

[Tech Note 911](#)

Connecting to QI Process Database Using QIA OLE Automation Script

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Introduction

Typical QIAnalyst/InTouch deployments include many InTouch windows using QI Analyst Chart ActiveX controls. In order to display data on those charts, each InTouch window makes a connection to a QI Process database.

The traditional way of connecting to the QI process database from an InTouch window uses the **QIDBConnection** control on that window. This approach requires having one QIDBConnection control per window and means that each window creates a separate connection to a QIAnalyst database in runtime, *each time* the windows are opened. This implementation often results in a database connection leak.

This *Tech Note* explains using QIA OLE automation scripts to connect with the QIA database instead of using the QI DB Connection control. This implementation connects to the process database *only once* when the application is opened and reuses the same connection on *all* InTouch windows in Runtime. This strategy avoids the database connection leak.

Application Versions

- All QI Analyst and InTouch versions.

Prerequisites

- QI Analyst and InTouch must be installed on the same machine.
- At minimum, a QI Workstation license and InTouch development license should be installed on that machine.
- You should be familiar with QI Analyst OLE automation inside InTouch.

Creating a Process Database Connection on Application Startup

In WindowMaker, include the following scripts in your Application's **On Startup** script.

```
OLE_CreateObject( %DBConnection1 , "QI.DBConnection.1" ) ; {creating process database connection object}
%DBConnection1.ProcessDatabase = "QIProcessDB"; {Specify the QI process database name as seen on data controller inside QI Controller/QI
Workstation}
%DBConnection1.QIUsername = "Admin"; {Specify QI Analyst login user}
%DBConnection1.QIPassword = ""; {Specify QI Analyst login user's password}
%DBConnection1.Connected = "True";
%DBConnection1.UpdateTimer = 60000; {Time interval to check for updates from the database}
```

Figure 1 (below) shows the Application Script.

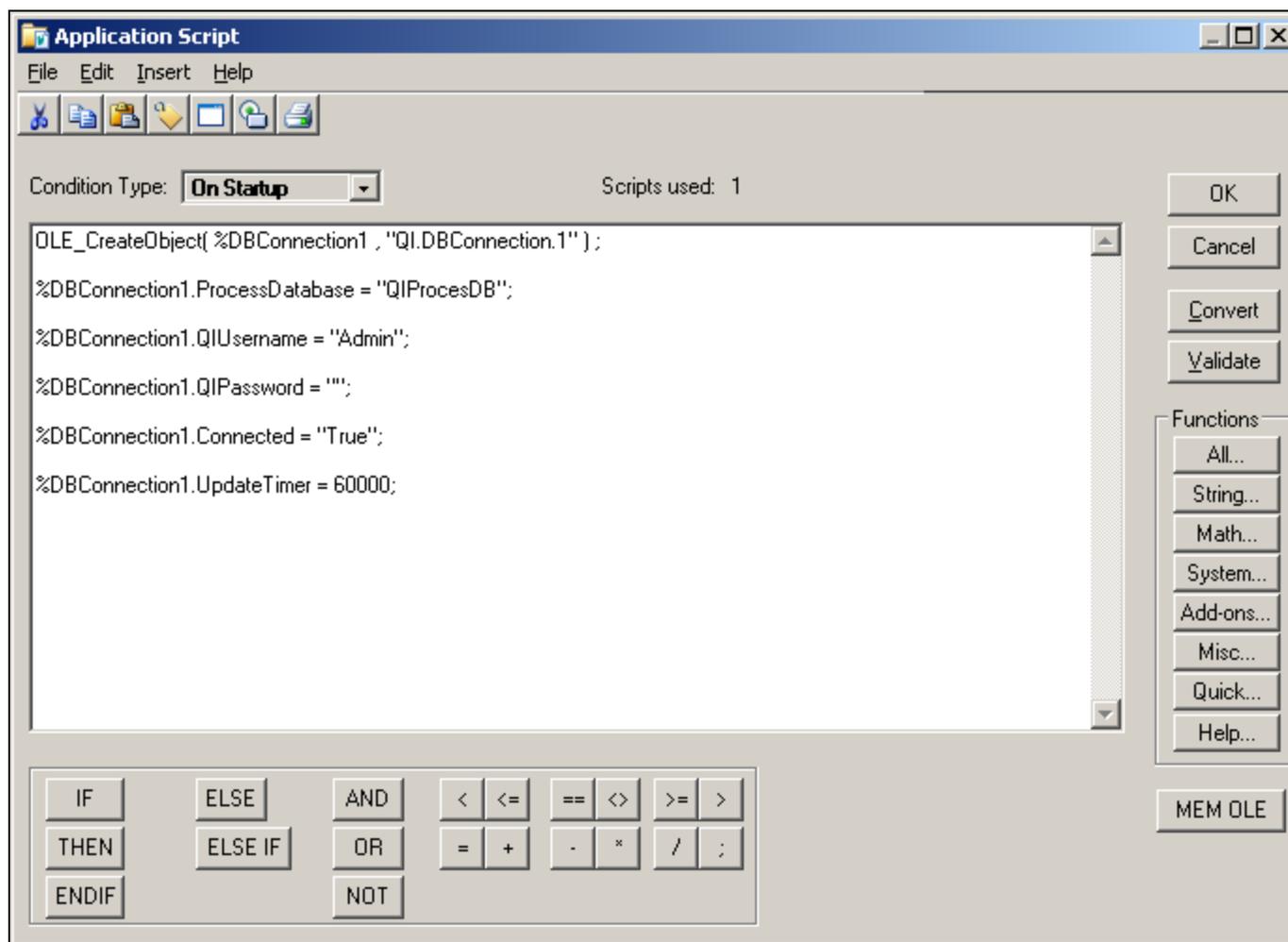


FIGURE 1: PROCESS DATABASE CONNECTION SCRIPT

Using Process Database Connection Object in Chart ActiveX Control

The process database object created using scripts in the earlier section should be used inside QIChart ActiveX Control Properties > **Parameters** tab (Figure 2 below).

Make sure you also enter the correct **Chart Type**, **Data Table name** and **Column name** in their respective fields.

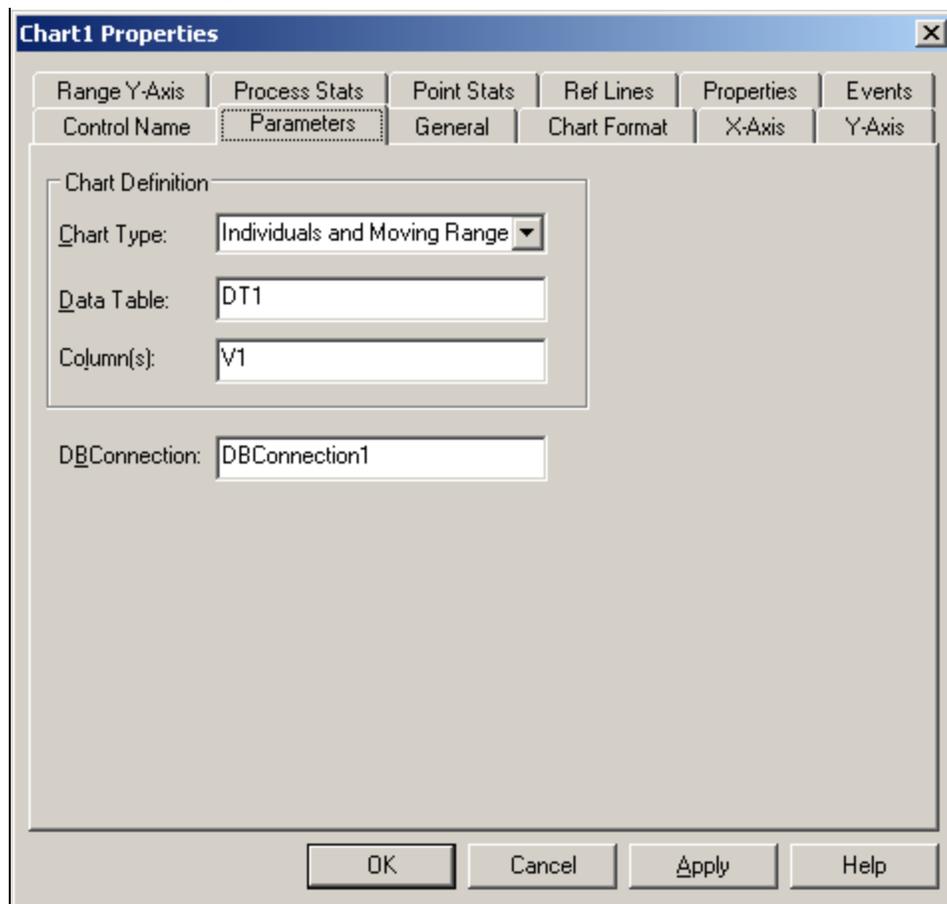


FIGURE 2: QI CHART ACTIVE X CONTROL PROPERTIES

Using Process Database Connection Object in Chart Initialization Scripts

The process database object created using scripts in the earlier section should be used inside QI chart initialization scripts.

```
IF OLE_IsObjectValid( #Chart1) THEN {check if the #Chart1 object is valid}
#Chart1.DataTable = ""; {To reduce the number of chart loads}
#Chart1.ChartType = 5; {Set it to Individuals and MovingRange chart }
#Chart1.DBConnection = %DBConnection1; {use the process database connection control created as per earlier section}
#Chart1.Columns = "V1"; {this is one of the variable column in data table DT1}
#Chart1.DataTable = "DT1"; {this is one of the data tables in the process database "QIProcesDB"}
#Chart1.ApplyChange(); {apply the above settings to the chart}
InitializeChartWindow1 = 0; {Reset the condition scripts so it runs only once}
ENDIF;
```

In this example, the chart initialization scripts are called from a condition script that gets triggered when an InTouch window displaying the QI Chart ActiveX control is opened in Runtime (Figure 3 below).

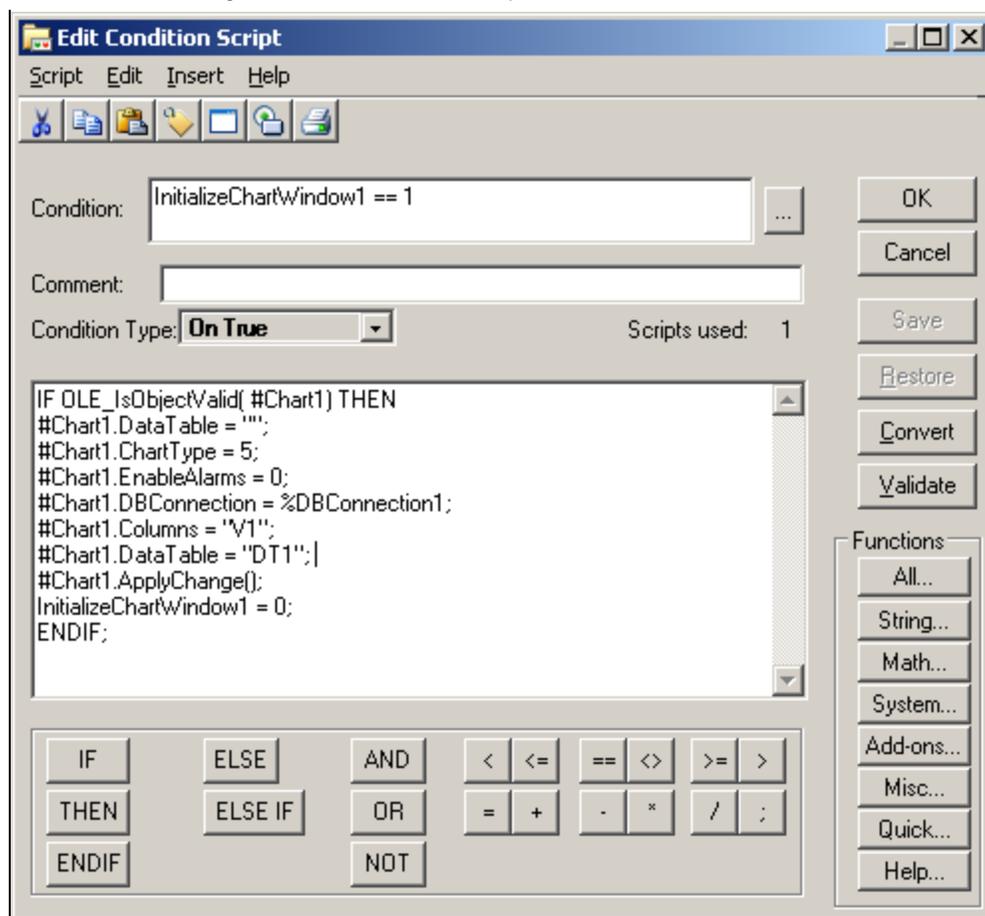


FIGURE 3: QI CHART INITIALIZATION SCRIPT

Here is a link to a [demo application](#) developed on InTouch version 10.1 SP3 that has an example of using QIA OLE automation scripts to make a connection to the process database.

This demo app uses the **sampledb80.qia** process database, which is available by default in the QI Analyst directory.

- On 32-bit OS: **C:\Program Files\Wonderware\QIAnalyst8.0**
- On 64 bit OS: **C:\Program Files (x86)\Wonderware\QIAnalyst8.0.**

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