



Admin Utility v 7.9

User Guide

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RIPL Admin Utility

The RIPL™ Admin Utility software can perform administrative activities on a Risk Intelligence™ Platform (RIPL) database. The software is primarily used by pipeline Integrity Managers, RIPL database administrators, or equivalent personnel with appropriate RIPL user permissions.

You can use the Admin Utility to complete these administrative activities:

- *Database Upgrade*
- *Database Maintenance*
- *Model Views*
- *Job History*
- *User Preferences*
- *User Permissions*
- *Regional Trees*
- *Analyze Trees*
- *Component Hierarchy*

If you need assistance with the RIPL Admin Utility software, contact RIPL Technical Services:

- **Telephone:** 1-866-987-4466
- **Email:** ripltechservices@aiworldwide.com

Connect to a RIPL Database

Before using the Admin Utilities features, first open the software and connect to a RIPL database.

- 1 If present, double-click the desktop shortcut .
- 2 Click the Windows **Start** button , then click **Programs > AI Applications > RIPL Admin Utility**.

The *Database Connection* window opens, which prompts you to establish a new connection or use a previously established connection to a RIPL database. For a new connection, refer to *Establish a New Connection*. For an established connection, refer to *Connect with a Previous Connection*.

Establish a New Connection

To establish a new connection to a RIPL database:

- 1 Login to RIPL Admin Utility. The *RIPL Admin - Database Connection* window opens.

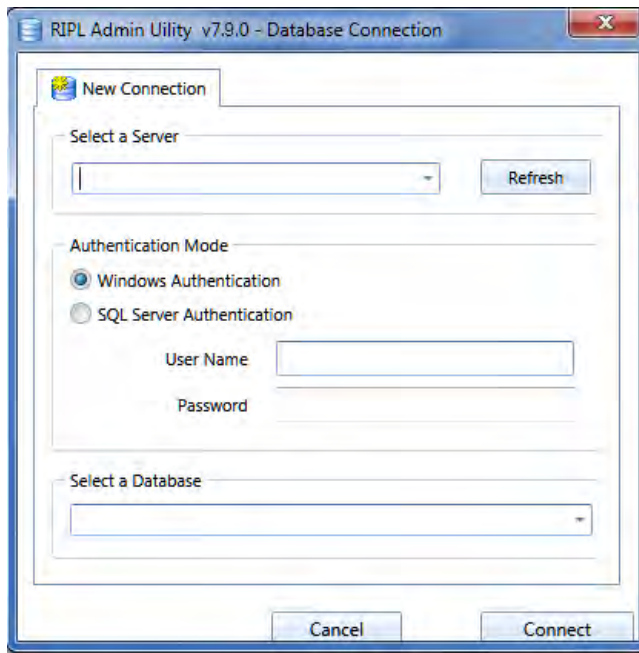


Figure 1-1. New Connection

- 2 Ensure that the **New Connection** tab is selected.
- 3 Type the name of the server in the **Select a Server** field. Or, click the down arrow in the **Select a Server** field and select a server.

NOTE: Selecting a server in the drop-down list may take a few seconds or minutes to gather the list of SQL Servers that are available on the network.

- 4 Select one of the following options in the *Authentication Mode* group box for logging into the server:
 - a Click **Windows Authentication** to log into the server using your Windows login credentials.

–or–

 - b Click **SQL Server Authentication** and then provide your user name and password to log into the server.
- 5 Type the name of the database in the **Select a Database** field. Or, click the down arrow in the **Select a Database** field and select a RIPL database.

NOTE: Selecting a database in the drop-down list may take a few seconds or minutes to gather the list of RIPL databases on the server.

- 6 Click **Connect** to establish a database connection and start the RIPL Admin Utility software.
-

IMPORTANT: If the database is an older software version than the RIPL Admin Utility software, the software allows you to upgrade the database. Once the database is upgraded, all buttons are enabled for use except *Database Upgrade*. See the section entitled *Database Upgrade* for information about how to upgrade the database.

Connect with a Previous Connection

To connect to a database using a previous connection:

- 1 Click the **Previous Connections** tab in the *Database Connection* window.

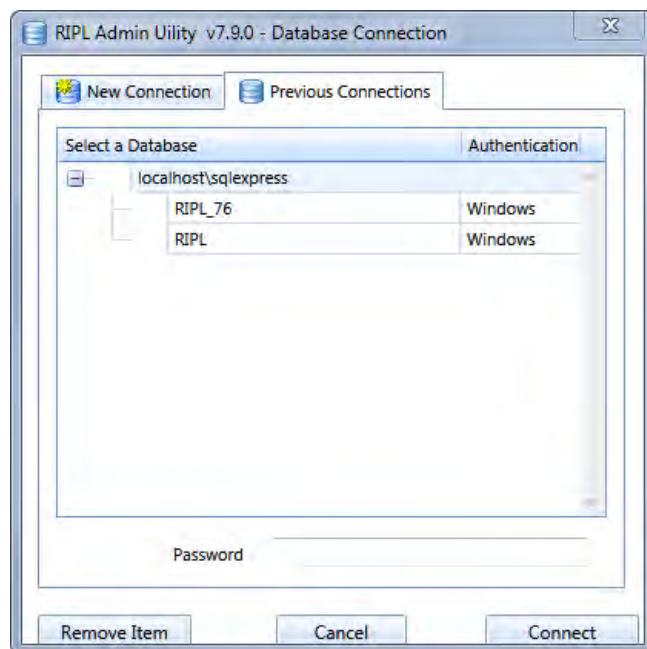


Figure 1-2. Previous Connections

- 2 Select a database listed in **Select a Database**.

NOTE: Selecting a server or database and then clicking *Remove Item* removes the selected server or database from the list of choices in the *Previous Connections* tab. Use this feature to remove old database connections that are no longer valid.

- 3 If using *Windows Authentication Mode*, click **Connect** to establish a database connection and start the RIPL Admin Utility software.

If using *SQL Server Authentication Mode*, type your password in the **Password** field and then click **Connect** to establish a database connection and start the RIPL Admin Utility software.

Database Upgrade

Once a database connection has been established, the RIPL Admin Utility then verifies the software version of the RIPL database.

If the database software version is older than the RIPL Admin Utility:

- 1 Click the **Database Upgrade** tab to begin the upgrade process.

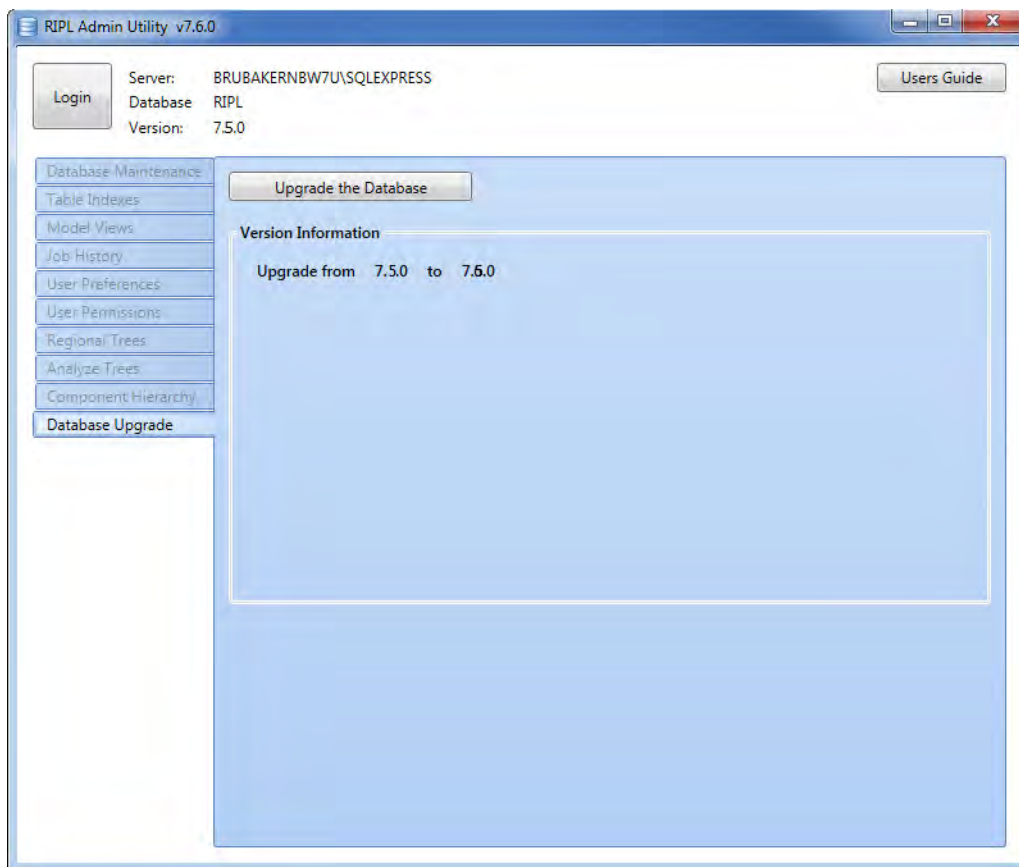


Figure 1-3. Database Upgrade

- 2 Click **Upgrade Database**.
- 3 A warning dialog window opens. To continue, click **Yes**. If you need to first backup your database, click **No**.

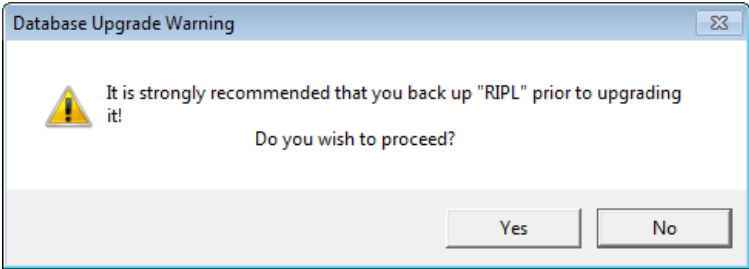


Figure 1-4. Database Upgrade Warning

4 When the upgrade is complete, click **OK** in the final dialog window.

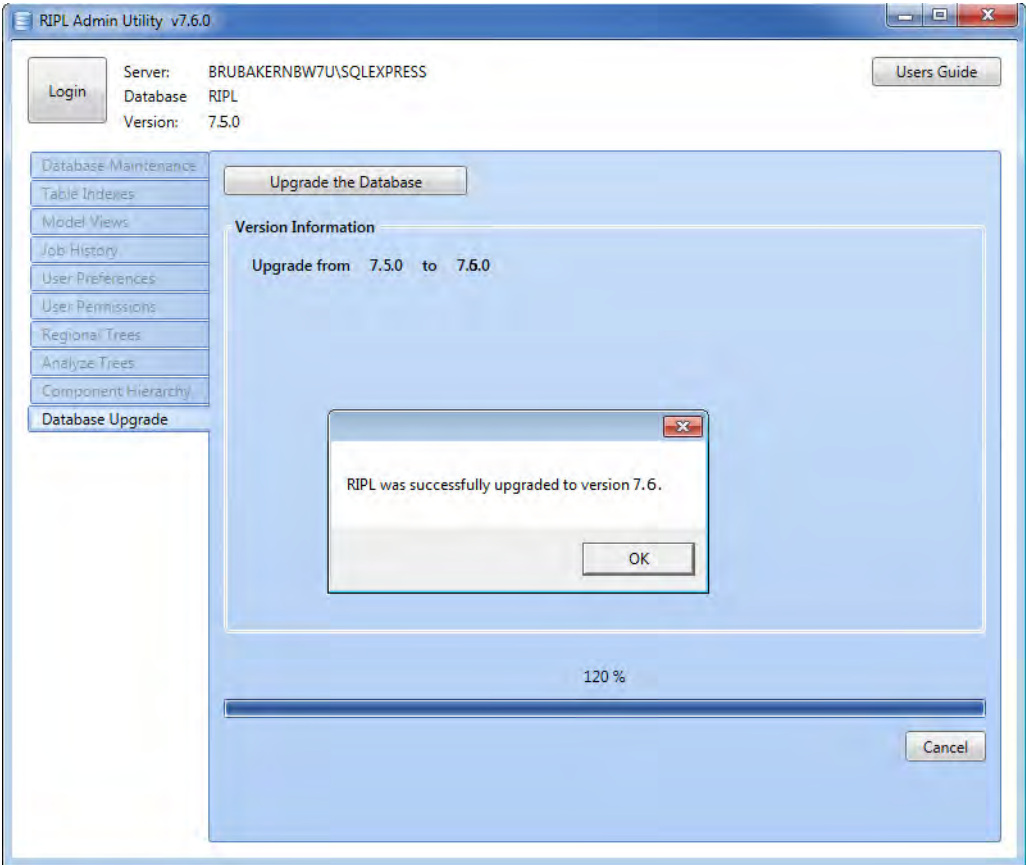


Figure 1-5. Upgrade Successful

- All tabs except the *Database Upgrade* tab become enabled for use after upgrading the database software.
- Click **Login** to open the *Database Connection* window if you need to connect to a different database.
- Information about the current database connection and software version will display beside the **Login** button in the **Server**, **Database**, and **Version** fields.

Database Maintenance

The Database Maintenance function cleans out temporary tables and other data that is no longer used by the database. Depending on the amount of user activity in the database, Database Maintenance should be run once a week or once a month. The maintenance can be scheduled as a re-occurring job by your company’s database administrator, because the stored procedure includes all maintenance procedures.

To run Database Maintenance:

- Click **Database Maintenance**, then click the **Run Maintenance Procedures** button. When a message opens stating the process may take several minutes to complete, click **Yes**.

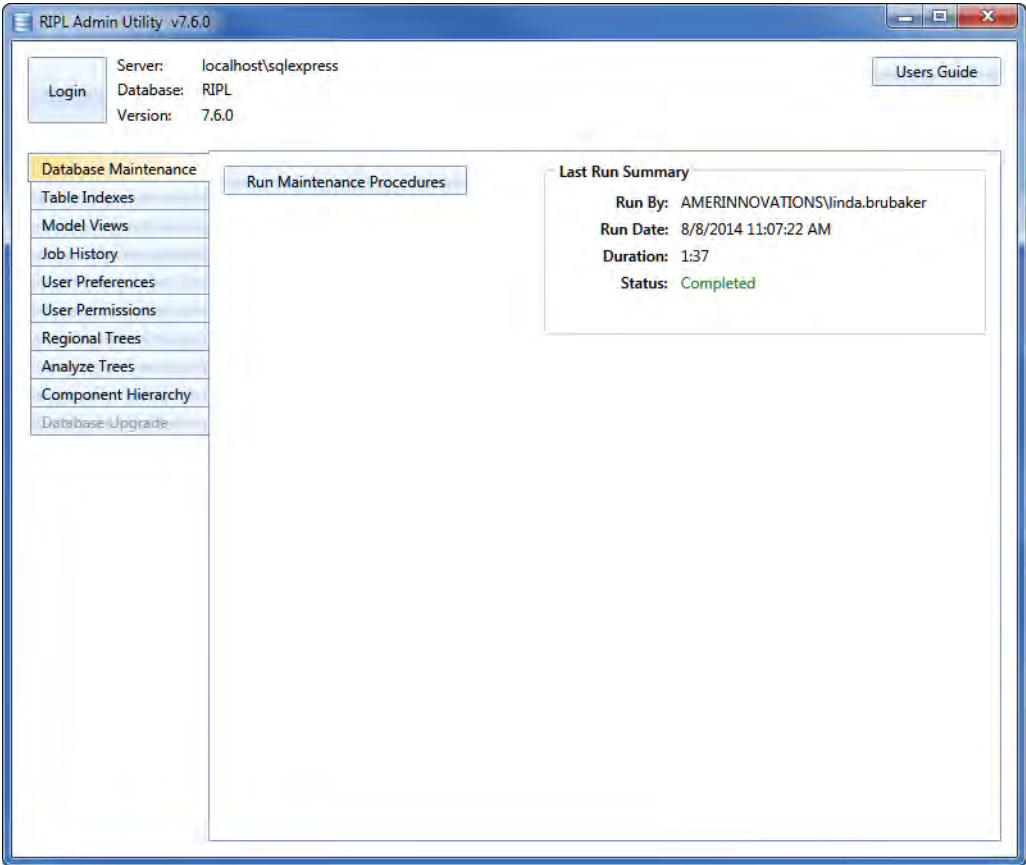


Figure 1-6. Database Maintenance

Maintenance activities performed during the *Database Maintenance* process include those in the following table.

Table 1-1. Database Maintenance Activities

| Maintenance Activity | Description |
|-----------------------------------|--|
| Remove Old Temporary Tables | <p>Drops lingering, temporary tables created during the viewing/editing of grids and execution of output models that may have failed to drop. Only tables more than one day old are dropped. Tables are dropped whose prefixes are:</p> <ul style="list-style-type: none"> • Del • BOM • DDTemp_ • Wtbl_ • Vtbl_ • Export_ |
| Clean Up Data Audit Tables | Truncates temporary data from Audit_ tables. |
| Remove Old Error Messages | Deletes log messages older than the number of days specified (default value is 7 days) to retain error log data (Log_Life_Days) in the Settings table. |
| Remove Old Component Selections | Deletes component selections for users that are more than 7 days old. Also deletes component selections for jobs that are more than 2 days old. |
| Remove Old Jobs Information | Deletes job status information more than 90 days old. Also deletes job status information for models with a newer job schedule, and deletes Output Metrics information for jobs that no longer exist in the JobStatus table. Jobs with expired dates are also deleted from the SQL Server Agent. |
| Remove Orphaned Variables | Deletes variables that are not associated with any model. |
| Remove Orphaned Attributes | Deletes attributes that are not associated with any variable. |
| Correct Invalid Model Flags | Updates invalid calculation flag values for models and transforms. |
| Remove Temporary Drill-down Data | Deletes temporary data from performing drill-downs on grid values. |
| Remove Old Data State Information | Deletes data from the Grid table for components that are no longer in each model "m" table. |

Table 1-1. Database Maintenance Activities (Continued)

| Maintenance Activity | Description |
|--|---|
| Remove Old Data for Deleted Components | Deletes data from each model "m" table for components that no longer exist in the database. Also adds the FK Constraint to each input and evaluation "m" table if it is missing. |
| Validate Data State Information | Adds data to the Grid and Grid_Ref tables for components that have been added to each model "m" table. Also deletes data from the Grid_Ref table for records related to references that are no longer in the database. |
| Validate Component Information | Deletes components in the Component table that are not associated with a component tree in the Catalog_List table or in the updated Grid table. |
| Validate the Stationing Table Key | Creates the primary key for each stationing table if it does not exist. |
| Update the Default Column Order | Updates the default column order for each model so the values are sequential. |
| Remove Old Temporary Importing Tables | Drops lingering, temporary tables created during the importing process that may have failed to drop. Tables with a prefix of Import_ are dropped. |
| Validate Stationing Tables | Drops the stationing tables for each child input model that gets its stationing values from the parent model. |
| Validate Manipulated Column Settings | Removes duplicate records associated with manipulated column definitions if they exist. |

Model Views

The Model Views feature creates database Views of each model (or table of data) in the database. Run this activity only when Views have never been created, or when RIPL models or column names have been modified, or when columns have been added or removed in a model. Views do not need recreating when data has been imported, modified, or deleted.

The option to remove special characters (hyphens, underscores, and spaces) from View names is only necessary if your company connects Views to a reporting tool that does not allow special characters in View names, such as SAP® BusinessObjects™ or Crystal Reports®.

Complete the following steps to create model Views:

- 1 Click **Model Views**, then click the **Create Model Views** button.

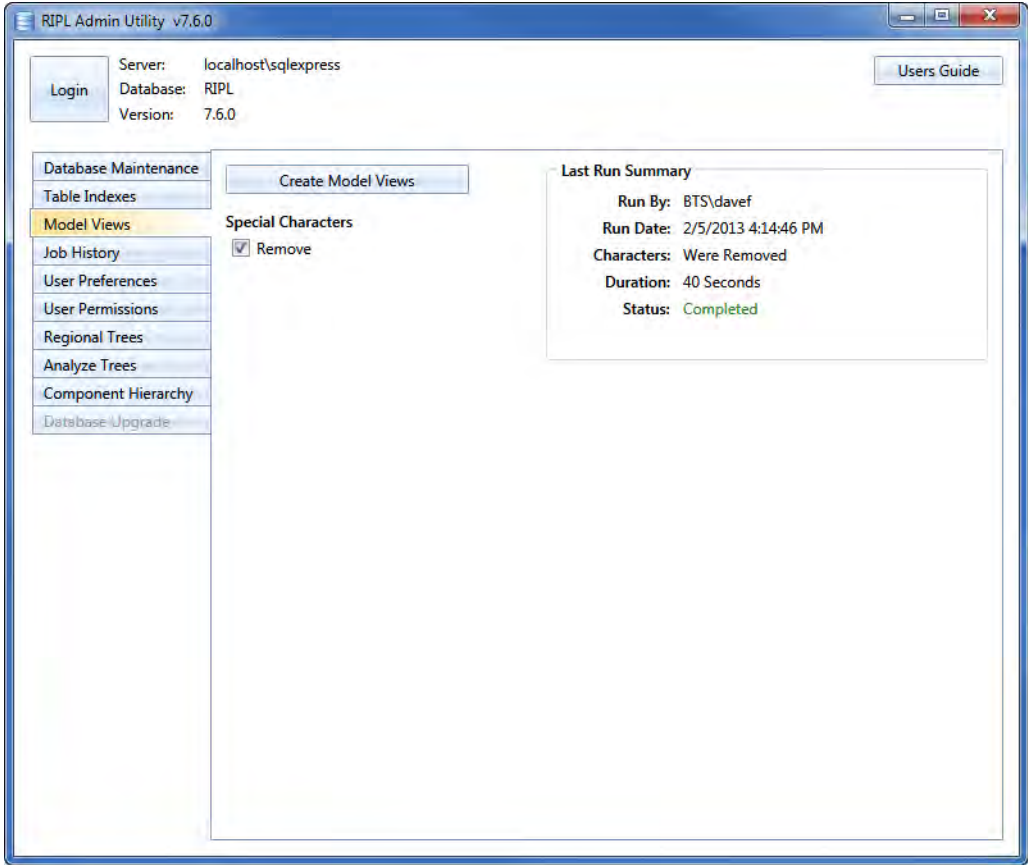


Figure 1-7. Model Views

- 2 When the *Creating Model Views* dialog box opens, click **Yes**.

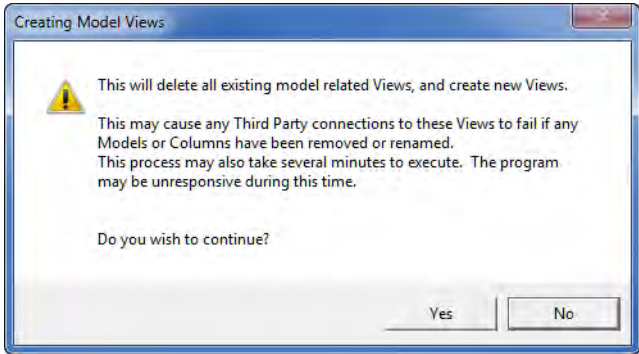


Figure 1-8. Continue with Creating Model Views

Job History

The Job History function removes history information for output models used in RIPL. This activity does not delete or stop any scheduled RIPL jobs in the SQL Server Agent, such as those that are running or past due.

Complete the following steps to clear job history:

- 1 Click **Job History**, then click the **Clear Job History** button.

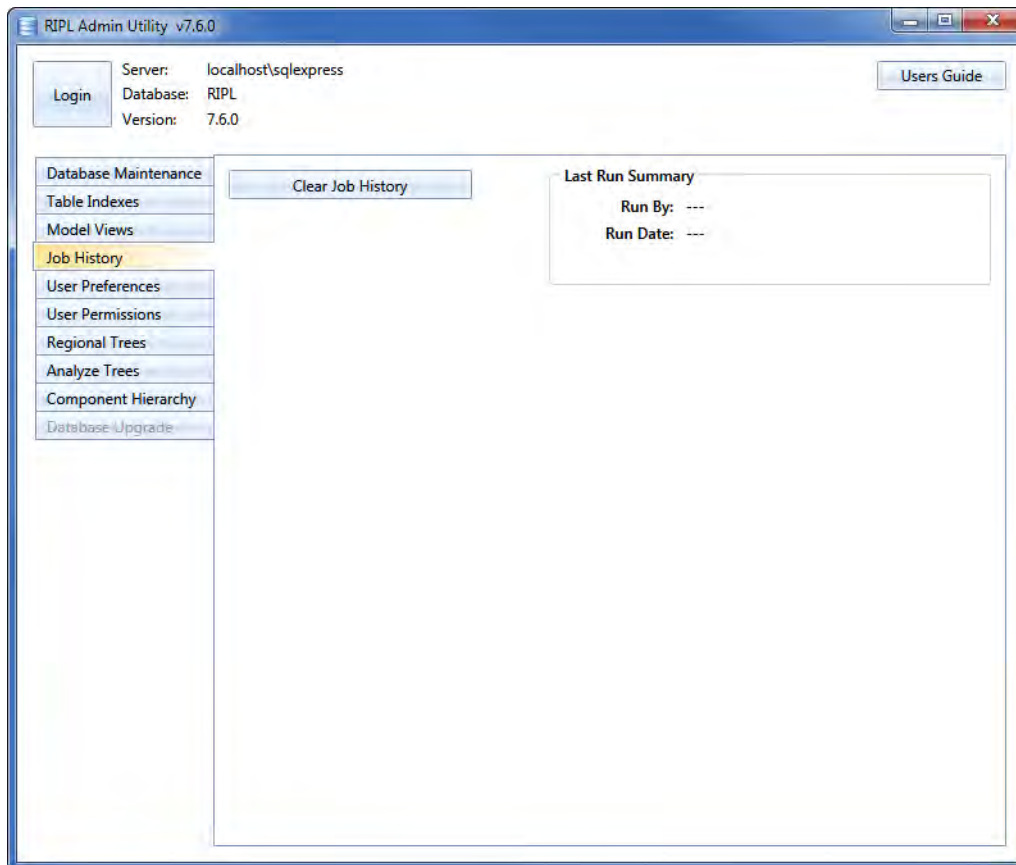


Figure 1-9. Job History

- 2 When a message opens stating the job history has been cleared, click **OK**.

User Preferences

The User Preferences feature clears application preferences for each selected user. These preferences include sorting, filtering, column order, width settings for grid columns, and the list of which items are expanded in each RIPL tree. Clearing user preferences also removes old preferences for users whose database access has been removed by the database administrator.

Complete the following steps to clear user preferences:

- 1 Click **User Preferences**, and then select one or more user names the **Select Users** column.

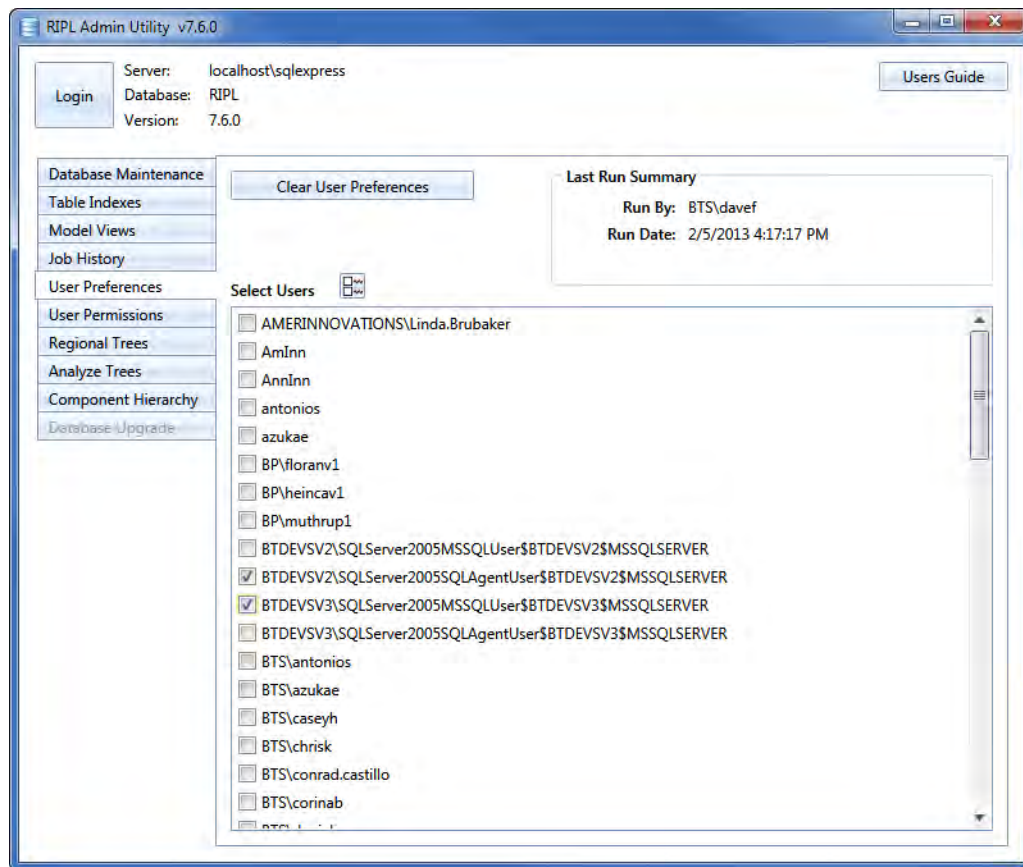



Figure 1-10. User Preferences

A check mark inside the check box indicates a selection. To clear all selections, click  **clear all**.

- 2 Click the **Clear User Preferences** button. When a message opens stating preferences have been cleared, click **OK**.

User Permissions

Adding users and granting access to a RIPL database are tasks performed the RIPL database administrator. The User Permissions feature allows the database administrator to manage user application permissions at the company (default), group, and user level.

Use the following information and Table 1-2 as a guideline when working with permissions:

- **User and Group Assignment:** A user can only be assigned to one group. When the user is not assigned to any group, the person is automatically assigned to the *Default* group.
- **User Permissions:** When a user is not assigned permissions, is not assigned to a Group, and *Default* group permissions have not been modified, the user is assigned Company permissions.

- **Managing Groups:** The database administrator can create and rename groups. Except for the *Default* group, any group can also be deleted. Users assigned to a deleted group are automatically re-assigned to the *Default* group.
- **Inherited Permissions:** All Groups inherit Company permission settings. These settings can be modified.
- **User Permissions:** All Users inherit permission settings from their assigned Group. Permission settings can however be modified on a user-by-user basis.

Table 1-2. RIPL Permissions

| Function | Permission | Description |
|---------------------|------------------------------|--|
| Application Screens | Maintenance | Access to the Tools > Maintenance window. |
| | Server Processes | Access to the Tools > Server Processes window. |
| Edit Settings | Models | Edit model settings. |
| | Template Models | Tag a model as a template model. Setting a model as a template model locks the model definition so it cannot be modified until the setting is removed. |
| | LVR & PP Mappings | Edit Calculated Model Settings. |
| | Drawing Templates | Edit settings for drawing templates. |
| Data | Calculate Models | Calculate output models. |
| | Import Data, Export Data | Import Data: import data to a RIPL database. Export Data: export data from a RIPL database. |
| | Export to SQL Server | Export data to other SQL Server databases. |
| | Save Data Changes | Save data changes in the RIPL database. |
| | Audit Data | Audit input model data. |
| | Save Grid Defaults | Save grid default settings as the Model Settings . |
| References | View, Edit | View: access to the View > References window. |
| | | Edit: edit Reference settings. |
| Transforms | View, Edit | View: access to the Data > Transform window. |
| | | Edit: Edit Transform settings. |
| System Analyzer | Enable | Launch the System Analyzer application. |
| Trees | Add Models, Delete Models | Add Models: add models in the Presentation tree. Delete Models: delete models in the Presentation tree. |
| | Delete Components | Delete components in the Components tree. This moves deleted nodes to the Trash node. |
| | Empty Trash | Delete all items from the database that are in the Components tree Trash node. |
| | Edit Trees | Edit the Component or Presentation tree hierarchy. |

Complete the following steps to assign a user to a group and select group permissions:

- 1 Click **User Permissions**, and then click **Groups** in the *Select a Level* pane.

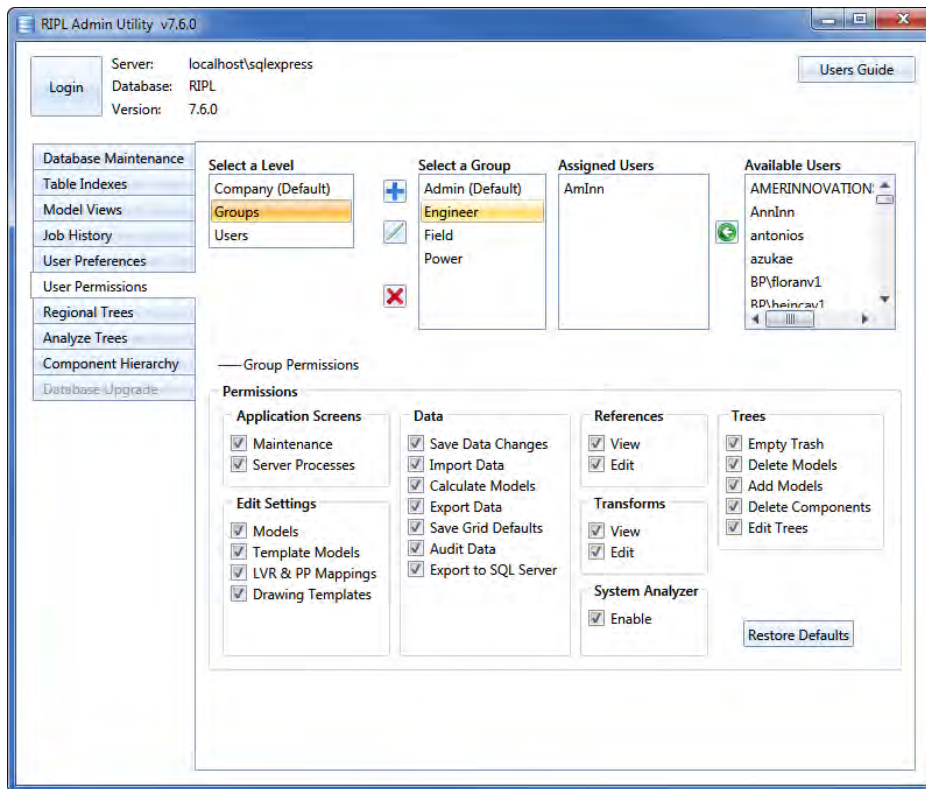



Figure 1-11. User Permissions

- 2 Select the group you want to assign the user by clicking the group name listed in the *Select a Group* pane.
- 3 Select a user name listed in the *Available Users* panel and then click . The selected user name now appears in the group's list of *Assigned Users*.

NOTE: The user inherits permission settings assigned to the Group. To edit the user's permission settings, (1) click **Users** in the *Select a Level* panel and (2) remove permissions as needed in the *Permissions* group box. Clicking a check box to remove a check mark subsequently removes the user permission.

The following color scheme is used in the *Permissions* group box to help you easily identify where each permission setting has been defined:

- Black text indicates the permission has been defined in the *Company* settings.
- Purple text indicates the permission has been defined at the *Group* level.

- Blue text indicates the permission has been defined for the specific *User*.
-

NOTE: Clicking the *Restore Defaults* button removes permissions associated with a selected Group (at the Group Level) or User (at the User Level).

Regional Trees

The Regional Trees function is only used when you want to split components into multiple component trees, which is typically organized by region. Use this feature to perform any of the following tasks:

- Manage users that have access to each regional component tree.
- Create new regional trees.
- Set the default regional tree.
- Move nodes from one regional tree to another.
- Manage which trees are archived. All archived trees are not accessible from the RIPL application.

Manage Users

Use the settings under the **Manage Users** tab to assign user access to Component Trees:

- 1 Click **Regional Trees**, then the **Manage Users** tab.

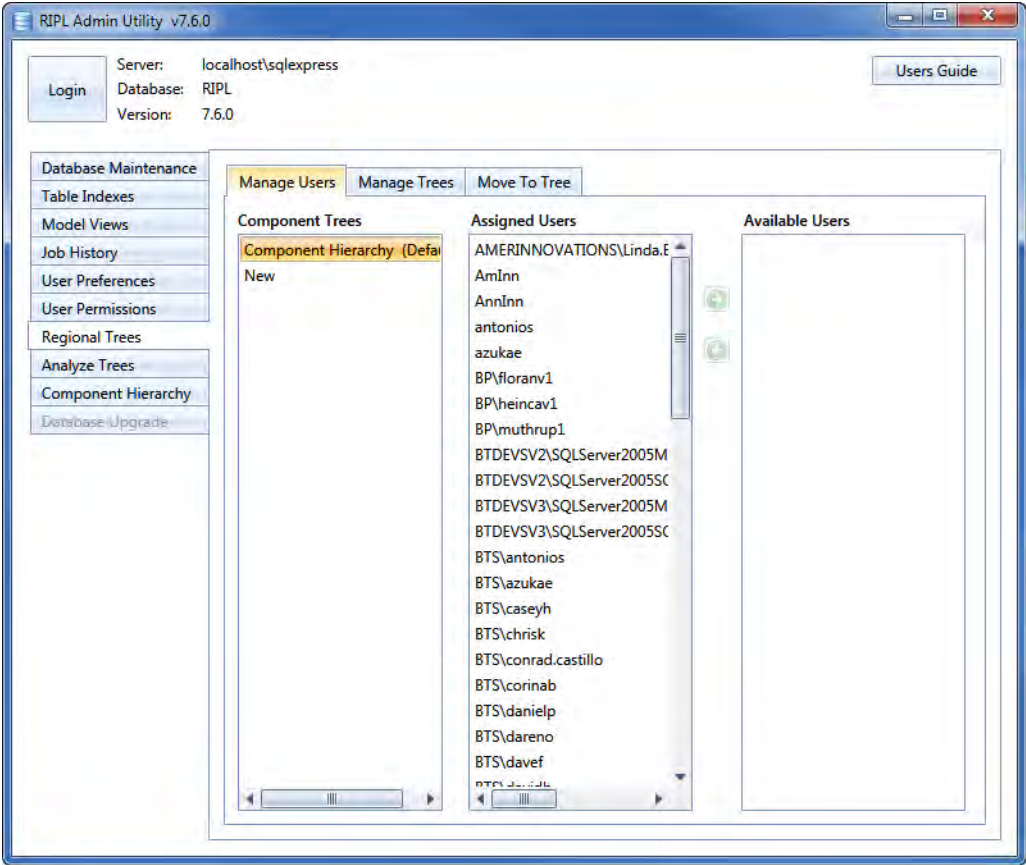



Figure 1-12. Regional Trees - Manage Users

- 2 Select a component tree listed in the *Component Trees* pane.
- 3 Select a user name listed in the *Available Users* pane and then click . The selected user name now appears in the *Assigned Users* panel.

NOTE: All users always have access to the default tree. Users can also be assigned to multiple trees.

Manage Trees

Use the settings in the **Manage Trees** tab to create new regional trees, set the default regional tree, and manage which trees are archived.

- 1 Click **Regional Trees**, then the **Manage Trees** tab.

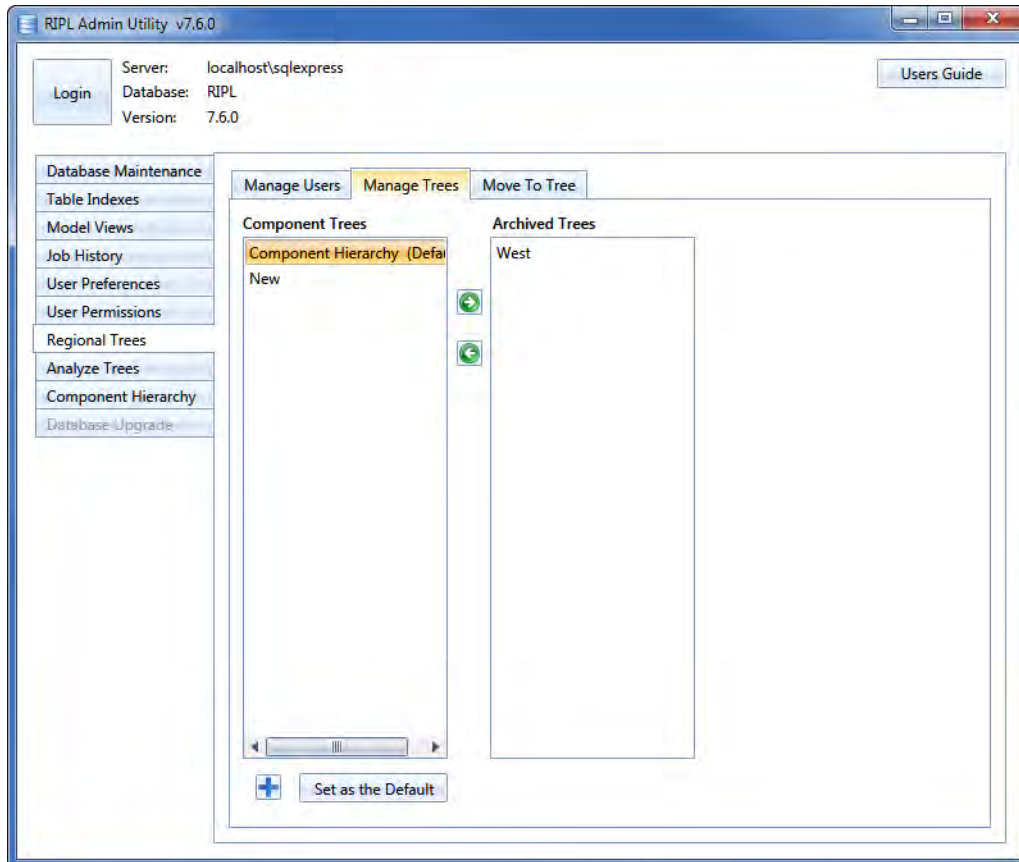






Figure 1-13. Regional Trees - Manage Trees

- 2 To create a new regional tree, follow these steps:
 - a Click  **Add Tree**.
 - b Type a name for the tree in the **Tree Name** field and then click  **Save**. Clicking  **Cancel** before saving cancels the process of creating a new tree.

The new tree is added to the *Component Trees* panel.

- 3 To set a tree as the default tree, select a tree in the *Components Tree* panel and then click the **Set as the Default** button.
- 4 To archive a tree, select the tree in the *Components Tree* panel and then click  to move the tree to the *Archived Trees* panel. Moving the tree back to the *Components Tree* panel makes the tree active again.

Move To Tree

Use the settings under the **Move to Tree** tab to move nodes from one tree to another.

- 1 Click **Regional Trees**, and then the **Move to Tree** tab.

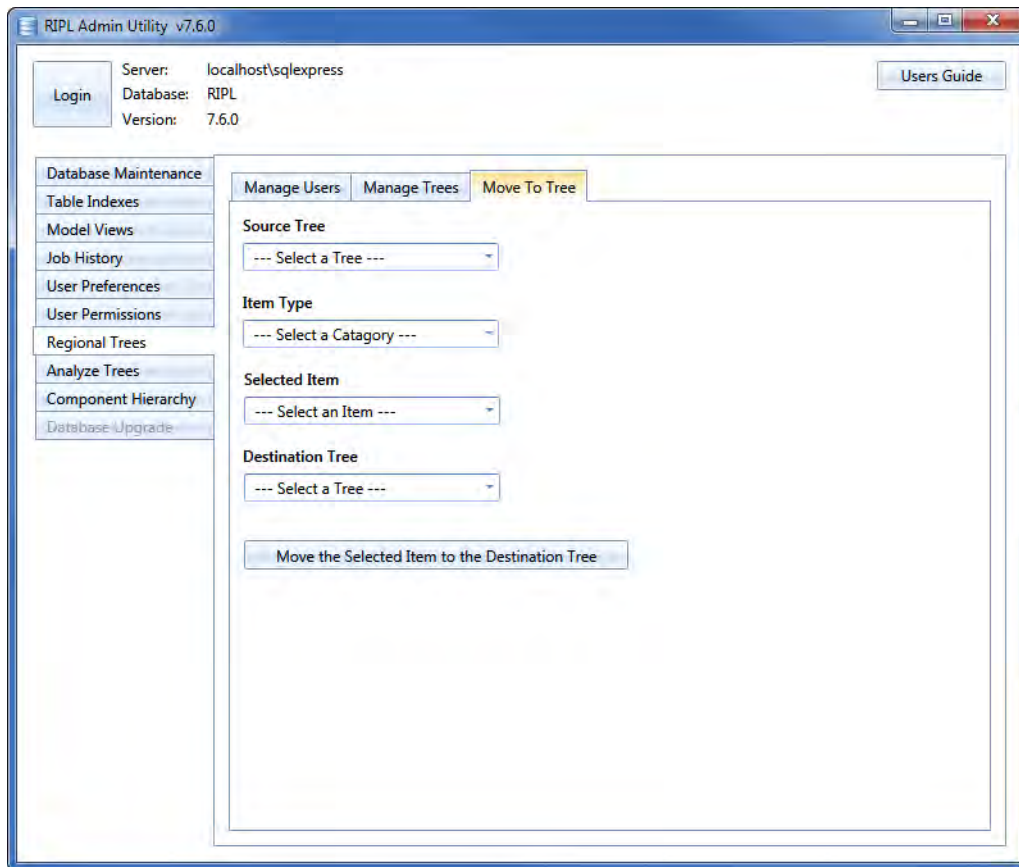


Figure 1-14. Regional Trees - Move to Tree

- 2 Click the down arrow in the **Source Tree** drop-down list and select a source tree. This is the tree containing the component or folders of components you want to move.
- 3 Click the down arrow in the **Item Types** drop-down list and select either **Components** or **Folder**.
- 4 Click the down arrow in the **Selected Item** drop-down list and select an item in the list (folder or component item).
- 5 Click the down arrow in the **Destination Tree** drop-down list and select a destination tree. This is the tree that will receive items from the source tree.
- 6 Click **Move the Selected Item to the Destination Tree** button.

Analyze Trees

The Analyze Trees feature corrects the most common issues encountered with managing tree structures in the RIPL database. This feature checks for issues in the following areas of the RIPL database:

- Components Tree
- Presentation Tree
- Import Templates Tree
- Drawing Templates Tree

To analyze trees and repair issues:

- 1 Click **Analyze Trees**.

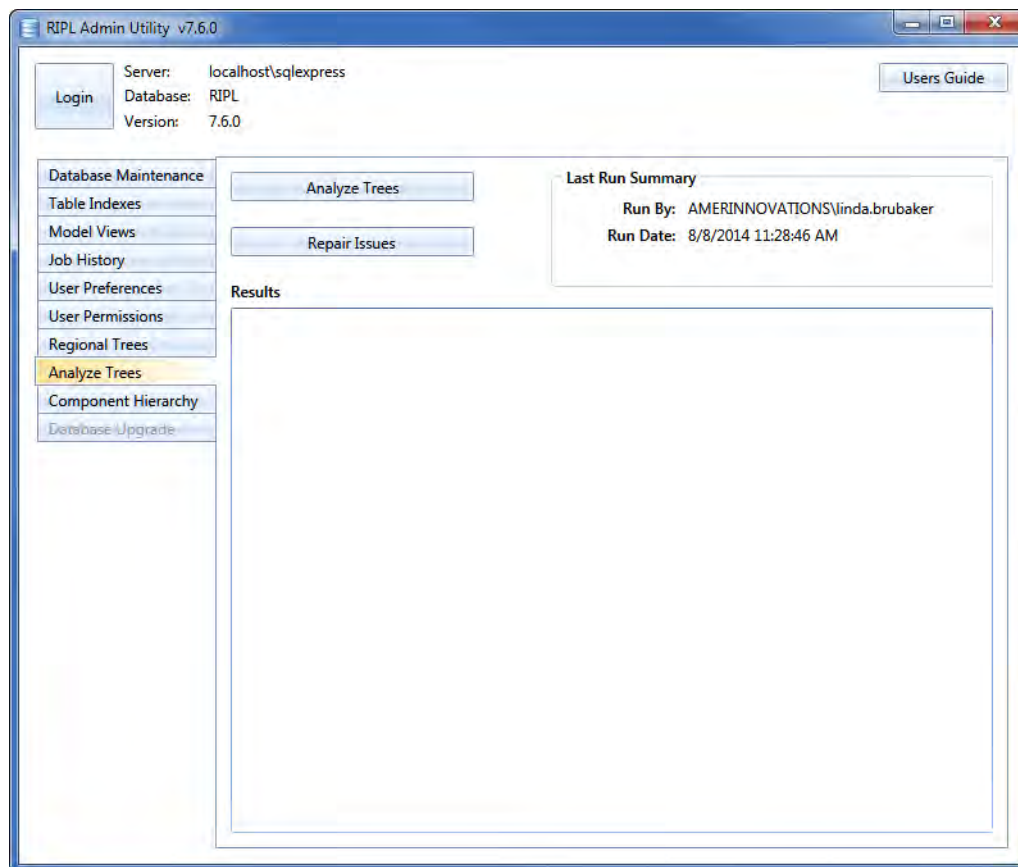


Figure 1-15. Analyze Trees

- 2 Click the **Analyze Trees** button to check for 23 common issues that cause errors in the RIPL application. If issues are discovered, they display in the *Results* pane.
- 3 Click the **Repair Issues** button to check for tree issues and attempt to repair them.

Component Hierarchy

Importing component hierarchies allows you to perform any of the following actions:

- Append a component hierarchy to an existing tree.
- Replace the contents of a component tree.
- Replace the contents of a root folder in a tree.

Complete the following steps to import a component hierarchy:

NOTE: All users must be logged off RIPL before a component hierarchy can be imported to the database.

- 1 Create an Excel file with the component hierarchy information you wish to import. Refer to the section *Create a Component Hierarchy Spreadsheet* for more information.

| | A | B | C | D | E | F | G | H | I | J |
|----|------------------|------------------|------------------|------------------|------------------|--------------|----------------|----------|----------------|--------------------|
| 1 | Catalog Folder 1 | Catalog Folder 2 | Catalog Folder 3 | Catalog Folder 4 | Catalog Folder 5 | Component | Component Type | Order By | PLine ID | Component Comments |
| 2 | Pipes1 | Pipes2 | Pipes3 | Pipes4 | Pipes5 | Pipe Segment | 1 | 1.00 | Transmission G | Sample, demo data |
| 3 | Tanks1 | | | | | Tank1 | 2 | 2.00 | | |
| 4 | Tanks1 | Tanks2 | | | | Tank2 | 2 | 2.00 | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |

Figure 1-16. Example Component Hierarchy Spreadsheet

- 2 Click the **Component Hierarchy** tab to begin the import process.

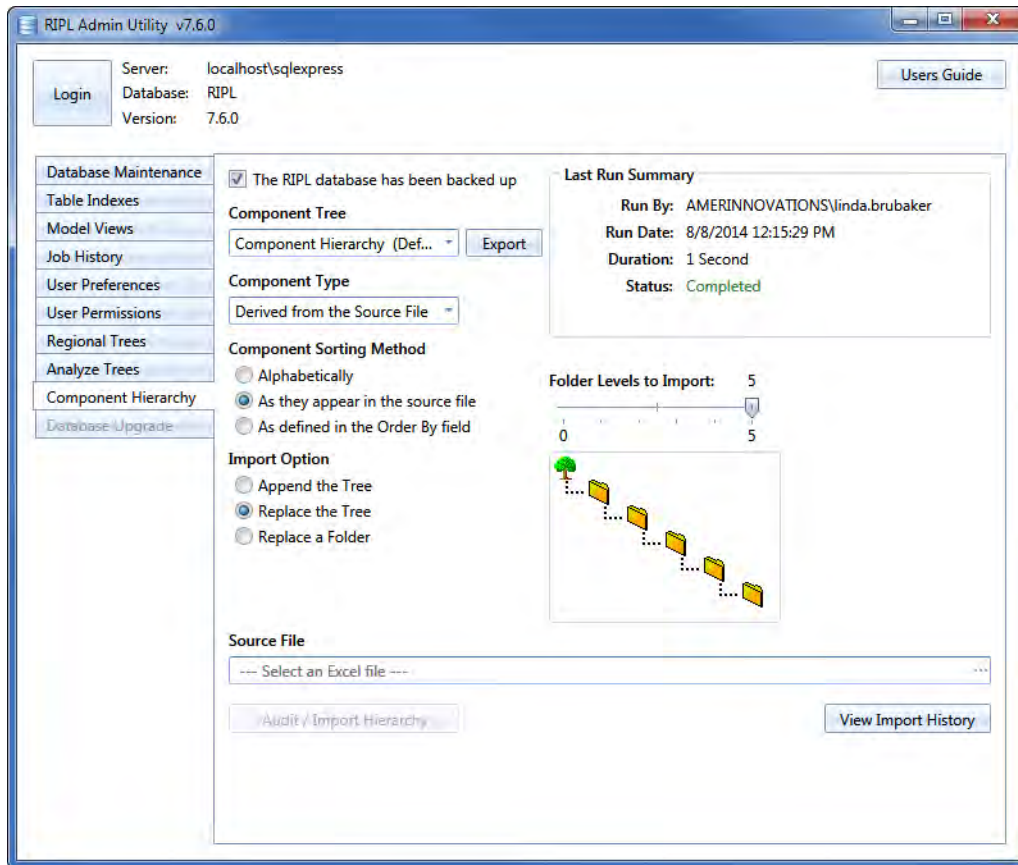


Figure 1-17. Component Hierarchy

- 3 After verifying the database has been backed up, check the **RIPL database has been backed up** check box.
- 4 Select the component tree you wish to modify from the **Component Tree** field.
- 5 Select the default component type from the **Component Type** field for the component you are importing, or select the *Derived from the Source File* option. Refer to the section *Create a Component Hierarchy Spreadsheet* for more information on how to create an input file.

When using the *Derived from Source File* option, you can use the import hierarchy to add up to 21 different components. The component types and their associated values are shown in Table 1-3.

- 6 Select one of the sorting methods listed under **Component Sorting Method**. Components within each Folder that is being imported will be sorted based on the selected option.
- 7 Select how the import will be done under **Import Option**. This option allows user to append a component hierarchy to an existing tree, replace the contents of a component tree, or replace the contents of a root folder in a tree.
- 8 Select the level under **Folder Levels to Import**. The source Excel file may contain up to 5 folder levels, but this option may be used to over-write the number of folder levels imported.

- 9 In the **Source File** field, select the source Excel file that contains the component hierarchy information.
- 10 Click **Audit / Import Hierarchy** button to start the import process. An audit will be run on the data prior to import. If the source data passes the audit test, you will be able to click the button again to continue importing the hierarchy information.

NOTE: If components are listed as the same name of the existing components, the hierarchy audit will fail. This includes components that have been deleted but not removed from the Trash Folder. You must delete these components before proceeding with the component hierarchy import.

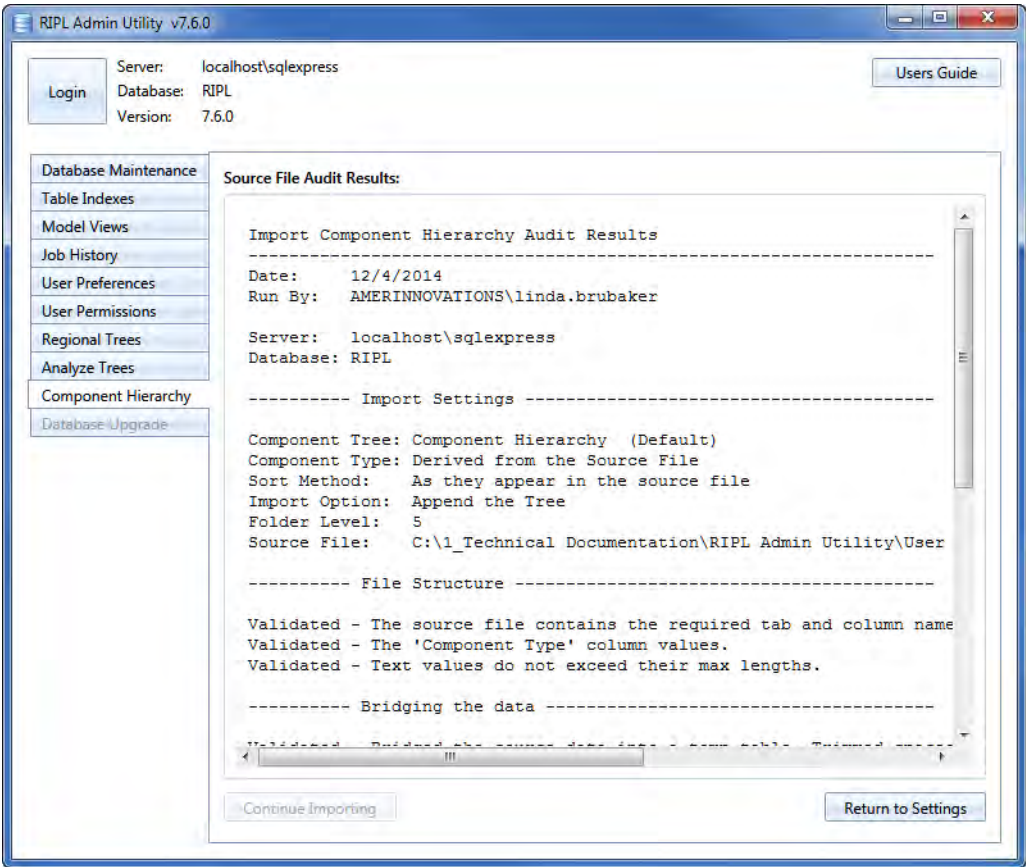


Figure 1-18. Audit/Import Hierarchy Results - Passed

- 11 Click the **Continue Importing** button.
- 12 Click **OK** in the *Import Component Hierarchy* dialog box when the import completes.
- 13 Click **View Import History** to see summary information regarding past component hierarchy import sessions.

Create a Component Hierarchy Spreadsheet

Before using the Component Hierarchy function of RIPL Admin Utility, you must first create an Excel spreadsheet that will contain the information to be imported. Refer to the section *Component Hierarchy* for more information on importing the Excel spreadsheet.

To create an Excel spreadsheet that will be used to import component hierarchy:

- 1 Create an Excel file with the following column headers:
 - a Catalog Folder 1

NOTE: The **Catalog Folder 1**, **Catalog Folder 2**, **Catalog Folder 3**, **Catalog Folder 4**, and **Catalog Folder 5** columns are optional. These columns create the main folders where the components will be stored. Refer to Figure 1-21 for an example imported hierarchy.

- b Component
- c Component Type

NOTE: The **Component Type** is a number that corresponds to a component type (for example, pipe segment, tank, compressor station) in RIPL. Refer to Table 1-3 for a complete list of component types and their corresponding value.

- d Order by
- e PLine ID
- f Component Comments

All the columns are text fields except **Component Type** (a RIPL enumeration value) and **Order By**, which are integer fields. The columns after the Catalog Folder 1 (through Catalog Folder 5) column represent sub-folder levels in RIPL (refer to Figure 1-21).

- 2 Name the worksheet Component Hierarchy.

| | A | B | C | D | E | F | G | H | I | J |
|----|------------------|------------------|------------------|------------------|------------------|--------------|----------------|----------|----------|--------------------|
| 1 | Catalog Folder 1 | Catalog Folder 2 | Catalog Folder 3 | Catalog Folder 4 | Catalog Folder 5 | Component | Component Type | Order By | PLine ID | Component Comments |
| 2 | Pipes1 | Pipes2 | Pipes3 | Pipes4 | Pipes5 | Pipe Segment | | 1 | 1.00 | Transmission G |
| 3 | Tanks1 | | | | | Tank1 | | 2 | 2.00 | Sample, demo data |
| 4 | Tanks1 | Tanks2 | | | | Tank2 | | 2 | 2.00 | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |

Figure 1-19. Example Component Hierarchy Spreadsheet

NOTE: The above example Excel spreadsheet shows only two types of components (1 and 2). You can add up to 21 different component types (see Table 1-3).

- 3 Perform a custom sort on the entire spreadsheet:
 - a Add levels for each Catalog Folder that will be imported.
 - b Add Component Type. An example of sort settings for an import of five levels of folders:

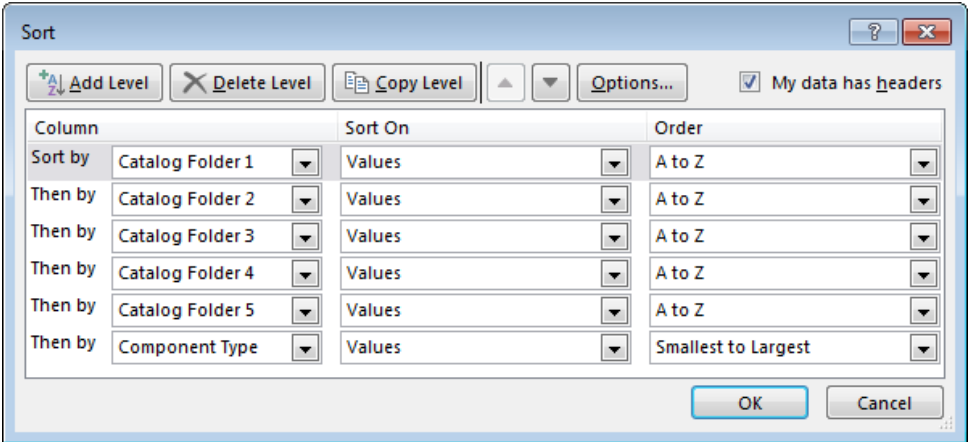


Figure 1-20. Example of Custom Sort for Five Levels of Folders

After the spreadsheet is imported into RIPL using the RIPL Admin Utility, the imported hierarchy will be similar to the following example:

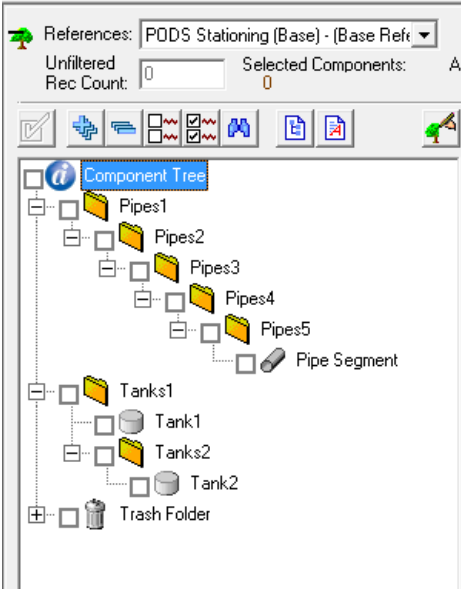


Figure 1-21. Imported Component Hierarchy

When using the **Derived from Source File** option on the Component Hierarchy function (see *Component Hierarchy*), you can use the feature to add up to 21 different components. The components and values associated with component types are shown in Table 1-3.

Table 1-3. Component Types

| Component | Component Type |
|-----------------------------|-----------------------|
| Pipe Segment | 1 |
| Tank | 2 |
| Compressor Station | 3 |
| Pump | 4 |
| Facility | 5 |
| Other 1 | 6 |
| Electrical System | 7 |
| Meter | 8 |
| Machinery | 9 |
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