



Description: Guide to Performance Optimization with DataWorX32 Version 8.

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

General Requirement: General knowledge of DataWorX32

Performance Optimization

Loading the Database

When DataWorX32 Runtime is starting up, it needs to load the active configuration database. To do so, it may need to load components for accessing databases (OLE DB Provider and related DLLs, depending on what kind of database is used). Loading these components may be a time consuming process.

When DataWorX32 is not running as a service, the first client connecting to DataWorX32 starts the Runtime mode. Therefore it may take longer time for the first OPC client to get the initial updates.

To speed up the process of connecting the first OPC client, it is recommended to pre-start DataWorX32 Runtime. You may do this with GenTray, or run DataWorX32 as a Service.

Using Registers

To improve the response time in communication with OPC servers, it is recommended to use registers. Major performance improvements can be notified in cases when:

- Adding/removing items to the OPC servers is very slow.
- The items on the OPC servers do not change very often.

When registers are used, their input OPC items are added on the DataWorX32 Runtime startup. The OPC items are then held during the runtime operation, regardless of whether the register itself is accessed by an OPC client or not (unlike accessing the OPC items through DataWorX32).

The registers keep their value up to date and so their response is almost immediate. On the other hand, DataWorX32 has to update the registers even if they are unused, so it is recommended to use a dedicated machine for this solution.

Writing to OPC Items through Registers

You may need to set up a register to have its input and output connected to the same OPC item. In such case it is recommended to disable input updates propagation with a checkbox on the **Properties** page.

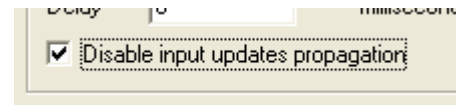


Fig. 1: Setting up OPC Item Cache in GenBroker Configurator

This setting causes the updates coming from the OPC item to not be written to the output (to the same OPC item). Only updates from outside of DataWorX32 are written to the outputs of such register. This prevents infinite loops that may happen when writing to the register faster, than the connected OPC item can handle.

Using OPC Item Cache in GenClient

For communication with OPC servers, DataWorX32 uses the GenClient DLL, as any other client application. Unlike other client applications DataWorX32 is also an OPC server, so many OPC clients may connect to it where DataWorX32 gets data from the servers on behalf of them. Since each of the connected clients may switch displays etc, the set of OPC items DataWorX32 reads from the servers may change quite often. (Obviously, only when the client applications read the servers **through** DataWorX32, not using registers as mentioned above.)

In such scenario, using the **OPC Item Cache** in **GenClient** may be helpful. To enable the cache, open the **GenBroker Configurator**, find the **Optimization** dialog (under **Options**), and check **OPC Item Cache**.



Fig. 2: Setting up OPC Item Cache in GenBroker Configurator