Integration Objects'

Solution for OPC/OPC UA tunneling

OPC UA Wrapper

Version 3.3 Rev.0

QUICK USER GUIDE

OPC UA Wrapper Quick User Guide Version 3.3 Rev 0
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ABOUT THIS USER GUIDE

This guide is a step by step guide that lists the main steps on how to install, configure and run OPC UA Wrapper.

INSTALLATION PRE-REQUISITES

In order to properly run the OPC UA Wrapper, the following software components need to be installed on the target system:

- The OPC core components 3.00, which consist of all shared OPC modules including the DCOM proxy/stub libraries, the OPC Server Enumerator, .NET wrappers, etc.
- .NET Framework version 4.8 or higher.
- The OPC UA Discovery Server, which lists the OPC UA endpoints available on a given computer.
- The Visual C++ redistributable 2015 x86 should be installed on the target machine.

Also, make sure there is no firewall or antivirus blocking the application.

INSTALLING OPC UA WRAPPER

To install the OPC UA Wrapper, run the installation executable using an administrator account and the wizard will take you through the different installation steps.

Once the installation is complete, go to **Start => Programs => Integration Objects => OPC UA Wrapper => OPC UA Wrapper** to start the UA Wrapper configuration tool.

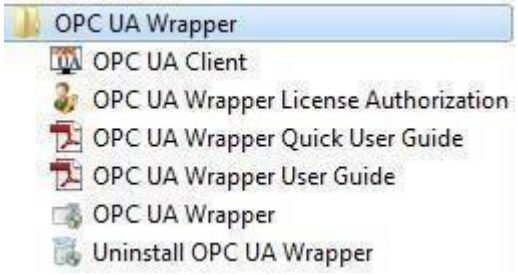

Figure 1: OPC UA Wrapper Start Menu

CONFIGURING OPC COM TO OPC UA WRAPPER

The first step is to add a wrapper by clicking the **Add** button available in the Home menu or by right clicking the COM to UA root node and selecting **Add Wrapper** as illustrated below.

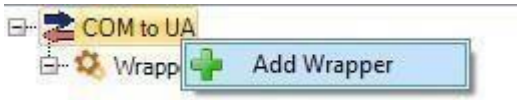

Figure 2: Add Wrapper

The Add Wrapper dialog box will then be prompted:

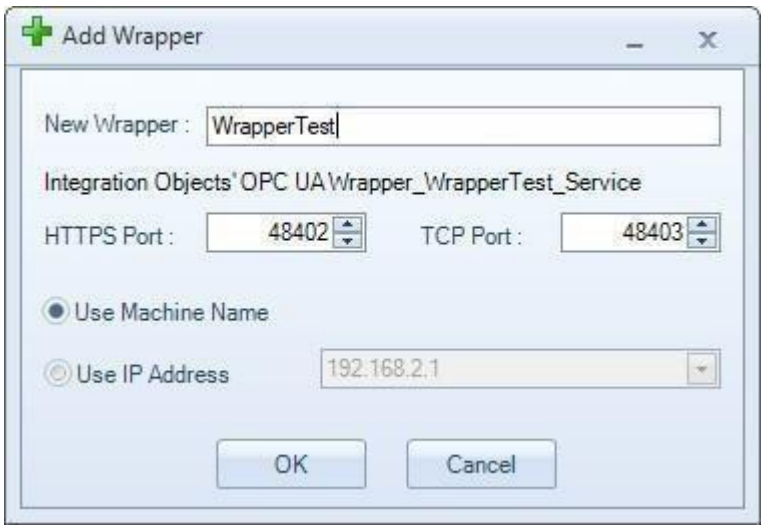

Figure 3: Add New Wrapper Dialog

Enter:

- The name for the wrapper you want to add. The name is a friendly one that will serve to identify your OPC UA server and must not contain any spaces or special characters.
- HTTPS and the TCP ports numbers used for the Wrapper/Client communications.

To create the wrapper service URL, you can choose between:

- Using the machine name
- Using the IP address of the machine

After you click OK, a new node will be added to the COM to UA root node.

Right click on this wrapper node and select **Add Servers** from the displayed menu. The following dialog screen will appear where you can configure the OPC servers to be wrapped as OPC UA servers:

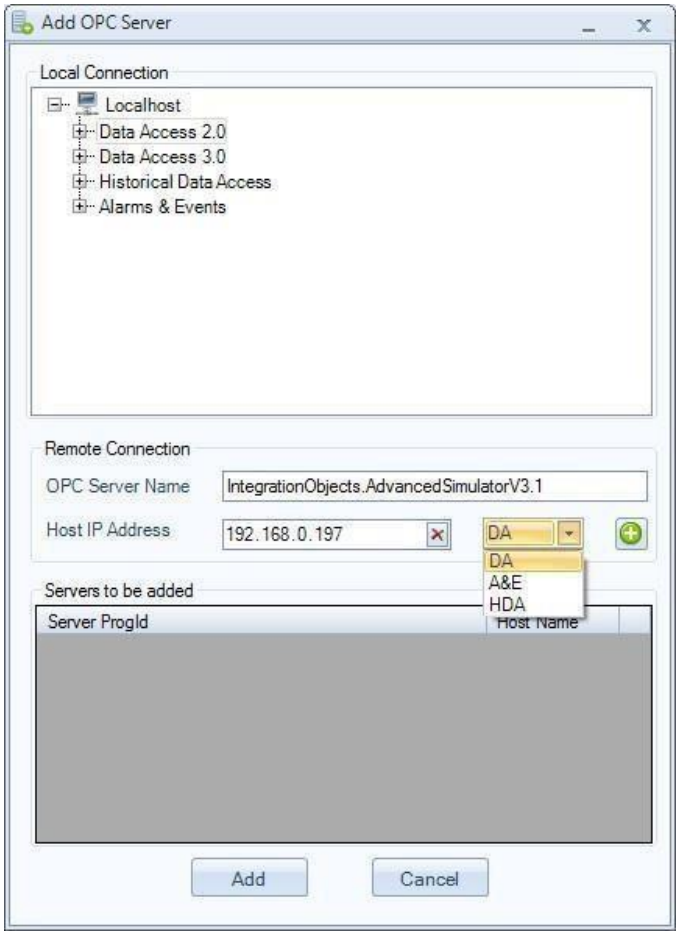

Figure 4: Add OPC Servers Dialog

You can either browse the list of the OPC servers available in your local machine, or manually configure a remote OPC server by entering:

- The OPC server name (ProgID),
- The IP Address of the machine that hosts this OPC Server,
- The OPC server type (DA, HDA or A&E server) as shown in the figure above.

To add multiple OPC local servers, you only need to select the server name from the servers tree view and the selected servers will be added to the grid view to facilitate the visualization of the servers to be added. Use the **X** button to delete servers from this list.

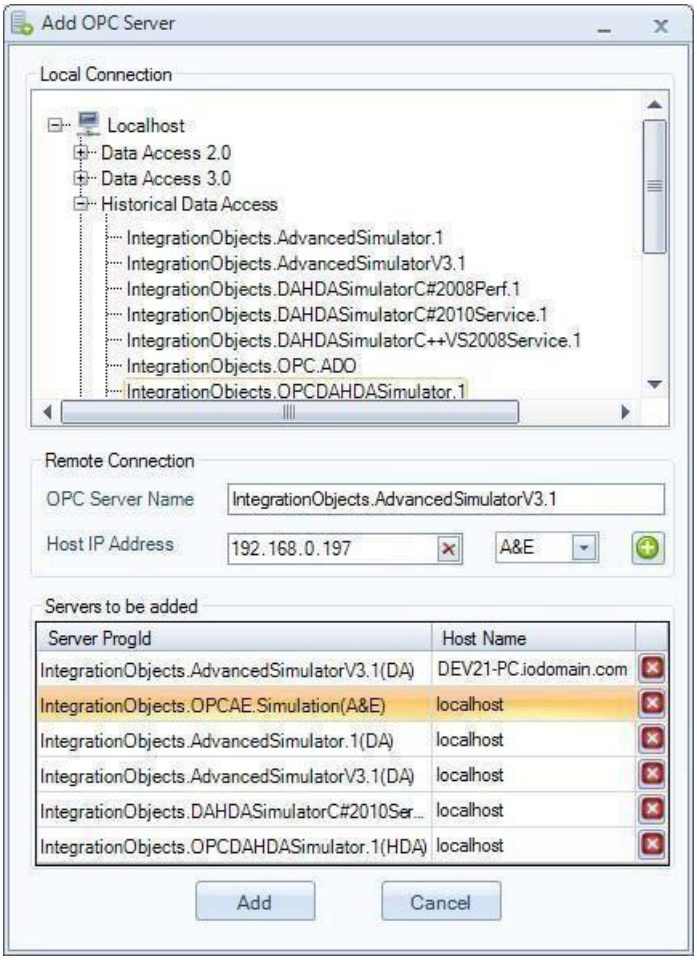

Figure 5: Add Local OPC Servers

Click the **Add** button to confirm your configuration. When you go back to the main window, you will be able to see that the servers have been successfully added under the desired wrapper as shown below:

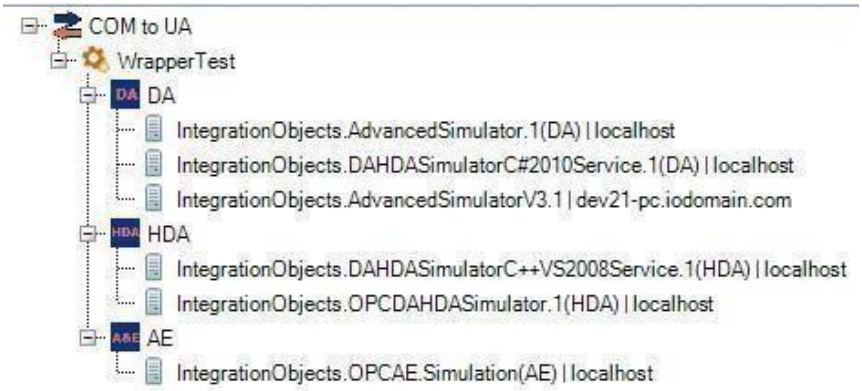

Figure 6: Wrapped OPC Servers

Once you finished configuring the OPC Servers, you need to start the wrapper service. To do so, right click on the wrapper and choose **Start Wrapper** from the wrapper context menu.

Furthermore, you can open Windows services manager, navigate to Services tab and look for the service you started.

Figure 7: Services Manager View – Service Started

Now, you can use your OPC UA client to connect to the created OPC UA server. If you do not have an OPC UA client, you can use the one included with the OPC UA Wrapper package:

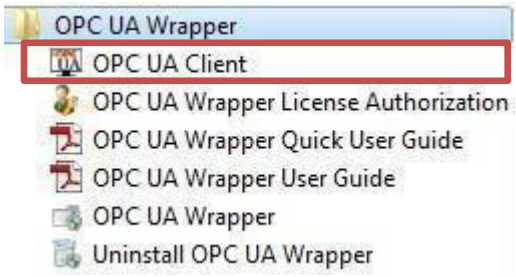

Figure 8: OPC UA Wrapper Start Menu – Open OPC UA Client

CONFIGURING OPC UA TO OPC COM PROXY

You can add a proxy by clicking the **Add** button available in the Home menu or by right clicking the UA to COM root node and selecting **Add Proxy** as shown below:

Figure 9: Add Proxy

The UA endpoint configuration dialog screen will then appear:

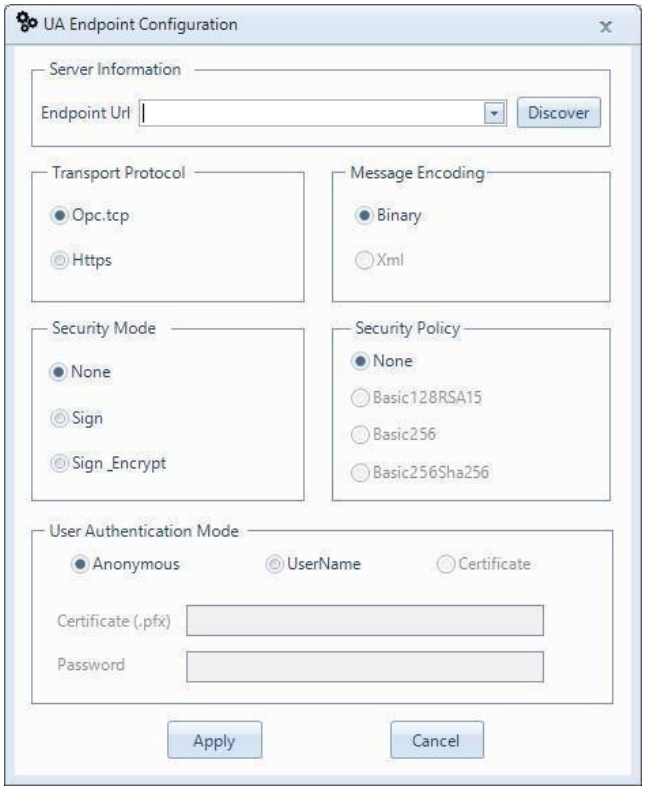

Figure 10: UA Endpoint Configuration Dialog

All the settings presented in this dialog screen are required to create an UA endpoint from the selected OPC UA server. You can refer to the user guide for more details about these settings.

After endpoint configuration is set, click the **Apply** button and the COM Server Configuration dialog will be displayed:

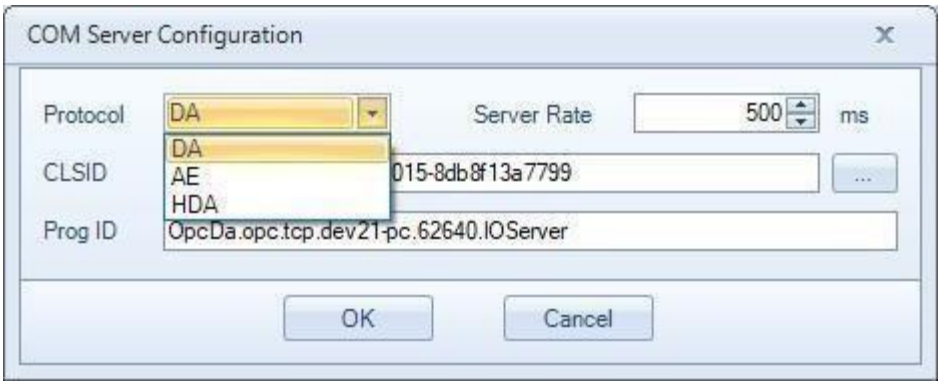

Figure 11: COM Server Configuration Dialog

There are four parameters that should be configured:

- Protocol: The user can choose between DA (Data Access), AE (Alarms & Events) and HDA (Historical Data Access) protocol.
- CLSID: A new CLSID is generated to be assigned to the server.
- Prog ID: The Prog ID is generated from the configured UA endpoint and can be edited by the user.
- Server Rate: the server scan rate in case the created OPC server is a DA server.

Then, click the **OK** button and a new node will be added to the UA to COM root node as shown below:

Figure 12: UA to COM Proxies List

Now, you can use your OPC client to connect to the created OPC server (DA, HDA or AE).

If you need to download an OPC test client, you can click here to access our free OPC tools.

For additional information on this guide, questions or problems to report, please contact:

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