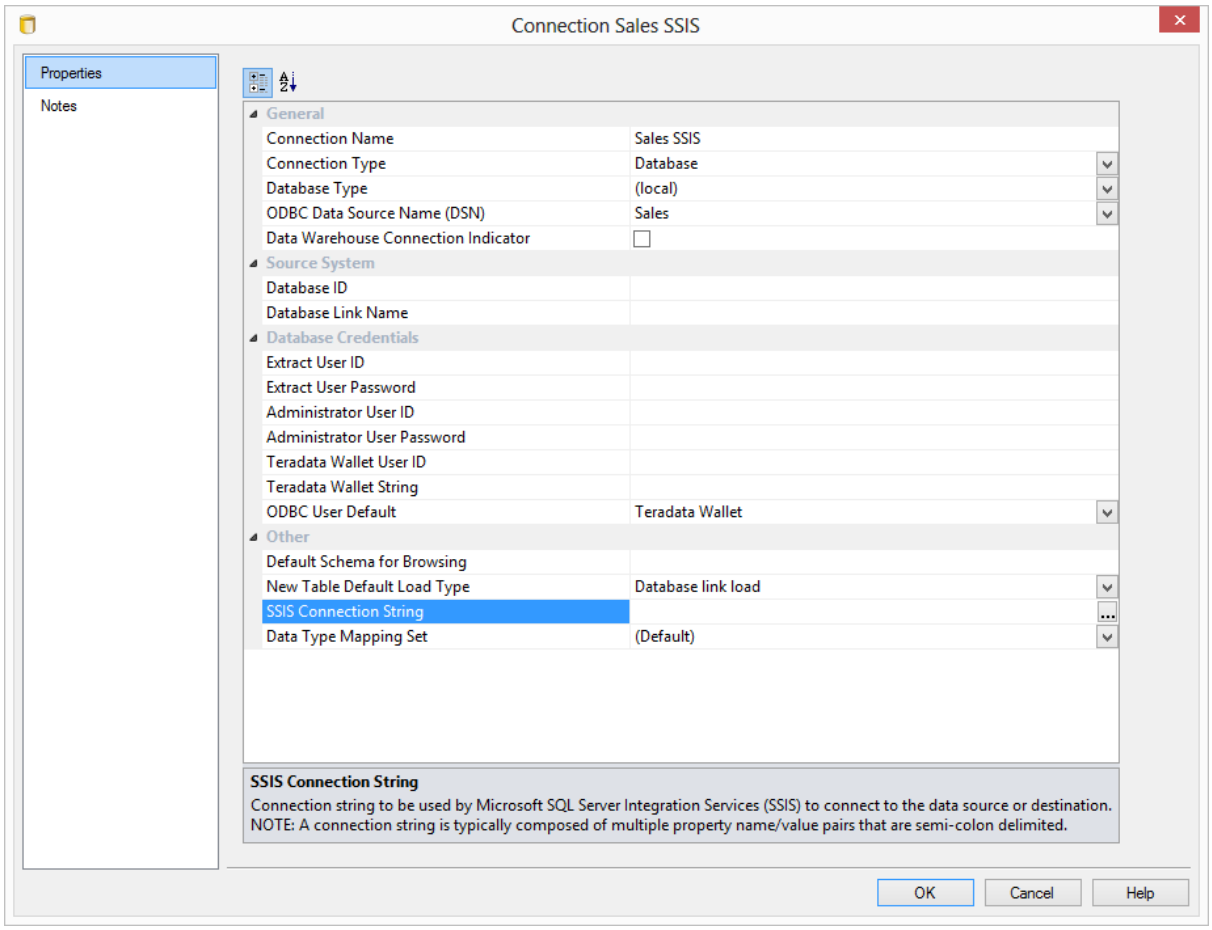
Loading Data via SSIS from a database

If the connection is a database load then there is additional connection information that should be supplied to use SSIS as a loading option.
This additional information needs to be supplied on both the source connection and the data warehouse connection.

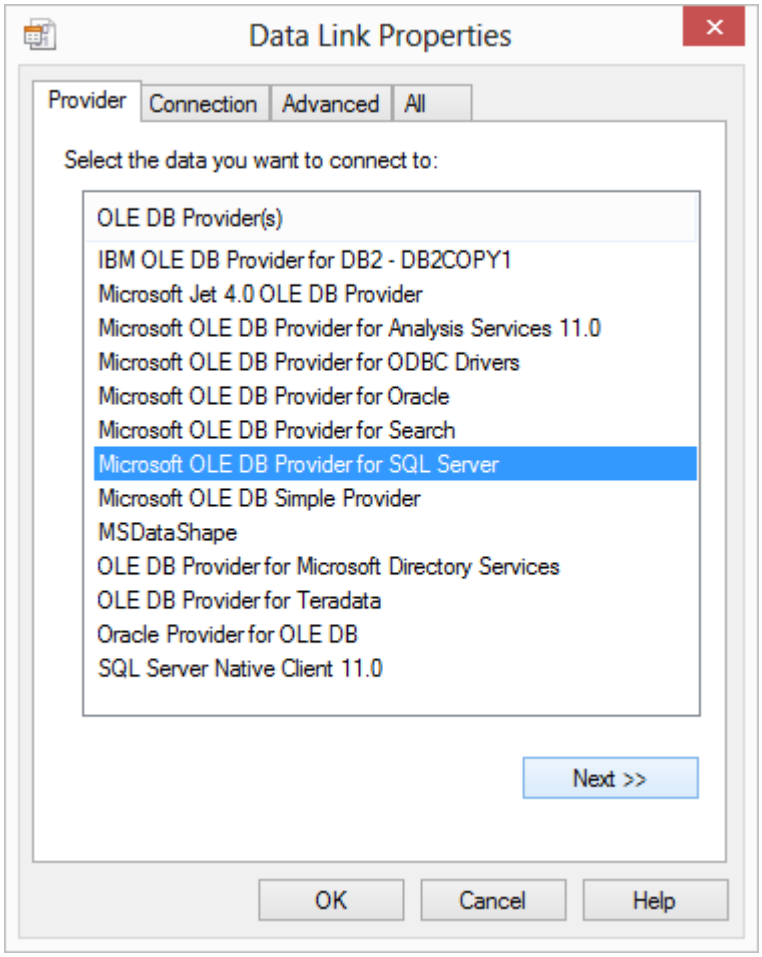
NOTE: SSIS Loads in Teradata can only be processed with a Windows Scheduler.

---

1 To load data into a Teradata repository using Integration Services, create the **SSIS Connection String** on the relevant connection by clicking on the ellipsis button.

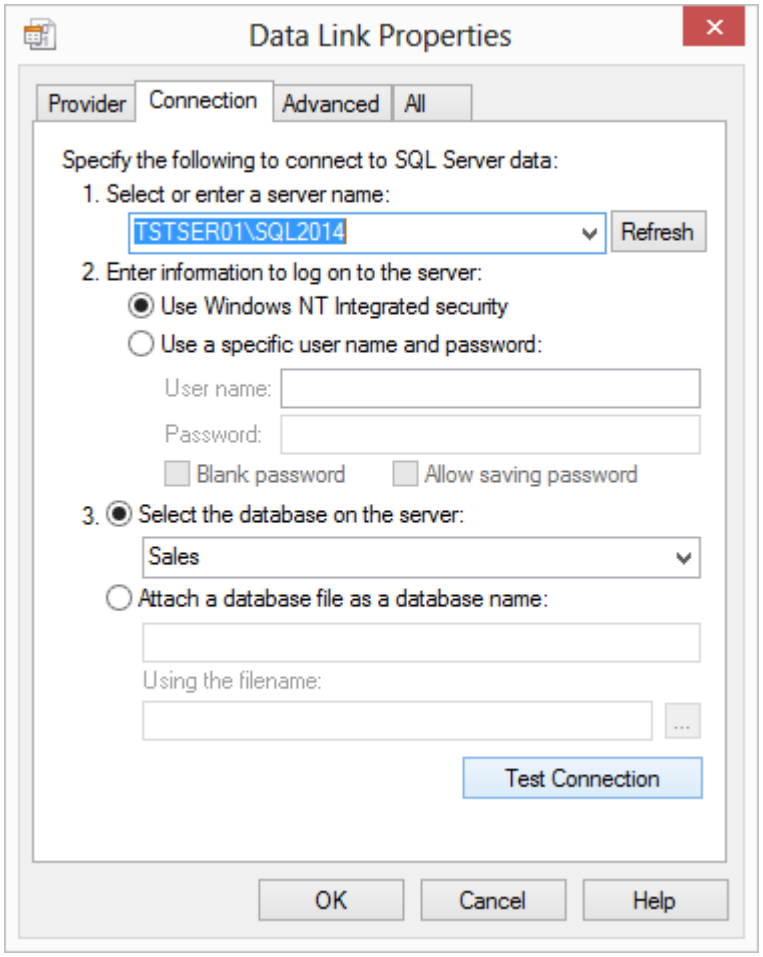


2 On the Provider tab, select the relevant **OLE DB Provider** and click **Next**.

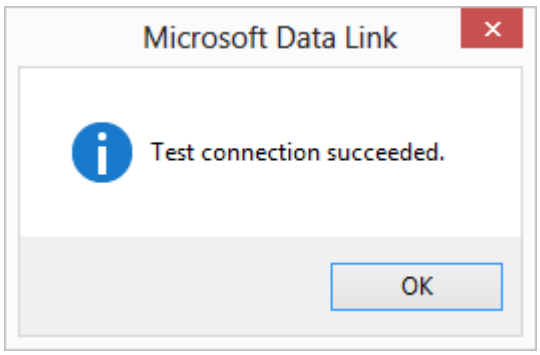


3 On the **Connection** tab, select the **server name**, enter the information to log on to the server and select the **database** on the server. Click **Test Connection**.

NOTE: When using a specific **user name** and **password** to connect to the server instead of using Windows integrated security, the **Allow saving password** check-box must be ticked.
It is also recommended that the password on the SSIS connection string field that is displayed in the connection properties is replaced with the **$PASSWORD$** token that is substituted at runtime.



4 Click **OK**.



5 Click **OK** on the Data Link Properties dialog to save the SSIS connection string settings.

6 The SSIS connection string is displayed.

- Before saving the connection, change te **New Table Default Load Type** to **Integration Services Load**.

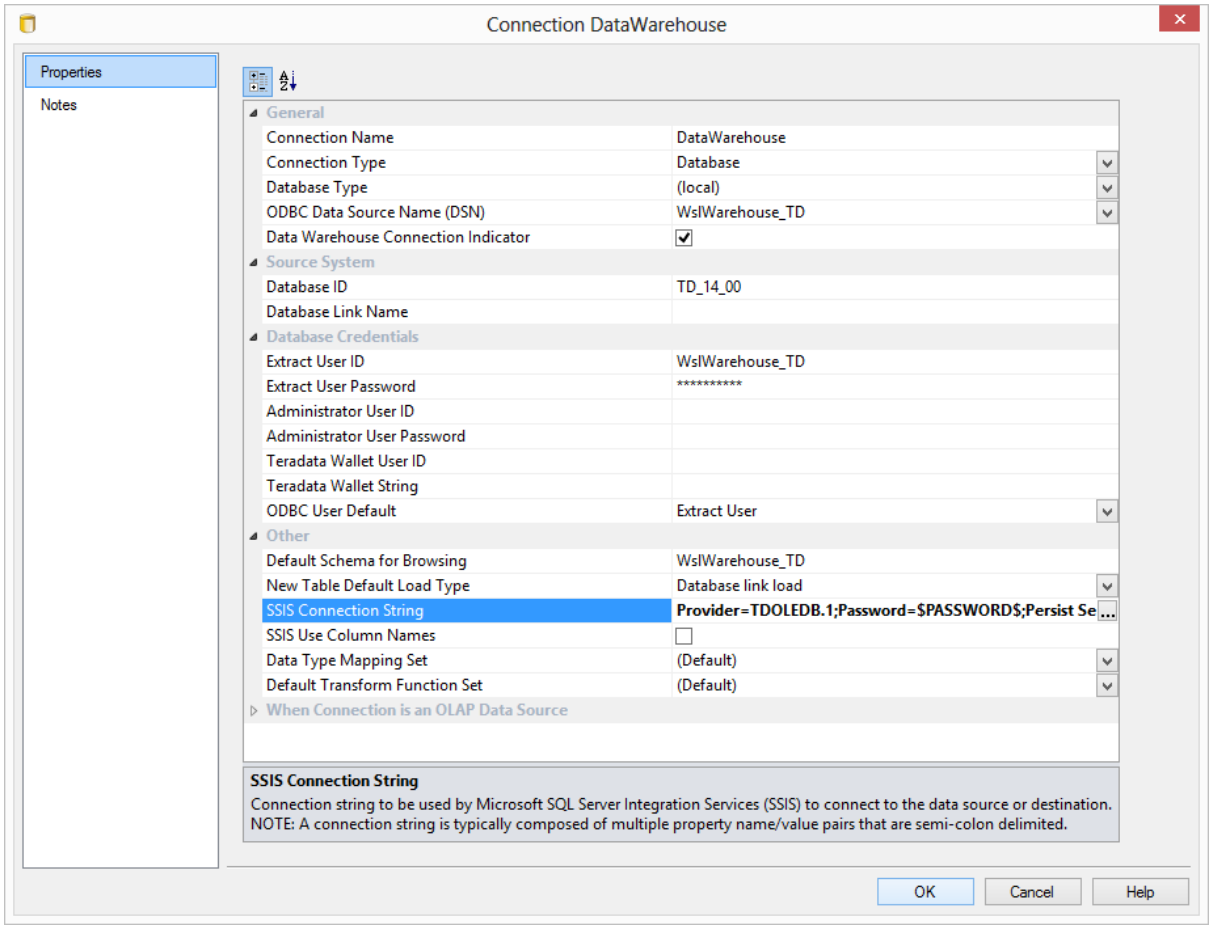
7 Click **OK** to save and close the connection.

- Right-click on **Sales SSIS** and select **Browse Connection.**
- Accept the defaults and click **OK**.

8 In SSIS terms, you have now defined your **Source** in **SSIS Connection Manager.** Using the same process, you need to add the SSIS Connection String to the data warehouse connection so you can specify your **Destination** connection:

- Double-click on the **DataWarehouse** connection in the object explorer to open up the Properties dialog.
- Follow the process above to create the SSIS Connection String, this time selecting the **OLE DB Provider for Teradata**.

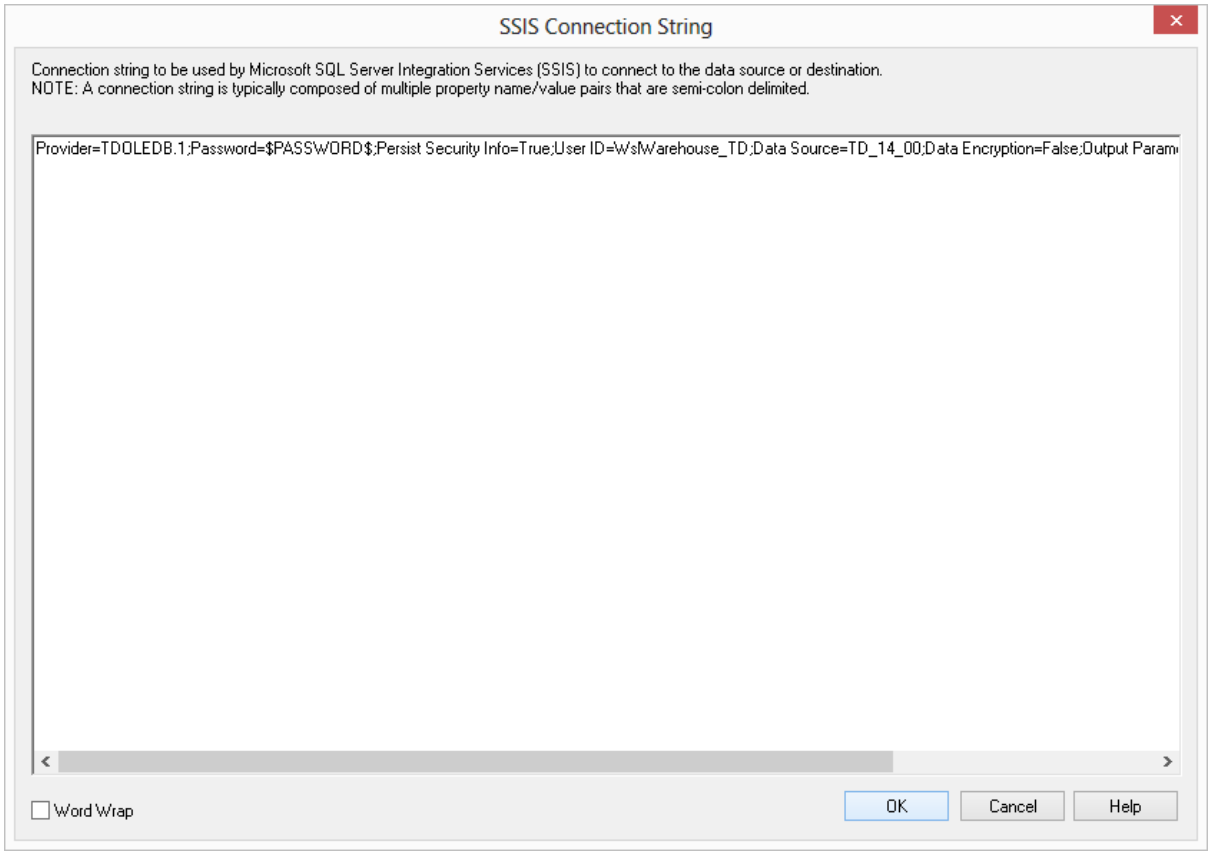
Click **OK** to save your connection.



Note1: If the connection string is already set, then the ellipsis button will open up an editor dialog.
Edit the connection string and click **OK**.

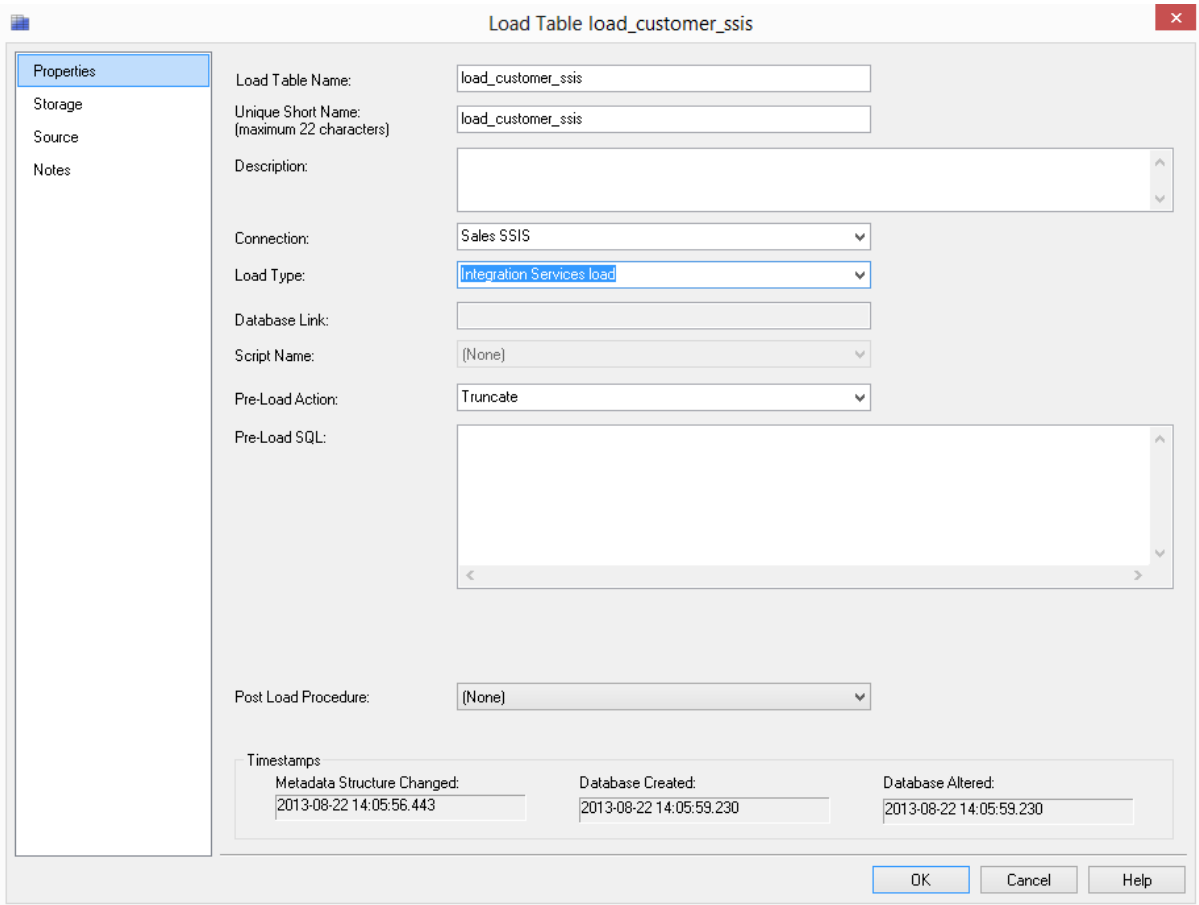
Note2: For connections that require a username and password, the connection string can also be edited to replace the password with the **$PASSWORD$** token that is substituted at runtime. If the $PASSWORD$ token is used, RED uses the contents of the masked "Extract User Password" property when making the connection.

E.g. "Provider=SQLOLEDB.1;Password=**$PASSWORD$**;.."



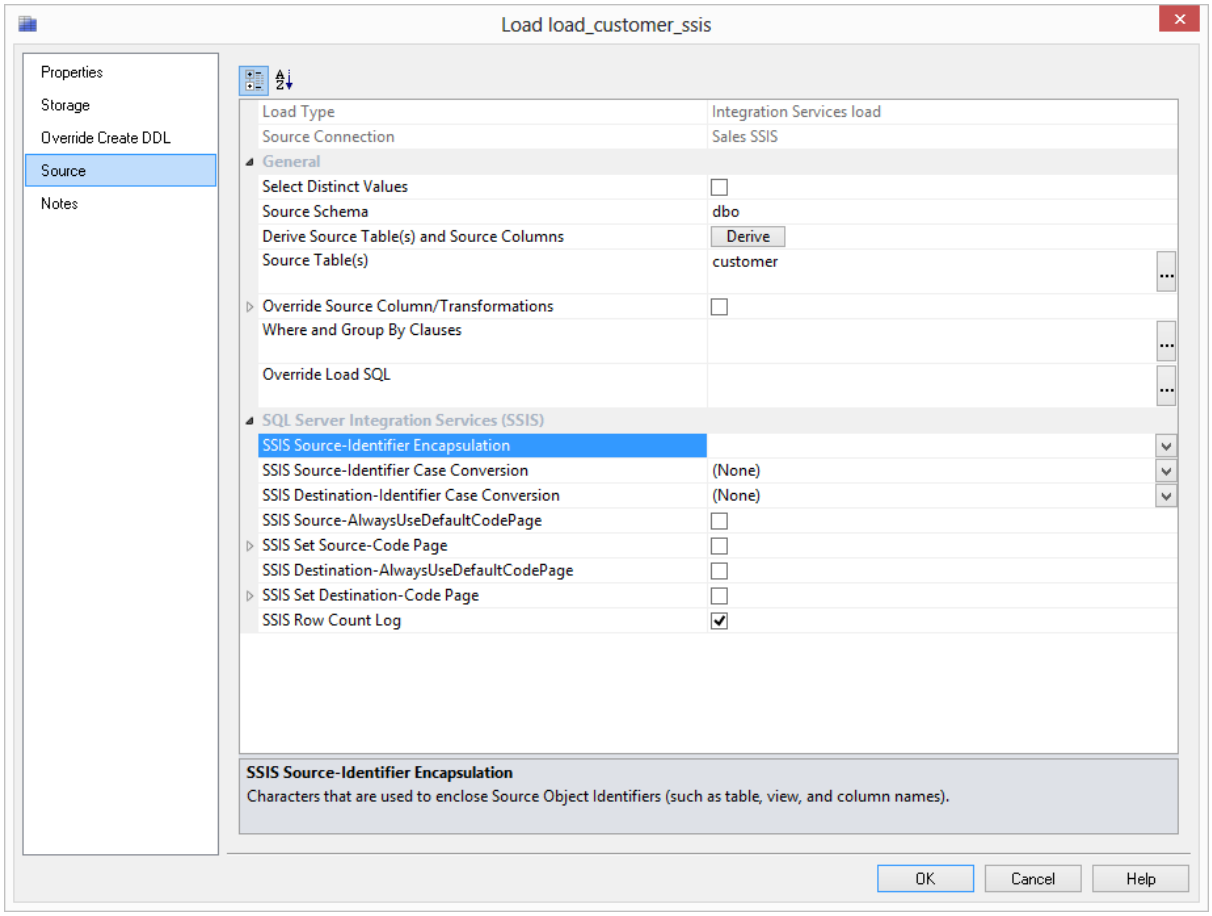
9 Once the connection is defined then a load table needs to be created to hold data loaded into the data warehouse by dragging a source table or a flat file to create a load table.
For more details see the **Loading Data** or **Loading Data from Flat Files using SSIS** sections of the **Teradata User Guide**.

- On the load table properties, ensure the Load type is set to **Integration Services load**. This will create and execute a SSIS package at run time to load data into the data warehouse load table.



10 The configuration options available on an SSIS load are available on the **Source** tab of the load table's Properties. These options are:

- **SSIS Source-Identifier Encapsulation** - Characters that are used to enclose source column names. Options are (None), "", [], '', ``
- **SSIS Source-Identifier Case Conversion** - Case-sensitivity conversion applied to Source Object Identifiers (such as table, view, and column names) in RED-generated SSIS packages. If no conversion is applied then the exact case of the identifier defined in the RED metadata is used in SSIS.
- **SSIS Destination-Identifier Case Conversion** - Case-sensitivity conversion applied to Destination Object Identifiers (such as table, view, and column names) in RED-generated SSIS packages. If no conversion is applied then the exact case of the identifier defined in the RED metadata is used in SSIS.
- **SSIS Source-Always-UseDefaultCodePage** - Forces the use of the DefaultCodePage property value when describing character data.
- **Set Source-Code Page** - Enables the SSIS source Code Page property.
- **SSIS Destination-AlwaysUseDefaultCodePage** - Forces the use of the DefaultCodePage property value when describing character data.
- **SSIS Set Destination-Code Page** - Enables the SSIS destination code page property.
- **SSIS Row Count Log** - During an SSIS Load include Row Count logging.

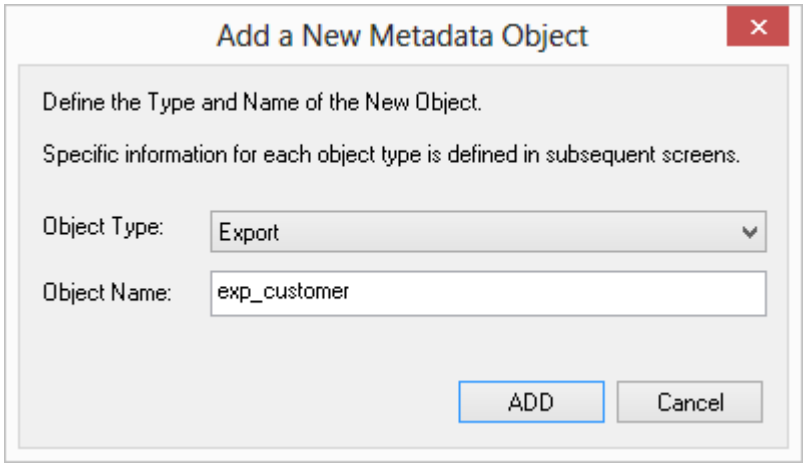


RED 6.8.4.0 - SQL SERVER INTEGRATION SERVICES (SSIS) EXPORTS

Integration Services Exports are now an available export method in WhereScape RED **.**
An **Integration Services Export** is an export processed using a **Windows** connection where the processing is handled via an Integration Services Package that is generated and executed dynamically at run time.
SSIS Exports to UNIX/Linux connections and processed via the UNIX/Linux scheduler are currently not supported.
To do **Integration Services Exports**, ensure that the **SSIS Version** is selected in **Tools>Options>Code Generation>SSIS Version.**

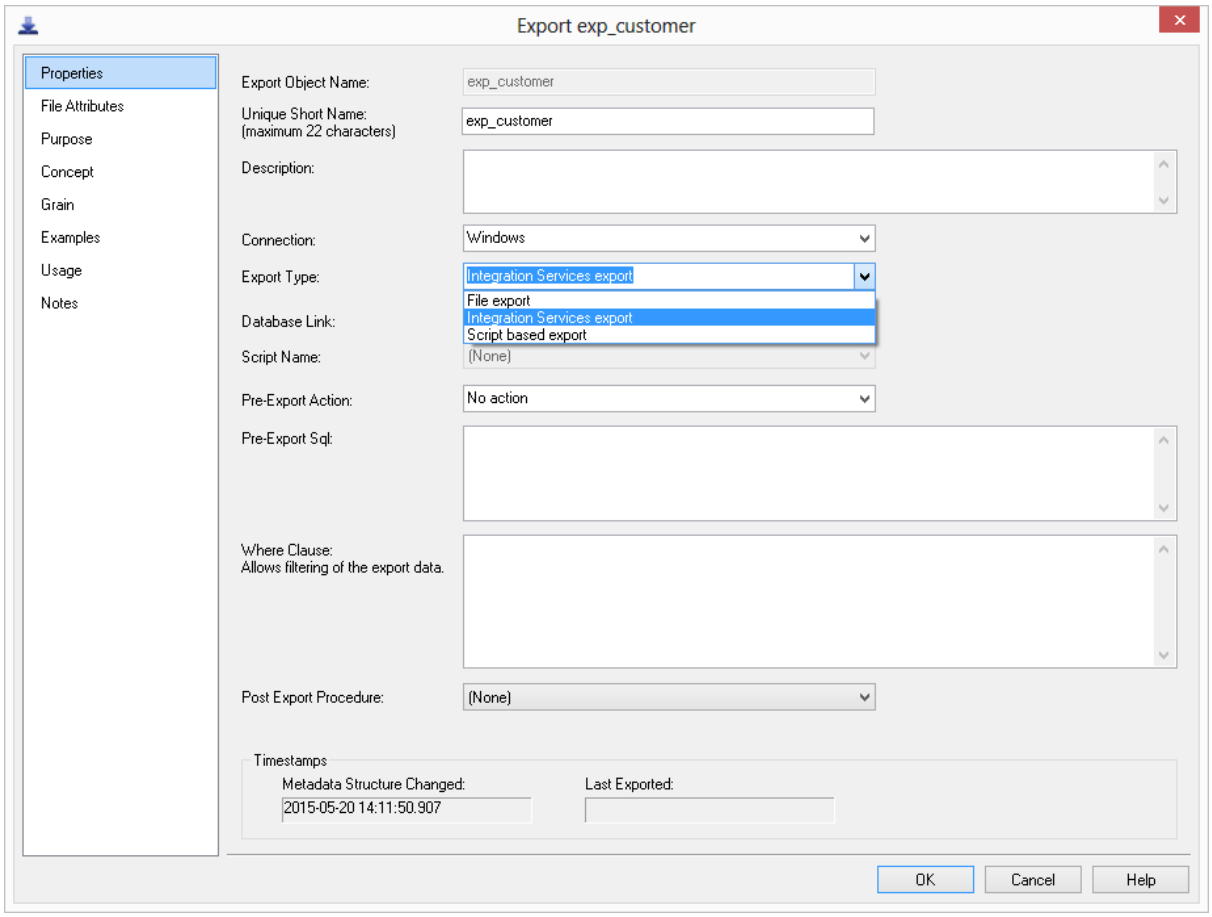
WhereScape RED Tip:
When doing **PDW SSIS Exports**, ensure both the **SSIS Connection String (OLEDB)** and the **SSIS Connection String (SQLPDW)** are set in the relevant connection.

1. As usual, **Integration Services exports** are performed by using the **drag and drop** functionality of WhereScape RED:
2. Browse to the data warehouse connection (Browse/Source Tables).
3. Create a drop target by double-clicking on the **Export object** group in the left pane. The middle pane should have a column heading of **Export Objects** for the leftmost column.
4. Select a table or view in the right pane and drag it into the middle pane. Drop the table or view anywhere in the middle pane.
5. The following dialog appears. If the export object needs to be renamed, rename it, otherwise click the **ADD** button to continue.



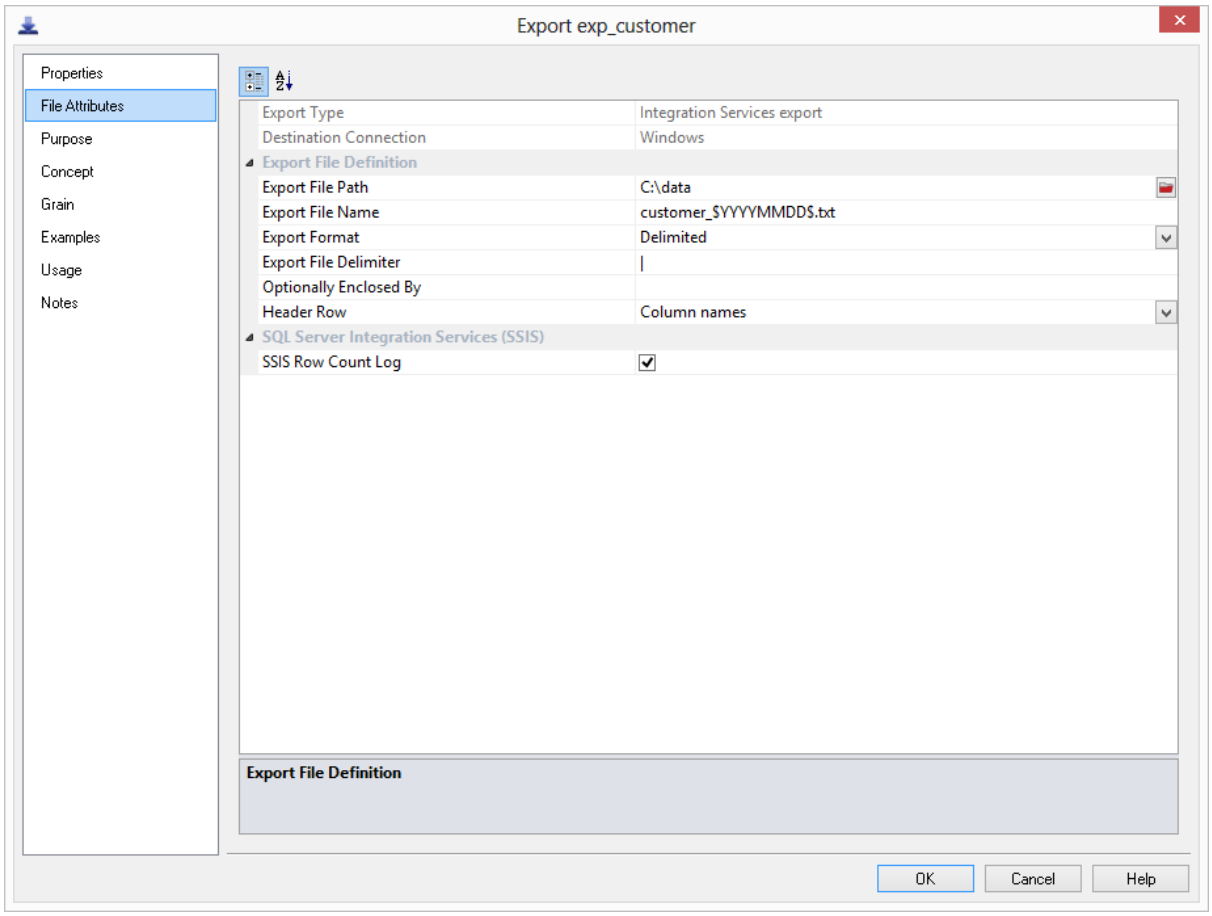
6 When the following dialog appears, select a **Windows** connection from the **Connection** drop-down list.

- Select **Integration Services Export** from the **Export Type** drop-down list.



7 Click the **File Attributes** tab and fill in the required fields to define the location, name and other definitions of the exported data file:

- Enter the path of the folder/directory where the File is to be created.
- Enter a file name for the export. The variable $SEQUENCE$ can be used to provide a unique sequence number for the export file.
  Data/file components YYYY, MM, HH, MI, SS can also be used when enclosed with the $ character. For example an export file name might be customer_$YYYYMMDD$.txt which would result in a file name like customer_20150520.txt.
- The export format available is **Delimited**.
- Enter the character that separates the fields within each record of the export file.
- Enter a character that brackets text fields within each record of the export file for Delimited formats (optional).
- Chose between **business names** or **column names** from the Header Row drop-down list if a header line is required for the export.



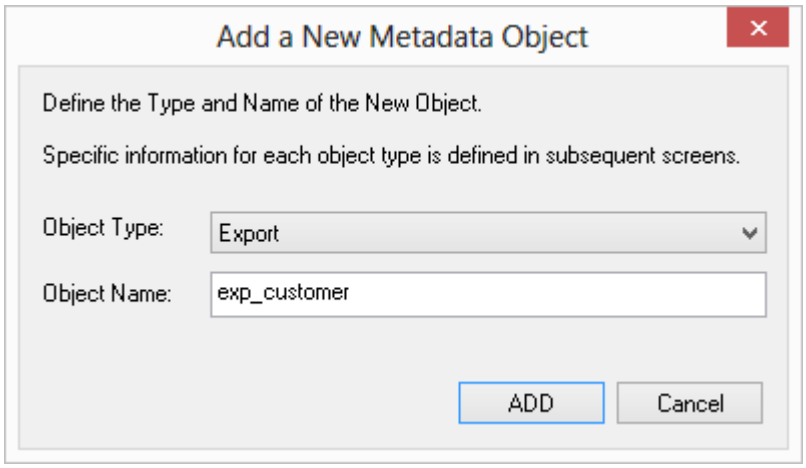
8 Finally, run the export by right-clicking on it in the left pane and selecting **Export**.

RED 6.8.4.0 - GREENPLUM EXPORTS

WhereScape RED now allows exporting data from the Data Warehouse via a **Windows** or **UNIX/Linux** connection. File based exports are currently the only export method supported.
The process of exporting data from Greenplum is performed using the **drag and drop** functionality of WhereScape RED. Chapter **18. Export Data** of the **RED User Guide** describes the export process in greater detail.
Greenplum Exports have **File Actions** as extra options that can be set in the File Attributes screen. These fields allow users to enter command lines to run after the export such as copying files to another machine or deleting files.
To process Greenplum exports within RED, the Greenplum client software must be installed on each machine that users want to export data to.

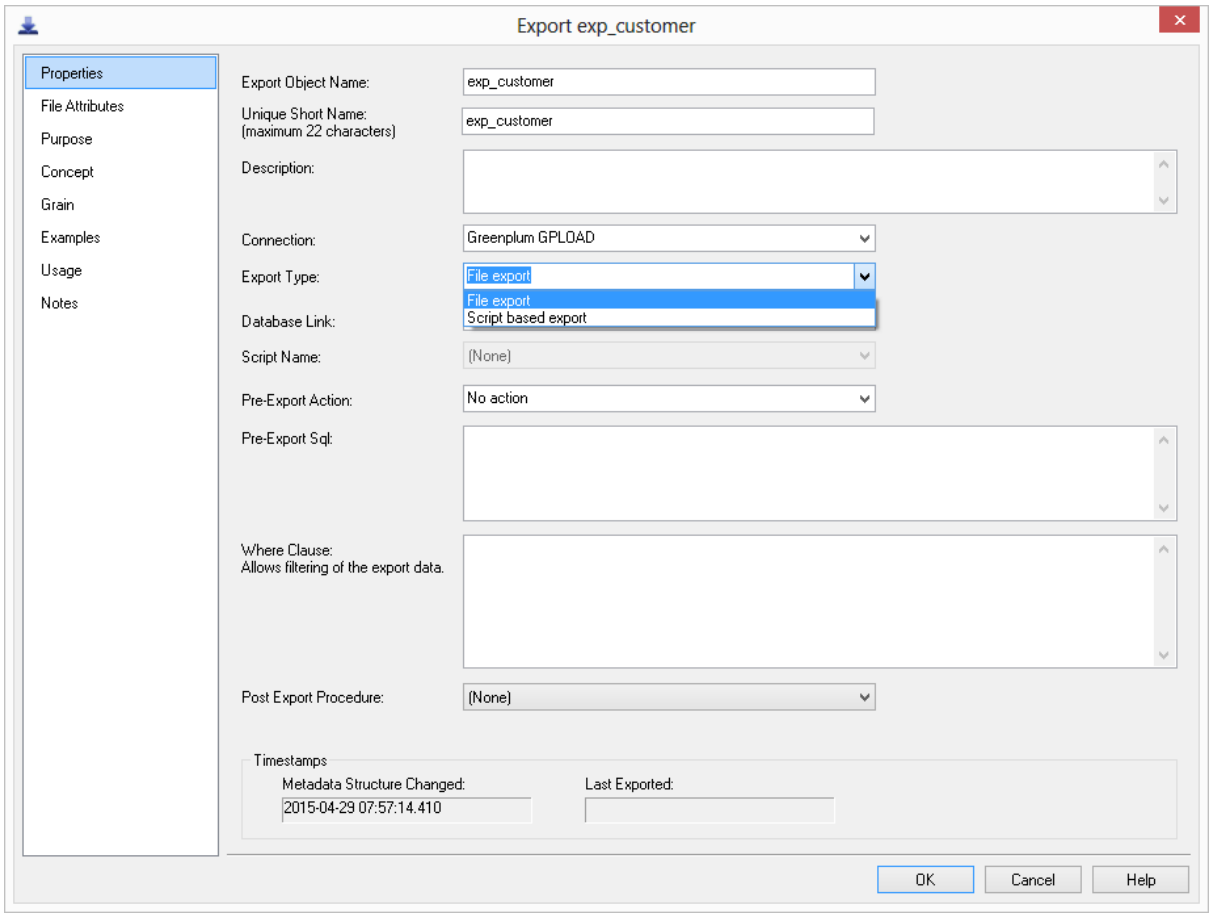
To create a **Greenplum Export** in WhereScape RED, use the **drag and drop** functionality:

1. Browse to the metadata repository or relevant source connection.
2. Create a drop target by double-clicking on the **Export object** group in the left pane. The middle pane should have a column heading of **Export Objects** for the leftmost column.
3. Select a table or view in the right pane and drag it into the middle pane. Drop the table or view anywhere in the middle pane.
4. The following dialog appears. If the export object needs to be renamed, rename it and then click the **ADD** button.



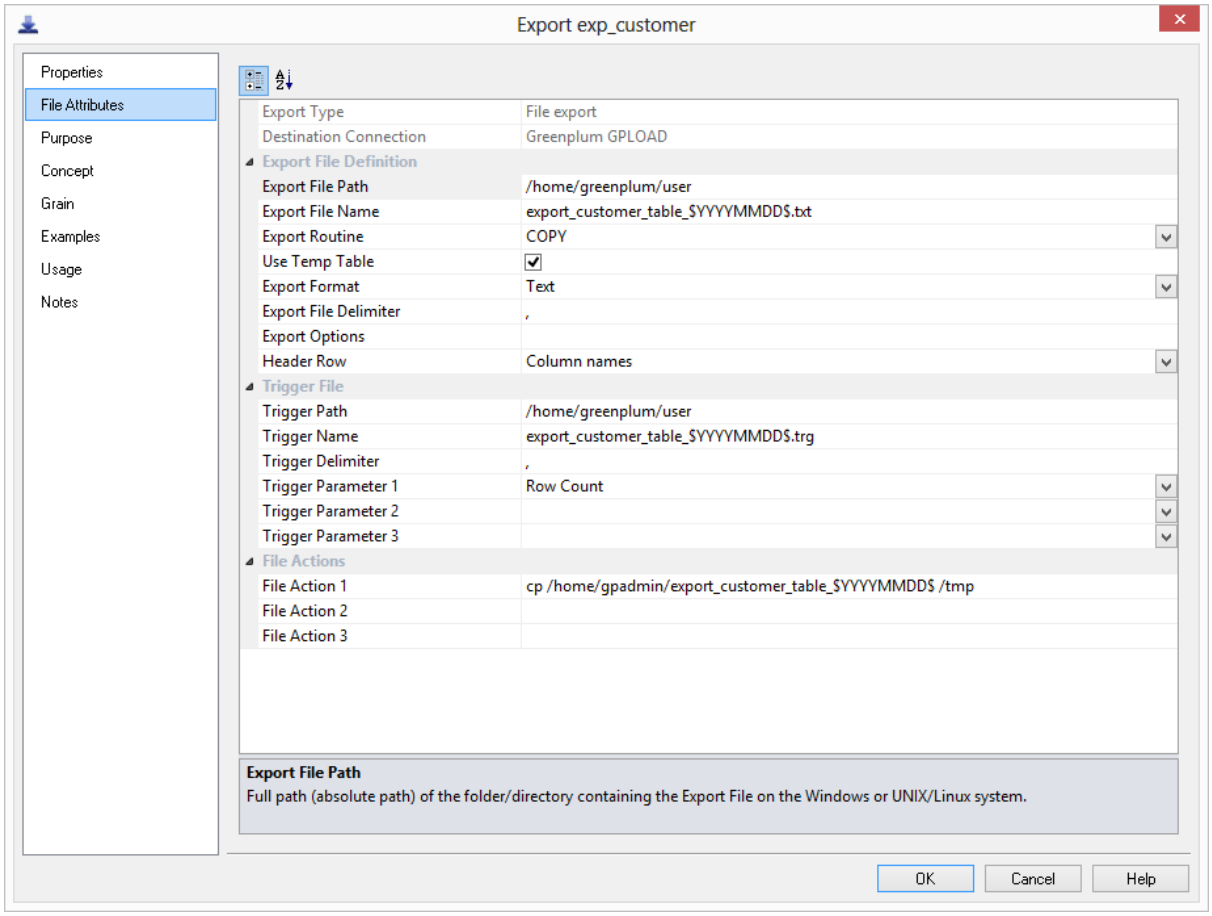
5 When the following dialog appears, select the **Connection** that you want to perform the export, from the Connection drop-down list. In this example, the Connection is a **UNIX** connection.

- Select **File export** as the export type.



6 Click on the **File Attributes** tab and fill in the required fields to define the location, name and other definitions of the exported data file:

- Enter the **path** of the folder/directory where the File is to be created on the Windows or UNIX/Linux system.
- Enter a **name** for the Export File - note that the variable $SEQUENCE$ can be used to provide a unique sequence number for the export file.
  The data/file components YYYY, MM, HH, MI, SS can also be used when enclosed with the $ character.For example the export file name might be customer_$YYYYMMDD$.txt which would result in a file name like customer_20150520.txt.
- Select **COPY** as the Greenplum specific routine to use to export the data.
- Ensure the **Use Temp Table** check-box is ticked. This option creates a temporary table to export the data into. The temporary table is then deleted once the data has been exported.
- Select between Text or CSV as the export format.
- Enter the delimiter that separates the fields within each record of the Export File.
- Select between **Column Names** or **Business Names** for the Header Row.
- Enter the trigger path to the directory in which a trigger file is to be generated in the destination system.
- Enter a name for the file that is to be created as a trigger file.
- Enter a delimiter for the trigger file.
- Select any parameters to be put in the trigger file.
- Use the File Actions to enter any command lines to run after the export such as copying files to another machine or deleting files.



7 Finally, run the export by right-clicking on it in the left pane and selecting **Export**.

NOTE: Processing Greenplum Exports via the Scheduler
To process Greenplum exports via the Windows Scheduler, please ensure that the **Windows Scheduler user** has the all the necessary permissions including having the **ssh host key saved**. The UNIX scheduler is currently not supported for Greenplum exports.

WhereScape®

DETAILED LIST OF CHANGES FOR RED 6.8.4.0

Changes in RED since 6.8.3.0

Database	Key	Release Note
Common	RED-2851	Fixed application create and load to permit comma in all connection attributes.
Common	RED-3372	Replaced AMO10/Microsoft.AnalysisServices.DLL version 10.0.1075.23 (2008 CTP) with version 10.50.1600.1 (2008 R2 RTM -- no SP).
Common	RED-3551	Extended available source table list in column change dialog now includes all valid types.
Common	RED-3556	The "<- Update" and "Update ->" buttons now work while editing user-defined documentation fields for columns.
Common	RED-3573	When adding a column to a table using the "Add Column" item from the context menu it is now possible to specify language mappings and user-defined documentation fields at the same time as the remainder of the column information.
Common	RED-3581	User documentation is now copied when adding or dropping columns from another object (via send/add or drag/drop). Only documentation fields with matching names are copied. Note, creating a new table using drag and drop does not copy documentation fields.
Common	RED-3625	It is now possible to load from delimited flat files using SSIS.
Common	RED-3672	If the imported XML file from 3D contains a column transformation, then it's used.
Common	RED-3678	NOPI, NUPI, UPI and NUSI flags are now set in RED metadata if the applicable elements are present in the imported XML file.
Common	RED-3932	Maximum Groups has been increased to 250; and maximum Projects increased to 1000.
Common	RED-4020	Dragging a column into a table that already contains a column with the same name will no longer lead to the original column being moved instead of the new one. Dragging all of the columns from a table will position the added columns where they were dropped instead of always at the end of the table.

Common	RED-4069	Fixed a problem when creating a new project inside a group from the group context menu for which the project name already exists in another group. Without the fix, the new project was incorrectly nested under the root, and a link to the existing project was added to the group. With the fix, the new created project will now be correctly nested inside the group and is distinct from the other existing project with the same name.
Common	RED-4202	Removed limit of 512 columns.
Common	RED-4501	Track forward reports now continue when an internal table has the same name as an external source table.
Common	RED-4502	View objects are now included in html glossary.
Common	RED-4505	Removed limitations of each individual edit box for joins, "Where"- and "Group By"-clauses to allow a total of 12,000 characters for the combined text of the joins, "Where"- and "Group By"-clauses.
Common	RED-4508	The description associated with tables exported to a 3D XML file is saved into the RED metadata.
Common	RED-4519	Corrected setting of default datatype mapping set when using target objects.
Common	RED-4526	Language mapping and user documentation are now copied when duplicating a column.
Common	RED-4527	When parsing the connection data in the imported XML file, we are now supporting the 'windows' connection type, using the 'user' element if it is present, using the 'database' element if it is present and using the 'path' element if it is present.
Common	RED-4528	If the imported XML file contains a <default_value> element, then its value is used. If it is a default value for a string column, the creator of the XML file must surround the default value with single quote (') characters for APL to generate a valid SQL statement.
Common	RED-4529	If there is join information listed in the imported XML file, then it is used to create the required joins on fact tables.
Common	RED-4541	The SSIS loaders are no longer dependent on a DLL that is not included with the installation.
Common	RED-4549	Changed the daily, weekly, monthly, and annually calculations of the new 'start after' datetime to calculate from the old 'start after' datetime rather than from the current datetime.
Common	RED-4552	Fixed the build and install of deployment applications to correctly save and restore the Display Folder property for OLAP calculations.

Common	RED-4606	Removed limitations of each individual edit box for joins, "Where"- and "Group By"-clauses to allow a total of 12,000 characters for the combined text of the joins, "Where"- and "Group By"-clauses.
Common	RED-4609	Optional user name in Application Load Options Dialog is stored with versions of objects for audit trail.
Common	RED-4610	Documentation will no longer stop at 1000 FACT tables.
Common	RED-4632	The SSIS loaders are no longer dependent on a DLL that is not included with the installation.
Common	RED-4640	Corrected issue with index validate/create not actually performing the create.
Common	RED-4648	Changes made for 'display data' option via both left hand and right hand pane to include db specific limits to query to increase performance particularly on MPP's.
Common	RED-4703	Removed limitations of each individual edit box for joins, "Where"- and "Group By"-clauses to allow a total of 12,000 characters for the combined text of the joins, "Where"- and "Group By"-clauses.
Common	RED-4704	Changes to Help/About to include extended detail of ODBC Driver, Target Databases and Scheduler.
Common	RED-4762	It is now possible to load from fixed-width flat files using SSIS.
Common	RED-4780	WslCube10.exe now returns an error when cube processing fails.
Common	RED-4816	The UNIX/Linux shell to use for generated scripts can now be set in the connection properties. Using the name of the connection to influence the chosen shell is now deprecated and will only work until the connection properties are opened.
Common	RED-4866	Aggregate, normalized, data store and view table types are imported from the XML exported from 3D.
Common	RED-4888	Browsing connections with targets defined now uses the Datawarehouse tab rather then Source.
Common	RED-4938	Fixed a problem with Native ODBC Loads from some DB2 sources in the case that not all columns have a source column.
Common	RED-5001	ODL now adds message to audit log when it cannot proceed due to new/unrecognized server's host key.
Common	RED-5016	Tidy up of identification/determination of numeric or not when drag/drop to add a new column.
Common	RED-5018	Fixed issue with SQLBLOCK in child jobs.
Common	RED-5029	Analysis Services 2000 (deprecated Microsoft version) no longer available for setting of connection type. Existing connections of this type will remain as before.

Common	RED-5240	Corrected directory listing for some HDFS.
Common	RED-5274	Corrected logon options presented in security settings.
SQLServer	RED-1508	Increased the supported length of file/path names in file exports.
SQLServer	RED-3309	Metadata validate can now be launched from the command line.
SQLServer	RED-3583	Fixed the date and time parameter replacement logic of file names and trigger names specified for File-based exports which are run directly in RED. The fixed logic no longer reorders the date and time fields of parameters to be in a predefined fixed order; instead, it leaves the order as specified in the parameter. The fixed logic also leaves all separators present between the different date and time fields of parameters.
SQLServer	RED-3639	Added a fix to retrieve the complete field which contains the Connection Notes, which was incorrectly being terminated by the embedded comma.
SQLServer, DB2, Oracle	RED-3944	Added option to specify number of records in multi-pass delete of "new style" procedure generation for Normalized, ODS and Dimension objects in SQL Server, DB2 and Oracle.
SQLServer, Oracle	RED-3993	Removed option "Update Current Records Only" for Merge in procedure generation.
SQLServer	RED-4055	SQLServer extended properties functions now use the schema parameter and not the user parameter.
SQLServer	RED-4351	Fixed the determination of the slowly changing test inside generated update scripts when a transformation is specified.
SQLServer, Oracle	RED-4438	Improved handling of load table rename or move of schema to be in line with other objects.
SQLServer, DB2, Oracle, Teradata, Netezza, Greenplum	RED-4513	The template script language now supports parameters.
SQLServer	RED-4634	Fixed the creation of a SQL Server non-clustered primary key index to be correctly created as non-clustered when created from within the scheduler.
SQLServer	RED-4795	Fixed issue with race condition in scheduler for SQL Server.
SQLServer	RED-4803	Corrected report for identification of object not in the db to not report invalid object types such as exports.
SQLServer	RED-5256	Corrected issue with create of new job that may result in deletion of tasks from previously edited job.

SQLServer, PDW	RED-4845	Corrected procedure editor compile option on PDW when procedure name is mixed case.
SQLServer, DB2, Oracle	RED-4897	New option to specify number of deleted records per transaction for fact tables.
SQLServer, DB2, Oracle	RED-5109	Fixed memory leak in the Windows scheduler.
SQLServer, Oracle	RED-5244	Corrected issue to have compiled code same as saved code for Oracle/SQL when no targets are enabled.
DB2, Netezza, Greenplum	RED-1939	Rename of view on DB2 now prompts to drop as alter not possible. Renaming of Netezza objects now fully qualifies the target object. Rename of views on Greenplum now work correctly.
Oracle	RED-3378	Oracle Datastore, Normalized and Set Based Dimension update code now enables editing of the Oracle Hints for the insert, update and merge statements. These can also have defaults provided via the Tools/Options/Code Generation setting.
Oracle	RED-4409	New login method for Oracle repositories - Oracle Individual User.
Oracle	RED-4453	Oracle Big Data Connector Support, Part I. Support for Oracle SQL Connector for HDFS (OSCH) added, with the following restrictions in initial release: 1. Supporting only JDBC Thin; 2. Supporting only single file loads;* 3. Supporting only Oracle Wallet authentication (no support for interactive authentication option, which is the only other authentication option available for OSCH). *Note: It is possible to specify loading of multiple files by using wild cards in the Source screen of a table's properties if their format is exactly the same. Multiple files will be loaded successfully, however, the result report will be wrong, stating that not all rows were loaded successfully.
Oracle	RED-4545	Models exported from WhereScape 3D as "RED Builder Model" can now be imported into Oracle Databases via the WhereScape Application Deployment tool.
Oracle	RED-4592	RED now uses the Metadata DSN for backups.
Oracle	RED-4594	Removed DDL terminator for statements that contain comments only. This change allows to use '/' as the DDL statement terminator as this character is appended only to valid statements.
Oracle	RED-4600	Added Datapump export/ import mechanism to backup and restore on local Unix/Linux based Oracle data warehouses.

Oracle	RED-4650	Oracle Big Data Connector Support, Part II. Support for Oracle Loader for Hadoop (OLH) added, with the following restrictions in initial release: 1. Supporting only Delimited Text Files; 2. Supporting only single file loads; 3. Supporting only JDBC Thin; 4. Supporting only Online database mode; 5. Supporting only Oracle Wallet authentication (to match OSCH which supports only Oracle Wallet authentication option). The need for supporting additional features is to be determined based on feedback.
Oracle	RED-4998	Fixed multiple scheduler logging issues where message added to audit ended with "Wrong number of parameters". An example of such message would be: "04/05/15 13:39:40 3231060/0 WsWrkAudit write error22 07001. [Microsoft][ODBC driver for Oracle]Wrong number of parameters"
Teradata	RED-4318	Fixed the redefinition of table indices to correctly store the Primary Index type after a rebuild of the table's update script.
Teradata	RED-4331	Fixed issue with Teradata file loads if first column has a default value or transformation and doesn't come from source file.
Teradata	RED-4450	Added new functionality to RED to enable script-based loads from Hadoop file systems into Teradata data warehouses.
Teradata	RED-4532	Fixed missing disconnect from Teradata at the end of a job.
Teradata	RED-4544	Models exported from WhereScape 3D as "RED Builder Model" can now be imported into Teradata Databases via the WhereScape Application Deployment tool.
Teradata	RED-4557	Implemented the suggested change to the select statement that determines the cursor for metadata tables to delete in Ws_Version_Clear.
Teradata	RED-4568	SSIS Loader option is now supported for loads to Teradata tables. Option must be enabled in Tools/Options to expose.
Teradata	RED-4571	Fixed issue with job dependencies in Teradata.
Teradata	RED-4585	Implemented a fix to correctly check if a Teradata table exists which has a table name of 30 or more characters. This change fixes the Create/ReCreate operation, as well as the Validate Against the Database operation.
Teradata	RED-4760	TPT loads now have additional attribute section available for adding options to tlogview call such as "-f '*'" to increase the logging detail.

Teradata	RED-4769	Fixed missing usage of transformation for change detection columns for procedures using MINUS.
Teradata	RED-4840	Added option to specify file format for TPT loads of non delimited files. Note: The default for all non delimited files has been changed from 'Unformatted' to 'Text'.
Teradata	RED-4975	Drag/Drop of an entire table with artificial key column to a Stage table now presumes it wants just the artificial key column added to the stage table.
Teradata	RED-5054	Fixed incorrect escape character for TPT ODBC script load in scheduler.
Teradata	RED-5055	Correction to generated TPT ODBC script when no default ODBC user, and using TD Wallet for that connection.
Teradata	RED-5131	Corrected rename of a primary index at the table level to also update all the required meta fields.
Teradata	RED-5164	Fixed issue when using CHAR datatypes in TPT loads and exports.
Netezza, Greenplum, PDW	RED-4727	DB Link loads for Netezza, Greenplum and PDW now work via Scheduler.
Netezza, Greenplum, PDW	RED-4970	Corrected issue for jobs within jobs firing incorrect object via scheduler for repositories managing PDW, Netezza or Greenplum objects.
Netezza, Greenplum, PDW	RED-4976	Fixed issue with child jobs in scheduler for target objects in Netezza, Greenplum and PDW.
Greenplum	RED-4542	Data can now be exported from the Data Warehouse via a Windows or UNIX/Linux connection. Currently only file based exports are supported, not script based. Note: To process Greenplum exports via the Windows Scheduler, please ensure that the Windows Scheduler user has the all the necessary permissions including having the ssh host key saved. The UNIX scheduler is currently not supported for Greenplum exports.
Greenplum	RED-4575	Corrected view name referencing on Greenplum to use schema name encapsulation.
Greenplum	RED-4898	Changed all Greenplum view create/recreate to perform a drop/create as the "create or replace" syntax of Greenplum does not support most changes to views such as column or view name changes.

PDW	RED-4461	Tables stored in a PDW database can now be exported to a Windows connection using sqlcmd. Both file and script-based exports are supported. Note: The -I option must be specified when accessing PDW with the SQL Server 2012 client tools; this option is added to the export options by default for PDW exports. Also note that the summary line (x rows affected) cannot be suppressed when exporting from PDW; A post-export procedure or a customized script should be used to remove this if necessary.
PDW	RED-4637	Corrected Template default directory setting to include trailing \.
PDW	RED-4839	Updated code templates for PDW to resolve issue of line length exception with multi key business columns.
PDW	RED-4849	Support in PDW template for NULLs in type 2 columns.
PDW	RED-4895	Corrected Fact Code generation for dimension columns having incorrect source (dimension table not stage as per prejoin).
PDW	RED-4945	Changes to PDW CTAS Union template to correct update of type 1 columns on multi business key type 2 objects.
PDW	RED-4947	The "Upsert" load mode is now available for Integration Services loads into PDW tables.
PDW	RED-5250	Altered binding of return value for procedures executed via scheduler to cater for issues with PDW.
PDW	RED-5292	Changes to PDW logic to ensure using correct DB when accessing object information.

WhereScape®

SIGNIFICANT NEW FEATURES - PREVIOUS VERSIONS

IN THIS CHAPTER

Significant New Features 6.8.2.0 49
Significant New Features 6.8.1.0 60
Significant New Features 6.7.5.0 65
Significant New Features 6.7.2.0 67
Significant New Features 6.7.1.0 69
Significant New Features Version 6 71

SIGNIFICANT NEW FEATURES 6.8.2.0

1. Multi Schema support for SQL Server and Oracle: object placement enabled across multiple schemas, using a similar method to Target objects.
2. RED for Teradata now supports use of non identity columns on artificial key column generation for Data Store, Normalized, Normal, Slowly Changing and Ranged Dimension objects.
3. Support for adding a dss_create_time column for Stage, Data Store, Normalized, Dimension Fact and Aggregate objects from the Tools/Options menu.
4. More intuitive procedure generation dialogs that direct users to highlighted sections where mandatory fields must be filled in.

RED 6.8.2.0 - MULTI SCHEMA SUPPORT FOR ORACLE AND SQL SERVER

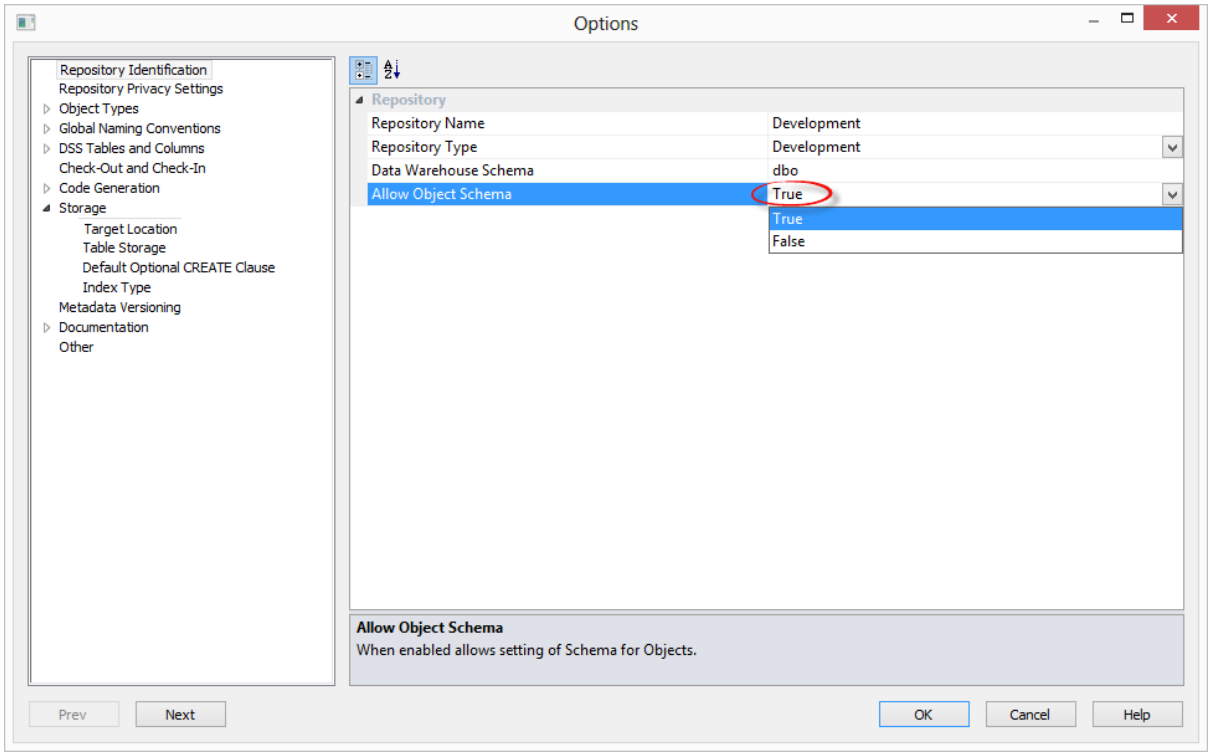
Version 6.8.2.0 of WhereScape RED introduces a new feature which allows objects to be placed across multiple schemas on both Oracle and SQL Server databases.
Before creating any tables using an Oracle source, the RED user needs to be granted a set of specific privileges. In SQL Server, the specific shemas will need to be created in the SQL database.
The required Oracle privileges and SQL Server schema instructions are described at the end of the schema highlights section.

The steps to use schemas in WhereScape RED are:

- Ensure the **Schema** you need exists in Oracle or SQL Server. Create any schema that does not exist.
- Enable **Schema** use in RED by switching on the **Allow Object Schema** in the RED options.
- Add one **Target** to the Data Warehouse connection in RED for each **Schema** you intend to use.
- Configure the Data Warehouse connection in RED to browse all required schema by default.
- Set the default **Target** for **load tables** in the RED options.
- When defining a new table in RED, check and ensure the correct target is set on the **storage** tab.

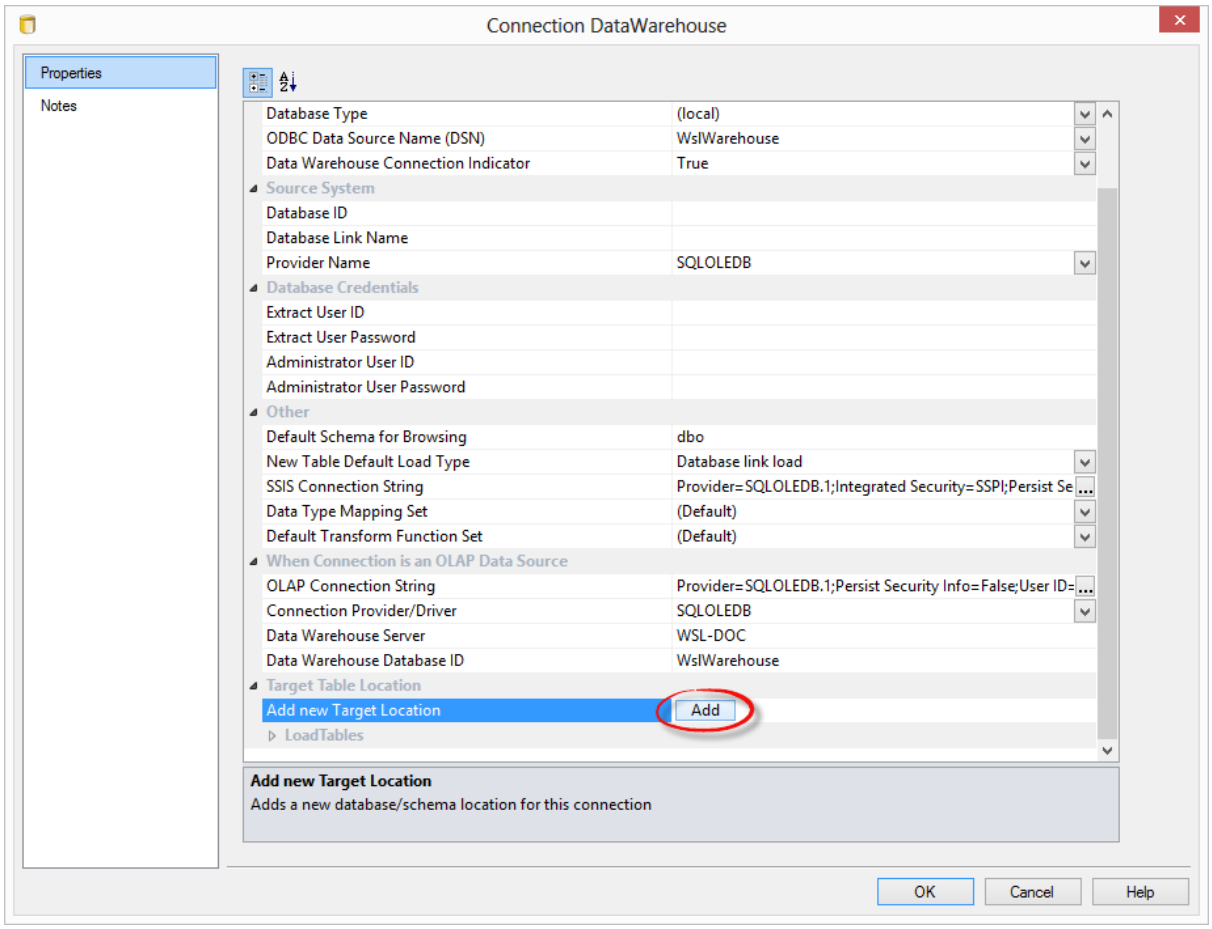
Schema Highlights in WhereScape RED:

1 After logging in to WhereScape RED, make sure the **Allow object Schema** option is set in the **Tools->Options->Repository Identification** settings.

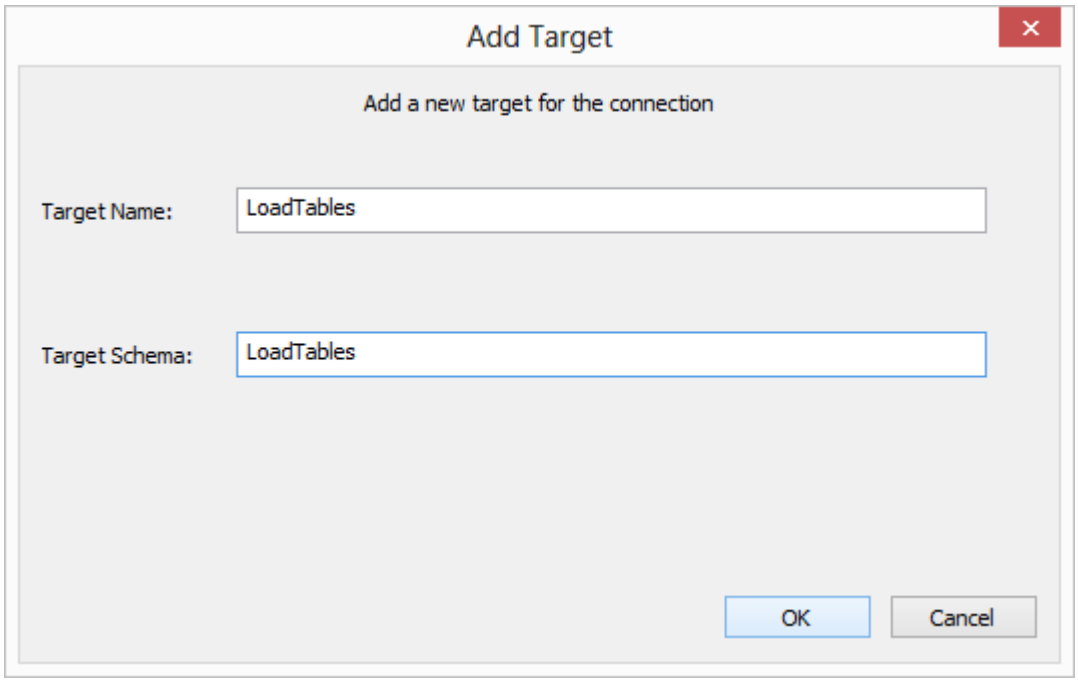


2 Add one Target to the Data Warehouse connection in RED for each Schema you want to use:

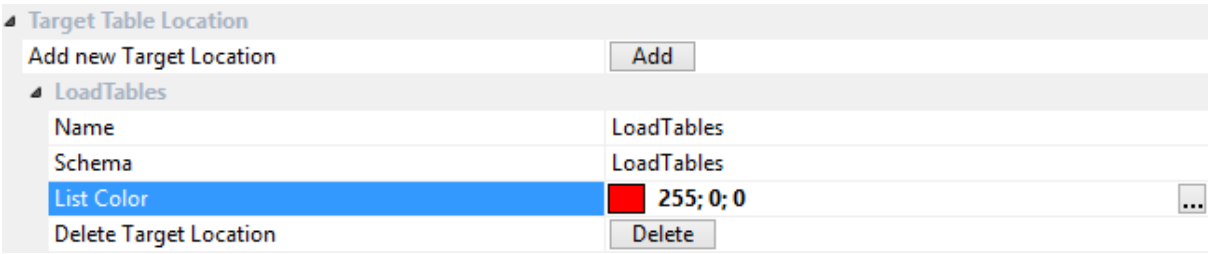
- Click the **Add** button to add the required target schemas for this connection.



3 Give the new target a name and then enter the target's schema. It is best to set the target name to the same name as the schema.

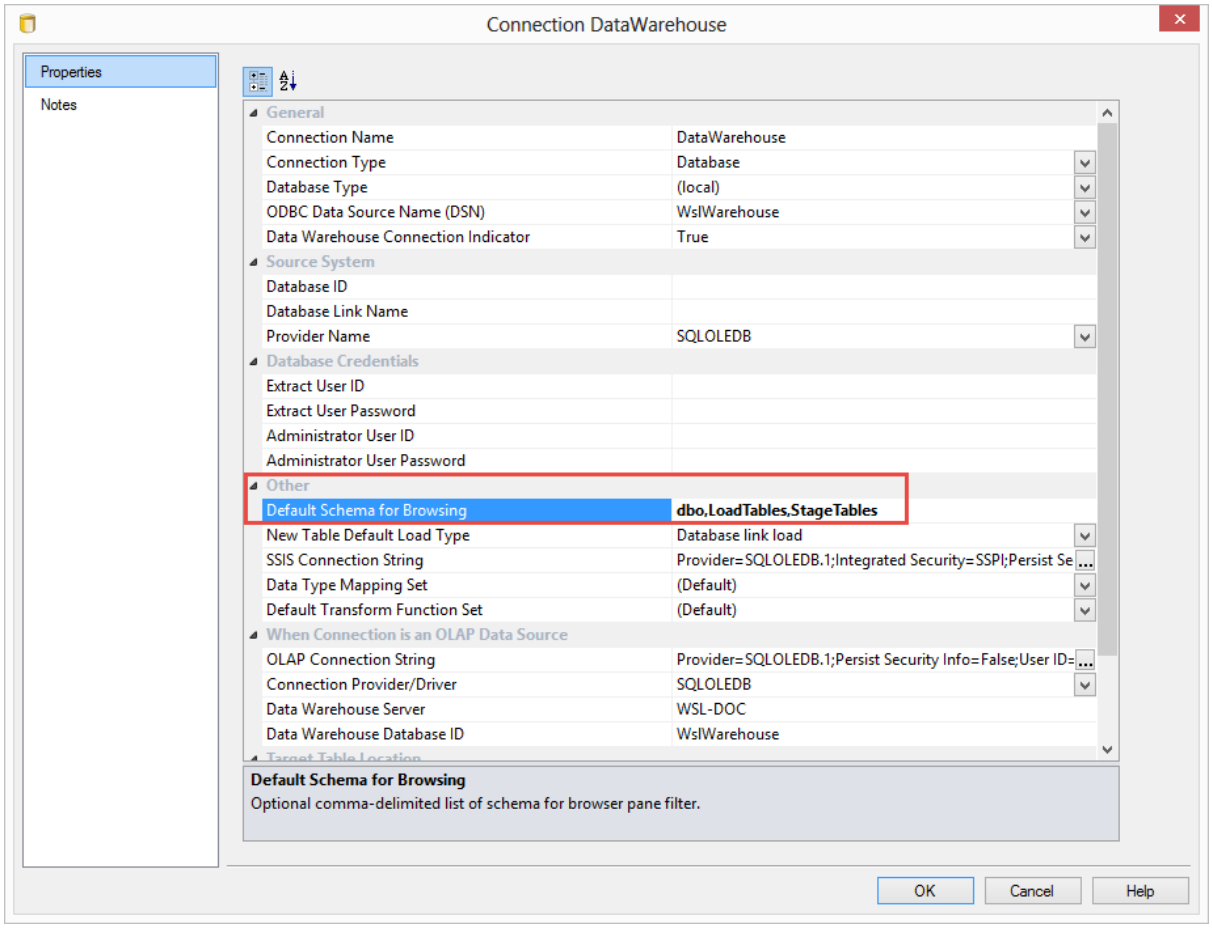


4 Expand the target locations to change schema colors or to delete schemas.



5 Still in the DataWarehouse connection, add the new schemas to the **Default Schema for Browsing** field separated by commas.

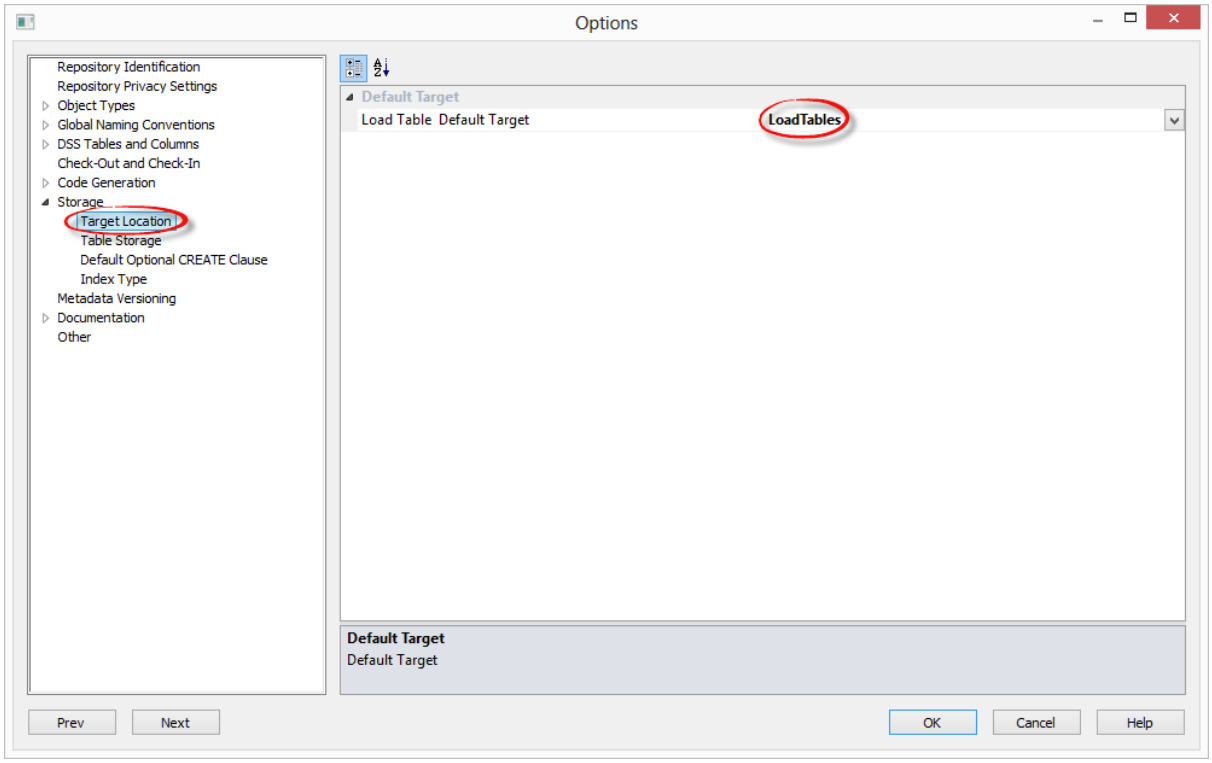
- While browsing this connection, RED will then display a list with all the schemas and their associated objects on the right-hand browser pane.



NOTE: In **SQL Server**, you will probably also want to include dbo in this list. Similarly, in **Oracle** you will probably also want to include the metadata schema.

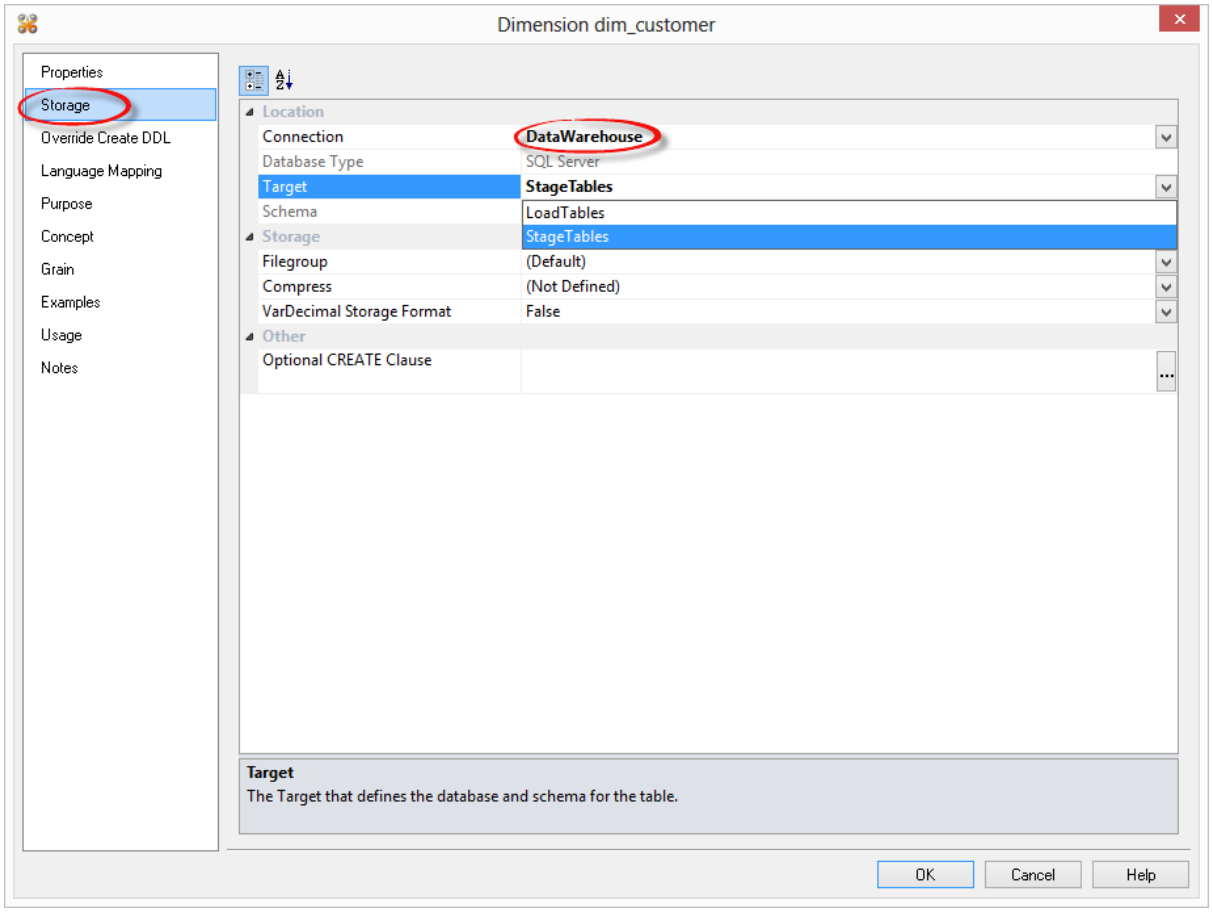
6 You are also able to set the default location for new **Load Tables** in **Tools/Options**.

- This default target location is only applied when a new load table is created.



7 When defining a new table in RED, check and ensure the correct target is set on the **storage** tab before creating the table in the database.
A new Load table will have a Target value set by default as defined in step 6. You're able to change this as required on each table using the **Storage** tab of each object's Properties screen. When using drag and drop, other object types will inherit the default Target value of the object you create them from. You are also able to change this as required on each table using the **Storage** tab of each object's Properties screen.

- To locate tables in different schemas, select **DataWarehouse** from the drop-down menu and then select the **Target** schema from the target drop-down menu.
- Alternatively, leave this field blank or select (local) for a local table.



WARNING: By default objects will be placed in the source table's schema for table types other than Load tables.

NOTE: When upgrading from a RED version previous to 6.8.2.0 and moving existing objects to a target location, all procedures that reference those objects will need to be rebuilt.
Any **FROM** clauses will also need to be manually regenerated in order for the table references to be updated to the new [TABLEOWNER] form.

8 To create any of these objects in RED, the RED user will need to be granted a specific set of privileges in Oracle. For SQL Server, the specific schemas will need to be created in the SQL database.

9 SQL Server

- To use object placement across multiple schemas, the required schemas need to be created in the SQL database.

10 Oracle

- To use object placement across multiple schemas in WhereScape RED, the RED user should be granted the following privileges:

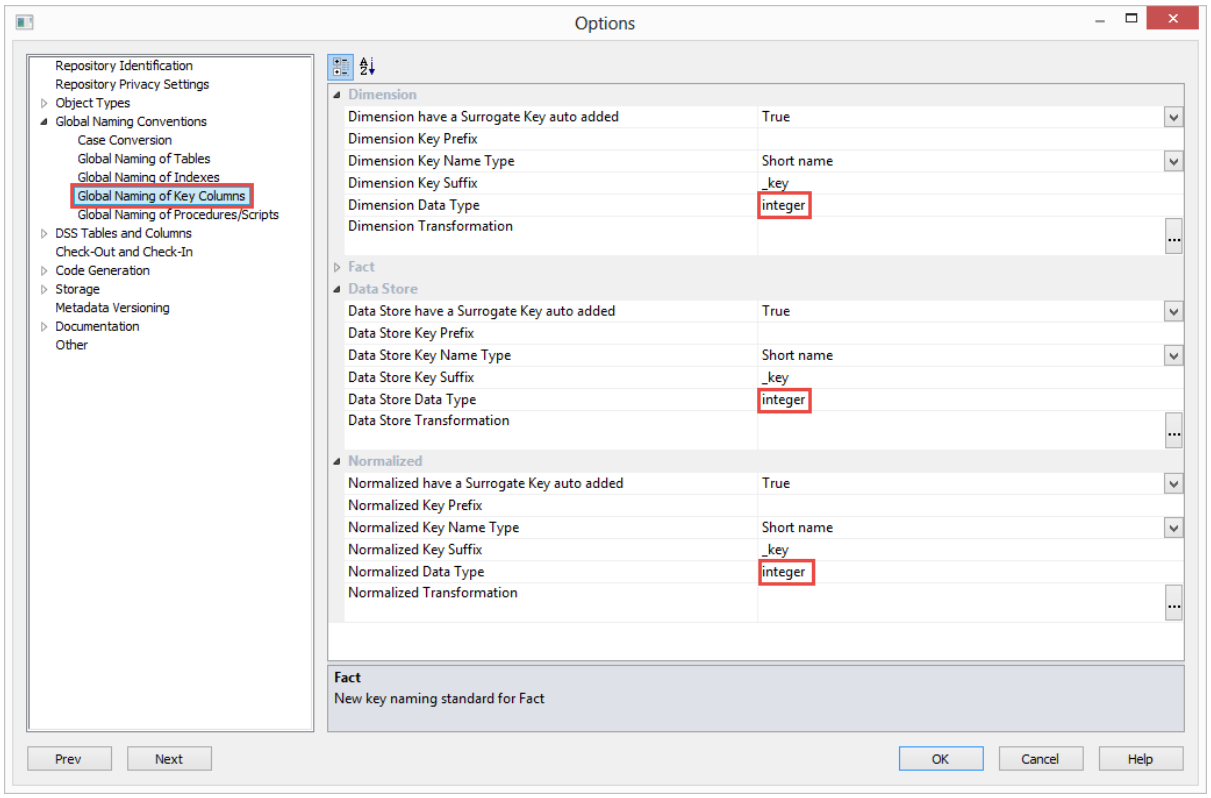
```
grant select any table to dssdemo;
grant create any view to dssdemo;
grant drop any view to dssdemo;
grant create any table to dssdemo;
grant drop any table to dssdemo;
grant delete any table to dssdemo;
grant insert any table to dssdemo;
grant update any table to dssdemo;
grant alter any table to dssdemo;
grant global query rewrite to dssdemo;
grant create any materialized view to dssdemo;
grant drop any materialized view to dssdemo;
grant alter any materialized view to dssdemo;
grant create any index to dssdemo;
grant drop any index to dssdemo;
grant alter any index to dssdemo;
grant select any sequence to dssdemo;
grant create any sequence to dssdemo;
grant drop any sequence to dssdemo;
grant alter any sequence to dssdemo;
grant analyze any to dssdemo;
```

RED 6.8.2.0 - SUPPORT FOR USE OF NON IDENTITY COLUMNS ON ARTIFICIAL KEY COLUMN GENERATION ON RED FOR TERADATA

RED for Teradata now supports use of non identity columns on artificial key column generation for **Data Store, Normalized, Model, History, Normal, Slowly Changing,** and **Date Ranged Dimension** objects.
The generation of the update procedure will automatically add logic to the code which will associate a sequential number to the artificial key of the objects when a new row is inserted into the required table.
The order of these sequential numbers is determined by the business key of the source table and the value of the first newly inserted artificial key will be the value of the highest artificial key in the dimension table plus 1.
This automatically generated logic can be overwritten by defining a user specific logic in the object's **Transformation** field on the **Tools/Options** menu or in the transformation column of the artificial key.
To have one of these objects with a non identity column as a surrogate key, that object's **Data Type** can be set to to **integer** in the Tools/Options menu.
The old logic can also be retained if an identity column is chosen as surrogate key.

Highlights for allowing non identity surrogate keys on objects:

- Go to Tools -> Options -> Global Naming Conventions -> Global Name of Key Columns.
- Set the desired object's **Data Type** to be **integer** and click **OK**.
- If your tables had been created previously, you will have to **Recreate** the tables after you set this option in the Tools menu.



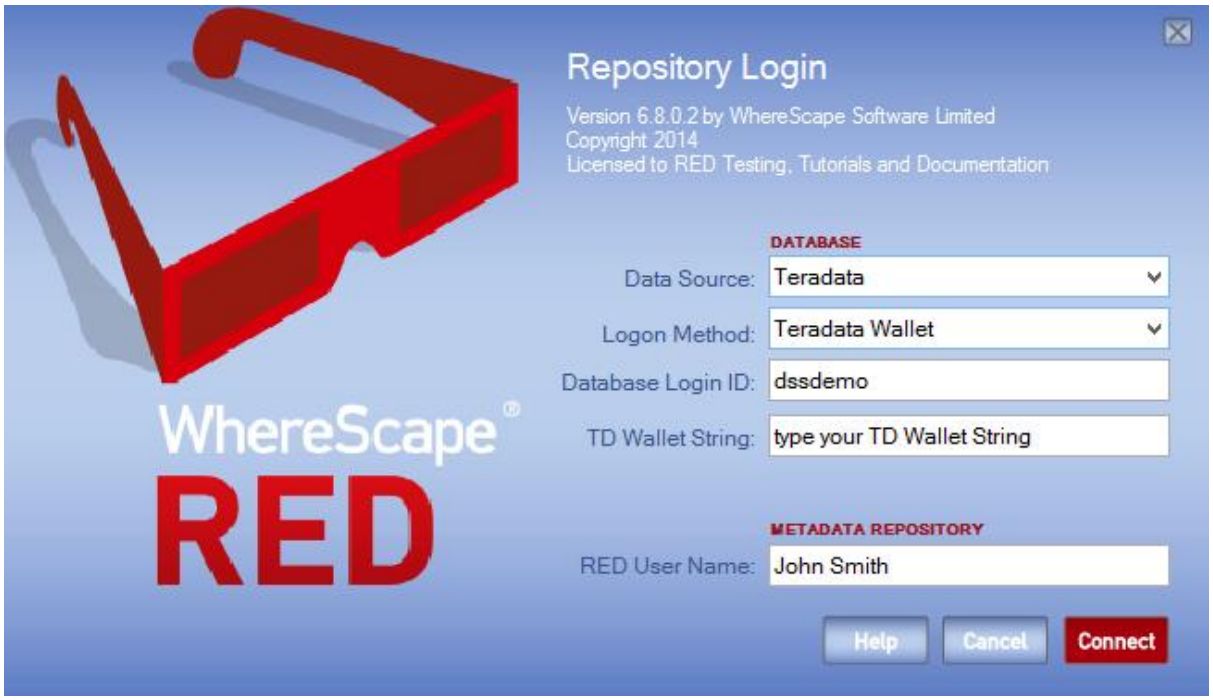
SIGNIFICANT NEW FEATURES 6.8.1.0

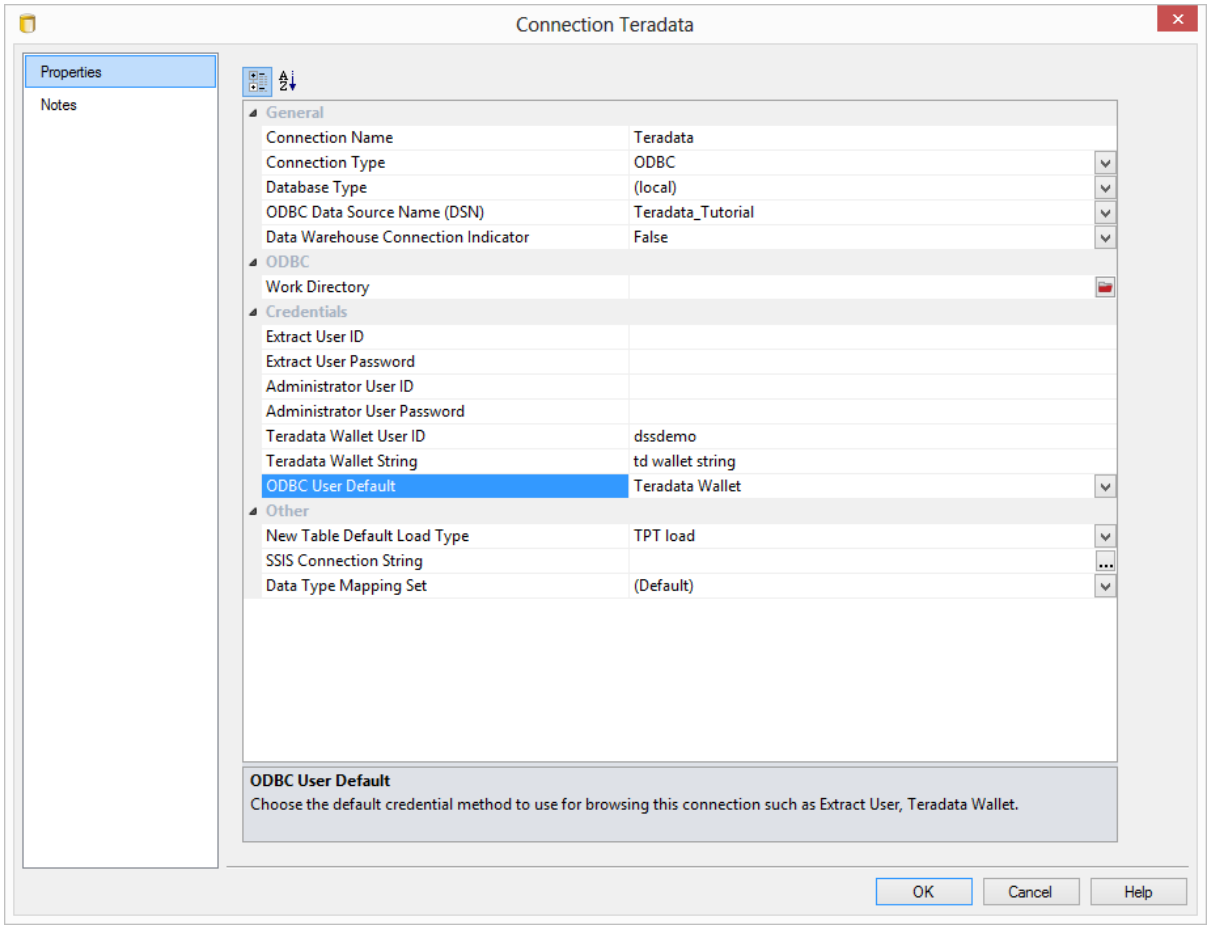
1. Support for Teradata Wallet - ODBC and TPT loading.
2. Teradata Linux TPT Exports.
3. Username and Password security enhancements including encryption of credentials within the metadata database.
4. Support for Oracle 12c.
5. Support for SQL Server 2014.

1. SUPPORT FOR TERADATA WALLET - ODBC AND TPT LOADING

WhereScapeRED now supports the Teradata Wallet Logon Method using a **Teradata Wallet String** for logging in to RED.

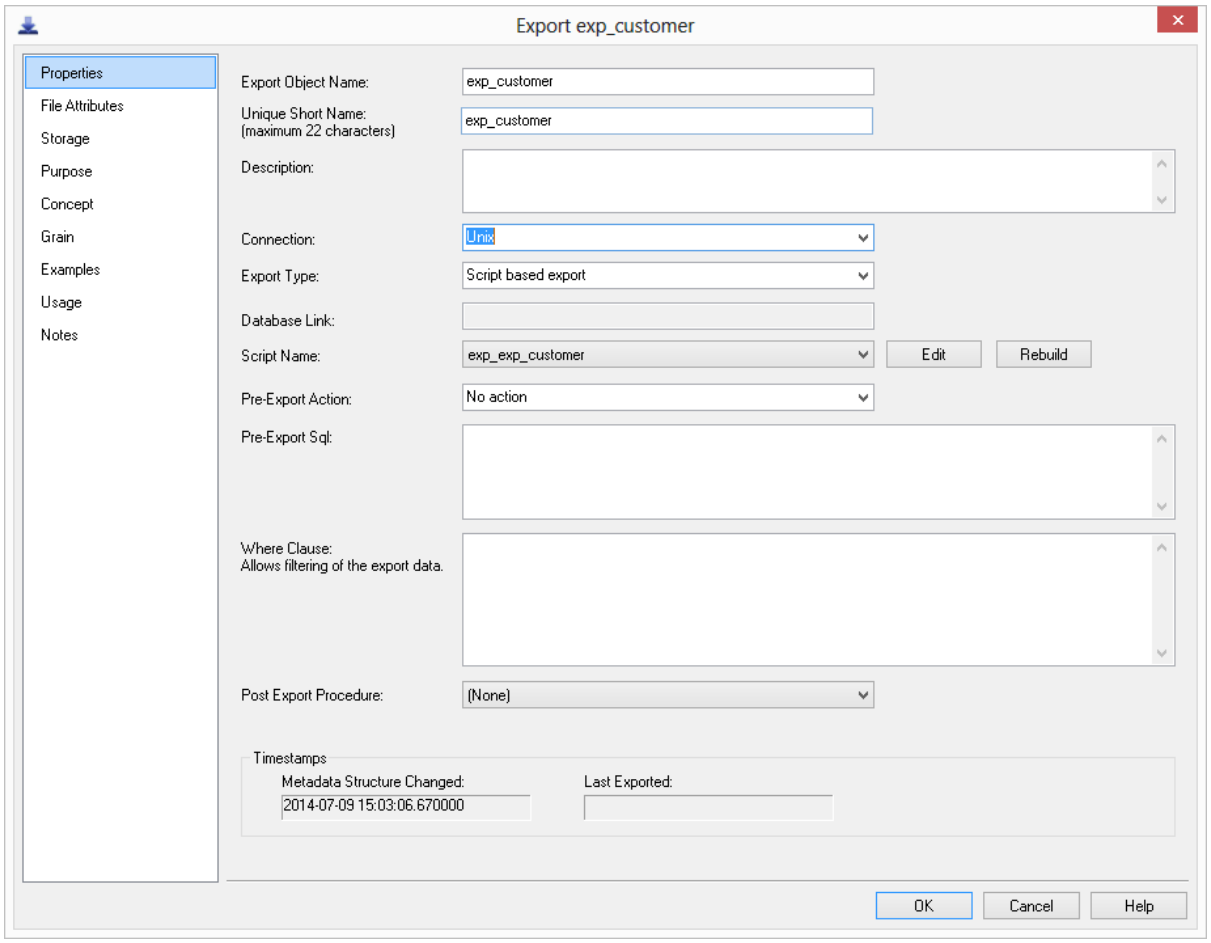
Significant changes were made to the connection properties to better support the Teradata Wallet logon method.




Connection Teradata
Properties
Notes
General
Connection Name
Teradata
Connection Type
ODBC
Database Type
(local)
ODBC Data Source Name (DSN)
Teradata_Tutorial
Data Warehouse Connection Indicator
False
ODBC
Work Directory
Credentials
Extract User ID
Extract User Password
Administrator User ID
Administrator User Password
Teradata Wallet User ID
dssdemo
Teradata Wallet String
td wallet string
ODBC User Default
Teradata Wallet
Other
New Table Default Load Type
TPT load
SSIS Connection String
Data Type Mapping Set
(Default)
ODBC User Default
Choose the default credential method to use for browsing this connection such as Extract User, Teradata Wallet.
OK
Cancel
Help

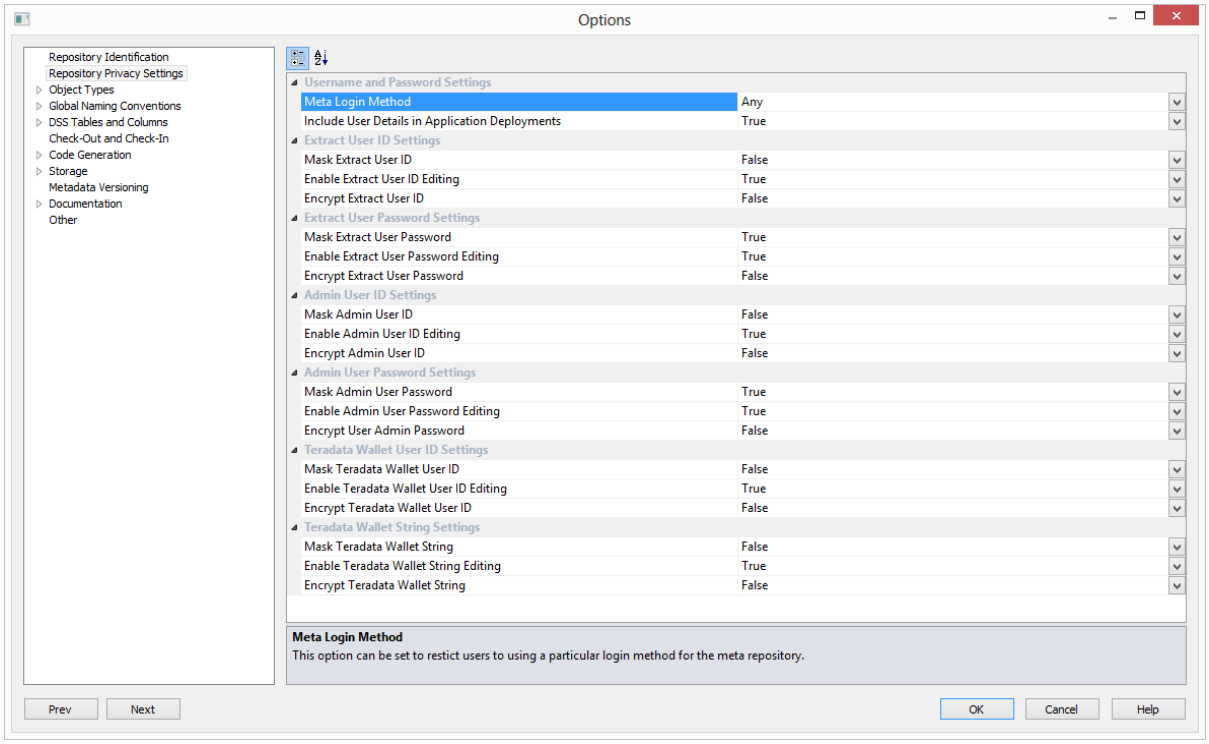
2. TERADATA UNIX/LINUX TPT EXPORTS

WhereScape RED now allows the exporting of objects via **Unix/Linux** using the TPT Data Connector.



3. USERNAME AND PASSWORD SECURITY ENHANCEMENTS INCLUDING ENCRYPTION OF CREDENTIALS WITHIN THE METADATA DATABASE

New **Repository Privacy Settings options** can now be configured from the **Tools/Options** menu:



Username and Password Settings

- **Meta Login Method** - This option can be set to restrict users to using a particular login method for the meta repository
- **Include User Details in Application Deployments** - Includes or excludes User Details in Application Deployment packages

Extract User ID Settings

- **Mask Extract User ID** - Masks the input of the "Extract/Unix/Windows User ID" on the connection properties
- **Enable Extract User ID Editing** - Allows editing the "Extract/Unix/Windows User ID" via the connection properties
- **Encrypt Extract User ID** - Encrypts "Extract/Unix/Windows User ID" in the meta repository using WhereScape encryption

Extract User ID Settings

- **Mask Extract User Password** - Masks the input of the "Extract/Unix/Windows User Password" on the connection properties
- **Enable Extract User Password Editing** - Allows editing "Extract/Unix/Windows User Password" via the connection properties

- **Encrypt Extract User Password** - Encrypts "Extract/Unix/Windows User Password" in the meta repository using WhereScape encryption

Admin User ID Settings

- **Mask Admin User ID** - Masks the input of the "Admin/DSS User ID" on the connection properties
- **Enable Admin User ID Editing** - Allows editing the "Admin/DSS User ID" via the connection properties
- **Encrypt Admin User ID** - Encrypts "Admin/DSS User ID" in the meta repository using WhereScape encryption

Admin User Password Settings

- **Mask Admin User ID** - Masks the input of the "Admin/DSS User ID" on the connection properties
- **Enable Admin User ID Editing** - Allows editing the "Admin/DSS User ID" via the connection properties
- **Encrypt Admin User ID** - Encrypts "Admin/DSS User ID" in the meta repository using WhereScape encryption

Teradata Wallet User ID Settings

- **Mask Teradata Wallet User ID** - Masks the input of the "Teradata Wallet User ID" on the connection properties
- **Enable Teradata Wallet User ID Editing** - Allows editing the "Teradata Wallet User ID" via the connection properties
- **Encrypt Teradata Wallet User ID** - Encrypts the "Teradata Wallet User ID" in the meta repository using WhereScape encryption

Teradata Wallet String Settings

- **Mask Teradata Wallet String** - Masks the input of the "Teradata Wallet String" on the connection properties
- **Enable Teradata Wallet String Editing** - Allows editing the "Teradata Wallet String" via the connection properties
- **Encrypt Teradata Wallet String** - Encrypts the "Teradata Wallet String" in the meta repository using WhereScape encryption

All these options are configurable from the Tools/Options menu, so in order to have a secure environment, WhereScape advises that a database administrator changes the permissions on table *ws_meta_admin table* to read-only after he has made the appropriate changes to the settings in the Toos/Options menu in WhereScape RED.

Changing this set of permissions to read-only is something which occurs outside of WhereScape RED and will be dependent on the specific metadata database.

SIGNIFICANT NEW FEATURES 6.7.5.0

1. WhereScape RED now supports Teradata 15 as a data warehouse database.
2. New property grid for Data Store/Normalized object procedure build.
3. RED now supports clustered ColumnStore indexes on SQL Server 2014.
4. Options for export to CSV such as for job detail/reports now use the configurable options in user preferences/output to determine the format of the output file.

SIGNIFICANT NEW FEATURES 6.7.2.0

1. Teradata procedures for most objects now include an additional option/method for change identification.
2. A new context menu option is available for load tables: Validate for Reserved Words.
3. TPT loads now support the setting of memory size.
4. TPT loads now support the setting of producer and consumer instances.
5. Tools / Options dialog now has buttons to navigate between option groups.
6. New menu options (in Edit Menu) to output 'middle pane' data to either file or clipboard.
7. New context menu to enable the copying of columns from one table to another, replicating the drag/drop functionality.

SIGNIFICANT NEW FEATURES 6.7.1.0

1. Connection Properties has been redesigned as a Property Grid to facilitate future extensions.
2. SSIS connection editing now uses Microsoft standard dialog to build the connection string if nothing is currently set.
3. New option added to context menus to create a duplicate copy of a meta object.
4. Enabled setting to auto add of artificial/surrogate key when drag/drop to create a new Data Store/Normalized object.
5. Merge update options now enabled for Teradata set based update code generation.
6. Character Set specification is now enabled for Teradata column definitions.
7. Linux scripts can now be generated for TPT ODBC loads on Teradata.
8. Native ODBC loads now have the option available to write extract detail (row_count) parameter for each load table.
9. List of functions in the column transformation dialog can be edited by the user. Additional sets can be loaded and exported.
10. New look - Storage tab.
11. Column Properties screens have been reconfigured to improve ease of use and consistency.
12. Revised Load Table Source Mapping dialog.
13. Enable configuration of True/False values.
14. Updates to Teradata retrofit functionality.

SIGNIFICANT NEW FEATURES VERSION 6

Significant New Features 6.6.2.0

1. Enabled ODBC Attributes for TPT ODBC Loads.
2. Teradata file loads now provide an option to specify the character set of the file being loaded.
3. Beta Support of Linux Script generation for File loads.

Significant New Features 6.6.3.0

1. New column context menu option added that enables bulk changes to selected attributes including source table, data type, nulls etc.
2. Significant changes have been implemented for the selection of diagrams to display.

WhereScape®

INDEX

D

Detailed list of changes for RED 6.8.4.0 39

R

RED 6.8.2.0 - Multi Schema Support for Oracle and SQL Server 51
RED 6.8.2.0 - Support for use of non identity columns on artificial key column generation on RED for Teradata 59
RED 6.8.4.0 - Greenplum Exports 34
RED 6.8.4.0 - New Oracle multiple user login method enabled for the RED repository 9
RED 6.8.4.0 - Oracle Loads from Hadoop - UNIX/Linux script based via OSCH (Oracle SQL Connector for HDFS) and OLH (Oracle Loader for Hadoop) 4
RED 6.8.4.0 - SQL Server Integration Services (SSIS) as load method for Flat Files from Windows connections 13
RED 6.8.4.0 - SQL Server Integration Services (SSIS) Exports 31
RED 6.8.4.0 - SQL Server Integration Services (SSIS) loads enabled for Teradata 23
RED 6.8.4.0 - Teradata TPT Loads from Hadoop - UNIX/Linux script based 7

S

Significant New Features - Previous Versions 47
Significant New Features 6.7.1.0 69
Significant New Features 6.7.2.0 67
Significant New Features 6.7.5.0 65
Significant New Features 6.8.1.0 60
Significant New Features 6.8.2.0 49
Significant New Features RED 6.8.4.0 3
Significant New Features Version 6 71

W

WhereScape RED 6.8.4.0 June Release Update 1