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# OpcDbGateway – examples of useful applications step-by-step

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*The purpose of this article is to show how to realize useful applications quick and easy utilizing OpcDbGateway.*

## Archiving of real-time process data to database (Historic Trends)

Many companies use OPC Servers for real-time monitoring of process values. If you want also to archive these values to a database (SQL Server, MS Access, etc.) then OpcDbGateway brings a simple and low-cost solution (please see Figure 1).

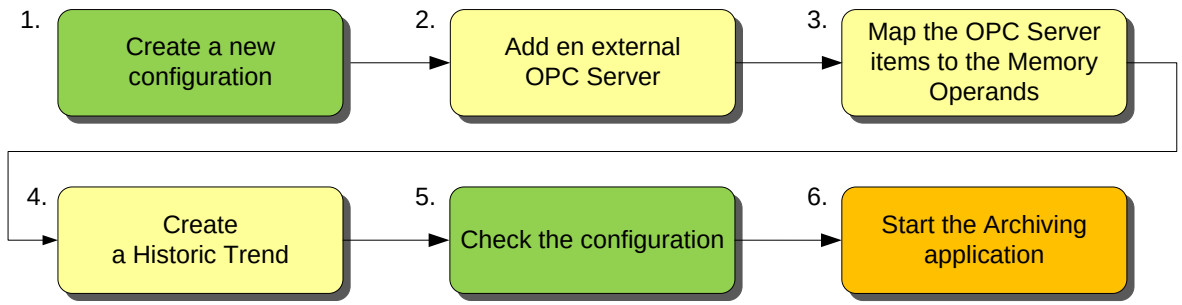



***Figure 1**: Creation of an application for archiving of real-time process data to a database utilizing OpcDbGateway.*

The creation of the application for Archiving of real-time process data includes only a few simple steps. Individual steps are in more detail described in the following sub-sections:

1. Create a new configuration.
2. Add en external OPC Server.
3. Map the OPC Server items to the Memory Operands.
4. Create a Historic Trend.
5. Check the configuration. (Optional)
6. Start the Archiving application. (Optional)

## 1. STEP 1: Create a new configuration

To create a new configuration for OpcDbGateway, please do the following:

1. Click on the Windows Start ⇨ OpcDbGateway ⇨ OpcDbGateway Configurator.
2. Click on the File ⇨ New menu item (toolbar item).
3. In the Save…dialog, select a target destination and type a File name (e.g. Test1).
4. Click on the Save button (please see Figure 2).
5. Click on the File ⇨ Make Active … menu item.

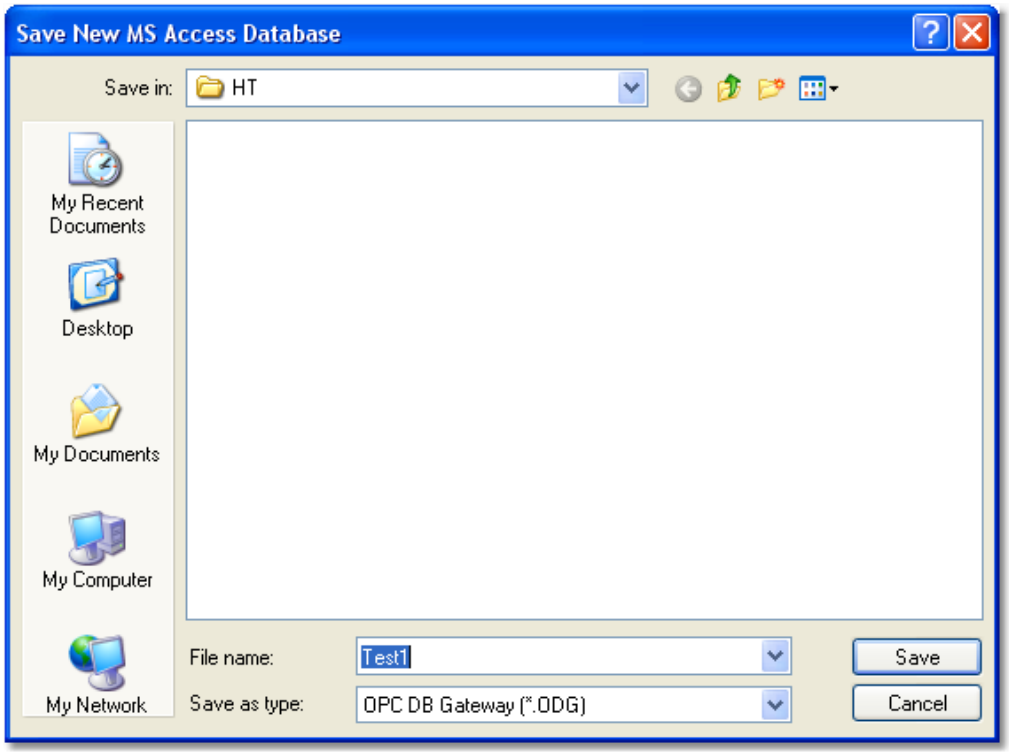



***Figure 2**: Creation of a new configuration for OpcDbGateway.*

## 2. STEP 2: Add en external OPC Server

To add a new OPC Server to the configuration, please do the following:

1. Right-click on the left tree-view item External OPC Servers ⇨ New ⇨ ExternalServers (Please see Figure 3).
2. Click on the Select an OPC Server button.
3. In the Browse OPC Server dialog, select an OPC Server and click on OK button.
4. Click on Apply button.

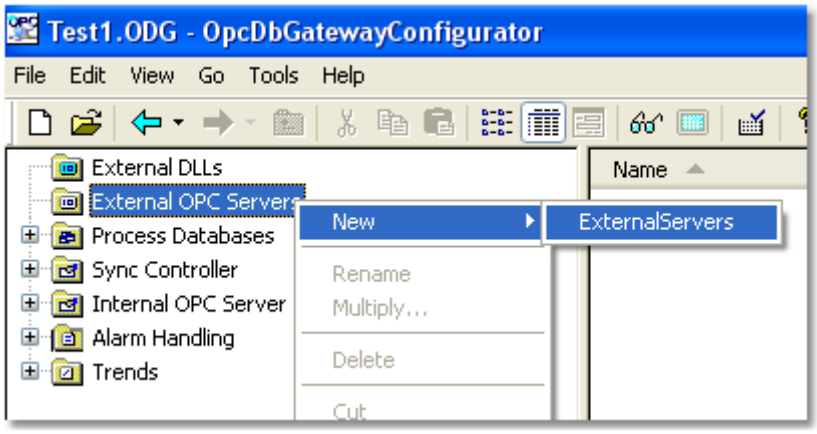



***Figure 3**: Adding of an external OPC Server to the configuration for OpcDbGateway.*

## 3. STEP 3: Map the OPC Server items to the Memory Operands

To add and map the OPC items from the external OPC Server to the configuration, please do the following:

1. Click on the Add OPC items to the OPC Server button.
2. Right-click on the left tree-view item Map OPC Server dialog.
3. Select the OPC items and click on the Add button.
4. In the area Map OPC items, check Memory operands and type a folder symbolic name, common for all new memory operands (e.g. ExtSrv).
5. Click on OK button (Please see Figure 4).

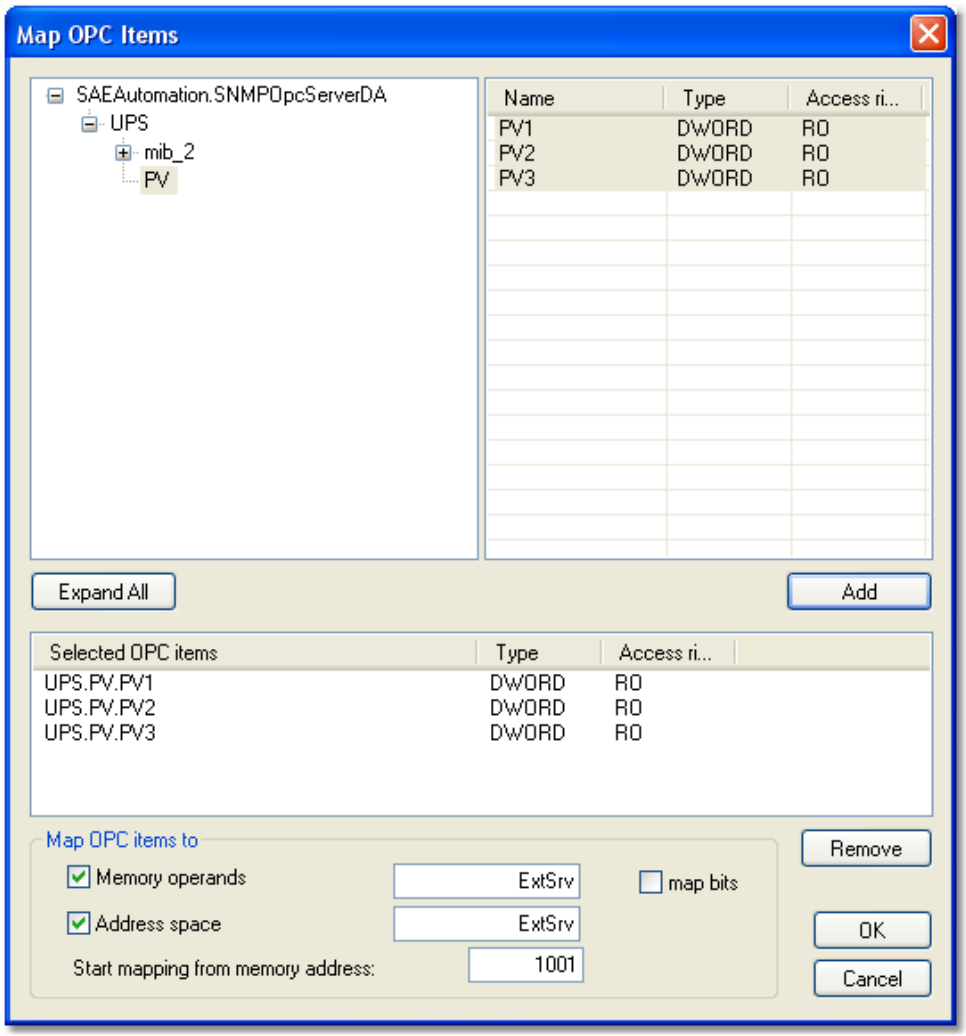



***Figure 4**: Map OPC Items dialog: Example of mapped OPC items from en external OPC Server.*

## 4. STEP 4: Create a Historic Trend

To create a new Historic Trend, please do the following:

1. Click on the Tools ⇨ Wizards ⇨ Create Historic Trends menu item.
2. In the first Welcome… wizard page, click on Next button (Please see Figure 5).
3. In the second Memory operands selection wizard page, select your memory operands and click on Next button (Please see Figure 6).
4. In the third Trend parameters wizard page, type a symbolic name to the field Trend and Table name (e.g. MyPV). (Please see Figure 7)
5. Select a target database in the Database combo-box (Please see Figure 7).
6. Set a period for storing of the real-time process data values to the database. Then, click on Next button (Please see Figure 7).
7. If you prefer also to archive the real-time process values to a file (CSV, HTML, XML, etc.) then please select the Use Backup check-box (Please see Figure 8).

8. Click on Finish button (Please see Figure 8).

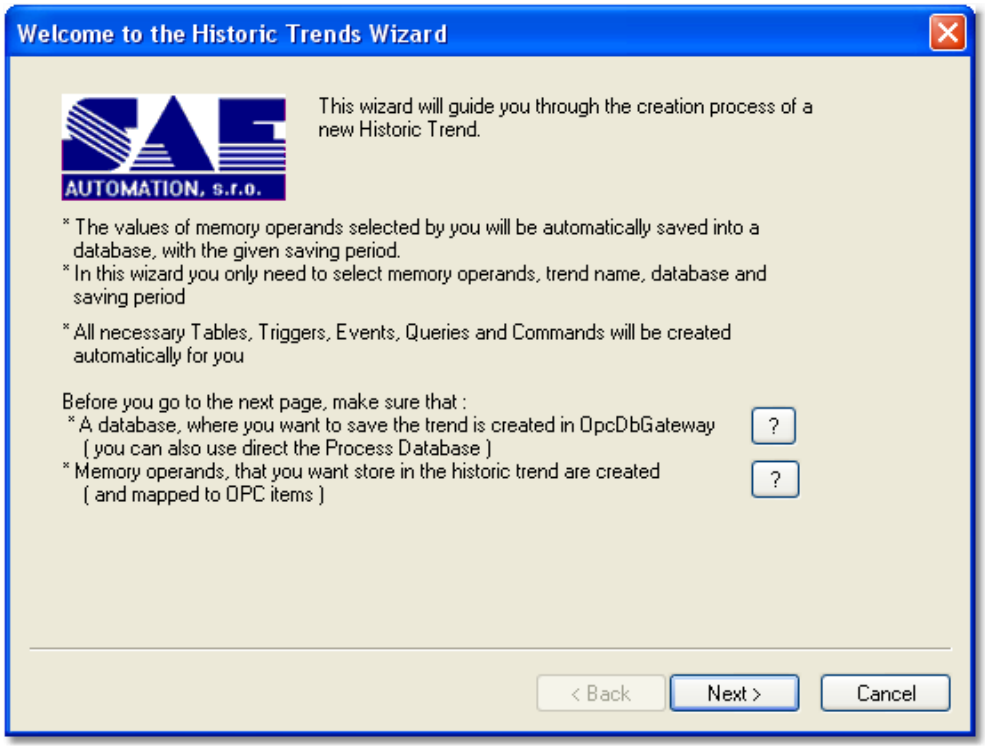



***Figure 5**: The first wizard page: Welcome to the Historic Trends Wizard.*

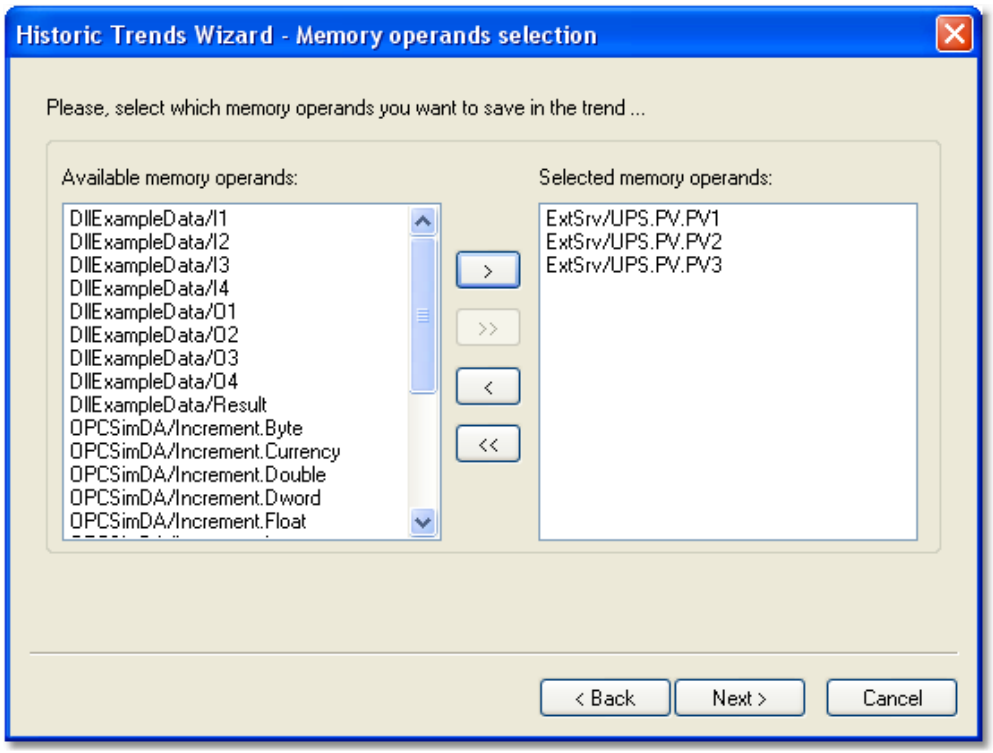



***Figure 6**: The second wizard page: HTW – Memory operands selection.*

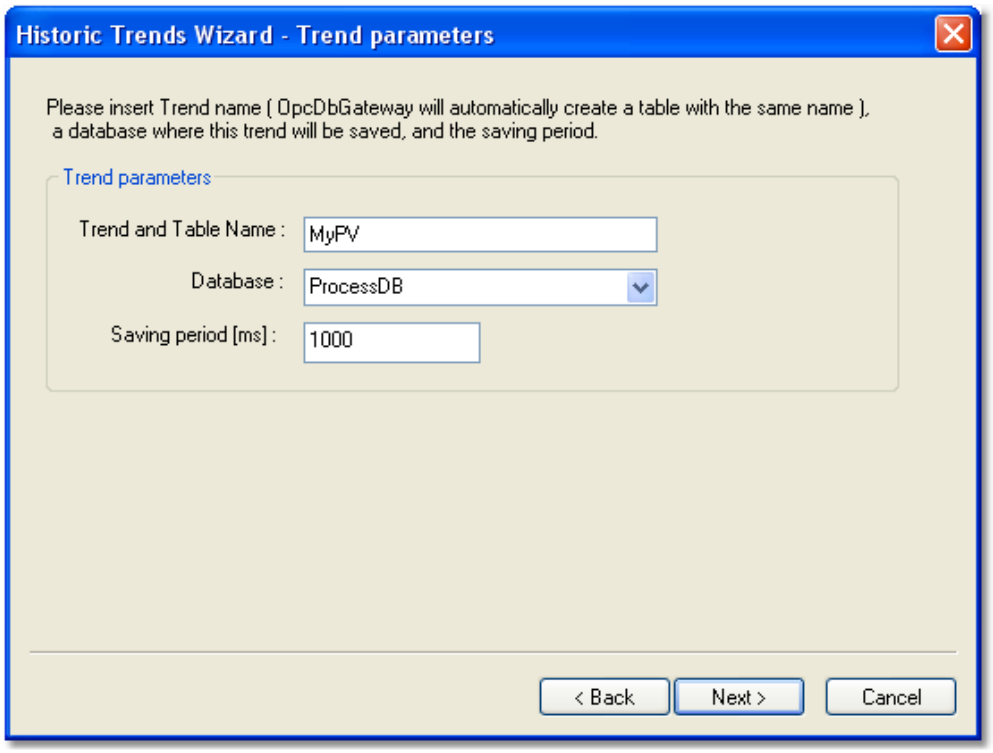



***Figure 7**: The third wizard page: HTW – Trend parameters.*

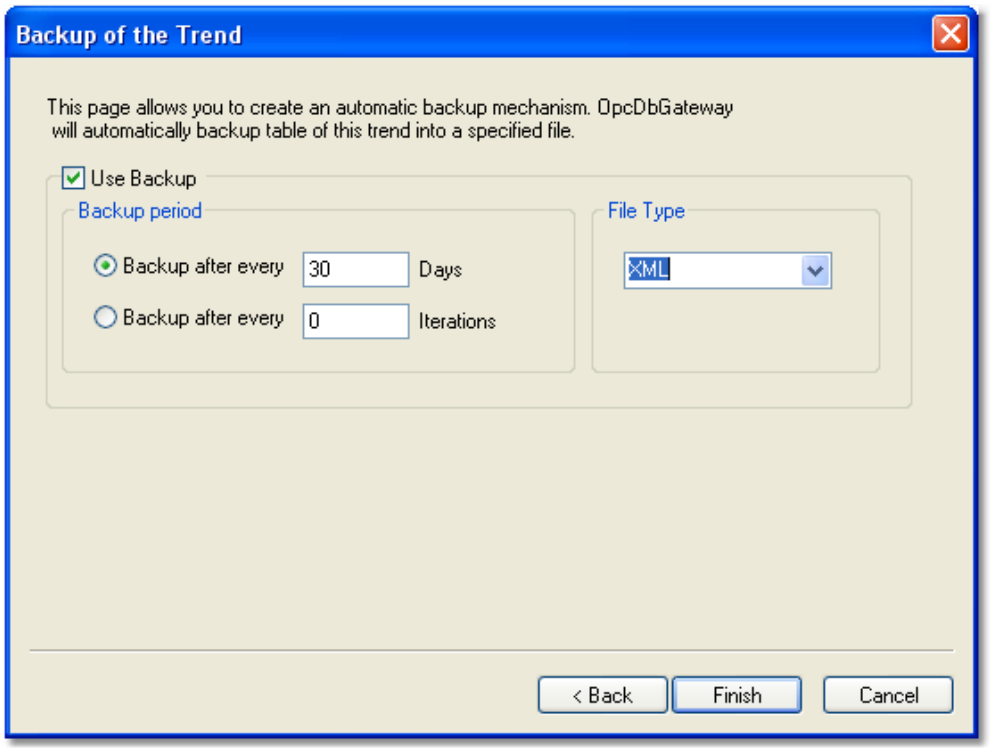



***Figure 8**: The fourth wizard page: Backup of the Trend.*

## 5. STEP 5: Check the configuration

This point is only optional. It gets result summary information if the configuration was successful. To check the configuration, please do the following:

1. Click on the Tools ⇨ Check configuration… menu item (toolbar item). (please see Figure 9 and 10)

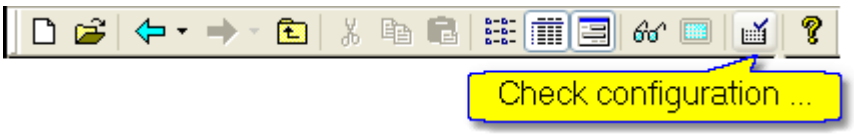



***Figure 9**: Check configuration.*

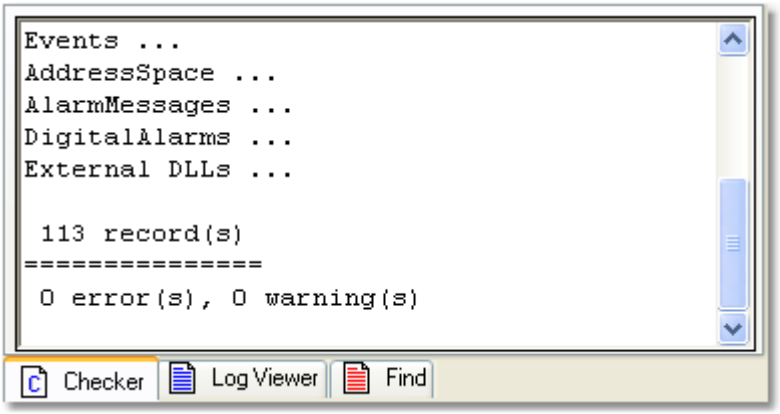



***Figure 10**: Check configuration – result.*

## 6. STEP 6: Start the Archiving application

To start the created Archiving application (based on Historic Trends) named MyPV, please do the following:

1. Click on the View ⇨ Monitor view menu item (toolbar item). (Please see Figure 11).
2. Right-click on the left tree-view item Internal OPC Server ⇨ Address space ⇨ ExtSrv (Please see Figure 12). On this view you can see the current values of your real-time process variables.
3. The archived values are stored to the MyPV table to the ProcessDB database (default MS Access database: *C:\Program Files\OpcDbGateway\Data\ProcessDB.mdb*). (Please see Figure 13)

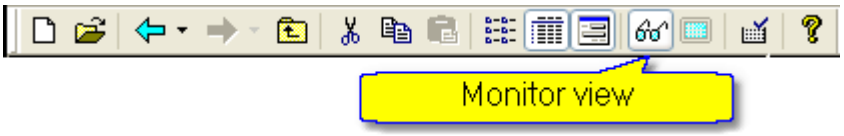
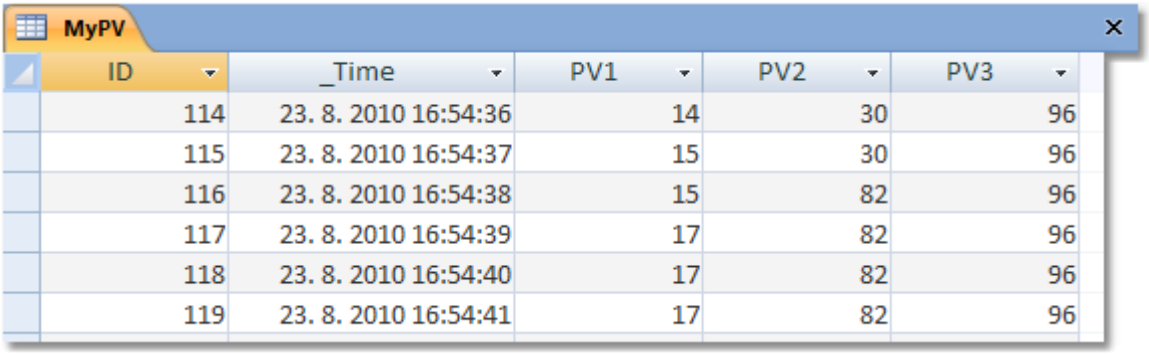



***Figure 11**: The Monitor view button.*

| Item ID | Value | Timestamp | Quality | Subquality | Limit |
|---|---|---|---|---|---|
| ExtSrv.UPS_PV_PV1 | 26 (VT_UI4) | 08/23/10 16:46:33.291 | Good | Non-specific | Not Limited |
| ExtSrv.UPS_PV_PV2 | 29 (VT_UI4) | 08/23/10 16:45:23.290 | Good | Non-specific | Not Limited |
| ExtSrv.UPS_PV_PV3 | 97 (VT_UI4) | 08/23/10 16:45:22.290 | Good | Non-specific | Not Limited |

***Figure 12**: The current values of archived process variables.*



MyPV

| ID | _Time | PV1 | PV2 | PV3 |
|---|---|---|---|---|
| 114 | 23. 8. 2010 16:54:36 | 14 | 30 | 96 |
| 115 | 23. 8. 2010 16:54:37 | 15 | 30 | 96 |
| 116 | 23. 8. 2010 16:54:38 | 15 | 82 | 96 |
| 117 | 23. 8. 2010 16:54:39 | 17 | 82 | 96 |
| 118 | 23. 8. 2010 16:54:40 | 17 | 82 | 96 |
| 119 | 23. 8. 2010 16:54:41 | 17 | 82 | 96 |

***Figure 13**: Your real-time process data values are stored in the MyPV table (MS Access database).*

## Downloads

In this section are listed links to important documents which relates with the OpcDbGateway.

**OpcDbGateway documentation (User's Guide)**
http://www.saeautom.sk/download/help/opcdbgateway_en.pdf

**Použitie našich produktov**
http://www.saeautom.sk/download/products_solutions_sk.pdf

**OpcDbGateway - Powerfull programm system for PC**
http://www.saeautom.sk/download/opcdbgateway_en.pdf

**Historical Trend Wizard for OpcDbGateway**
http://www.saeautom.sk/download/gwtrends_en.pdf

**Configuring OPC and DCOM for OPC server and OPC client applications from SAE – Automation, Ltd.**
http://www.saeautom.sk/download/dcom_config.pdf

**Configuring DCOM for using OPC UA COM Wrapper with OPC servers from SAE – Automation, Ltd.**
http://www.saeautom.sk/download/opcuaforsaeproducts.pdf

**Internet browser based OPC client**
http://www.saeautom.sk/download/opc_explorer.pdf

**SAEAUT SNMP OPC Server documentation (User's Guide)**
http://www.saeautom.sk/download/help/saeaut_snmp_opc_server_en.pdf

**Elegant solution for the management of computer network**
http://www.saeautom.sk/download/snmpopcserver_en.pdf

**Monitoring of network infrastructure**
http://www.saeautom.sk/download/monitoring_en.pdf

**Internet browser based OPC client**
http://www.saeautom.sk/download/opc_explorer.pdf

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