

Database Consolidator

Overview

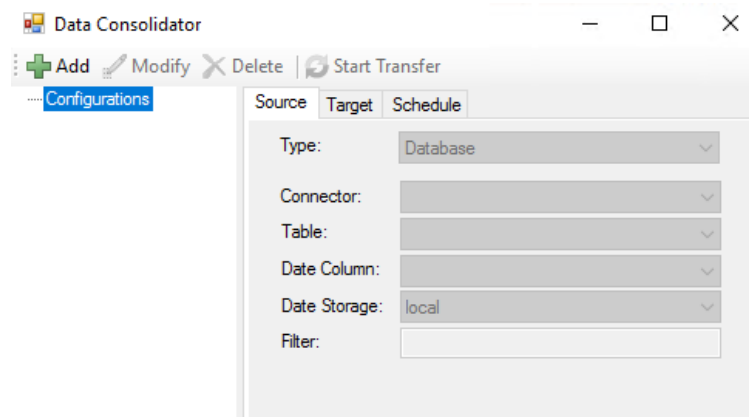
The Database Consolidator is used to take data from various sources and log that data to a relational database for reporting purposes.

When a transfer is initiated, the last transfer date is read from a table in the target database and data is requested from the source from that date until the current date. That data is then written to the target database and the last transfer date is updated to reflect the date of the most recent data.

Designer

The Designer is launched from **Install\bin\XLRdbCopyView.exe**

Every configuration in the project is listed on the left side. When selected, the settings are displayed read-only on the right side.



To create a new configuration click **Add**.

To modify an existing configuration click **Modify**.

To delete a configuration click **Delete**.

To start a transfer, select an existing configuration and click **Start Transfer**. From the Designer, data transfers occur in 6-hour increments from the start date/time established until the current time. A record of each transaction is displayed in the lower right. The transfer may be stopped at any time by clicking **Stop Transfer**.

Add/Modify a Configuration

The **Name** setting at the top defines the configuration name that is specified during runtime.

Source Tab

The **Source** tab contains all the settings to define where the source data to consolidate comes from. The **Type** setting determines the type of data to consolidate.

Database

For **Database**, the following settings are available:

Connector

The connector that defines the database to get the source data from. This can be any database connector defined in the project.

Table

The table within the database to retrieve the data from.

Date Column

The column within the table that contains the timestamp for every record.

Date Storage

This defines how the timestamps are stored in the date column.

Filter

An additional filter to apply when querying the data from the table. The syntax must match the syntax of the database. For example, if the table has a **Type** column that defines if the record is an *Alarm* or an *Event* and only alarm records should be queried, set Filter to:

Type = 'Alarm'

Target Tab**Database**

The **Database** connector that defines the target database. Any database connector defined in the project may be selected.

Table

This displays the name of the table in the **Target Database**. It is only displayed after it is created.

Create/Update Table

If no table has been created, a set of columns is derived from the source and displayed to create a table from. Otherwise, the columns in the existing table are displayed to update.

Each column has the following settings:

Name

The name of the column. This is not editable.

Type

The column type. This can be modified if needed. This must be a valid type in the **Target Database**.

Allow NULL

If checked, the column can be set with a NULL value, otherwise it cannot.

Indexed

If checked the column is indexed in the table making it faster to use in the WHERE clause of a query.

Click **OK** to create/modify the table.

Schedule Tab

The **Schedule** tab is used to define the schedule for consolidation. Use the **Every** setting to define the frequency.

The **Transfer Start** setting is used to define the start date/time when a data transfer is initiated. This setting is only available on new configurations or on an existing configuration if the **Target Table** has been reset or the last transfer date recorded is before the **Transfer Start** stored in the configuration.

After the initial transfer, this date is no longer used. Instead, the **Transfer Start** is the timestamp of the last record from the previous transfer.

Runtime

When a configuration is saved, a line is added to the scheduler to perform the consolidation based on the Schedule settings specified.

Configurations can also be deployed from third party applications such as HMI screens, VBA macros, and the windows command line. The syntax to execute a configuration is as follows:

Install\bin\xlriDBCop.exe Configuration

Where *Install* is the full path to the installation and *Configuration* is the name of the configuration file.

Example

For example, consider the following configuration used to consolidate critical alarms (HIHI) from a remote SQL Server database table into a local Access database table.

The image shows three sequential screenshots of the 'Add' dialog box in the Data Consolidator software, illustrating the configuration of a data transfer task. Each dialog has a title bar with 'Add' and a close button 'X'.

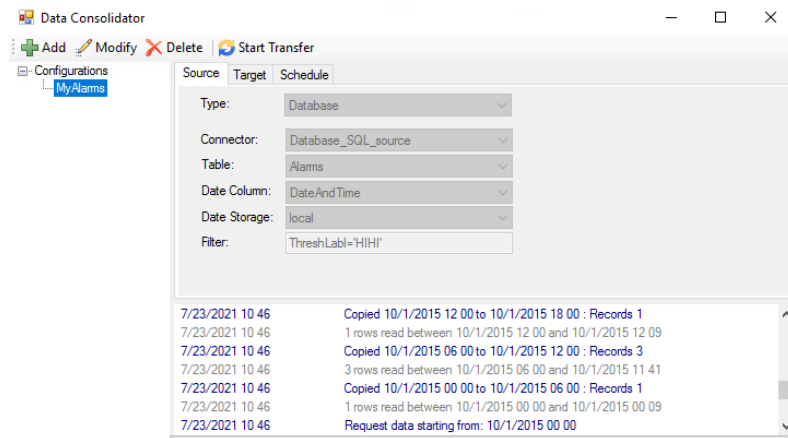
- First Screenshot:** The 'Name' field is 'MyAlarms'. The 'Source' tab is selected. 'Type' is 'Database', 'Connector' is 'Database_SQL_source', 'Table' is 'Alarms', 'Date Column' is 'DateAndTime', 'Date Storage' is 'local', and 'Filter' is 'ThreshLabl='HIHI''.
- Second Screenshot:** The 'Name' field is 'MyAlarms'. The 'Target' tab is selected. 'Database' is 'Database_Access_target' and 'Table' is 'Alarms'. An 'Update Table' button is visible.
- Third Screenshot:** The 'Name' field is 'MyAlarms'. The 'Schedule' tab is selected. 'Start' is '00:15:00', 'Every' is '1' day(s), and 'Transfer Start' is '01 Oct 2015'.

The **Data Consolidator** will look into the *Alarms* table of the *Database_SQL_source* data connector and push all records logged after *2015-10-01 00:15:00* that have a *ThreshLabl* value of *HIHI* into a mirrored copy of the table that has been created in the *Database_Access_target* connector.

The screenshot shows the 'Schedule Designer' window with a menu bar (File, Tools, Scheduler) and a toolbar (Add, Modify, Delete, Outline, Test). A table displays the task configuration:

Condition	Action
<input checked="" type="checkbox"/> Data Convert - MyAlarms	
<input checked="" type="checkbox"/> Daily	Every day; 00:15:00
<input type="checkbox"/>	RunApplication bin\XLriDbCopy.exe MyAlarms

After configuring the **Schedule** tab and clicking **OK**, the *Run Application* line will be added to the schedule.



When **Start Transfer** is selected from the designer a log will be displayed in the bottom window.

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