APP
SQL BULK UPDATE

USER
MANUAL
VERSION - 3.3.0.2

APPLIED PROJECTS ENGINEERING

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Contents

First time use of the Application

The SQL Bulk Update Utility Tool is used to change large sets of data in SQL databases in a simplified manner. The Application automatically creates update queries and acts as a repository for standardized queries which will be frequently re-run.

Whether a user is a database administrator, automation engineer, software tester or validation professional, the SQL Bulk Update Utility Tool Application can help make large changes to data that requires frequent modifications in a controlled manner.

Data Simulation in Automation

In industrial automation, the application has been designed to make changes to data which represents database table records completed with data acquisition. The application is intended to make the exercise of verifying large datasets during Qualification and troubleshooting far easier with simulated information.

Manual Updates through Queries

Typical Manual updates to a SQL database are done through queries such as shown in the SQL management studio example below. The application has been specifically created to keep track of these Update Queries where full administrative rights are not to be given to all testers.

```sql
UPDATE  VISION_INSPECTION_BATCH_RECORD_TEST
 SET CELL_ENTRY_TIME = ' 2023-05-12 10:46:15'
 WHERE BATCH_ID = 'PA123001'
```

⊞ Results | 🗐 Messages

	ID	PART_ID	BATCH_ID	LOT_NUMBER	PRODUCT_ID	PROCESS_STATUS	CELL_ENTRY_TIME
1	12	COM1489001	PA123001	L100456	PA_V1	INSPECTION ENTRY BUFFER	2023-05-12 10:46:15
2	13	COM1489002	PA123001	L100456	PA_V1	INSPECTION ENTRY BUFFER	2023-05-12 10:46:15
3	14	COM1489003	PA123001	L100456	PA_V1	INSPECTION ENTRY BUFFER	2023-05-12 10:46:15

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SQL bulk Update Utility Tool Interface Overview

The application has been specifically designed to be simple to use with easy steps required to view and update the real-time values of a SQL Database. The main screen has a menu bar on the left hand side. In the center are 3 tables which represent database table column names (left), condition fields of an update query (Center) and the fields which are intended to be updated (right).

At the top of the screen, the name of a database connection is shown ("FentonMedical Batch Test" is used as an example above). Connection details for each database – table are held in an underlying encrypted application database where all configuration is held securely.

Database Table fields are displayed in a list at the left. The load button acquires all column field names from the current connection. The arrow icons above the condition – selected update fields are used to move the column field names across to their list - tables.

Main Menu Sidebar

The menu on the side of the main screen provides a simplified method of using the features of the application. The application design has been refined to be as simple as possible to use with the least amount of child forms used for additional settings and data entry.

CONNECTIONS	The connections button reaches out to a SQL Database or Server. A connection is made to a system by identifying the IP Address
LOAD	Loads the column fields in to the Table Fields box
UPDATE	The update button sends the updated fields to a SQL Database in the form of an update Query.
SAVE QUERY	Saves the current query into the application database
QUERY LIST	Lists all the saved queries in the application database with a load option
USER GUIDE	Opens this user guide
INFORMATION	Current details on application including version

Network Connection Overview

The SQL Bulk Update application is intended to be used locally or over a network where a client connection is made to a SQL Server over a network or directly on the Server itself. Below is an example of Architecture with typical client - server setup.

Most SQL database driven applications use a client - server configured locally or over the web to cloud based datacenter hardware. Both windows and SQL authentication connections are available. Connections over a domain can be completed by using suitable connection strings which are available through a configuration settings screen.
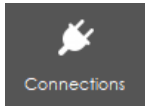
Note – The SQL Bulk Update application is an ideal way to white box and black box test database/domain account permissions over a network where specific requirements are in place at the tabular and column level.
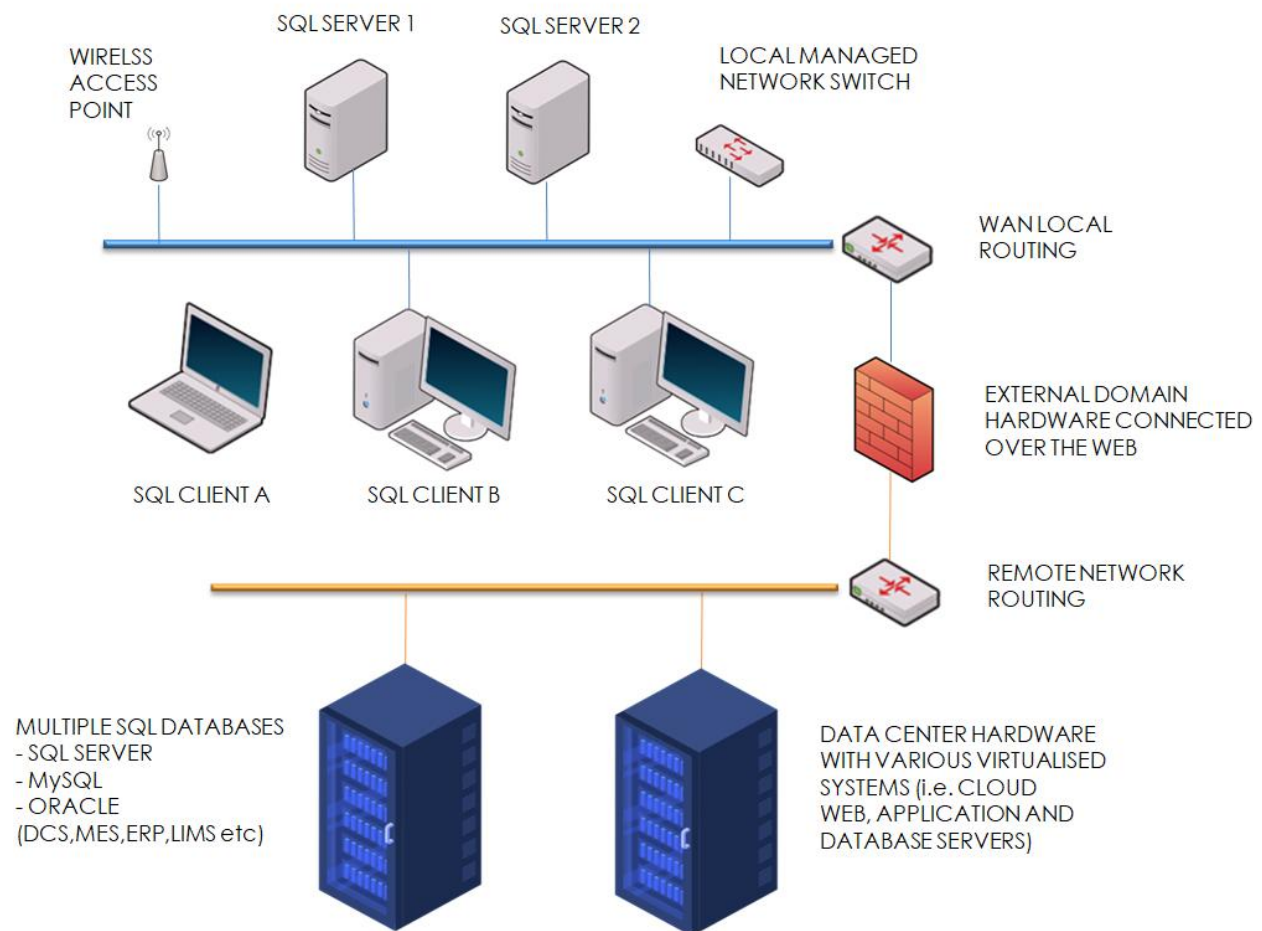
Creating a SQL Database connection

The creation of a new connection is completed through the CONNECTION DETAILS screen. A connection is specific to a database table and not simply to a database itself.

Step 1 – Select the connections button from the main screen.

Step 2 – Enter a name for the Connection. This is used by the SQL Bulk Update application only to identify each unique connection.
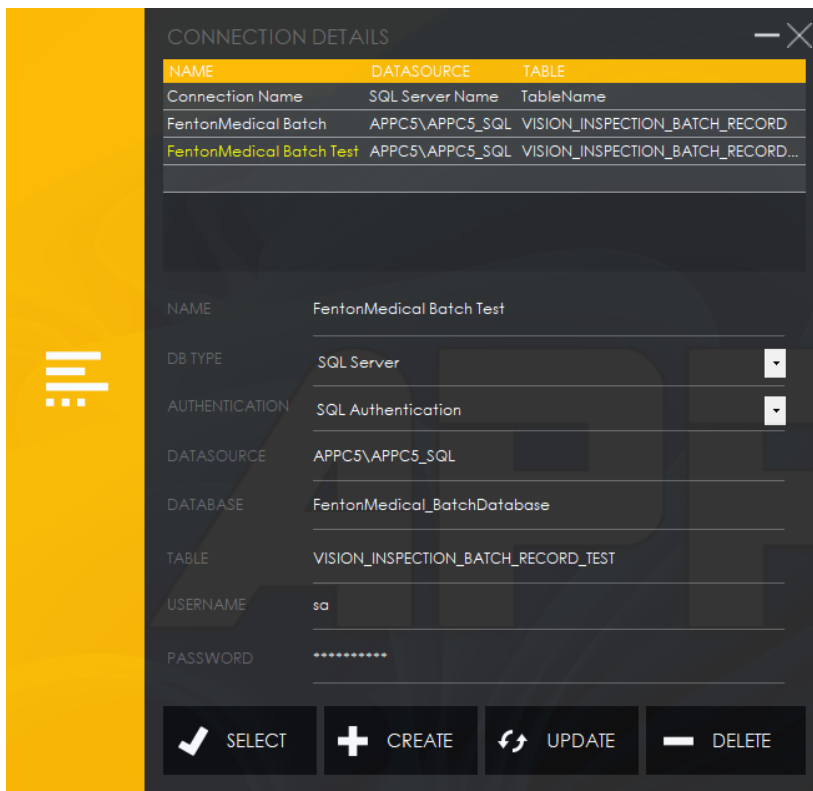
Step 3 – Use the dropdown to select the Database type, in this example, we are selecting the SQL Server option.

Step 4 – Select the preferred authentication method from the dropdown.

Step 5 – Enter the location of the data source. (i.e. Name of the SQL Server and the machine it is hosted on).

Step 6 – Enter the name of the database.

Step 7 – Enter the name of the table which will be updated.

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Step 8 – Enter in an existing SQL Server account username and password if SQL Authentication has been selected earlier.
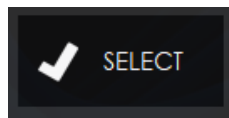
Step 9 – Select the "CREATE" button and verify the connection appears in the Gridview at the top of the screen.

Selecting a SQL Database connection for use
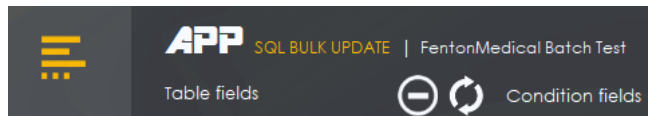
Step 1 – Press the connections button on the main menu to open the connections menu.
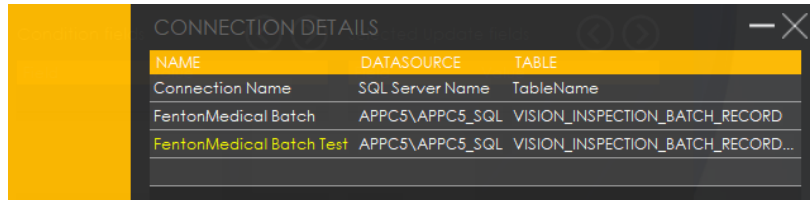
Step 2 – Select the connection presented in the list view at the top of the menu.

Step 3 – Press the "SELECT" button and check if the connection name is presented at the top of the main menu.

Step 4 – Press the "LOAD" button on the side menu to load in all of the fields from the database.

Creating and Executing an Update Query

There are 2 main factors when considering an update query. These factors are the Condition field and the fields you wish to update.
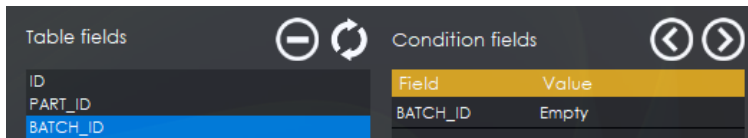
By selecting a field from the table fields and pressing the right arrow of the condition field, it will add that field to the conditions. This means the selected update fields will only update if the condition field value is satisfied (if an item in the SQL server contains that value). Pressing the left arrow above the condition field will remove that field.

Similarly to the condition fields, by selecting a field from the table fields and pressing the right arrow of the selected update fields, the field will be added to the selected update field's box and by pressing the left arrow, it will remove the selected field. These will be the fields that you wish to update. In this example, FentonMedical batch test is used to demonstrate how to successfully execute an update query on a SQL database.

Step 1 – Ensure that you have selected the database table you wish to update through the connections screen. Load the column names of the table by selecting the "Load" button.
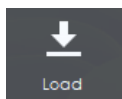

Step 2 – Select a Table field which will be a condition in the update Query and then select the right arrow above the condition fields table.

Step 3 – Insert the value of your condition field in the area displayed as "Empty". (PART_ID, BATCH_ID are shown as an example with a value of "12345","PA_V1").
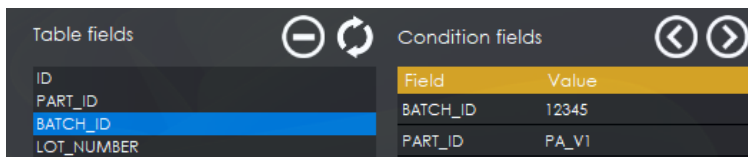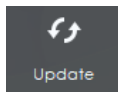

Step 4 – Select the field from the Table Fields that you wish to update and press the right arrow above the Selected Update Fields. Enter a Value to set the Update field to.
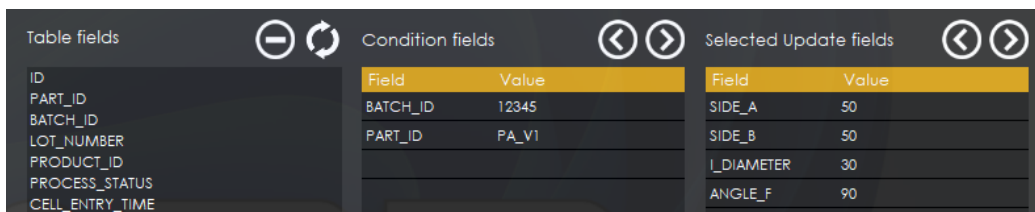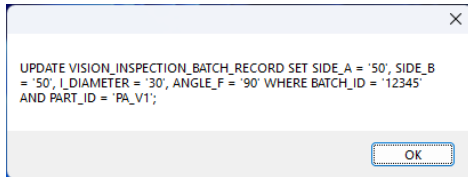

Note - The left arrow is used to remove a field if required from the selection.

Step 5 – Select the Update Button

Step 6 – Confirm the Query is displayed with an acknowledgment. Select "OK".

The data in the database will have been updated as per the displayed query if relevant conditions have been provided.

Saving an Update Query

When a query is developed, the user has the option to save the query so they do not need to recreate the query at another time.

Step 1 – With a full query setup, Select the "Save Query" Button.
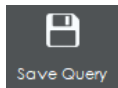
Step 2 – Enter the Query Name in the textbox and select the "SAVE" Button.

Note – Select a previous Query using the dropdown menu if the intent is to modify an existing Query.

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Loading an Update Query

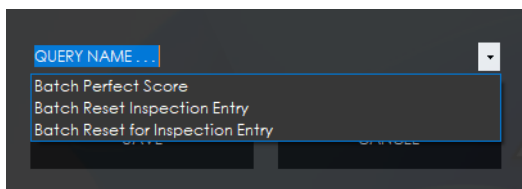Previously saved queries are available for re-execution once they are saved to the underlying application database.

Step 1 – To load a query, select the "Query List" Button.
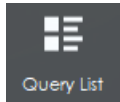
Step 2 – Select the query name from the "SAVED QUERY LIST" Screen.

Step 2 – Select the "SELECT" Button and verify the detail has displayed on the main screen as expected.

Contact Applied Projects Engineering Technical Support

APP Support Contact Information

The support page provides contact information should you need to contact an APP Technical Support representative.
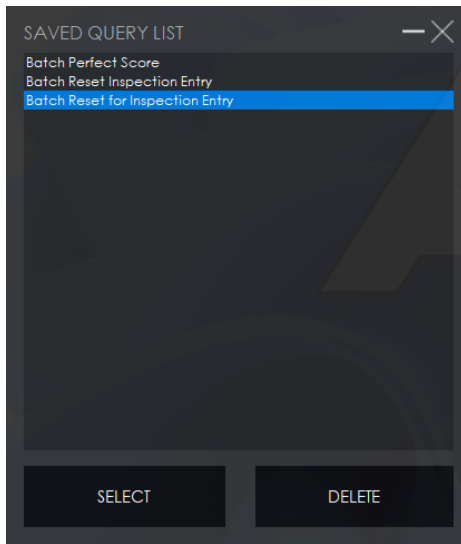
Ports and Firewalls

APP solutions are designed to work transparently through firewalls, enabling a connection with any computer. However, with certain highly secured networks, some configuration may be necessary

Port 3389(or customized) must be open for outbound TCP traffic on the remote system's and local user's firewalls. More ports may be available depending on your build

Internet security software such as software firewalls must not block executable files from downloading. Some examples of software firewalls include McAfee Security, Norton Security, and Zone Alarm. If you do have a software firewall, you may experience some connection issues. To avoid such issues, configure your firewall settings.

Tech Support

At APP, we are committed to offering the highest quality service by ensuring that our customers have everything they need to operate with maximum productivity.

If you should still have difficulty making a connection, contact APP Technical Support at contact@appliedprojectsengineering.com

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