

Description: Guide to setting up OPC Tunneling using DataWorX32.

OS Requirement: Win 2000 Pro/Server, XP Pro, Server 2003

General Requirement: Basic knowledge of DataWorX32 and GenBroker communications. You should install DataWorX32 on the Client machine and GenBroker on both client and server machines.

Introduction

OPC Tunneling is a new powerful feature of DataWorX32. It enables intranet and internet communication based on transparent, open industry standards including OPC Data Access 3.0, OPC Alarm and Events 1.10, and OPC Historical Data Access 1.20.

OPC Tunneling connects a remote OPC server to a local client in a more robust and secure manner than standard DCOM that allows you to redirect a server to more than one location. The underlying technology which makes such robust communication possible is the ICONICS GenClient/GenBroker™ communication protocol, which allows communication on different types of channels, through firewalls and Network Address Translators (NAT).

Once you have setup OPC tunneling, it treats the remote OPC Server as local. This means that you can browse for your tag without going out to the network to look for it, resulting in reduced development time.

Setting up GenBroker on Server Machine

You can run the GenBroker Server with the appropriate settings regarding specific communication protocol configured in the GenBroker Configurator. GenBroker Server can be started as a Windows Service or from ICONICS GenTray application. For more details please refer to the application note *GenBroker – Introduction to GenBroker Communications*.

Setting up GenBroker on Client Machine

1. Launch GenBroker Configurator by going to Start → Programs → ICONICS Tools → GenBroker Configurator.
2. In the tree-control on the left-hand side, select Channels.
3. In the right-hand pane, right click on OPC over TCP/IP Direct Channels and select Set As Default. Save the configuration and exit.

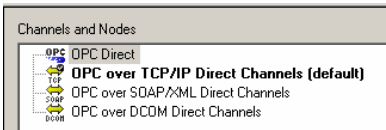


Figure 1 - Client GenBroker Configuration

Configuring DataWorX32

1. On the client machine, launch DataWorX32 Configurator by going to Start → Programs → ICONICS GENESIS32 → DataWorX32 → DataWorX32.
2. In the toolbar, click on the “OPC Tunneling”  button. This will launch the Unified Data Browser.
3. Browse to the node that hosts the OPC server in which you would like to make a tunnel to, right-click on the OPC Server and select Make OPC Tunnel.

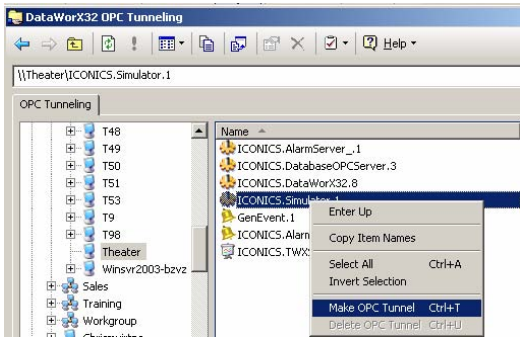


Figure 2 - Making an OPC Tunnel

Viewing Tunneled Data

1. Launch GraphWorX32 by going to Start → Programs → ICONICS GENESIS32 → GraphWorX32 → GraphWorX32
2. Insert a process point and click on the “Data Tags...” button.
3. Expand My Computer; you will see your Tunneled OPC server.
4. Select the OPC Server and a tag on the right-hand pane. Noticed that the tag path is TunnelTo:Theater::ICONICS.Simulator.1\SimulatePLC.Ramp in the text field to signify that this is a tunneled tag.

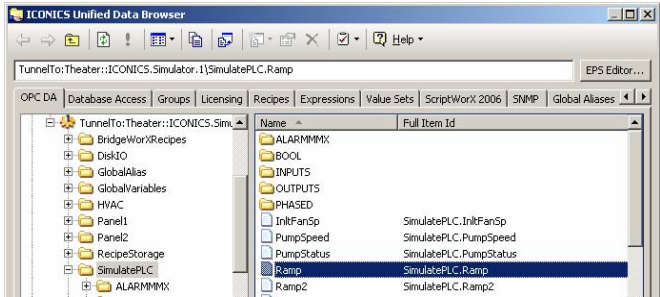


Figure 3 - Browsing for a Tag

5. Click “OK” until you are back in GraphWorX32 working space.
6. Enter runtime to see the value of your data tag.