



Connect Browser Node to GENESIS32 Server Node Over GenBroker

APPLICATIONS NOTE

January 2003

Description: *GENESIS32 Communication Capabilities Using GenBroker*

OS Requirement: *Windows XP/2000/NT, 9x/Me.*

General Requirement:

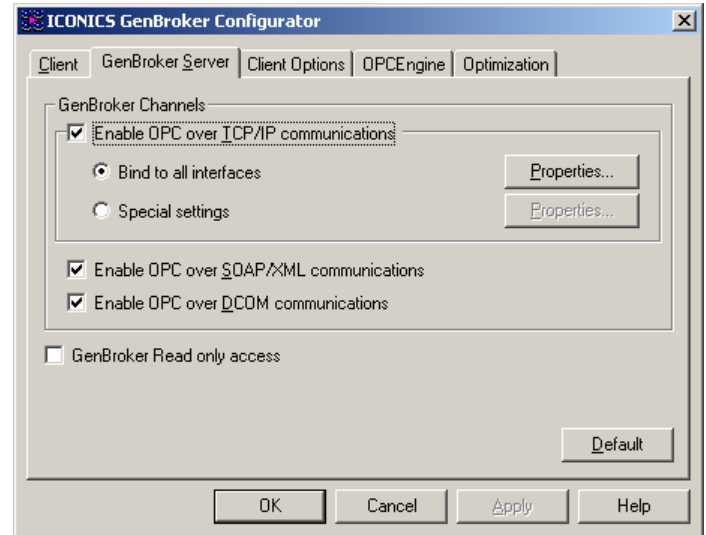
GenBroker uses three basic methods of networked communications:

- 1. OPC Direct:** The client applications communicate directly with OPC servers. This method uses standard fast DCOM over a LAN, but does not allow to set a connection retry period or timeout settings.
- 2. Using a Direct Channel Over DCOM or TCP/IP:** The client applications communicate with GenBroker software located on remote nodes. This method can use either DCOM or TCP/IP, and it allows you to set a connection retry period and timeout settings. GenBroker then communicates (locally) with the target OPC servers on behalf of the client application. There are predefined direct channels which users can't delete or modify.
- 3. Using a Channel Via a Mediator Node (Indirect Channel):** The client applications communicate with a mediator node over DCOM or TCP/IP. The mediator can communicate with OPC servers. The client applications cannot have any direct connection with the node where the GenBroker utility they use is located. You can create and delete the indirect channels, none of which is in a new configuration.

Most channels, either direct or indirect, translate the OPC COM calls into one of two protocols and transmit them to the remote node, where GenBroker can execute them. (The OPC Direct channel is the only exception: it uses OPC calls.) Protocols that every channel can use for these transmissions are:

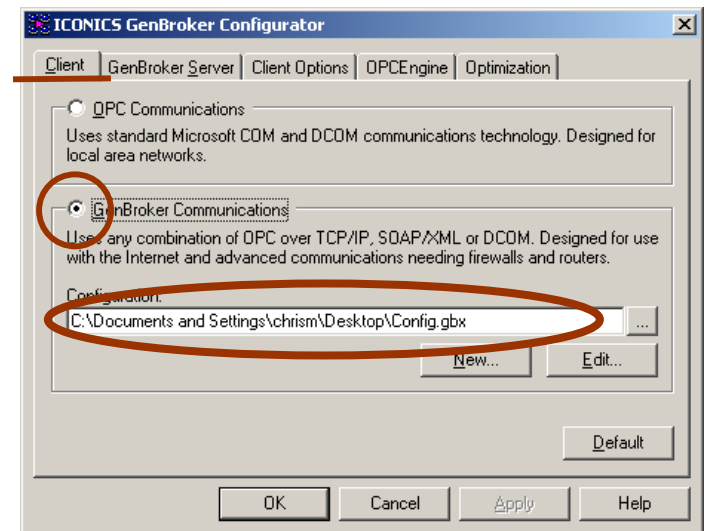
- 1. DCOM:** Easy to use and set up. Suitable for local networks enabled with DCOM. Not recommended for Internet use.
- 2. TCP/IP:** Communicates over the Internet through routers and firewalls.

Server Configuration: On the Server machine, Select the tab "Genbroker Server" Check the options: "enable OPC over COM\DCOM communication and also over TCP\IP".



Go to Start, programs, Genesis32, Tools, Gentry. The icon of Gentry [A pink triangle ▼] comes up on the tool tray. Select Genbroker, start.

Client Configuration: On the Client machine, Start, GenBroker Configurator. Select tab, Client, Genbroker Communication and select "New" Configuration.



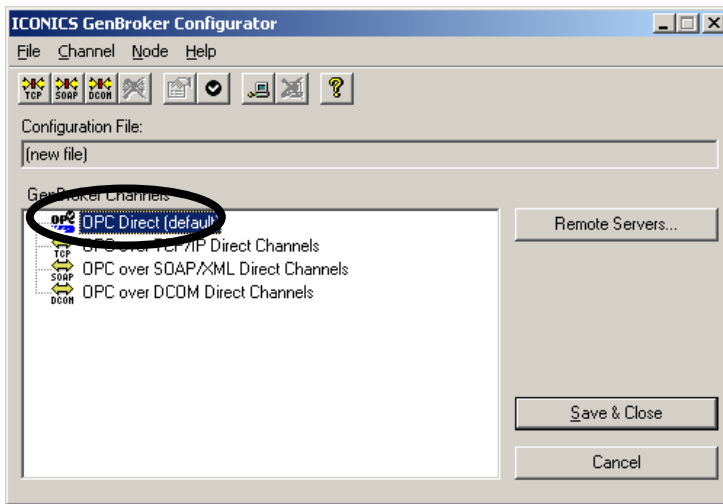
This brings the user to a screen where he can see 4 possible Genbroker Channels. The default screen shows OPC Direct selected as Default.



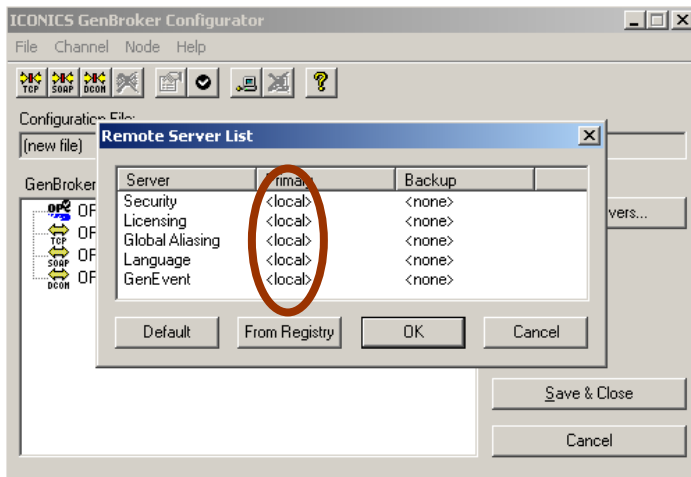
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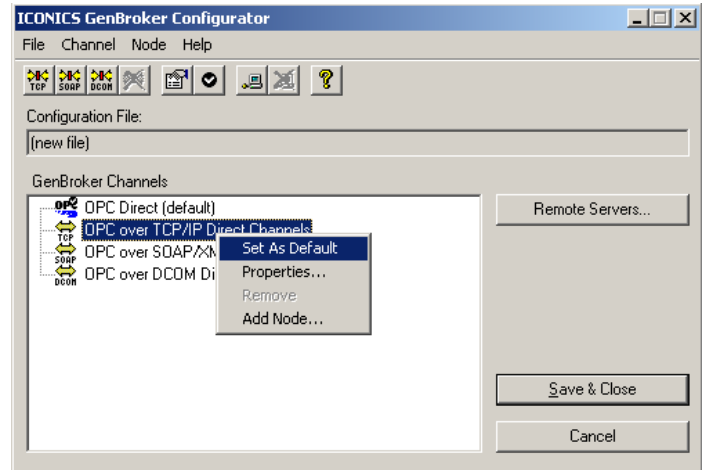
Check the Remote License server Option and click the gray browse button to the right of the display bar. Select the License Server Location and click "OK"



Case 1: For faster communication in the **same domain**, that is when your server as well as client nodes are in the same domain, use OPC direct or OPC over DCOM Direct Channel as default. For example to set OPC over DCOM Direct Channel As Default:

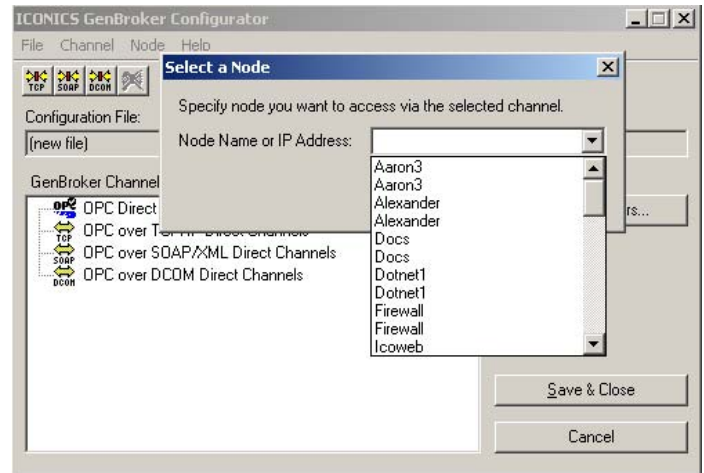
- Selecting "OPC direct" right click and "set as default". Save and close the file

The following diagram shows setting OPC over DCOM as default when server and Client nodes, both are in same domain.



Case 2 : When the client and the server both nodes are in the **different domains**, set TCP/IP Direct Channel *As Default*: selecting "OPC over TCP/IP direct" right click and "set as default". Save and close the file

Select "OPC Over TCP/IP direct" right click and "Add Node", specify the Node or IP address you want to access and click "OK"



The browser node Should be able to access Genesis32 & the License from the Server Node