

Description: This AppNote will explain how we can view the Data Statistics (regarding OPC data points) in GraphWorX and save them to view later (offline)

OS Requirement: The operating system required is Win XP/2000/NT/95/98/Me.

General Requirement:

This application gets the Runtime Statistics in GraphWorX. Also the data comes in XML form, and you can save as an XML document to view later. The data comes from the **GenClient** that the particular application is using.

Open GenStatistics Viewer from **Start- Programs- Genesis32-Tools- GenStatistics Viewer**. There are 3 main trees in the dialog view. The statistics dialog displays the trees in a standard form like Windows Explorer.

The 3 trees are:

1. **GenClient Tree:** Contains subtrees for each instance of GenClient object the given application is using. There may be more than instance of GenClient for one application. Under the GenClient instances there are points used, sorted into groups by the kind of data the points are accessing. There are
 - ❖ **OPCSecPoints** for OPC Data Points with Security,
 - ❖ **SecPoints** for security,
 - ❖ **RegAppPoints** for registering applications at GenRegistrarServer (license Server)
2. **OPC Engine tree** aggregates all points requested by the given Application and groups them for particular server
 - ❖ If GenClient communicates with the given server directly via OPC Direct or
 - ❖ By a GenWrapper (if GenClnet uses a channel to communicate with the given server).

The statistics are then related to the given channel or server type.

3. **Options Tree** contains options as set in the GenBroker Configurator. This is helpful for debugging, because if a customer sends ICONICS these statistics, we will also know his actual settings, without the necessity to ask him.

Steps:

1. Open a GWX display and go into Runtime. Click on the view menu and select Data Statistics. In this example I have selected a Display with almost 20 tags on it. See the figure below:

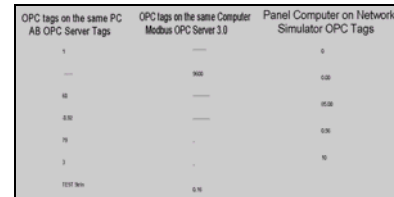


Figure 1

2. You will notice some of them are not updating. This is because one point does not exist and the others have communications failure (i.e. not connected to the physical device). See the figures below:

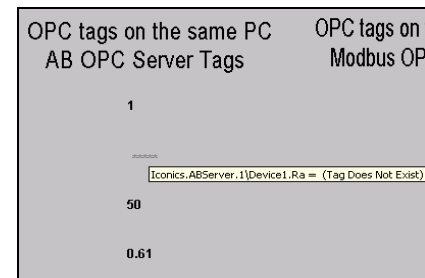


Figure 2

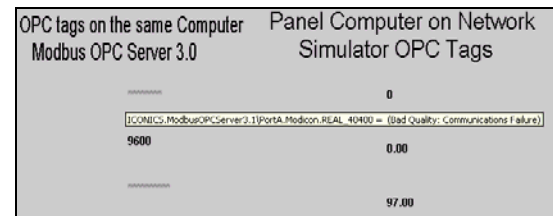


Figure 3

3. Go to View menu and click on Data Statistics. The following window will open up.

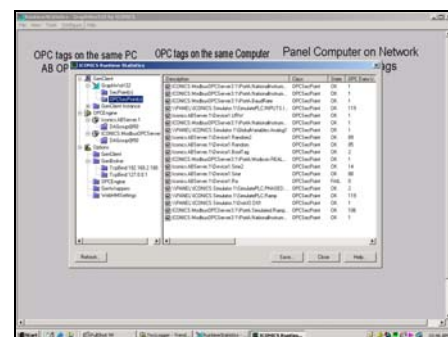


Figure 4

4. You will see the tree panes as explained above. Click on the GenClient tree and you will see GWX listed. Under GWX, you will see the OPC SecPoints. Select this and you will see all the tags listed.



GENESIS32 GenBroker Statistics Quick Start

APPLICATIONS NOTE

January 2003

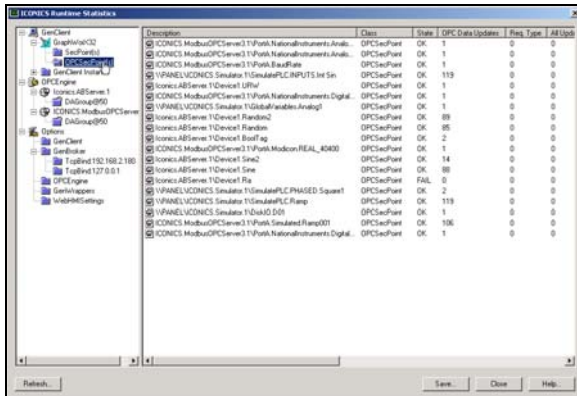


Figure 5

- Here you will notice that only one point shows "Fail" all others show "OK" status.
- Data Statistics viewer will not tell us if there is a communication problem (or any problem) between server and the physical device. Whatever the information the OPC server gives GWX, only that will be shown. In this case, the OPC server said "Bad quality: Communication failure". This is exactly the message GWX shows. But for the other tag, the OPC server is saying, "that the tag does not exist" to GWX, when GWX is trying to request information, hence the point Fail.
- Next in the tree pane you will see the tags coming from each OPC server. Here I have shown the tags coming from AB OPC server. You will notice that there is one tag missing, and that is the one, which has "Point Fail" state. See the figure below:

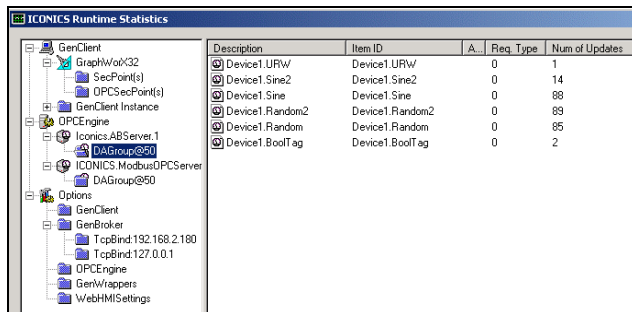


Figure 6

- You can also see the properties of the GenClient by clicking the GenClient under Options, see the figure below:

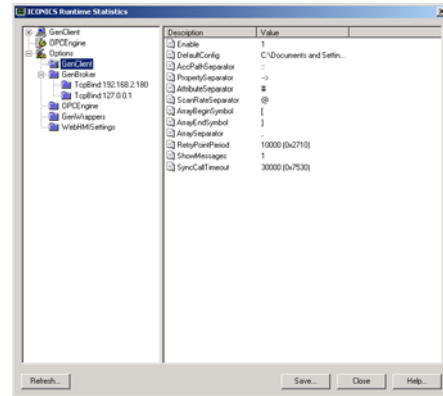


Figure 7

- You can see the number of updates on each tag, by clicking on the Refresh button. Also you can save this information to view later. Click on the save button and the save dialog will open up. You can save it as an .xml file. See the figure below:

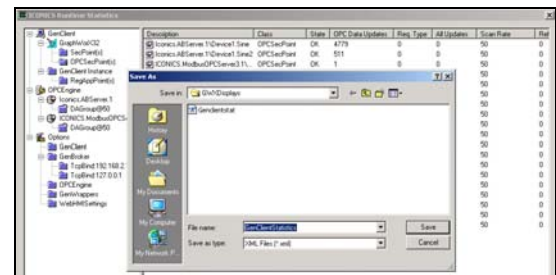


Figure 7

- To view the saved information, go to **Start – Programs – Genesis32 – Tools – Runtime Statistics viewer** and open it.
- You will immediately be prompted to select an .xml file to open to see the statistics. Select the saved file, see the figure below:

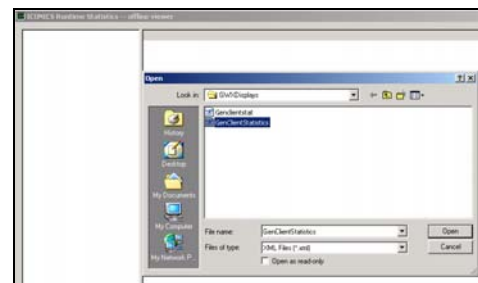


Figure 8

- Select the file, and you will see the same information show up in the Runtime Statistics viewer. You can see in the figure below that the title bar says Offline and also you will notice that there is no Refresh button or Save button. Instead you have an Open button to open another statistics file.

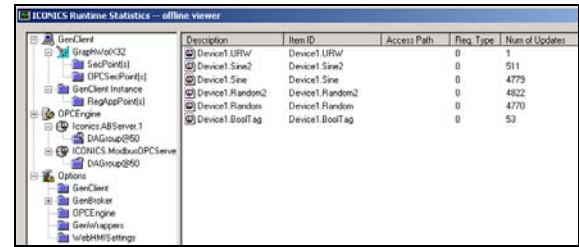


GENESIS32 GenBroker Statistics Quick Start

APPLICATIONS NOTE

January 2003

13. You will notice in the offline statistics viewer that it has saved only 6 tags and missed the one, which had “Point Fail” status.



Description	Item ID	Access Path	Req. Type	Num of Updates
Device1.LSRW	Device1.LSRW		0	1
Device1.Sine2	Device1.Sine2		0	511
Device1.Sine	Device1.Sine		0	4779
Device1.Random2	Device1.Random2		0	4822
Device1.Random	Device1.Random		0	4770
Device1.BootTag	Device1.BootTag		0	53

Figure 9