Transparent gateway

D2000 GateWay Client may be configured also for direct transfer of values of selected objects from the source D2000 System (shows data through the **D2000 GateWay Server**) to the destination one without need to configure objects of "Remote tag" type.

This transparent gateway enables transferring values of these types of D2000 objects:

- Processes
- Communication lines
- Stations
- I/O tags
- User variables
- Eval tags
- Structured variables

The value transfer is executed only on the basis of verification of object match between D2000 Systems. To transfer the values, select the particular objects or group of objects filtered by mask and then enter them to the start parameters of *GateWay Client* process.

The destination system tries to verify whether the required objects exist in the source system and if so, it ensures transferring value of these objects. If the source system does not contain the particular object, it will have the invalid value in the destination system.
If the list of objects is changed (any object is added or deleted) while running the *GateWay Client* in the destination system, which corresponds with mask, the proper action is executed towards the source system (logging on / off of object).

Any values are not transferred from the destination system to the source one. The value transfer is always **unidirectional**.

The structured variables can be transferred only as whole.

There is not supported the feature Destination column for I/O tags. A user must select the values of given destination structure that are to be transferred.

GateWay Client process may be executed both as it is defined for remote tags and as the transparent gateway.

Use of transparent gateway

The transparent gateway is a temporary solution providing that:

- there are done the changes or modifications of functional and used system, which are first tested on a parallel system,
- there is executed the test of a new hardware when upgrading the existing system,
- other testing or debugging purposes.

Limitations

You should realize that the transparent gateway assigns the values to objects those administrative processes in DODM system. Therefore, these processes must be **stopped** in the destination D2000 System. It concerns the communication processes and calculation processes.

The user cannot change the value on the destination D2000 System (commanding values). As the administrative communication process does not run, the setting of value ends with error.

Start parameters

To activate the transparent gateway, start *GateWay Client* with one or more **/ROV** parameters.

Syntax: /ROV*obj_mask1*[+][,][*obj_mask2*][+][,].....

/ROV parameter is followed by a name (or more names separated by a comma) of object or mask for more objects. To transfer the object values together with the child, add '+' (plus) character at the end.

Examples:

/ROVSELF.KOM+	Ensures the value transfer of the SELF.KOM process together with its children (lines, stations, I/O tags).
/ROVM.*	It is used for value transfer of I/O tag which name starts according to the ordinary naming 'M.'.
/ROVM.OBJ1,M.OBJ2	Value transfer of objects M.OBJ1 and M.OBJ2.

Pairing objects by UID

Transparent gateway supports pairing not only by object names but also by UID objects. This feature is enabled by the start parameter **/UID**, which must be used when starting both the *GateWay Client* and *GateWay Server* processes.
This feature can be used to implement the functionality of a transparent gateway regardless of changes in names of the objects (provided that they have the same UID), i.e. objects can be renamed.

Filtering of process alarms

When transferring the values to the destination system, the values of process alarms are usually filtered. To transfer values together with the process alarms, start *GateWay Client* with the **/ROA** parameter.

Invalidation of values of non-found objects

If the transparent gateway does not find the desired object on the side of gateway server, it invalidates the value of the object on the side of gateway client. This feature can be disabled by the **/NOINV** start parameter.

Optimization for XML import

When performing XML import of multiple objects to the destination system, the D2000 Server used a lot of CPU for performing refreshes of as object lists. Refreshing can be delayed by starting the *GateWay Client* with the **/GTWDL<seconds>** start parameter (refresh will be performed with a delay equal to the specified **seconds** parameter - the recommended value is 10).

Diagnostic information

To activate the detailed debug information, start *GateWay Client* with these parameters:

/E+DBG.GTW_TR	Enables listing of the debug information about the objects when executing of the transparent gateway.
/E+DBG.GTW_TR.VAL	Enables listing of the debug information about the value transfer of selected objects to the destination system.

This listing of debug information can be enabled /disabled also while running the *GateWay Client* through the D2000 System Console.

Tell command **TRGTW**

After receiving the **TRGTW** command, *GateWay Client* lists the status of all required objects.

Related pages:

Remote tags