



# WhereScape RED 9.0.2.4

**Release Notes** 

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WhereScape is pleased to announce that WhereScape RED 9.0.2.4 is now available.

This release of RED is compatible with WhereScape 3D 9.0 versions and up.



### Note

Before upgrading, review the Important Messages when Upgrading for more information.

Go to <a href="https://www1.wherescape.com">https://www1.wherescape.com</a> to see available product versions and release notes for older versions.

Log into the WhereScape Support Portal to access downloads.

## New Features and Improvements in RED 9.0.2.0

This version RED 9.0.2.4 adds accumulated fixes to the RED 9.0 product line. See the detailed changes section for the full list.

### RedCli

- Added support for the 3D Integration feature Merge Settings for Source Mappings
- Added support for merging single sourced table from 3D to an existing multi-sourced table in RED
- Improved RedCli license install with accept-eula functionality for silent installations and configuration

### Windows Scheduler

Fixed issue where execution of scripts would return false negatives when the error-stream is
not empty but the return code signaled a success. Please follow the general upgrade steps
for the Windows Scheduler if you were affected by this issue.

## Other Improvements

- RED SQL Admin query tool 'dba.exe' is now Advanced Connect aware enabling seamless authentication when launching from RED Connections that utilize Advanced Connect ODBC connection stings.
- Upgraded multiple 3rd Party component libraries to address reported vulnerabilities in them.

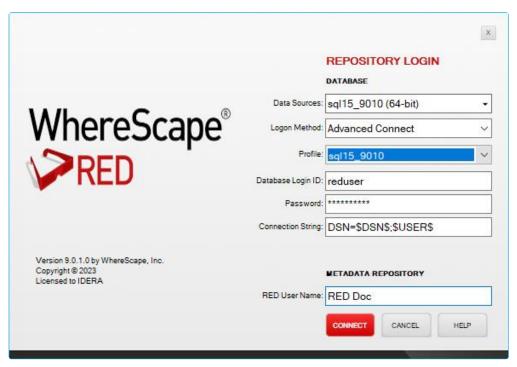
## New Features and Improvements in RED 9.0.1.0

WhereScape presents RED 9.0 a new version of RED with new capabilities and features to enhance the user experience. This version includes Advanced Authentication Methods, an improved 3D Integration for Source Mapping Objects, and increased DDL Limits. In addition, over 50 customer-requested improvements and fixes are included in this release.

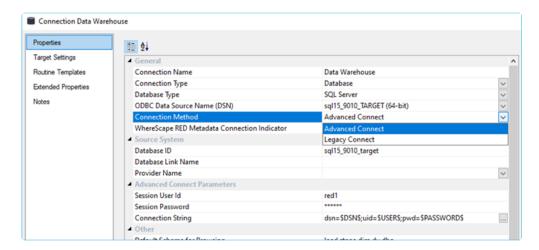
### Advanced Authentication Methods

The Advanced Connect feature provides a new way to manage connection security and modify ODBC connection attributes in RED enabling a wide variety of authentication mechanisms for your metadata, source, and target connections. This feature combines session-based authentication, complete control over ODBC connection strings, and secure encrypted storage of passwords.

Advanced Connect is enabled through the properties screen of connections, once enabled a connection string must be defined which will be used when establishing a connection. RED Login Screen showing the new Logon Method:



RED Connection Properties Screen showing the new Connection Method:



This feature is designed with security in mind and adds even more ways for enterprises to secure their metadata, sources, and targets for a wide variety of authentication methods such as OAuth, Azure Active Directory, and multifactor authentication (depending on vendor driver capabilities). Please see the User and Installation Guides for more details.

This feature is only available for SQL/Azure SQL targets and Enablement Pack target platforms, refer to your specific Enablement Pack platform on the WhereScape downloads page for compatibility.

## 3D Integration - New Merge Settings for Source Mappings

When deploying Objects with multiple Source Mappings via 3D Export to RED you can now control the merge behavior when updating existing Objects Source Mapping Sets. There is now a new option with three settings when deploying from 3D to RED.

Option: 'Existing Source Mapping Sets will be'

- Replaced: [Default] Replaces the entire Source Mapping Set (Source Mappings can be removed in this mode)
- **Merged using Application:** Merges the Sets, resolving conflicts by deploying Source Mappings from this Application Add and Update.
- Merged using Repository: Merges the Sets, resolving conflicts by retaining Source Mappings in the Repository - Add only.

This feature will be particularly useful to organizations with multiple development teams or projects affecting the same objects in RED, allowing them to deploy only the new Source Mappings that they have added and avoid deploying out-of-date changes to existing Source Mappings.

## Stand-alone Script Improvements

Stand-alone Windows scripts can now be associated with Database/ODBC and Extensible Source Connections providing access to the associated connection settings and Credentials in your scripts.

This feature is particularly useful for "High Water Mark" scripts that require access to target connection properties. When combined with Advanced Connect this provides a secure way to run scripts directly against source and target connections in RED. Previously you could only associate a Windows connection to a script.

### Other Improvements

### **Added Support**

- Windows Server 2022
- MS SQL Server 2022

#### **Increased Limits**

- Increased DDL size limit to 64,000 chars for Tables and Views for RED on SQL metadata.
- You can now export Where Clauses up to 12000 chars from 3D to RED.

### **DevOps**

- RedCli now allows you to accept the EULA with the license install command.
- Improved options and template import commands in RedCli.

#### **Platforms**

- You can now override the default 'Table Exists Check SQL' which can improve performance on some target platforms.
- Extended Property scopes are now configurable for all database and connection types.

### Components

- The Java components in the RED installation have moved from Oracle JDK 8 to Open JDK 11.
- The Pebble template engine version has been upgraded.

### **Over 50 improvements**

This release includes 50+ improvements and accumulated customer-requested fixes since the previous release. Please refer to the detailed changes section below.

# Important Messages when Upgrading from Earlier Versions

When **Upgrading** from previous major versions of RED (a change in the first two version numbers), it is necessary to update each RED metadata repository to complete the upgrade. This is done by completing a **validation and recompile of all metadata procedures** in WhereScape Setup Administrator.



Upgrades between minor versions (a change in the last two version numbers) normally only contain application improvements so do not require a metadata repository upgrade unless specially stated.



If upgrading from a previous version:

- Please ensure you also upgrade the WhereScape scheduler at the same time. Details for this process are outlined in the WhereScape RED Installation Guide—Upgrading WhereScape RED and Scheduler Installation and Configuration sections.
- 2. Please review and action all the previous version-specific **Important Messages** below, that are relevant for your RED Upgrade.

## Important Message when upgrading to 9.0.2.x from 9.0.1.x

• Upgrade the RED application and RED Windows Schedulers

# Important Message when upgrading to 9.0 Product line from 8.x or earlier

 Major release change, upgrade all; RED application, RED Windows Schedulers, and the RED Metadata

## Important Message when upgrading from 8.6.1.2

• You must reenter any encrypted field values in your existing Extensible Source Connections when using this release for the first time.

### Important Messages when upgrading from 8.2.1.1 or earlier

• A new metadata service attribute for the DSN architecture has been added in the RED 8.3.1.0 release. Any existing templates that include authentication to the RED repository must be updated to include this attribute if the RED repository is migrated to a 64-bit ODBC DSN (if the attribute is not defined, then a 32-bit architecture is assumed).

For example: [WslMetadataServiceClient.Architecture]::\_64bit

• The **Unix** and **Linux Scheduler scripts for Oracle and Teradata** have been altered and need to be applied manually.

## Important Messages when upgrading from 8.1.1.0 or earlier

- Teradata customers upgrading from RED versions before RED 8.0.1.0 please be aware that later versions of Setup Administrator have functionality to test the RED metadata tables' primary indexes. When suboptimal primary indexes are detected Setup Administrator creates a copy of the affected table with the recommended primary index, copies the data to the new table, and finally removes the old table. Please note that sufficient free space in the metadata database is required to temporarily duplicate the largest metadata table that requires migration. Also, any custom statistics on these tables will need to be reapplied.
- WhereScape from the RED 8.2.1.1 version has added certification for the following metadata and target databases:
  - o Oracle 12C Release 2
  - o Teradata 16.20
  - Microsoft SQL Server 2017
- Cube and Cube Virtual objects are to be deprecated in a subsequent release. Cube objects must be migrated to OLAP Cube objects.
- Microsoft is deprecating support for their Microsoft OLE Driver for Oracle. WhereScape recommends that customers currently using this software migrate to the Oracle OLE Driver.
- WhereScape recommends that you use an Oracle or SQL Server metadata repository and the Windows Scheduler if you wish to use Custom database targets.
- WhereScape wishes to advise customers that work is underway to migrate RED to a 64-bit application over the next 12 months. While the transition is planned to minimize the impact on customers, there may be a requirement to transition to 64-bit ODBC data sources, as part of the upgrade path for this future release of WhereScape RED. No changes are required in the interim. More details will be made available closer to the time the work is completed.

### Important Messages when upgrading from 8.0.1.0 or earlier

- SQL Server customers taking advantage of the multiple database support feature are
  recommended to apply three-part naming in their references to SQL Server tables. For
  example, in a custom procedure please refer to a data warehouse table using the format
  <database name>.<schema name>.. This will offset the impact of different
  users or machines having different default database set.
- Customers using custom database targets to support RedShift or Snowflake are advised to contact their WhereScape representative for information on taking advantage of RED's enhanced custom database support features.
- The Data Vault hash key functions for Teradata and Oracle repositories have been changed in the templates (wsl\_teradata\_utility\_dv and wsl\_oracle\_utility\_dv). Data Vault customers running on Teradata or Oracle who were using these templates from the RED 6.9.1.0 release are advised to retain that version of the template unless they migrate any key generated using the previous hash key function.
- The Windows and the UNIX/Linux generated Load and Export scripts for Teradata have been
  updated to use the new environment variables for identifying the TDPID, the user name and
  the password to connect to the metadata repository, the target database and the source
  database for Loads and Exports. Please refer to the section Script Environment Variables of
  the WhereScape RED User Guide for more information.

### Important Messages when upgrading from 6.9.1.0 or earlier

• The Linux Scheduler scripts for Oracle, Teradata, and DB2 have been altered and will need to be applied manually.

## Important Messages when upgrading from 6.8.7.0 or earlier

- In RED, File and Script-based loads from Windows connections create a format file for the BULK INSERT operation in the Work Directory of the Windows Connection. This only applies when loading into an SQL Server target. This directory must be accessible to both the machine running SQL Server and the machine running the WhereScape RED Scheduler. Unless these are always the same machine, a UNC path or mapped network path will be required.
- Legacy hub, link, and satellite objects, created in RED 6.8.7.0 or earlier are still supported in subsequent releases. However, they do not utilize the Data Vault enhancements introduced in release 6.9.1.0.

The following changes have been implemented since 8.6.6.3.

JIRA Ticket	Metadata Type	Description
Improveme	nts	
RED-9152	Common	The 'table' node in the template engine now correctly populates the source join settings from the Custom update routine generation.
RED-1021 0	Common	The Java components in the RED installation have moved from Oracle JDK 8 to Open JDK 11
RED-1080 1	SQL Server PostgreSQL	Increased DDL limit for User Defined Views.
RED-1102 0	Common	You can now export Where Clauses up to 12000 chars from 3D to RED.
RED-1114 2	Common	Improvements to DSS_LOAD_SOURCE transformation string when using Extensible Source Connections.
RED-1114 4	Common	Added a new scope to extend property visibility for Extensible Source Connections.
RED-1115 8	Common	You can now start RED with command line parameters to automatically populate login screen.
RED-1117 6	Common	RedCli can now be forced to accept the license agreement for unattended installs.
RED-1124 4	Common	Relaxed licensed object checks for RedCli connection set-default template commands to reduce Enablement Pack installation complexity.
RED-1124 6	Common	Windows Scheduler will now report a failure when a script runs but returns no return status, commonly caused by virus scanning on the run directory.
RED-1124 8	Common	Added merge mode to application deployment for Source Mappings when deploying from WhereScape 3D.
RED-1125 4	Common	Extended Properties can now be scoped to any of the inbuilt database types regardless of license.
RED-1127 4	Common	Default Transform Function Set can now be set on all Target Connections individually.

RED-1130 2	Common	Changed default for 'SSIS Row Count Log' to 'off' for new SSIS Load table objects.
RED-1130 3	SQL Server	Stand-alone Windows scripts can now be associated with Database and Extensible Source Connections providing access to target settings and credentials.
RED-1131 4	SQL Server PostgreSQL	RedCli Template Import operations now default the database type to 'Custom' when not specified and cannot be derived.
RED-1131 5	Common	RedCli Template Import operations now also parse the database type from the template header for automatic assignment on import.
RED-1132 8	SQL Server PostgreSQL	Application deployment on SQL Server now checks for the required database user permissions before deployment begins.
RED-1133	Common	Added support for Windows Server 2022 and MS SQL Server 2022.
RED-1138 6	Teradata	Improved performance of object properties storage tab initialization on Teradata metadata repositories.
Issues		
RED-1142 8	Common	Pebble template engine updated to version 3.1.5.
RED-4861	SQL Server	Increased the limit of DDL size on SQL and PostgreSQL metadata from 16,000 to 64,000 chars.
RED-1004 9	Common	Fixed deployment issue from WhereScape 3D when column names containing 'XX' would have names modified during deployment.
RED-1064 0	Common	Resolved issue using StringUtils function in templates.
RED-1079 2	Common	Improved 3D Export of documentation subjects to RED.
RED-1081 9	SQL Server	When exporting from 3D to RED with Multi-Database SQL Targets the defaults of Target Connection are now honored for generated procedures storage location.
RED-1099 3	Teradata	Resolved LOCK TABLE FOR ACCESS statements issue on multi sourced Views in Teradata.
RED-1100 6	Common	Enhanced deployment options for generated indexes.

RED-1109 4	Common	Export Object Properties UI Improvements.
RED-1115 5	Common	Fixed a RED crash when browsing Extensible Source Connections in some conditions.
RED-1117	Common	Resolved issue with Source Mapping Maintenance not prompting to save source mapping changes in some scenarios.
RED-1117 4	Common	Fixed issues in Options Import where some settings were not being imported correctly.
RED-1118 9	Common	Fixed issue Deleting Views via Application Deployment on Custom Targets.
RED-1119	Common	Fixed crash when selecting a function to use while building reusable transformations.
RED-1119 5	SQL Server	Fixed truncation of export options for File Based Exports on SQL Server.
RED-1120 3	Common	Fixed an issue where you could not add a new dependency to the end in the dependency management screen.
RED-1121 0	Common	When exporting to RED from 3D all generated update routines are now correctly associated with the groups of the parent object.
RED-1125 1	Common	Fixed an issue where Documentation Generation could lead to application crash in some cases when using remote desktop software.
RED-1125 3	Common	Fixed issue in the script editor when saving script lines ending with a backslash character '\'.
RED-1125 9	Common	Fixed a 3D export to RED issue where complex table joins occasionally lead to a metadata insert error.
RED-1126 2	Common	Fixed issue with browsing Linux Connections, introduced in RED 8.6.6.0.
RED-1126 3	Teradata	Linux File Loads on Teradata could fail if the work directory did not have a trailing forward slash.
RED-1126 9	Common	Fixed a template issue with 3D export to RED when loading objects associated to Extensible Source Connections without any extensible attributes.
RED-1128 8	Common	Added RedCli set-default-template commands for Post Load Routine and Export Scripts.

RED-1131 7	Common	Fixed an issue with RedCli PowerShell install-module command.
RED-1131 8	Common	RedCli Options Export\Import improved.
RED-1137 0	Common	Fixed template evaluation issue in RED 8.6.6.0 in some cases.
RED-1137 9	Common	Fixed a file locking issue in the Scheduler when operations involving SQL Block execution were inheriting file locks from other tasks.
RED-1138 5	Custom	Provided a way to override the SQL for the Table Exists check for Objects on Custom Targets.
RED-1157 2	Common	Fixed RedCli deployment issue when deploying UI Config field values to existing objects.

The following changes have been implemented since 9.0.1.0.

JIRA Ticket	Metadata Type	Description
RED-1168 4	Common	Fixed performance issue with ODBC load via the Windows Scheduler introduced in RED 9.0.1.0
RED-1162 4	Common	Source tab fields are now transferred correctly from 3D export of Loads from Extensible Source Connections.
RED-1164 4	Common	Fixed issue with very wide tables where load script generation during deployment from 3D could fail.
RED-1157 0	Common	Fixed issue with Extensible Source Connection Scripted Browse workflow where the display name was used for schema name leading to insert failures.
RED-1162 1	SQL Server	Fixed Documentation Generation crash when Extensible Source Connections are included.
RED-1162 3	Common	Fixed an issue with 3D export to RED when using deployment setting 'Object Source Mapping Sets will be Merged' and extended properties.
RED-1164 2	SQL Server	Extensible Source Connections load scripts now set environment variables for Advanced Connect credentials via the Scheduler.
RED-1160 6	SQL Server	Extensible Source Connections load scripts now set environment variables for Advanced Connect credentials for interactive loads.
RED-1160 4	SQL Server	Extensible Source Connections now set environment variables for Advanced Connect credentials while browsing.
RED-1157	Common	Resolved deployment issue with UI Configuration values metadata leaving orphaned metadata rows.
RED-1161 0	Common	Resolved a RedCli deployment DML/DDL logging issue where view objects where not producing logs for Custom Targets.

The following changes have been implemented since 9.0.1.1.

JIRA Ticket	Metadata Type	Description
RED-1164 8	Common	Fixed issues with Source Mapping Set Merge mode in ADM.exe. Note: RedCli.exe doesn't have this feature yet.
RED-1159 6	Common	Fixed issue on List Source Mapping pane context menu, Source Mapping update routines can now be executed via the scheduler.
RED-1167 4	Common	Fixed "The specified connection could not be found" warning for operations on local storage objects affecting some repositories.

The following changes have been implemented since 9.0.1.2.

JIRA Ticket	Metadata Type	Description
RED-1169 4	Common	Extended Object Source Mapping Deployment Merge Mode feature to RedCli deployments.
RED-1178 5	Common	Updated vulnerable 3rd-party components.
RED-1031 3	Common	Resolved an issue where 3D deployment to RED was doubling single quotes in extended property values.
RED-1164 7	Common	The Maintain Hash Keys wizard now preserves the column position order of existing Hash Key columns.
RED-1168 1	Common	Resolved a deployment issue for source mapping objects with where clauses exceeding 4000 chars.
RED-1170 1	Common	Fixed an issue in drag'n'drop from data warehouse tables when source column datatypes contain quotes.
RED-1170 8	Common	Fixed accept-eula issue in redcli license installation
RED-1186 8	Common	Fixed issue where execution of scripts would return false negatives when the error- stream is not empty but the return code signaled a success.

The following changes have been implemented since 9.0.2.0.

JIRA Ticket	Metadata Type	Description
RED-11916	Common	Fixed a digital signing issue with 9.0.2.0 build on the RED installed exe's
RED-11806	Common	Fixed "Cannot retrieve default template" error after reverting a target connection from a version.
RED-11793	Common	You can now export a single-sourced table in 3D to an existing multi-sourced table in RED and have it added or merged.

The following changes have been implemented since 9.0.2.1.

JIRA Ticket	Metadata Type	Description
RED-11002	Common	Added a new User Preference to allow override of Template operation timeout.
RED-11800	Common	Added multi-select capability to the tree view controls in 'Project Object Maintenance' and 'Job Tasks Definitions' screen.
RED-11965	SQL Server	When saving an Advanced Connect Profile, 'Include Session Passwords' is now selected by default.
RED-11900	SQL Server	Updated the WslMetadataServiceClient.dll to work with the connection string arg.
RED-11650	Common	Fixed dialog label in Scheduler Refresh Settings.

The following changes have been implemented since 9.0.2.2.

JIRA Ticket	Metadata Type	Description
RED-12014	Common	Resolved a crash during Application Create in some repositories wherein certain view metadata could cause ODBC overflows.
RED-11994	Common	RedCli Deployments now transfer relationships metadata to RED from 3D exports.
RED-11974	Common	Fixed issue where interactive processing via scripts could fail with " <work_dir>contains an incorrect path" in some repositories.  NOTE: This fix also addressed RED-12070, a performance issue for interactive script execution on large repositories.</work_dir>
RED-11887	Common	Fixed issue with remapping Filegroups during application deployment with RedCli.
RED-11771	Common	Fixed a deployment issue from 3D affecting tables with multiple surrogate key joins, where only the first column's join metadata was populating.
RED-11759	Common	Updated the built in Java JRE version to OpenJDK 11.0.25.

The following changes have been implemented since 9.0.2.3.

JIRA Ticket	Metadata Type	Description
RED-12287	Common	Increased the UID and PWD field lengths for Legacy Connect connections to suit programmatic access token requirements.
RED-11533	Common	RED SQL Admin query tool 'dba.exe' is now Advanced Connect aware enabling seamless authentication when launching from RED Connections that utilize Advanced Connect ODBC connection stings.

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