GENESIS32 – GenBroker Plug-in Technology

APPLICATIONS NOTE

October 2013

Description: Guide to viewing Licensing and Redundant node information in GENESIS32 Clients
OS Requirement: Win 2000, XP Pro, Server 2003, Vista, Server 2008, Windows 7
General Requirement: Basic knowledge of GenBroker and DataWorX32

Introduction

GenBroker Plug-ins are light-weight modules that would provide real time data, alarms and events. They function as a subset of an OPC DA Server. Unlike OPC DA servers, the GenBroker plug-ins are bound to the Unified Data Browser on the client side. They are supported by the GenClient name syntax, which allows ICONICS client applications to access them seamlessly. Table 1 shows the capability of the GenBroker plug-ins versus the OPC DA Server.

Table 1 - GenBroker v. OPC DA Server

	GenBroker Plug-in	OPC DA Server
Interface specification	ICONICS Proprietary – only ICONICS client application will be able to use it (though GenClient)	Standard – any OPC client application can use it
Implementation	Easy to implement	Hard to implement (even with the OPC ToolWorX)
Functionality	Limited set of functions – suitable for small projects, typically with no configuration	Complex – suitable for big and advanced projects
DA Browsing	Each plug-in has a separate tab in Unified Data Browser	All OPC servers are displayed in one tab. Exceptions (Database OPC Server) need an extra effort.
DA Point Names	Prefixes for plug-ins supported by GenClient i.e. snmp:3comhub.mib\1.2.3.4	Names use ProgIDs, e.g. ICONICS.Simulator\SimulatePLC.Sine

The plug-ins are implemented as COM objects so that they may be used on the client side. You can use the plug-ins in written code, which would allow you to reuse the plug-ins in future versions of GENSIS32. It would also make migration of GenClient/GenBroker to managed code as simpler task. To do this, you would need to resolve the problem of connecting native GenClient to managed plug-ins.

You can find the plug-ins in your Unified Data Browse. There is couple of plug-ins available, for example Licensing, Simulations, Recipes, UDM Data, ScriptWorX2010, SNMP, Global Aliases, Language Aliases, etc. Some of these can be access both locally and remotely. For more information on these plug-ins, you can refer to the help file. This document will walk you through the steps of using the plug-ins to view licensing information and redundancy information.

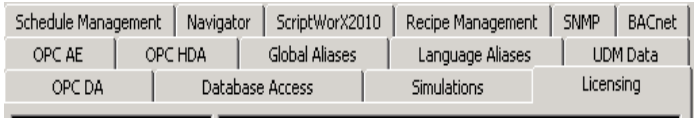

Figure 1 - Some Plug0ins in Unified Data Browser

Viewing Licensing information

1. Start GraphWorX32 by going to Start → Programs → ICONICS GENESIS32 → GraphWorX32 → GraphWroX32
2. Click on the "Process Point" button to insert a process point.
3. Click on the "Data Tag…" button in the Property Inspector to bring up the Unified Data Browser.
4. Select the Licensing tab.
5. In the tree-control in the left-hand side, expand My Computer → Counter → Points.
6. Select InUse as your tag. This would should you the number of process points being use when you go into runtime.
7. Notice that the tag started with the prefix of "lic:" this signifies that the tag contains licensing information. The syntax for the tag is:

   Local – lic:Counter.Points.InUse
   Remote – lic:\\T11\Counter.Points.InUse

8. Click on "OK" until you are back in the GraphWorX32 work space.
9. You can enter runtime to see the number of process points in use.

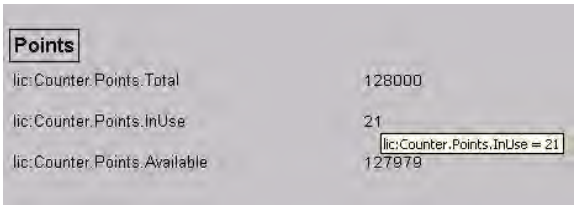

Figure 2 - Point Count Information

NOTE: You can also select Total or Available as information to display.

10. You can view the same information in MonitorWorX. Launch it by going to Start → Programs → ICONICS GENESIS32 → MonitorWorX.
11. You should see in your system tray next to the clock once it's launched.
12. Click on the Licensing tab and select Counters in the left-hand pane.
13. You should see the same information for points in the different columns.

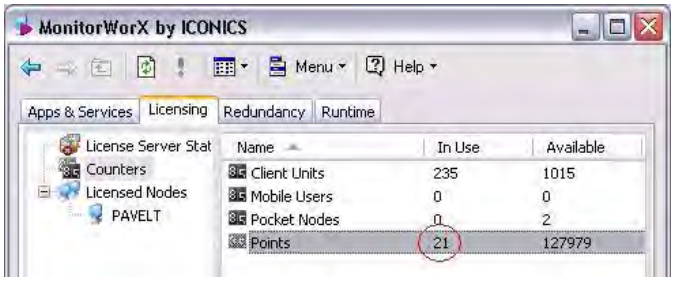

Figure 3 - Licensing Information in MonitorWorX

NOTE: MonitorWorX also provide information on the License Server status and allows you to view the amount of Client Units for each running application.

Viewing Redundant Node Status

1. Start GraphWorX32 and insert a process point using the steps 1-3 in the previous section.
2. Select the Redundancy tab. You May need to click on the right-arrow in the upper-right hand corner.
3. Expand Network Neighborhood → your computer. In the right-hand pane, you should have a tag named Online. Select the tag.
4. Notice the tag started with "rdcy" for redundancy. The tag syntax is:

   Local – rdcy: ICONICS.Simulator.1\Online
   Remote – rdcy:\\T11\ ICONICS.Simulator.1\Online

5. Click on "OK" until you are back in the GraphWorX32 work space.
6. Go into runtime and you will see the status of your node that you have selected. A value of 1 means the node is online and a value of 0 means its offline.

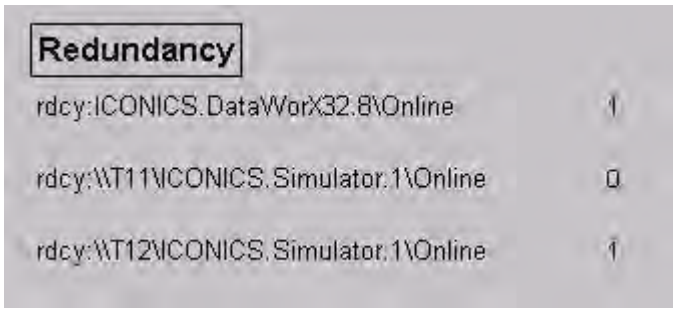

Figure 4 - Online Node Information

7. You can view the same information in MonitorWorX. Launch MonitorWorX using the same procedure as in step 10 of the previous section.
8. Select the Redundancy tab. Expand Node Pair → your primary node → the redundant OPC Server
9. You should see the same information in the right-hand pane as you see in GraphWorX32.

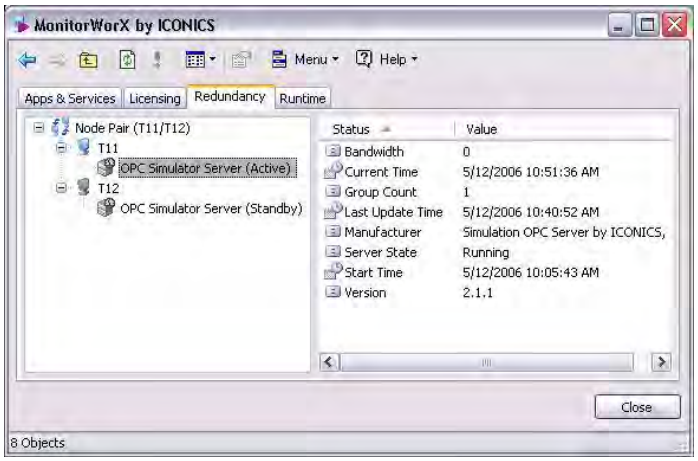

Figure 5 - Redundant Node Information in MonitorWorX