

WhereScape®

# WhereScape® 3D

## Release Notes

Version 8.4.1.1 | September 2019

# Table of Contents

<b>WhereScape 3D Version 8.4.1.1 Release Update</b> .....	<b>3</b>
<b>Version</b> .....	<b>4</b>
Significant Features in Version 8.4.1.1 .....	4
Enhanced Data Vault generation workflows.....	4
Advanced copy performance enhancements .....	4
Added Snowflake and RedShift database support .....	5
Enhance model conversion criteria matching.....	5
Other Enhancements .....	6
Entity type robots enhancements .....	6
New attribute type colors enhancements.....	6
RED category enhancements .....	7
Deprecated Features .....	7
<b>Detailed list of changes in Version 8.4.1.1</b> .....	<b>8</b>
<b>Previous Release Significant Features</b> .....	<b>10</b>
Significant Features in 8.3.1.0 and 8.3.1.1 .....	10
Significant Features in 8.2.1.1.....	10
Significant Features in 8.1.1.0.....	10
Significant Features 8.0.1.0 .....	10
Significant Features 2.10.0.0 .....	11
Significant Features 2.9.0.0 .....	11
Significant Features 2.8.0.2 .....	11
Significant Features 2.8.0.1 .....	11
Significant Features 2.8.0.0 .....	11
Significant Features 2.7.2.0 BETA .....	11
Significant Features 2.7.1.0 BETA .....	12
Significant Features 2.7.0.1 .....	12
Significant Features 2.7.0.0 .....	12
Significant Features 2.6.2.0 BETA .....	12
Significant Features 2.6.1.0 BETA .....	13
Significant Features 2.6.0.0 .....	13
Significant Features 2.5.2.0 BETA .....	14
Significant Features 2.5.1.0 BETA .....	14
Significant Features 2.5.0.0 .....	14
Significant Features 2.4.2.0 .....	15
Significant Features 2.3.2.0 .....	15
Significant Features 2.2.1.0 .....	16
Significant Features 2.1.0.1 .....	16
Significant Features 2.1.0.0 .....	16
Significant Features 2.0.0.8 .....	16
Significant Features 2.0.0.7 .....	16
Significant Features 2.0.0.6 .....	17

## WhereScape 3D Version 8.4.1.1 Release Update

WhereScape is pleased to announce that the WhereScape 3D Version 8.4.1.1 is now available. The Version 8.4.1.1 release notes document details the changes since the last release.

### Upgrading to Version 8.4.1.1

To upgrade to Version 8.4.1.1, login to [www.wherescape.com](http://www.wherescape.com) to download 3D from the downloads page in the Support section.

### Detailed Changes from Previous Versions

Details of changes made in previous versions of 3D are available on the <http://www.wherescape.com/support/3d-release-notes/> page in the Support section.

Kind Regards,  
WhereScape 3D Team

## Version

### Significant Features in Version 8.4.1.1

The following significant new features have been added since Version 8.3.1.0.

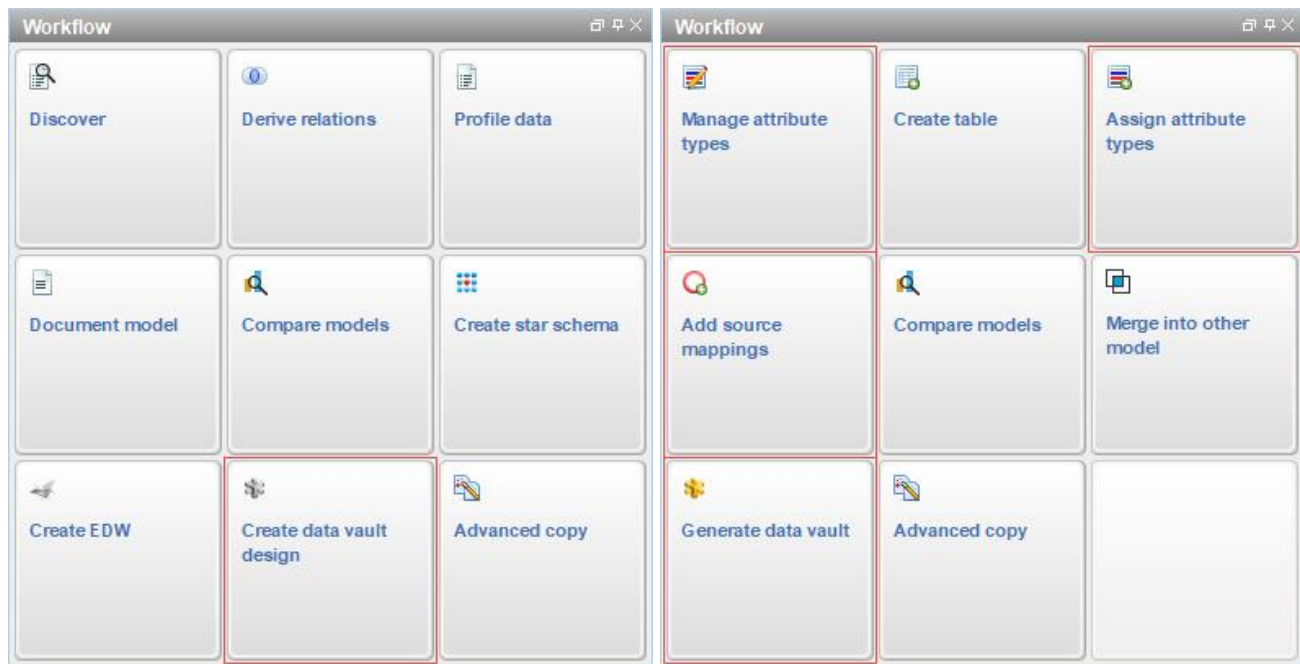
- Enhanced Data Vault generation workflows
- Advanced copy performance enhancements
- Added Snowflake and RedShift database support
- Enhanced model conversion criteria matching
- Other enhancements
  - Entity type robots
  - New attribute type colors
  - RED category

### Enhanced Data Vault generation workflows

A new wizard and workflows have been added to generate a Raw Vault from a Data Vault Design model.

#### Tip

It is strongly recommended to create new categories for Data vault and Load and staging if the categories are already in use. However, a fresh repository will showcase all the new workflows.



### Advanced copy performance enhancements

The performance with metadata has been optimized when doing an advanced copy.

#### Tip

This is an on-going task, and other areas will be looked into for additional optimization.

## Added Snowflake and RedShift database support

Support has been added for Snowflake and RedShift databases. This includes discovery methods, profiling methods and data type mappings.

## Enhance model conversion criteria matching

Model conversion matchers have been improved, allowing for more flexible logical operations and complex scenarios to be matched. This means there will be currently two methods of matching active in this version.

### Tip

- We suggest that you migrate to the newer style as the older style will be not be supported in a future release.
- If a model conversion contains the assign attribute type rule with the matcher of Attribute Property + Attribute Type and also requires the option to "Remove other attribute types", there is currently a known issue with this combination and will need to move to the new style.

Match all of the conditions (AND)  
 Match any of the conditions (OR)

Is     Match all of the conditions (AND)  
 Is not     Match any of the conditions (OR)

Has entity type:  x

OR

Has entity type:  x

v

**AND**

Has attribute type:  x

v

**Matching definition:**

```

Match attribute with
(
  Entity type: ( Hub )
OR Entity type: ( Link )
)
AND Attribute type: ( Business key )
  
```

## Other Enhancements

### Entity type robots enhancements

Attribute robots and dim\_date attributes have been updated with new target-unaware data types.

Some robots have also been removed from the default entity types.

#### Tip

- Due to the possibility of custom user workflows, **ONLY** the data types will be updated during the upgrade. If you wish to use the new Data Vault workflows, it is recommended to create and use new categories.
- Any custom data type mappings will need to be amended to include a mapping for these new target unaware data types.

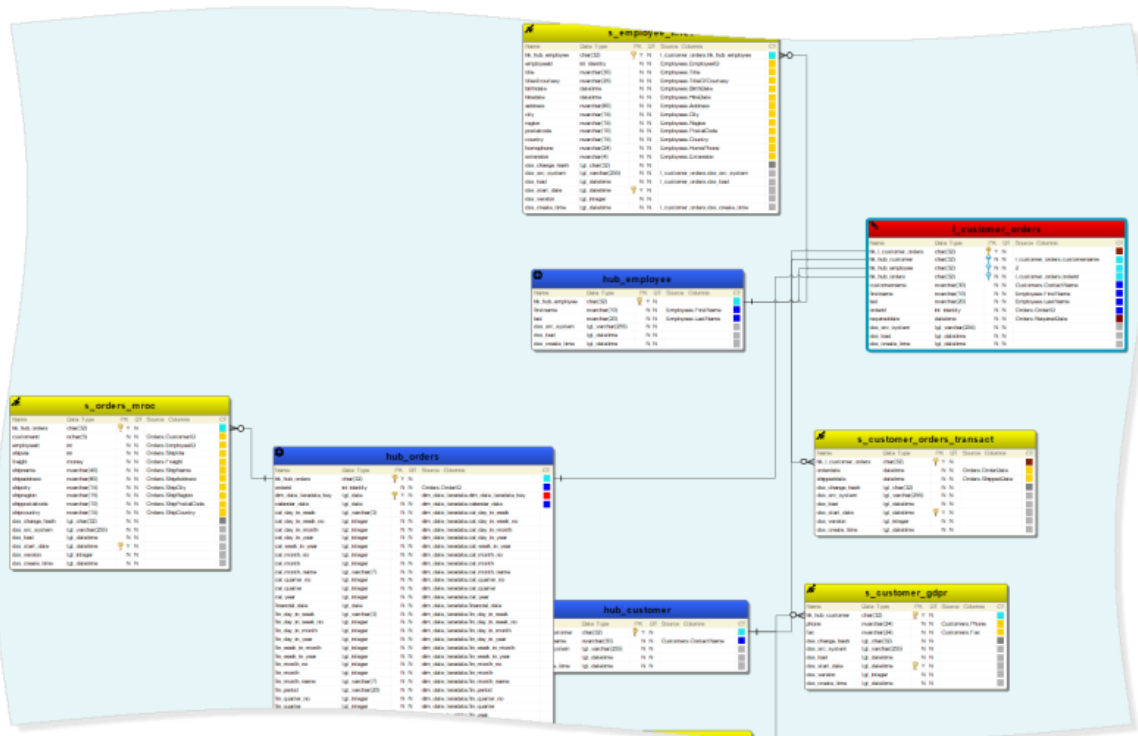
### New attribute type colors enhancements

New colors have been introduced for attribute type to be more in line with how 3D associates with Data Vault objects.

- Business keys are now blue (from red)
- Surrogate keys are now red (from blue)
- Data warehouse attributes now have an associated attribute type and are represented in gray.
- New Data Vault attribute types are represented as...
  - Link business key in red
  - Link dependent child in dark red
  - Satellites in shades of yellow

#### Note

The new attribute types colors will **ONLY** be applied to new categories.



## RED category enhancements

A new category, RED export has been introduced in this version of 3D. This is the ONLY category from where exporting to RED is allowed.

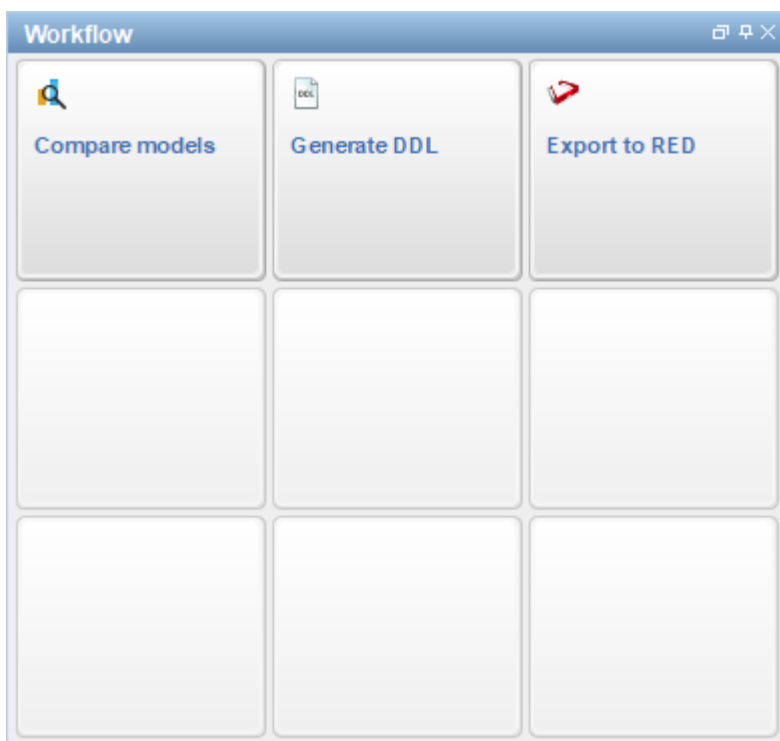
### Note

RED design and RED schema categories have been replaced with the RED export category in WhereScape 3D 8.4.1.1. They have been converted to regular load and stage and star schema categories respectively.

The goal of this feature is to better improve the workflow and stability of getting a WhereScape 3D model into WhereScape RED in the correct state.

The RED preparation model conversion has also been updated.

- This includes deletion of schemas and adding the dss\_record\_source data transformation.
- An upgraded repository will not get these changes by default, as we wish to respect any changes you may have made to this model conversion, if you wish to amend the model conversion, compare against a fresh repository with at least the RED export category created.



## Deprecated Features

The following features has been marked as deprecated with 3D 8.4.1.1.

- **Effort calculations** - It has been assessed the Effort calculation feature no longer provides beneficial use and will be removed from 3D in the next release.
- **Discovering XML and JSON files** - The current functionality in 3D to discover XML and JSON files is likely to significantly change in a future release of 3D. This will most probably result in the deprecation of the current feature and the addition of new XML and JSON discovery feature.

## Detailed list of changes in Version 8.4.1.1

The following changes have been implemented since Version 8.3.1.1

### Notes

Details of changes made in previous versions of 3D are available on the <http://www.wherescape.com/support/3d-release-notes/> page in the Support section.

Jira Number	Description
<b>New Features</b>	
<b>BLUE-2306</b>	A new wizard has been added to bulk assign attribute types.
<b>BLUE-2312</b>	A new wizard has been added to generate a Raw Vault from a Data Vault Design model.
<b>BLUE-2313</b>	A new wizard has been added to generate the Load and Stage for a Raw Vault model.
<b>BLUE-2314</b>	A new wizard has been added to prepare a model for exporting to WhereScape RED.
<b>BLUE-2318</b>	Model conversions have been improved with additional metadata such as descriptions and conversion properties.
<b>BLUE-2362</b>	A new wizard has been added to help generate a starter Data Vault Design model.
<b>Improvements</b>	
<b>BLUE-2234</b>	Added Snowflake as a supported database platform.
<b>BLUE-2273</b>	The product version is now displayed in the installer.
<b>BLUE-2280</b>	Source mapping set support has been added to the source mapping wizard.
<b>BLUE-2292</b>	The model conversion rule matching criteria has been improved to support better logic control and more complex scenarios.
<b>BLUE-2304</b>	The reorder attributes model conversion rule has been improved to allow options for sorting.
<b>BLUE-2305</b>	A new model conversion rule has been added to split entities by their source mapping sets.
<b>BLUE-2315</b>	The Exporting to RED option is now only available from RED export category.
<b>BLUE-2316</b>	The model conversions to generate the Raw Vault and Load and Stage based on a design model, have been improved.
<b>BLUE-2317</b>	The option to choose the category's source version workflow buttons have been provided.
<b>BLUE-2320</b>	The category naming standards can now be modified in new categories when using workflows.
<b>BLUE-2326</b>	Added RedShift as a supported database platform.
<b>BLUE-2328</b>	Added PostgreSQL as a supported database platform.
<b>BLUE-2333</b>	WhereScape 3D now runs on Adopt OpenJDK 11.
<b>BLUE-2338</b>	The third party components have been updated to the latest version.
<b>BLUE-2341</b>	The chosen database issue has been fixed for Snowflake connection.
<b>BLUE-2348</b>	Model conversion rules that added extended properties no longer accept empty values as a valid extended property value.
<b>BLUE-2354</b>	Some model conversion options are now editable when changing the related options.
<b>BLUE-2358</b>	Improvements to the performance of metadata access (On-going).
<b>BLUE-2363</b>	Entity type robots are now defined with generic (non-target specific) data types.
<b>BLUE-2383</b>	A new option has been added to the Add relationships from the source model for allowing the choice to add self-referencing relationships.
<b>BLUE-2396</b>	A new set of colors have been introduced for attribute types.



---

Jira Number	Description
<b>BLUE-2412</b>	The option to allow template code to compare matched attributes in the Add relationship model conversion rule has been added.
<b>Bug</b>	
<b>BLUE-2322</b>	Export to RED no longer causes ADM to crash on launch.
<b>BLUE-2327</b>	Hidden attributes no longer break displaying of source mapping diagrams.
<b>BLUE-2355</b>	Renaming a model conversion no longer causes the auto model conversion settings to not display correctly.
<b>BLUE-2378</b>	Custom discovery and profiling no longer fail to display on multiple definitions of the same vendor.
<b>BLUE-2384</b>	Advanced copying a hidden attribute with extended properties no longer causes it to fail.
<b>BLUE-2397</b>	Fixed repository back-up and restore on non-Windows platforms.
<b>BLUE-2421</b>	The merging models functionality no longer merges the data query into the DW query field.
<b>BLUE-2427</b>	The HashColumn extended property is no longer considered for RED's 4000 character limitation.

## Previous Release Significant Features

### Significant Features in 8.3.1.0 and 8.3.1.1

- A new installer with an option to install metadata server
- The metadata repository has transitioned from Apache Derby to the WhereScape Metadata Server
- A new dialog has been introduced to migrate from 32-bit ODBC DSNs to 64-bit ODBC DSNs
- There is support for native resolution scaling
- WhereScape 3D now encrypts all profiling data that is stored in the metadata repository
- Template editor preview enables testing against other areas than the current entity. The previewer has also been added to the model conversion editor
- DevOps changes
  - New DevOps command line arguments enable you to create, restore, link and backup a repository
  - New DevOps command line option enables you to advanced copy a model with model conversions
  - New DevOps command line option enables you to create the XML for export to RED
- HTML Help enhancements
  - Pebble syntax help information has been added to the HTML help

### Significant Features in 8.2.1.1

- Introduced source mapping sets for multi-source
- Reinvigorate user guide with HTML5

### Significant Features in 8.1.1.0

- Improvements to model conversions
  - Customizable matching in model conversion rules
  - Use profiling for matching criteria
  - Run multiple model conversions sequentially
  - Customizable RDBMS filter
  - WhereScape provided model conversions are read only
  - Improved renaming support
  - Entity type synchronization
- New template features
  - Variable type conversions
  - String support functions
- Improved the interface for source mappings

### Significant Features 8.0.1.0

The following significant new features have been added since Version 2.10.0.0

- Improved DDL template support
- Added template support for queries

## Significant Features 2.10.0.0

The following significant new features have been added since Version 2.9.0.0:

- Model conversion logger and snapshots.
- Alignment of Data Vault 2.0 with RED changes and improvements to the model conversions.

## Significant Features 2.9.0.0

The following significant features or improvements have been added since Version 2.8.0.2

- Added changing hash to Satellites of a Data Vault
- Data type mappings for Hive and to support TPT loads in Teradata
- Allow deletion of profiling results
- Updated tutorials

## Significant Features 2.8.0.2

The 3D 2.8.0.2 update fixes a RED export issue by providing a prompt to determine how potentially invalid data types for dss columns for Teradata are processed.

## Significant Features 2.8.0.1

The 3D 2.8.0.1 update fixes an issue when upgrading a repository with an entity type named 'View' which would cause the repository upgrade to fail.

## Significant Features 2.8.0.0

The following significant new features have been added since Version 2.7.0.1

- Data Vault improvements
  - Add relationship between Links and Hubs
  - Entity types added to RED design category
- Model conversion rules
  - New rule: Assign relationship type
  - The 'Exclude views' option in 'Copy entities' rule has been removed
  - The 'Create view' rule requires setting a 'View' entity type
  - Described in the user guide
  - The entity object property field was removed
- Improvements to synchronizing RED object types
  - The improvements have been incorporated for use with the upcoming RED release
  - Allow custom databases for target locations
  - Discovery of view queries
  - Support for Teradata timestamp(0) and MSSQL varchar(max)
  - Additional features to the UI

## Significant Features 2.7.2.0 BETA

- No significant features were added in this release.

## Significant Features 2.7.1.0 BETA

- Data Vault entity types added to RED design category
- Discovery of view queries
- Support for Teradata timestamp(0) and MSSQL varchar(max)

## Significant Features 2.7.0.1

- CSV parser supporting multi-character delimiters and newlines in values
- Model conversion rules have a description field
- Discovery improvements
  - Oracle XML discovery includes data type size and scale
  - Teradata indexes without names

## Significant Features 2.7.0.0

- CSV parser supporting multi-character delimiters and newlines in values
- Model conversion rules have a description field
- Discovery improvements
  - Oracle XML discovery includes data type size and scale
  - Teradata indexes without names

## Significant Features 2.6.2.0 BETA

- Data vault 2.0 support
  - Entity type icons for hub, link and satellite tables
- Model conversion rules
  - Additional rule
    - Delete attribute source mappings
- Improvements to existing rules
  - Support for more variables
  - New options for some rules

## Significant Features 2.6.1.0 BETA

- DDL language expansions
  - Table type filtering
  - Source query support
- Data Vault 2.0 support
  - Hash key transformations
  - Data Vault staging out views
- RED external targets
- Model conversion rules
  - Additional rules
    - Adding relations
    - Removing transformations
    - Merge entities by source entity
    - Populate entity queries
    - Assign schema
  - Improvements to existing rules
    - Applying steps only for certain RDBMS
    - Variables and basic logic support for transformations
- Diagram walker for large diagrams
- Derive relations wizard can assign primary keys

## Significant Features 2.6.0.0

- Improved usability
  - Regenerating DDL on an entity allows manual changes to be merged back in
  - XML and Generic Profiling allow a connection retry period to be set
  - Display data shows calculated columns
  - Display data generates SQL aliases
- Performance improvements
  - CSV file discovery can be performed on a limited number of rows
  - File profiling (CSV, XML and JSON) can be performed on a limited number of rows
  - Export to RED on a shared repository has been optimized for speed

## Significant Features 2.5.2.0 BETA

- Model conversions
  - Direction of source mappings when copying tables
  - Apply data type mappings
  - Copy columns within a table
  - Table and column names as variables
  - Schema handling
  - Setting views
- Generated documentation
  - Hidden entities and attributes
- Handling of simple JSON and XML files
  - Discovery
  - Profiling
  - Sample data
  - Pivot table
  - Duplicate data

## Significant Features 2.5.1.0 BETA

- Additional RED integration
  - Generated JOIN queries can now be altered before exporting to RED
- Support for composite joins
  - Generic and XML defined Discovery
  - Generic profiling
  - Query generation
  - DDL generation
  - RED integration
- Hierarchical joins supported
- Joins with aliases supported
- JDBC connections can now have multiple JAR files assigned

## Significant Features 2.5.0.0

- Additional RED integration
  - Transformations created from the data type mappings
  - Catering for altering index types
  - Default values and nullable columns
- User defined content
  - Custom reports
  - Stored queries
- Shared repositories
  - Storing connection passwords central, local or entering when connecting
- Updated branding

---

## Significant Features 2.4.2.0

- 3D work flow assistance
  - Simplified default functionality
- Prototyping capabilities to verify the data warehouse design
  - Denormalizes a sample of the data behind the data warehouse design
  - Shows a basic pivot table for the designed star schema
- Merging models
  - Allows for moving changes between models
  - Supports conflict resolution
- Improved usability and user experience
  - Setting under View to increase the fonts
- Runs on a bundled version of Java 8
- New model conversion to generate load and stage tables for data vaults
- Data type mappings have been updated
- Improved RED integration
- Improved diagram performance
- Updated tutorials and user guide

## Significant Features 2.3.2.0

- Usability / ease of use redesign
  - Improved handling of surrogate keys
  - Adjustment of default values
  - Allowing diagrams to open as read only
  - Navigating from the tree to the diagram
  - Introduction of a category manager
  - Restoring the tree state at start-up
- Setting table background colors in the diagram
- Search and replace functionality in the model conversion rules
- Improved lineage tracking
- Improved subtype handling by the model conversion
- Discovery of files without header rows
- General maintenance and bug fixes
- Added query join types (only INNER JOIN was being supported before)
- Teradata views now get their data types correctly discovered
- Generated documentation has been expanded to contain additional business semantics
- Display data now uses the data transformations
- Models now can be exported in the Common Warehouse Metamodel format
- RED integration Level One
  - Joins on stage tables
  - Unique short names
  - Change detection fields
  - RED projects
  - Syncing of object types
  - Business key flags
  - Surrogate key flags

## Significant Features 2.2.1.0

- Simplified database schema selection on connections
- WhereScape 3D can now be installed in a custom location
- Events viewer
- New wizard to rename multiple columns
- Java 8 support (a custom JDBC-ODBC bridge supporting ODBC 3.x was added)
- Model conversions
  - Sharing model conversions (export and import functionality)
  - Model naming standards (a new rule to enforce naming standards and automate abbreviations)
  - A new rule to generate indexes
  - The 'Delete entities' rule now provides the option to cascade delete any foreign keys
- Simplified connection and model creation
- Redesigned the copy/import/transition functionality
- Large diagrams handling
- Diagrams can now be saved as PNG images

## Significant Features 2.1.0.1

- Effort calculation
- Distribution keys enhancements
- Improved RED integration
- Extended relationship profiling
- Duplicate data detection

## Significant Features 2.1.0.0

- 3D to RED export/import is now enabled
- New model conversion rules for:
  - Rename attribute
  - Redirect attribute source mappings
  - Add attributes from source entities

## Significant Features 2.0.0.8

- Data transformations (BETA)
- PowerDesigner support for views, groups and code as name
- Hadoop Distributed File System can now be a host connection
- File encoding can now be selected on local file system host connections (e.g.: various EBCDIC encodings)
- Updated context menus

## Significant Features 2.0.0.7

- Data quality functionality
- Business rule validation
- Automated star schema design generation from source systems
- Automated stage and load tables generation from star schemas
- New filtering and validation screens for profiling results (BETA)
- WhereScape RED “fixed” categories
- Silent installation options



## Significant Features 2.0.0.6

- Significantly improved diagram layouts using a new layout engine
- Sample data generation can now be scheduled.
- Several enhancements to model conversion rules.
- Referential integrity profiling.

## Copyright

Copyright © 2019 WhereScape Software Ltd. All rights reserved.

This document may be redistributed in its entirety and in this electronic or printed form only without permission; all other uses of this document and the information it contains require the explicit written permission of WhereScape Software Ltd.

Due to continued product development this information may change without notice. WhereScape Software Ltd does not warrant that this document is error-free.

## Trademark

WhereScape and WhereScape are trademarks or registered trademarks of WhereScape Software Ltd. Other brands or product names are trademarks or registered trademarks of their respective companies.

### **WhereScape USA, Inc**

1915 NW AmberGlen Parkway  
Suite 400, Beaverton  
Oregon 97006  
United States  
T: 503-466-3979  
F: 503-466-3978

### **WhereScape Europe**

45 Brook Drive  
Green Park  
Reading RG2 6UU  
United Kingdom  
T: +44-118-914-4509  
F: +44-118-914-4508

### **WhereScape Asia Pte. Ltd**

300 Tampines Avenue 5  
#09-02 Singapore 529653  
T: +65-6679-5728

### **WhereScape Software Ltd**

P.O. Box 56569, Auckland  
1446  
12-16 Tapora Street  
Quay Park  
Auckland 1010, New Zealand  
T: +64-9-358-5678  
F: +64-9-358-5679