CA ERwin® Data Modeler

Overview Guide

r8

CA Technologies Product References

This document references the following CA Technologies products:

- CA ERwin® Data Modeler Standard Edition (CA ERwin DM)
- CA ERwin® Data Modeler Workgroup Edition (CA ERwin DM WE)

Contact CA Technologies

Understanding your Support

Review support maintenance programs and offerings.

Registering for Support

Access the CA Support online registration site to register for product support.

Accessing Technical Support

For your convenience, CA Technologies provides easy access to "One Stop" support for all editions of CA ERwin Data Modeler, and includes the following:

- Online and telephone contact information for technical assistance and customer services
- Information about user communities and forums
- Product and documentation downloads
- CA Support policies and guidelines
- Other helpful resources appropriate for your product

For information about other Home Office, Small Business, and Enterprise CA Technologies products, visit http://ca.com/support.

Provide Feedback

If you have comments or questions about CA Technologies product documentation, you can send a message to techpubs@ca.com.

If you would like to provide feedback about CA Technologies product documentation, complete our short customer survey, which is also available on the CA Support website, found at http://ca.com/docs.

CA ERwin Data Modeler News and Events

Visit www.erwin.com to get up-to-date news, announcements, and events. View video demos and read up on customer success stories and articles by industry experts.

Contents

Chapter 1: Introduction

This *Overview Guide* is targeted for Data Architects, Data Administrators, Application Administrators, Database Administrators, and Partners who are planning to upgrade from CA ERwin Data Modeler r7.x and want to learn about the new features of r8.

CA ERwin Data Modeler r8 has many new features accompanied by changes to the user interface. Use the guided tours described in this guide to become familiar with these features and changes. This guide provides you with a framework of understanding to implement future releases, which will expand on the features introduced in this release.

While working in CA ERwin Data Modeler during a tour, if you need additional information about the feature, click the Help button on the toolbar or press F1 to open the online help.

Chapter 2: Guided Tours

This section contains the following topics:

Diagrams, Subject Areas, Layout, and Customization

This section provides information about the following functional areas:

Basic Menu and Toolbar Customizations

Use the following steps to become familiar with basic toolbar customization.

1. Open CA ERwin Data Modeler.
2. Left-click the Down arrow at the right-hand bottom corner of any displayed toolbar to display the *Add or Remove Buttons* menu. Slide your cursor over this menu and a submenu should appear. Place your cursor over any of the displayed toolbars and modify the tools displayed on that toolbar by clicking on the specific tool (to turn on or off).

   Note: Your changes should be reflected in real-time on the displayed toolbar.
3. Make changes to several of the toolbars by following the process outlined in Step 2.
4. Undo one or more of your toolbar customizations by selecting the Reset Toolbar button at the bottom of any of the Add or Remove toolbar submenus. You should see the reset action reflected in real-time on the displayed toolbar.

Advanced Menu and Toolbar Customizations

Use the following steps to become familiar with advanced toolbar customization.

1. Right-click in the toolbar area and select the toolbars that you want to display at the top of the screen.
2. Click *Customize* to open the toolbar and menu customization dialog. Click the *Toolbars* tab and feel free to create (*New* button), rename (*Rename* button), and delete (*Delete* button) one or more toolbars.

   Note: You can use practice toolbars, not the predefined CA ERwin Data Modeler toolbars. Also, you can always use the *Reset* button to the reset the changes made to the menu or existing toolbars to reflect the product default settings.
3. Click the *Commands* tab to see the complete list of all the commands that can be added to the toolbars and menu. Add one or more commands to your choice of toolbar. Using this same dialog, add one or more commands to the CA ERwin Data Modeler menu.
4. Click the *Keyboard* tab and assign a new shortcut key to one or more commands available in the different menu categories. You can experiment by removing or resetting the changes made.
5. Click the *Options* tab to further personalize the menus and toolbars as needed. You can modify settings to see full menus, large icons, or screen tips on toolbars.
6. While you are still in the Customize dialog, right-click any menu, menu item, or displayed toolbar icon to open a menu of advanced object-specific property customizations. You can experiment with any of these customizations.

Workspace Customization

Use the following steps to become familiar with workspace customization.

1. Click View, Windows and specify the window panes you want to see or hide by selecting or deselecting them on this submenu.
2. If a pane, such as the Model Explorer, is visible only as a tab, it is considered *hidden*. Hover your mouse cursor over a hidden pane's tab to unhide the pane. Then, click the "push-pin" icon at the upper right corner of the now visible pane. Doing so turns the push-pin icon vertical and docks the selected pane. Now you can continue.
3. When a pane, such as the Model Explorer, is visible on your workspace you may select it and drag it by clicking and holding the title bar.

   Note: The selected pane undocks from the workspace border to become a floating window. Try doing this with the Action Log pane.
4. Holding the Action Log Pane as selected in Step 3, notice the appearance of the dropping guides that indicate the available docking locations. Move your mouse cursor over any of the docking locations; the area where the pane will dock along the workspace border is highlighted. Release the mouse button, and the pane is docked in that location.
5. If the window panes are already docked together and appear as tabs in a single docking pane, click and drag an individual tab and drop it anywhere in the workspace to create a standalone floated or docked pane. To dock panes together in a pane group (that is, they combine to create multiple tabs in a single dockable pane), drag one pane over another and select the center icon on the docking guide. Create a pane group using the Action Log and the Advisories panes.
6. Click and drag the Overview pane over the Bulk Editor pane, and select one of the edge targets of the docking guide that appears within the Bulk Editor pane. Notice how the panes have been grouped together in a single pane separated by a splitter. You can now auto-hide either of the combined panes (click the push-pin icon so it becomes horizontal) while leaving one of the panes docked. When your mouse hovers over the hidden pane's tab, the pane will slide out so you can make use of it.
7. You can close CA ERwin Data Modeler after customizing your workspace the way you want using the previous steps. Now open CA ERwin Data Modeler again, and verify that all of the window panes are in the same position as you had customized them before closing the application.

Diagram and Subject Area Properties

Use the following steps to become familiar with the new diagram and subject area properties.

1. Create a new model. Select the *Subject Area* tab in the Model Explorer and note that NO "Main Subject Area" has been created – unlike when using older versions of CA ERwin Data Modeler (r8 does not require that a model contain any subject areas. Also, both the model and subject areas may own diagrams although the presence of diagrams is completely optional). Now select the *Model* tab in the Model Explorer.
2. Create four entities in the model using the Model Explorer (right-click the *Entities* category and select New).

   Note: The entities created do not automatically display on the visible diagram.
3. In the Model Explorer, right-click one of the new entities you created. From the submenu displayed, select *Add To Diagram* and the entity becomes visible on the diagram. Create another new entity by selecting the Entity Tool on the toolbar and then clicking on a blank area within the diagram.

   Note: This new entity is automatically added to the diagram and to the Model Explorer.
4. Right-click on a blank area within the diagram and click *Properties* from the pop-up menu to launch the Diagram Editor. Select the *Members* tab and note that the two entities visible on your diagram display in the *Included Objects* list and the three remaining entities display in the *Available Objects* list. Add one or more available entities to your diagram and close the editor to verify your changes. You may have to move entities around to see them all as some overlap may occur.

   Note: Diagrams can only display model objects that belong to the diagram's owner (either the Model or a Subject Area).

5. Add one or more key and non-key attributes to each of the entities visible on your diagram and connect the entities using a mixture of identifying and non-identifying relationships. Open the Diagram Editor and turn on display of Data Type and Null Option on the *Entity* tab (*Display Attribute Data Type* and *Display Attribute Null Option*) and/or the *Table* tab (*Display Column Data Type* and *Display Column Null Option*). Close the Diagram Editor and examine the effect of your selections.
6. Reopen the Diagram Editor and select *Show Attributes/Columns as Grid* on either the *Entity* or the *Table* tab. Close the Diagram Editor and verify the effect of this new selection. Explore the additional diagram options available within the Diagram Editor (these include options for display, print, and page setup).
7. Create a new subject area using the Model Explorer (right-click the *Subject Areas* category and select New) and then enter “Test” as the name for your new subject area (SA). Right-click “Test” and click *Properties* from the pop-up menu to open the Subject Area Editor. On the *Members* tab select the three entities from the *Available Objects* list to be included in the subject area (must be moved to the *Included Objects* list). Close the Subject Area Editor and observe the results of your actions.
8. While still viewing your new SA diagram, create a new diagram (refer to Step 4) and name this diagram “One Entity” by clicking on the diagram name in the upper portion of the dialog and typing the new name. Add one of your entities to this diagram, close the Diagram Editor and view the result.

   Note: You can easily switch between diagrams by selecting the appropriate named tab at the bottom left of your workspace.
9. Create a new diagram in the "Test" SA using Model Explorer (right-click ER Diagrams and select New), and add some entities to the diagram (see step 8). You can easily switch between diagrams within a subject area by selecting the tab containing the diagram name (at the bottom left of the workspace).
10. Save your model to use later.

Creating, Maintaining, and Working with Model Objects

Use the following steps to become familiar with creating, maintaining, and working with model objects.

1. Open an existing model or create a new model. Right-click on the diagram area and click *Properties* to launch the Diagram Editor. Click the *Relationship* tab.
2. Select the *Display Logical Relationship Name* and *Display Physical Relationship Name* properties on this tab if they are not already selected.
3. Click the *Layout* tab. Select the *Show Callout* property in the Visual Cues section and click Close.
4. Grab any relationship name on the diagram and move around. Observe the appearance of a dashed line which connects the relationship name to the relationship line on the diagram.
5. Reopen the Diagram Editor and click the *Relationship* tab again. Clear the *Display Relationships* check box and click Close. Observe that all the relationships in the current diagram are hidden.
6. Reopen the Diagram Editor and select the *Display Relationships* property again. Click the *Members* tab and ensure the *Automatically populate from Subject Area* property is not selected, and only the required entities/tables are included in the current diagram. Click the *Relationships* tab.
7. Include or exclude relationships for display in the current diagram by making the appropriate selections from the available relationships list on this tab. Exclude all the relationships from the diagram by clicking the *Move all objects to Available Objects* toolbar command under the *Included Relationships* section.
8. Select only one relationship from the list of *Available Relationships* and include it in the diagram by selecting *Move selected objects to Included Objects* toolbar command. Click Close and observe the effect of these changes on the diagram. Close the current model.
9. Create a new logical model and create two entities. Join the two entities with an identifying relationship. Create a third entity to the right of first two entities, and arrange the three entities so that they are spread out across in a horizontal line.
10. Grab the relationship line and try to spread its edges to the right, so that the relationship line loops around the third entity. Notice that in the process of expanding the relationship line, you will be able to create multiple bend points on the line. Play around with the relationship lines and close the model.

Annotation and Connector Objects

Use the following steps to become familiar with annotation and connector objects.

1. Create a new logical model. Right-click the toolbar area and make sure that the *Drawing* and *Toolbox* options are selected to display the corresponding toolbars.
2. Click the Annotation object on the Toolbox toolbar, then click the diagram. Enter some text in the rectangle created to denote it as an annotation. Similarly, click the Rectangle object on the Drawing toolbar, place it on the diagram, and enter some text in it.
3. In the Model Explorer, observe that the Annotation object is created as a model-level object, whereas the Rectangle object is created as a shape object within the default model-level ER Diagram.
4. Create a new subject area called 'SA1' and launch the Subject Area Editor from the Model Explorer. Click the *Members* tab and observe that the Annotations object is present in the *Available Objects* list. Include the Annotation object in the subject area SA1 and click Close.
5. From the Model Explorer, launch the Diagram Editor for the default diagram SA1. Click the *Members* tab and include the Annotation object in the diagram and click Close. Make sure that the diagram to which the Annotation object has been added is the current diagram.
6. Right-click the Annotation object in the current diagram and click *Properties* to launch the Annotation Editor. Click the *Style* tab and select a Theme of your choice from the Optional Theme drop-down, to apply on the Annotation object.
7. Click the *Where Used* tab and note that all the subject areas and diagrams where the current Annotation object has been used are listed. Click Close to save your changes.
8. Create a new entity in the current diagram and connect it to the Annotation object using the Connector shape (available in the Drawing toolbar), just like creating a new relationship between two objects.
9. Move around the objects connected using the Connector, or layout the diagram again using one of the Auto-Layout options. Observe that the Connector does not lose its connections with the objects it connects. Close the model.

Model Layout and Navigation

Use the following steps to become familiar with model layout and navigation.

1. Open an existing model (or create one) that contains at least 10 entities/tables. If you are creating a new model make sure to include attributes and relationships. Left-click on a blank area of the visible diagram to ensure that no model object is currently selected.
2. Click Layout, Circular on the Diagram menu or click the toolbar icon and review the effect of this selection. Notice that annotations connected to model objects stay connected even after the diagram layout is changed.
3. Perform Step 2 again, this time selecting a different model layout option – until you have tried all five layout options that are available.
4. Select a subset of the visible model objects on the diagram, apply any of the five model layout options and note the effect this has on your diagram.
5. Next, open the Overview pane (click Windows, Overview Pane on the View menu) if it is not already open. Note the marquee rectangle that designates the drawing area that is visible in the drawing workspace. Interactively move and resize this rectangle to pan to a different area of the drawing and to change the viewing zoom factor. Auto-hide (use the "push-pin" icon) this pane for use later.
6. Modify the zoom percent value (between 1% and 200%) of the diagram by dragging the zoom bar at the bottom right-hand corner of the application. You can alternatively increase or decrease the zoom by clicking on the plus or minus signs at the ends of the zoom bar.
7. Select an entity in the diagram and resize the entity to make the diagram object either extremely large or extremely small. Right-click the entity and select *Reset Object to Automatic Sizing* and observe that the entity is resized exactly to the size of contained text.
8. Select any relationship on the diagram and drag the relationship line arbitrarily to make it extremely long. Right-click the relationship line and select *Reset Relationship Path* and observe that the relationship line is set to the least distance between the connecting entities.

Creating and Working with Themes

Use the following steps to become familiar with creating and working with themes.

1. Open an existing model (or create a new one) and click Themes on the View menu to launch the Theme Editor.
2. Click New  on the Theme Editor toolbar to create a new theme. Notice that a new theme is created with a default name and property values.
3. Click the Name field of the newly-created theme and provide a meaningful name such as *MyTheme*. Customize your new theme by specifying non-default values for the Default Font, Diagram Fill, Entity Font, Entity Fill, Attribute Font, and FK Attribute Font options in the grid. Click the tabs for other modeling objects like Key, View, Relationship, and so on, and customize their font and fill options if required. Close the Theme Editor to save your changes.
4. Open the Diagram Editor, click the *General* tab, and select your new theme from the Optional Theme drop-down to apply the theme to the visible diagram. Close the Diagram Editor to see the effect of your selection.
5. Right-click an entity on the diagram, and select Entity Properties to launch the Entity Editor. On the *Style* tab, change the Theme selection from the currently selected one to the Default Theme, and close the editor. Note the effect of this action on the selected entity only.
6. Reopen the Theme Editor (see Step 1). Select the theme you created in Step 3, and click the *Where Used* tab to see the subject areas, diagrams, modeling objects, and drawing objects that use this particular theme. Verify the places where this theme is being used, and close the editor.

Tour 1 Questions and Feedback

Work with the following questions for Tour 1 to assess your understanding of the features.

1. Did the toolbar customization work as expected? Were you able to successfully create new toolbars, add/remove buttons to them and assign new shortcut keys to them?
2. In addition to the process stated for launching the Diagram Editor (right-click on a blank area of a diagram and click Properties) what are two other ways to accomplish this same task?
3. Do the five model layout options work as expected? Did you perform a model layout after selecting a subset of the visible model objects? If so, what was the effect?
4. What, if any, additional model layout functionality would you like to see incorporated in CA ERwin Data Modeler?
5. How was your experience working with themes? Did you apply themes to subject area and individual diagrams? Were the changes reflected in the diagram according to the theme applied? Do you have any suggestions to make themes work better according to your requirements?
6. Did the Link Objects work as expected? Were you able to successfully create the Link Object and control the properties of the target column by changing the properties of the source column? Can you differentiate between the Link Objects in this release and Column Denormalization in the previous releases?

Contact us to provide feedback, comments, or questions about the features covered in this tour.

New Database Support

This section provides information about the following functional areas:

DB2 Table Support - New Model

Use the following steps to become familiar with DB2 table support in a new model.

1. Create a new DB2 (z/OS or LUW) v9.x model.
2. Add several entities to the model and populate with attributes using on-screen editing. Connect with relationships as needed.
3. Open the Entity, Attribute, and Key Group editors. Review and familiarize yourself with the layout of information available on all of the tabs in these editors.
4. Create a definition in one of these editors and check the spelling of your entered text.
5. Create one or more note entries.

6. Press F1 or the Help icon to access the context-level help for any of these editors. Review the help text and then close the online help.
7. Access the physical side of your model (if you created a Logical/Physical model) or derive a physical model (if you created a Logical-only model).
8. Open the Table Editor and review and familiarize yourself with the physical properties available on all of the tabs.
9. Assign your tables to different tablespaces (you will have to create the tablespaces first).
10. From within the Table Editor, access the Permission Editor (click the Permission Editor icon  on the *Permission* tab).
11. Create several new permissions and close the Permission Editor.
12. Associate one or more of your permissions to one or more of your tables, and close the Table Editor, but do not save the model just yet.

DB2 Column Support - New Model

Use the following steps to become familiar with DB2 column support in a new model.

1. Open the Table Column Editor and review and familiarize yourself with the information available on all of the tabs.
2. Click the *Database* tab and validate the database-specific properties, including the available data types.
3. Explore and modify the information within this editor as you would normally do as part of your daily activities.
4. Close the Table Column Editor and save this model.

DB2 Support - Existing Database or Script

Use the following steps to become familiar with DB2 support for reverse-engineering using an existing database or script.

1. Reverse-engineer an existing DB2 (z/OS or LUW) v9.x database or script.
2. Browse this new model and review the physical properties created (table, column, index, and so on) paying careful attention to those properties not available in prior versions of CA ERwin Data Modeler.
3. Note any inconsistencies and discrepancies.
4. Make any changes you want to the physical properties of this new model using any of the editors available.
5. Close any open editor and save this model.

DB2 Support - Existing Model

Use the following steps to become familiar with DB2 support in an existing model.

1. Open an existing CA ERwin Data Modeler r7.3 DB2 (z/OS or LUW) data model.
2. Browse the migrated model and review the physical table properties (nothing should exist except for those properties available in the prior product release).
3. Note any inconsistencies and discrepancies.
4. Based on your knowledge of this model, set the Table, Column, Tablespace, and Permission properties.
5. Make any changes you want to the physical properties of this model using any of the editors available.
6. Close any open editor and save this model.

DB2 Index Support - New or Existing Model

Use the following steps to become familiar with DB2 index support in a new or existing model.

1. Right-click on any table in either a new or existing model and click Index Properties on the pop-up menu.
2. Review and familiarize yourself with the index properties available on all of the tabs.
3. Based on your knowledge of DB2 and this model, freely create and set the index properties for the selected table.
4. Change the table and repeat Step 3 as often as you wish.
5. Close the Table Index Editor, but do not close or save the model just yet.

DB2 XML Index Support - New or Existing Model

Use the following steps to become familiar with DB2 XML index support in a new or existing model.

1. Right-click on any table in a new or existing model and click XML Index Properties on the pop-up menu.
2. Review and familiarize yourself with the XML index properties available on all of the tabs.
3. Based on your knowledge of DB2 and this model, freely create and set the XML index properties for the selected table.
4. Change the table and repeat Step 3 as often as you wish.
5. Close the Table XML Index Editor, but do not close or save the model just yet.

Additional Database Support - SQL Server 2008 and Teradata 13

Use the following steps to become familiar with SQL Server 2008 and Teradata 13 support.

1. Perform any of the steps described previously for DB2 using SQL Server 2008 models and applicable editors instead.
2. Perform any of the steps described previously for DB2 using Teradata v13 models and applicable editors instead.
3. Close any open editor and save any open models.

Schema Validation

Use the following steps to become familiar with schema validation.

1. Open one of your DB2 v9.x, SQL Server 2008, or Teradata v13 models containing newly-supported physical properties and indexes (modified in previous steps).
2. Click Forward Engineer, Schema on the Actions menu or click the Forward Engineer Schema Generation icon  on the toolbar.
3. Click the Preview button and review the SQL generated for errors or other issues.
4. Click Generate (catalog or script), and note any issues.
5. Click Close and then click OK to exit the Forward Engineer Schema Generation dialog.
6. Repeat steps 1 through 5 as needed.

Tour 2 Questions and Feedback

Work with the following questions for Tour 2 to assess your understanding of the features.

1. Did the Table Editor, the Column Editor, the Tablespace Editor, and the Permission Editor contain all of the properties and options you expected to find?
2. Did the Index Editor and the XML Index (DB2) Editor contain all of the properties and options you expected to find?
3. What properties or options are missing (and in which editor) that you expected to find?
4. Did Schema Generation produce the SQL you expected and is it correct?
5. Did the online help provide clear information and is it easy to navigate?

Contact us to provide feedback, comments, or questions about the features covered in this tour.

Bulk Editor and Bulk Editor Wizard

This section provides information about the following functional areas:

Bulk Editor Wizard (see page 23)

Basic Bulk Editor operations (see page 24)

Working with CSV files (see page 25)

Bulk Editor Wizard

Use the following steps to become familiar with the Bulk Editor Wizard.

1. Open one of your existing models and launch the Bulk Editor pane (if it is not already displayed) by clicking Windows, Bulk Editor Pane on the View menu.
2. Click the Bulk Editor Wizard icon  on the Bulk Editor toolbar to open the Bulk Editor Wizard.
3. Read the information in the *Overview* page to understand the process of using the wizard and the information contained in the other pages of the wizard. You can also press F1 or the Help button to access the online help specific to this wizard.
4. Click the *Object Types* page from the list on the left side. Select one or more of the object types listed (such as Table or Column) for display/editing in the Bulk Editor. You can experiment with the toolbar on this page to filter the object list display or select or clear your choices.
5. Click the *Property Types* page from the list on the left side. Select one or more of the property types listed (such as Comment, Definition, Name) for display/editing in the Bulk Editor. You can experiment with the toolbar on this page to filter the property type display or select or clear your choices.

   Note: The property types displayed are those that are common to all the object types selected in Step 4.

6. Click the *Object Instances* page from the list on the left side. Expand each grouped object "set" and select all or a subset of the object type instances listed on this page for display/editing in the Bulk Editor. You can experiment with the toolbar on this page to facilitate this selection process.
7. Click the *Display Order* page from the list on the left side. Use the toolbar buttons to arrange the Bulk Editor output row ordering by selected Object Types and the column ordering by selected Property Types.
8. Click the *User Settings* page from the list on the left side. Familiarize yourself with these optional configuration settings and feel free to experiment.
9. In Steps 4, 5, and 6 you can save your Object Types, Property Types, and Object Instances to an Option Set (similar to Option Sets in Complete Compare).

   Note: You can only save Object Instances in your Option Set when the Option Set is saved in the 'current' model. Saved external XML Option Sets only contain Object Types and Property Types.
10. Once you are satisfied with the selections made in the previous steps, click the Edit button to close the wizard and return to the Bulk Editor pane that now contains the model metadata based on your selection criteria.

Basic Bulk Editor Operations

Use the following steps to become familiar with basic Bulk Editor operations.

1. Using the vertical "splitters" between the displayed column headers feel free to adjust the width of any displayed column for better viewing of the selected metadata.

   Note: Clicking on a column header will override the row ordering you specified in the Bulk Editor Wizard and sort the row-level metadata either alphabetically or reverse alphabetically.
2. Click in a metadata cell (such as Name or Comment) and make some in-line edits. Click the  icon to open a larger editing window so you can change the metadata value.

   Note: You can launch the macro toolbox (via the menu icon) to include macros in your changed metadata. When you complete your change, click the OK button to close the window and display your change in the Bulk Editor.
3. Enter text in the search box at the top of the Bulk Editor (search box reads: "Enter filter text") to search for and limit the Bulk Editor display to only those rows containing the entered text.
4. Enter a new (or updated) comment (or similar) value on the first row displayed.
5. Right-click on the updated comment (or similar) value and then select *Copy this cell* on the pop-up menu.

6. Using standard Windows selection keystrokes select several or all displayed rows.

   Note: Use the first column in the Bulk Editor to do this.

7. Right-click on any one of the selected rows and then select *Paste to...all selected rows* on the pop-up menu to populate the change made in Step 4 to all selected rows.

8. Remove the filter criteria entered in Step 3 (delete the entered search value) and verify the changes made in Step 7 did not update any non-displayed rows.

   Note: You can use Undo/Redo for this purpose.

9. Select one of the table objects displayed in the Bulk Editor that is also visible in the modeling workspace. Click the  icon (Edit the selected object) to open the Table Editor. In the Table Editor, click the Delete toolbar icon to delete the selected object from the Bulk Editor pane – it should also disappear from your modeling workspace. Close the Table Editor to return to the Bulk Editor.

10. Click the  icon to undo the previous Delete operation and verify that both the Bulk Editor and the modeling workspace are properly updated.

Working with CSV Files

Use the following steps to become familiar with working with CSV files.

1. Click in the leftmost cell on row 1 (for example, row 1, column 1 – “Name”) to select row 1, then press Ctrl A to select all rows in the Bulk Editor window.

2. Click the *Save selected rows to .csv file* toolbar icon and save the Bulk Editor metadata result set to an external .csv file.

3. Update the .csv file by adding missing metadata and/or updating existing metadata.

4. Import your changes back into your open model using the *Import model updates from .csv file* toolbar icon. Confirm that the changes made are reflected in both the Bulk Editor window and the model itself.

Tour 3 Questions and Feedback

Work with the following questions for Tour 3 to assess your understanding of the features.

1. What do you feel about the Bulk Editor functionality? Does it help you with bulk metadata access and modification?
2. Does the Bulk Editor work as expected according to this tour? Is there something not working correctly?
3. Is the Bulk Editor Wizard straightforward and easy to use? Would you like to provide any suggestions to improve the Bulk Editor Wizard options?
4. Is all of the metadata displayed correctly in the Bulk Editor pane? Are changes made to the metadata in the pane reflected back in the model?
5. Are the Bulk Editor pane menu icons working as expected? Were you able to successfully perform copy-paste-delete operations on the result set?
6. Were you able to successfully export and import metadata to .csv files? Did the changes made by you to the .csv file reflect correctly in the model on import?
7. Do you feel the Bulk Editor provides the same level of functionality and ease of use for metadata access and modification, as was provided by Data Browser?
8. Is the Bulk Editor context-sensitive help useful? Were you able to find answers on all of your questions in the help file?

Contact us to provide feedback, comments, or questions about the features covered in this tour.

Reporting

This section provides information about the following functional areas:

CA ERwin Report Viewer (see page 27)

Diagram integration with Crystal Reports (see page 27)

Mart reporting with Crystal Reports (see page 28)

CA ERwin Report Viewer

Use the following steps to become familiar with working with the CA ERwin Report Viewer.

1. Open one of your existing models and launch the pinned report *Logical-Physical Combined Dictionary.rpt* on the Tools, Pinned Reports menu. This launches the CA ERwin Report Viewer.
2. In the Enter Parameter Values dialog, select one or more Subject Areas to report on and an appropriate Column Ordering. Click OK to generate the report.
3. Browse the report generated and verify the dictionary information against your model. Use the Group Tree on the left side to quickly jump to a particular entity in the report.
4. Switch back to CA ERwin Data Modeler, and change the definition of one of the entities in the current diagram. In the CA ERwin Report Viewer, click the Refresh toolbar button  to reload the model information. Select the parameter values and click OK. Note that the change in definition is also reflected in the report.
5. In the CA ERwin Report Viewer, select Edit, Edit Design (or press Ctrl+E) to launch Crystal Reports Developer to edit the report. Format the report in the *Design* tab, and click Refresh to see the results of the new report.
6. Save your changes and exit Crystal Reports Developer. Close the CA ERwin Report Viewer.

Diagram Integration with Crystal Reports

Use the following steps to become familiar with diagram integration with Crystal Reports.

1. Open one of your existing models and launch the pinned report *Current Diagram Membership (Logical).rpt* on the Tools, Pinned Reports menu (through CR Developer). This launches Crystal Reports Developer.
2. Execute the report from the menu option Report, Refresh Report Data (or press F5), and observe the current diagram's image in the report output. Close the Current Diagram Membership report (and not Crystal Reports Developer).
3. Select the menu option File, New, Standard Report (or press Ctrl+N) to launch the Standard Report Creation Wizard. Select and double-click the CURRENT_DIAGRAM table under My Connections, ERwin_Current, Current, DGM, CURRENT_DIAGRAM to include the CURRENT_DIAGRAM in the Selected Tables list and click Finish.
4. On the *Design* tab, insert a new OLE Object from the menu option Insert, OLE Object and selecting the option *Object Type as Bitmap Image*. Click OK and click anywhere on the report area to drop the image rectangle. Close the image editor by clicking anywhere on the report area.

5. Right-click the OLE Object and select *Format Graphic* to launch the Format Editor dialog. On the *Picture* tab, click the Graphic Location command button to launch the Formula Workshop dialog. Select ENTIRE_MF under the ERwin_Current, CURRENT_DIAGRAM by double-clicking the same and click Save and Close (top left corner). Click OK in the Format Editor dialog.
6. Refresh the Report (see Step 2), and note that the latest image of the current diagram is fetched in the result.
7. Go back to CA ERwin Data Modeler and change the position of some of the entities in the current diagram. Alternatively, you can switch to a new diagram. Return to Crystal Reports Developer and click Refresh. Observe that the latest image of the current diagram is fetched and displayed in the report.
8. Save your changes and exit Crystal Reports Developer. Close CA ERwin Report Viewer.

Mart Reporting with Crystal Reports

Use the following steps to become familiar with mart reporting with Crystal Reports.

1. Connect to your mart by clicking Mart, Connection on the File menu if you are not already connected. Enter your login credentials and details of the mart database in the Connection Manager dialog, and click Connect.
2. Click Model Manager Reports, Global Reports on the Tools menu and launch the *Libraries Diagram Entity* report. This launches CA ERwin Report Viewer.
3. Enter your mart Login ID and password in the Database Login dialog and click Finish. Note that the selected report is executed and the result is displayed in the CA ERwin Report Viewer.
4. Verify the result of the report against the libraries, diagrams, and entities in your mart. Make some changes to your mart hierarchy and Refresh the report to see the changes reflected in the report output.
5. Click Export, Export Report on the File menu to export the report contents in an external file format. Select PDF or any other format from the Export dialog and click OK. Select ‘All’ Page Range in the Export Options dialog and click OK. Enter a file name and provide a file path and click Save. Open the PDF file created and verify the contents of the report generated.
6. Switch back to CA ERwin Data Modeler and explore the other reports present in Global Reports (see step 2). Execute some more reports and observe the results.

Tour 4 Questions and Feedback

Work with the following questions for Tour 4 to assess your understanding of the features.

1. Is the report generated in CA ERwin Report Viewer correct and contain all of the expected model metadata?
2. Do the Pinned Reports provided fulfill your requirements to the same level as Data Browser and Report Template Builder? Are there any additional Pinned Reports you would like to see?
3. Are the report formatting and content-displaying capabilities of Crystal Reports better than what was provided by CA ERwin Data Modeler in the past?
4. Were you able to successfully design your reports in Crystal Reports Developer after studying the Pinned Reports provided in CA ERwin Data Modeler?
5. Is the diagram generation capability of Crystal Reports sufficient for your requirements for reporting? What additional capabilities would you like for diagram reporting?
6. Did you observe all of the various export file formats for Crystal Reports Developer? Were you able to successfully export all of your report content?

Contact us to provide feedback, comments, or questions about the features covered in this tour.

Spell Checker, History, Notes, Printing, Transforms, Link Objects, and Navigation

This section provides information about the following functional areas:

Spell checker (see page 30)

History and notes (see page 31)

Microsoft Windows standard printer selection dialog (see page 31)

Single state transformations (see page 32)

Creating and working with Link objects (see page 33)

Go To functionality (see page 33)

Spell Checker

Use the following steps to become familiar with the Spell Checker functionality.

1. Open one of your existing models or create a new model with a few entities. Right-click on any entity in the Model Explorer and select Properties to launch the Entity Editor. Click the *Definition* tab, and enter some text if there is not text already present. Make a deliberate spelling error. Click the Spell Check toolbar button  to launch the Check Spelling dialog.
2. Click the Options command to launch the Spelling Options dialog. Explore the various options available and customize Spell Check according to your requirements. Save your changes and close the Spelling Options dialog by clicking OK.
3. In the Check Spelling dialog, click the Dictionaries command to launch the Spelling Dictionaries dialog. Add a new word to your currently selected dictionary and define the associated Action. You can add or remove Dictionaries to your model from this dialog.
4. At any time, launch the Help to further understand the meaning of all of the options available on the various dialogs for Spell Checker.
5. Modify the misspelled word by double-clicking one of the words from the Suggestions list, or ignore the mistakes pointed out by the Spell Checker by clicking Ignore.

   Note: You can also add this word to your enterprise dictionary by selecting the dictionary from the *Add Words To* drop-down list and clicking Add.
6. Close the Check Spelling dialog by taking an appropriate action for the misspelled word (like Ignore, Add, or Change). The Spell Checker facility is also available for Comments and Notes.

History and Notes

Use the following steps to become familiar with history and notes.

1. Open one of your existing models or create a new model with a few Entities. Right-click any Entity in the Model Explorer and select Properties to launch the Entity Editor. Click the *Notes* tab and notice that History and Notes properties have been consolidated. Have a look at all of the information presented on this tab.
2. Click the Sort Items toolbar button and select the *Creation Date Descending* sorting mechanism. Observe how the events are rearranged accordingly. Sort the events using the other sorting mechanisms as well, and select the one that best suits your requirements.
3. Click the Filter toolbar button to display both History and Notes, or either one of them.
4. Click the New toolbar button to launch the Notes Editor. Enter some text for the newly-created User Note, which will be displayed as a comment. Select some other Note or History item from the Navigation Grid, and modify the comment for the same in the text editor. Save your changes by clicking the Close button and observe the result of your actions in the *Notes* tab.
5. Click Close to exit the Entity Editor.

Windows Standard Printer Selection Dialog

Use the following steps to become familiar with the Windows standard printer selection dialog support in CA ERwin Data Modeler.

1. Open one of your existing models and launch the Page Setup dialog by clicking File, Page Setup.
2. Click the *General* tab and specify the general page settings like page size, orientation, and so on. Click the *Margins* tab and specify the Header/Footer and Margins values to use for printing. Save these settings to the currently open diagram by selecting *Save to Diagram*, and then close the Page Setup dialog.
3. Open the Diagram Editor and click the *Page Setup* or *Page Setup Margins* tab. Verify that the changes made to the page settings in Step 2 are reflected here as well. Close the Diagram Editor.
4. Open the Page Setup dialog again, and make some changes to the General or Margins settings. Click *Load from Diagram* and notice that the settings from the current diagram are restored and override your changes. Select the *Keep synchronized with current diagram* option to keep the page setup and current diagram page style settings synchronized. Save the changes by closing the dialog.

5. Open the Overview pane and notice the grid view of the model content printed on each page. Open the Page Setup dialog again, and change the Zoom Level value to 400 and click Close. Observe the corresponding changes to the grid view in Overview pane and increase in the number of pages required to print the diagram.
6. Launch the Print Preview dialog by clicking File, Print Preview. Browse through all of the pages being printed according to the Print and Page Setup Options, using the *Prev* and *Next* page commands. Also explore the *Zoom In* and *Zoom Out* options. Close the Print Preview dialog.
7. Click Print on the File menu (or press Ctrl+P) to launch the Print dialog. Select a printer from the drop-down and click the Properties button to launch the standard printer properties dialog. Press Cancel to close the printer properties dialog. You can also launch the Preview and Page Setup dialogs in the Print dialog to further customize the print settings.
8. In the Print dialog, specify the Page Range that you want to print. Specify whether to print the diagram or selected objects, and specify the print order.
9. Customize all the print options as needed, and click Print to begin printing. Compare the printed copy of the model with the actual diagram to notice if there are any differences.

Single State Transformations

Use the following steps to become familiar with single state transformations.

1. Open one of your existing r7.x models containing live transforms.
2. CA ERwin Data Modeler r8 launches the Model Upgrade Wizard that will help you in the model upgrade process. Read the *Overview* information before proceeding.
3. Click *Main Subject Area* from the list on the left. Check the *<Main Subject Area> Upgrade Options* if you want to keep the Main Subject Area and its diagrams in the upgraded model. Also select the *Apply a default theme to each diagram* option to maintain theme consistency after the upgrade.
4. Click *Transforms* from the list on the left hand side. Select from the options available one-by-one and read the associated information in the text box. For this tour, select the *Resolve all transforms* option and click Continue.
5. The upgrade process completes successfully. Close the Post Load Upgrade dialog and note.
6. In the Model Explorer, notice that no Transformation objects are created (as opposed to Transform objects in r7.x), and thus no live updates of source and target objects are maintained. In the diagram area, verify that all of the transforms have been resolved and only the target objects are visible. Close and save the model for later use.

Creating and Working with Link Objects

Use the following steps to become familiar with creating and working with Link objects.

1. Open an existing model, or create a new one with some entities and attributes. Select an attribute in one of the entities and launch the Attribute Editor.
2. Click the *Link* tab and click the New icon on the toolbar to launch the Link Wizard.
3. Read the information in the *Overview* page to understand the process of using the Link Wizard.
4. Click the *Link* page from the list on the left side. Provide a Name and Definition for the Link Object created. Select the *Synchronization Direction* property as *Two Way*.
5. Click the *Target* page from the list on the left side. Select the *Target Owner Table* and the *Target Column* for the link object. You can also create a new target column in the target table selected.
6. Click the *Properties* page from the list on the left side. By default all of the properties are selected to synchronize between the two attributes. Click the  button on the toolbar to unselect all of the items in the list, and select the properties that you would like to be synchronized. Save your selections as a new Option Set.
7. Click the Apply button to close the wizard and return to the Attribute Editor that now contains the Link object details for that attribute. Close the Attribute Editor.
8. Make some changes to the Properties of the source column, and verify that the changes are reflected in the properties of the target column. Similarly make some changes to the Properties of the target column, and verify that the changes are reflected in the properties of the source column. Close the model.

Go To Functionality

Use the following steps to become familiar with the Go To functionality.

1. Open one of your existing models or create a new model with some entities, relationships, and shape objects.
2. Press CTRL+G to launch the Go To dialog. Observe that this dialog now contains a complete listing of all the model objects in your model. Toggle the 'Show Drawing Objects in List' check box (top right corner of the dialog) to hide/unhide the drawing objects. Enter some text in the *Enter filter text* field, to filter the list of objects based upon the text entered.
3. Select an entity, relationship, or shape object from the list and click the Go To button. Observe that the focus moves to the selected object on the diagram area. Feel free to explore the other commands on the toolbar. Close the Go To dialog.
4. Right-click any entity or relationship in the diagramming area, and click *Go To Model Explorer* from the context menu. Observe that the same entity or relationship is selected in the Model Explorer.

Tour 5 Questions and Feedback

Work with the following questions for Tour 5 to assess your understanding of the features.

1. Did the Spell Checker work as expected? Was it able to detect/change or ignore misspelled words according to the spelling options you specified? Are there any other spelling options you would like to see in the tool?
2. Does the Spell Checker provide you with the ability to create and use Enterprise Dictionaries? Were you able to create and use dictionaries in languages other than English, if that is a requirement?
3. Apart from the *Definition*, *Comment*, and *Notes* tabs, are there any other places you would like the Spell Checker feature to be available?
4. Does the *Notes* tab provide you with all of the information on the history and notes attached to the particular object? Are all of the menu options available on the *Notes* tab working as expected?
5. Were you able to successfully print your model diagram according to the Page and Print settings? Did you face any challenges during the Print operation?
6. Are there any other customizations to the Page and Print settings you would like in the tool? What are your print requirements that the tool is able to meet or not meet?
7. How does the new Single State Transformation affect your models or workflow? Do you see any gain in the performance of CA ERwin Data Modeler as a result of this change?
8. Based upon your exploration, how do you intend to use the Annotations object, as opposed to the traditional Rectangle drawing object?

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