# ODBC Custom Node

## Introduction

Custom Nodes are a new feature of Square 9's GlobalCapture and GlobalAction and are available from version 2.3.x. Custom Nodes are seen as a replacement for Call Assembly nodes and extend the functionality of GlobalCapture and GlobalAction but in way that is more familiar to workflow designers than the Call Assembly nodes.

The ODBC Custom Node allows you to interact with ODBC data sources such as SQL Server, PostgreSQL, Microsoft Access, Microsoft Excel, Text files and many more, from within you GlobalCapture and GlobalAction workflows.

## Pre-Requisites

The following items are required:

- GlobalCapture or GlobalAction Version 2.3 or newer.
- ODBC Custom Node Package - `dc0ea1fa-1b5f-4d87-b807-dacbd25e8d48.s9n`.
- An installed ODBC driver.
- A license file.

## Installation

To install the ODBC Custom Node:

1. Log into GlobalCapture with an account that can administer GlobalCapture.
2. Navigate to `Mange >> Nodes`.
3. Click the Menu button in the bottom right corner of the interface and choose Upload S9N File (the middle option).
4. Browse for the ODBC Custom Node Package - `dc0ea1fa-1b5f-4d87-b807-dacbd25e8d48.s9n` and click open to install.

## Default Configuration

To configure the default properties for the ODBC Custom Node, click on the three-dot menu and select edit and the node's properties will be displayed.

There are two types of default configuration available:

1. If you click on Modal Preview and enter any values, these properties will then be pre-populated when the node is added to a workflow.
2. If you click on Config you are presented with a JSON view of the node's configuration. This contains the properties that can be on the node's config panel as well as properties you only need to set once per install, for example, the path to the license file.
   Any properties configured here will override the properties set on the node's config panel, configuring all nodes on all workflows to use this value. To remove an override, edit the property's value and set it to `null`.
   If you need assistance on how to edit a JSON file please contact support.

Once you have completed configuring any properties, click on save

## Licensing

The ODBC Custom Node requires a license to function. If it is added to a workflow without a license being present the workflow will be stopped and remain in an error state. Please contact sales to enquire about pricing and obtaining a license.

Once you have obtained a license file, save it somewhere safe, it also needs to be saved in a location that the login user for the GlobalCapture or GlobalAction Engine service(s) has access to. Next you need to configure the node's default config to point to this file by editing the value for the `licenseFilePath` property.

**Note:** As you can see in the sample value provided, any back slashes need to be escaped for the JSON to be valid, for example: `"C:\\Node License File\\app.license"`

Once you have completed configuring the license file path, click on save.

## Workflow Configuration

The ODBC Custom Node is used like any of the built-in nodes in the workflow designer, drag it from the node toolbox onto the designer's canvas, configure the properties and link it up as is appropriate for your workflow.

### Configure the ODBC Custom Node

#### Data Source

- Connection String
  The connection String for the ODBC Data Source. Usually it is easier to create a DSN (Data Source Name) via ODBC Data Source Administration, which also allows you to test the connection. However, it is also possible to use a connection string that targets the ODBC driver directly.

  A DSN connection string takes the form: `DSN=MY_DSN`

  **Note:** The 64-bit version of ODBC Data Source Administration must be used to add the DSN and the DSN must be added as a System DSN.

- ODBC Command
  The command which dictates the operation you are performing on the Data Source, Usually an INSERT or SELECT. There are no restrictions on the commands available other than the restrictions of the ODBC driver.

#### Field Mapping

Field Mappings are only required if you are fetching data from the Data Source with a SELECT command. Field Mappings create a map between a Process Field and the columns from the fetched data. Use the + button to add a mapping and the - button to remove a mapping.

- Process Fields
  Select a Process Field to write to.

- Data Source Columns
  Enter a column name to read from.

- MV

  If the Process Field is a multi-value field check the MV box and an entry will be written for each row fetched from the Data Source Column.

  If the Process Field is a single-value field and more than one row is fetched from the Data Source Column, the column will be joined with commas into a single string. If this is undesirable, you may need to refine your command to ensure only a single row is fetched.

### Table Mapping

The Table Mapping serves a similar purpose to the Field Mappings, but it maps the fetched data to a Table Field.

- Table Field

  Select a Table Field to write to.

- Table Fields

  Enter a comma separated list of the IDs of the Process Fields that comprise the table. The ID for each Process Field can be seen in the Field Catalogue by clicking the three dots on the right-hand side of the Process Field definition.

  **Note:** You do not have to enter all the Process Fields that comprise the table, but each one entered does require a corresponding Table Data Source Column.

  **Note:** The order of the Process Fields does not have to be the same as the order in the Table Field, but it does have to match the order in the Table Data Source Column to ensure a correct mapping.

- Table Data Source Columns

  Enter a comma separated list of the names of the columns in the fetched data.

## Contacts

Sales and licensing enquiries to: sales@selectec.com

Support enquiries to: support@selectec.com

## Acknowledgements

Selectec Custom Nodes are made possible by open-source software. The following open-source software is distributed and is provided under other licences.

- Custom Workflow Nodes  
  https://github.com/Square9Softworks/custom-workflow-nodes
- Nett  
  https://github.com/paiden/Nett
- BouncyCastle  
  http://www.bouncycastle.org/csharp/
- Meziantou.Framework.Win32.CredentialManager  
  https://github.com/meziantou/Meziantou.Framework
- Newtonsoft.Json  
  https://www.newtonsoft.com/json

Thank you to the developers of these softwares.