DDE Client

DDE Client communication protocol

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Supported device types and versions

Communication supports the DDE Client access using the **XlTable** data format (the format used by e.g. MS Excel, Wonderware Intouch I/O Servers) or **CF_TEXT** data format.

Communication line configuration

Communication with the DDE Server requires a separate line. Accessing several servers from one communication line is not possible.

- Communication line category: **DDE**.
- Line parameters (the **DDE - parameters** tab):

- Server - DDE server name (e.g. MS Excel „Excel").
- Impersonate user - if the option is checked, the communication line will connect with the following name and password to the NetDDE.
- Name - system user name.
- Password - system user password.

Note: The user you want to impersonate must have **Log on as a batch Job** system privileges.

Communication station configuration

- Communication protocol: **DDE Client**.
- The station address is the DDE Topic name (a string containing up to 50 characters).

Station protocol parameters

Table 1

Keyword	Full name	Meaning	Unit	Default value
REQ	Request	If the value is Yes, after each writing a value, a request for the reading of the value will be sent.	YES /NO	NO
TYPE	Server Type	Type of the DDE server for communication: • WARM - supporting XTYP_ADVSTART transactions, • COLD - periodic reading the values using the XTYP_REQUEST transaction.	COLD /WARM	WARM
FORMAT	Data Format	The Data clipboard format to be used for data transmission.	XLTABLE/TEXT	XLTABLE
TIMEOUT	Transaction Timeout	A timeout of the function DdeClientTransaction, which determines the maximum amount of time (in milliseconds), that the DDE client will wait for a response from the DDE server in the synchronous transaction.	ms	1000

I/O tag configuration

Possible types: **Ai, Ao, Ci, Co, Di, Do, Txtl, TxtO**.

The address is the DDE Cell name (a string containing up to 50 characters).

Note: If the initialization of the connection to the server, topic, or cell has failed, the attempt to connect is repeated in the interval of 5 seconds. The same is true also when the connection is lost (server shutdown etc.).

Connection to the server via NetDDE

If the DDE server is installed on other PC within a local computer network, you can establish a connection via the NetDDE interface. For such a connection the following rules apply:

- DDE server name (in the line configuration) is defined in the form of *computer_name**server*, where *computer_name* is the network name of the PC with running DDE server (e.g. \\WRK_PC\Excel).
- On the PC with running DDE server, the Network DDE service must be running. You can run it also manually: **Start menu** -> **Settings** -> **Control Panel** -> **Services**, find **Network DDE**, and click **Start**. In case you need an automatic start-up, change the **Startup type** to **Automatic** -> OK.
- On the PC with aD2000 KOM process as a DDE Client, the Network DDE service is run automatically at the first request for the NetDDE server. If you are experiencing a problem with access rights, the **Logon** dialog box for entering access name and password, which are valid on the PC with the DDE server, will be displayed. Usually, it is necessary to use the Win NT system utility "**ddeshare**" on the PC with the DDE server for configuration of access rights of individual users to individual DDE servers, topics, and cells.

Example of communication testing

It is possible using the MS Excel program. Run the MS Excel as the DDE server using the switch **/e** e.g. from the command prompt - **excel.exe /e**.

Complete access to a DDE cell is in the following format:

```
Excel|Sheet1!"R1C1"
```

Where:

- **Excel** is the server name. Configure a line of DDE category and enter the DDE server name to **Excel**.
- **Sheet1** is a topic name. Configure the station with protocol = "**DDE Client**" and enter the DDE topic name **Sheet1**. Other sheets have similar names in the form *Sheetx* unless those sheets have been renamed.
- **R1C1** is the name of a DDE cell. Configure an I/O tag and enter the DDE cell name **R1C1**. The name means **Row 1, Column 1.** The other cells have similar names in the form *RxCy* (e.g. R2C12).

This naming is valid only for English versions of MS Excel.

Literature

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Changes and modifications

- May 20th, 2002 - added TEXT data format + COLD/WARM link.

Document revisions

- Ver. 1.1 – February 8th, 2000 – document update

Related pages:

Communication protocols