

Description: This application note describes the BridgeWorX Transaction Diagram Designer in general and explains how you can use the BridgeWorX visual transaction data mapping configuration wizard.

OS Requirement: Win XP/Server 2003/ Server 2008/Vista/Windows 7

General Requirement: BridgeWorX V9.x installed.

What is a Transaction?

A Transaction is a set of data transfer tasks, defined by the user to be executed in a user configured order.

Transaction Blocks

BridgeWorX comes with several transaction blocks that can be configured to carry out data integration and interface management among automation systems, MES and ERP applications. One of unique features is the definition of the user defined “Logic” and diagram “Flow”. Here’s a list of available blocks:

- Database to OPC
- Database to Database
- OPC to OPC
- OPC to Database
- Execution Delay
- Conditional Branch
- Event Generation
- File Transfer Task
- SQL Command Task
- Web Service Task
- Custom Task
- Text File Parser
- XML File Parser
- TrendWorX Import
- TrendWorX Export
- HDA Export

Transaction Diagram

A transaction diagram consists of one or more transaction blocks with sequential logic implemented to outline the flow of execution.

How to configure a Transaction Diagram

1. Open BridgeWorX Configuration from Start → All Programs → ICONICS BizViz → BridgeWorX → BridgeWorX Configurator.
2. Select Transaction Diagrams from the Transaction Tools branch in left pane.

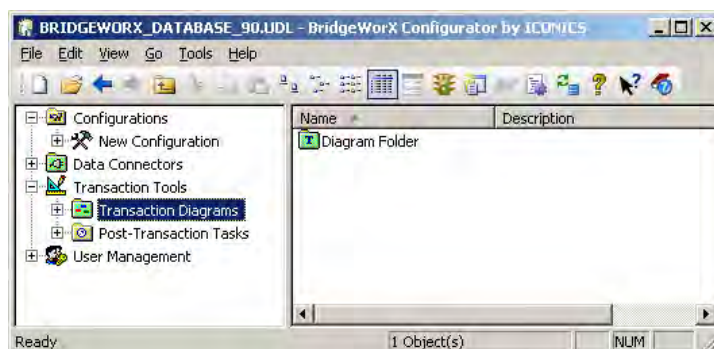


Figure 1 – Transaction Diagrams Folder

3. Right click on Transaction Diagrams to create a new Transaction Diagram Folder (e.g. “Test Folder”).
4. Right click on the New Folder to create a Transaction Diagram (e.g. “Test Diagram”).
5. Once the new transaction diagram is created, the properties window appears.
6. Click on the Run Diagram Designer button. You will get a message letting you know that you are about to open the diagram designer, then the Transaction Diagram Design window appears.
7. To add the task into the diagram, double click or drag one of the Task Icons into the Design area, for example “Database to OPC”.

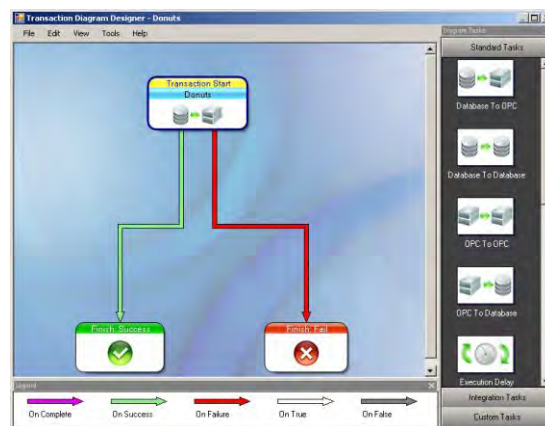


Figure 2 –Transaction Diagram Designer

8. Right click on the block and select Properties and the Properties window appears.
9. On the General tab, enter the name of the task in the Task Name field and select the appropriate actions from “Advancing to the next task” section. You may either select “On Complete,” meaning regardless of success or failure you will always proceed to the same block, or “On Success” and “On Failure”, which allows you to specify different blocks for a success or a failure.

BridgeWorX – Transaction Diagram Designer Quick Start



APPLICATIONS NOTE

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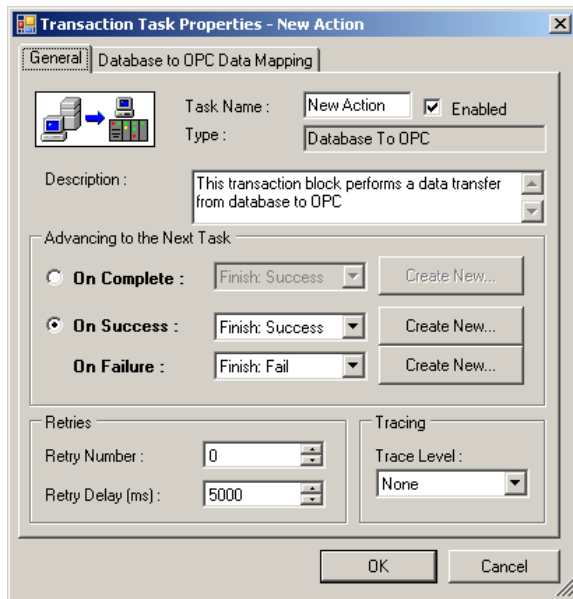


Figure 3 – Transaction Task Properties

10. Select the Database to OPC Data Mapping tab and select the appropriate Database Connector from Database Connector to read data from list (e.g. Test DB Connector”).
11. Once the Database Connector is selected, the parameters, if any, for that particular Database Connector will be shown under Parameter Mapping. Click on the dotted button in the Bind To column for each parameter and select the appropriate OPC element, Global Variable, Trigger Variable, or Constant that you want to bind to the selected Parameter. You may select more than one. When you have the appropriate items selected, hit the Bind Current Selection button.

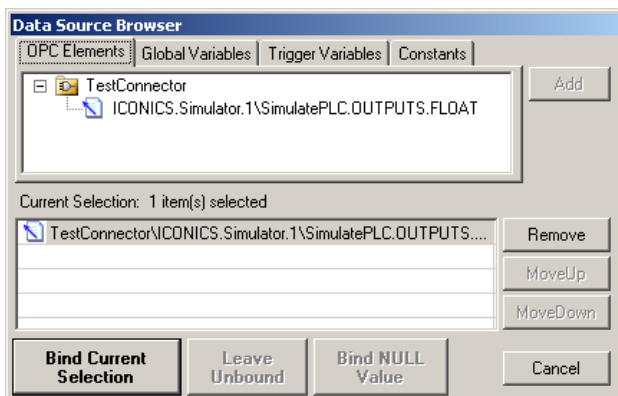


Figure 4 – Choosing a data source

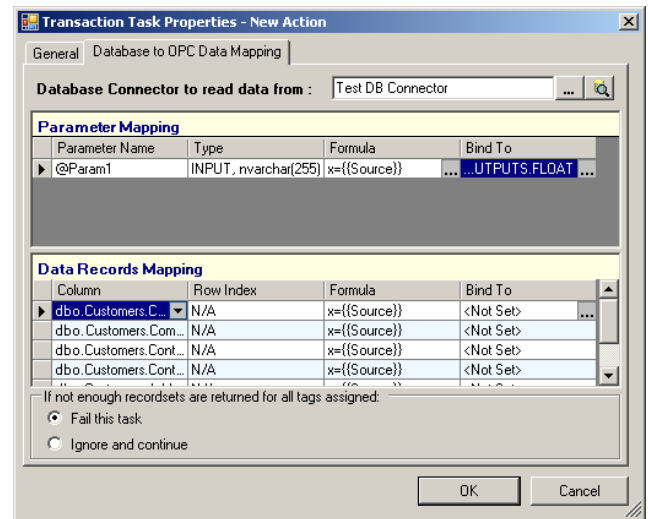


Figure 5 – Data Mapping Tab

12. Click on the drop-down arrow in the Column field to select a list of table columns from the selected database connector. Select the first column that you want to configure. Similarly select the Row Indexes and Formula if applicable
13. After selecting the Column, click on the dotted button under in the Bind To column and select the appropriate OPC Element or Global Variable from the Data Source Browser as you did in step 11.
14. Repeat steps 12 and 13 until you have bound all of the desired columns with a data item. Click OK when you are done configuring the transaction block.
15. Go to File → Validate to check your diagram for errors. If there are any errors, your diagram will only be able to be saved as “Under Construction”, indicating it is not finished.

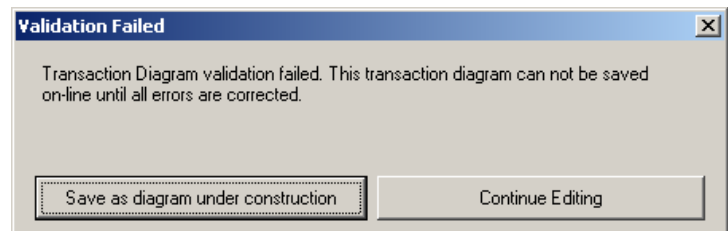


Figure 6 – Validation Failed

If you try to save a diagram that does not validate, you will be prompted to either save the diagram as “Under Construction” or continue editing to fix the errors. Validation warnings will not prevent you from saving your diagram as “On-line”, but you will be notified when warnings are present.