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OPC Server of the REX Control System

User guide

REX Controls s.r.o.

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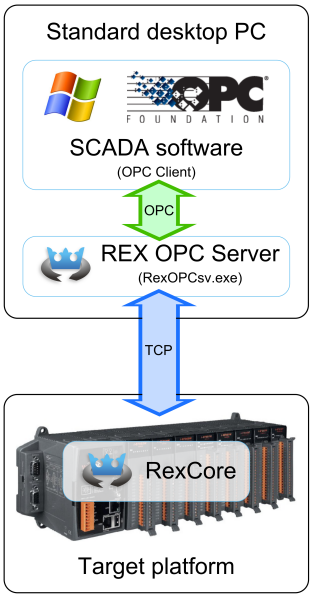
Chapter 1

OPC server of the REX Control System

The standard installation package of the REX Control System development tools includes also an OPC server, which can serve as a data exchange point between visualization system (SCADA, HMI) and the running control algorithm.

There are many visualization systems of third parties, e.g. InTouch, Indusoft, Genesis, WinCC, Citect or Reliance, to name a few. Some of them are even free for personal and non-commercial use.

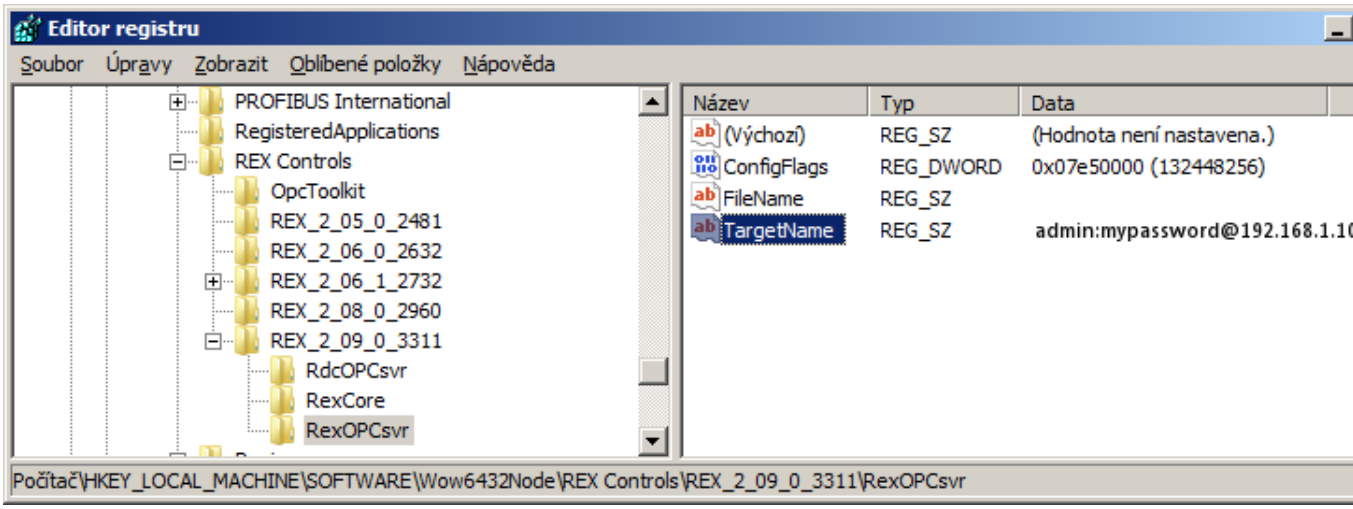
The OPC server of the REX Control System runs only on Microsoft Windows 7/8/10. It communicates with the REX target device via proprietary communication protocol and provides data exchange with the visualization software via the OPC protocol. The current version of the REX OPC Server supports OPC Data Access 2.0 and 3.0 specification. The visualization packages include a broad range of tools and graphical elements to process the data and the creation of professional and detailed visualization of the controlled technology is quite straightforward.



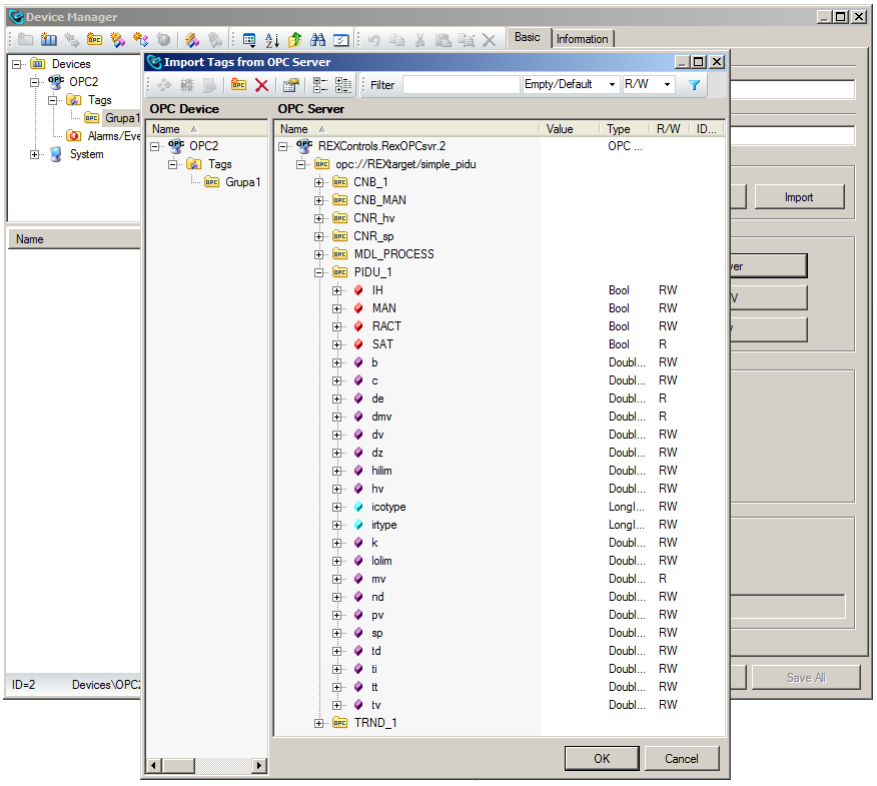
It is necessary to define the IP address of the REX target device in Windows registry to allow data exchange with the OPC server. Find the following key in the Windows registry
`HKLM\SOFTWARE\Wow6432Node\REX Controls\REX_X_XX_X_XXXX\RexOPCsvr`
and set the IP address of the REX target device into `TargetName`.

The address of the target device must contain a username and password for establishing connection with the REX runtime module on the target device. Please use the same credentials as you do in RexDraw. The syntax is e.g. `admin:mypassword@192.168.1.100`. If there are multiple devices the OPC server should connect to, use semicolon as a separator in the list.

It is highly recommended to password-protect your target device but you might have reasons for not doing so. In such a case use only `admin@192.168.1.100`.



Afterwards it is possible to establish data exchange with the running executive of the REX Control System from the visualization software. The OPC server named `REXControls.RexOPCsvr` allows the visualization SW to read all inputs, outputs and parameters of the function blocks the control algorithm is composed of. It is possible to write to function block parameters and inputs. For the latter case, no signal can be connected to the block input in the control algorithm.



Chapter 2

Troubleshooting

The OPC server of the REX Control System is automatically launched by the visualization software when OPC signal browser opens. However, this happens only if the server is registered correctly in the Windows operating system. In the case you do not see the `REXControls.RexOPCsvr` in the OPC servers list, use the *Task manager* to check whether the `RexOPCsv.exe` program is running. If the OPC server does not start automatically, register it manually from command line using the command
`RexOPCsv.exe /regserver`

In the case you are able to see `REXControls.RexOPCsvr` server in the list but do not see the individual signals of the control algorithm, you probably have:

- incorrectly defined the IP address of your target device in the Windows registry
- disconnected the target device (check the Ethernet cable)
- switched off the target device

If you are still not able to access the variables of the REX control algorithm via the OPC server after checking the possible causes listed above, please contact us with the description of the problem.

Please include the following information in your description to help us process your request as soon as possible:

- Version number, build number and licence number of the REX Control System you are using.
- Short and accurate description of your problem.
- The configuration files of the REX Control System (`.mdl` files) reduced to the simplest case which still demonstrates the problematic behavior.

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