



Kepware Technologies

KEPServerEX Client Connectivity
Guide for ObjectAutomations
OAenterprise™

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1. Overview and Requirements

This guide will demonstrate how to establish a connection between the KEPServerEX OPC server and an ObjectAutomations **OAenterprise™** runtime project. Users must complete the following before continuing with this tutorial:

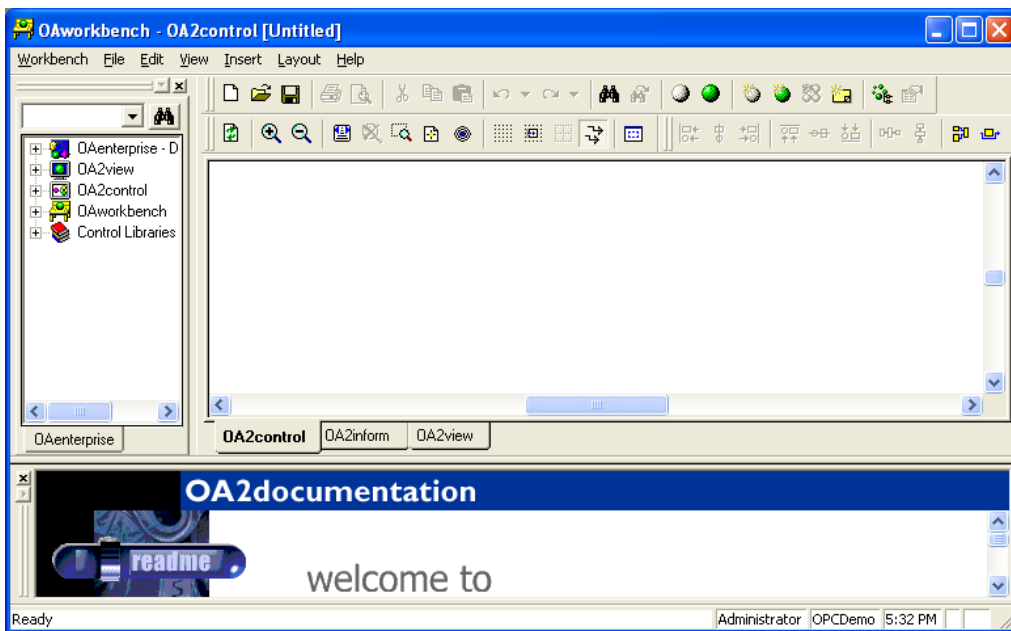
- Configure a server project. Users may either select the appropriate driver and settings or run the **Simulation Driver Demo** that is included with KEPServerEX. The Simulation Driver Demo project will be used for all examples in this tutorial.
- Start KEPServerEX and load the Simulation Driver Demo project. Once the server project has been loaded, open the Runtime menu on the main menu bar and verify that the server project has been connected.

2. Using OAenterprise™ as an OPC Client

For information on connecting to KEPServerEX from **OAenterprise™** as an OPC client, refer to the instructions below.

Note: **OAenterprise™** version 5.1 will be used in this tutorial.

1. To start, open OAworkbench. Then, either create a new workspace or open an existing one.

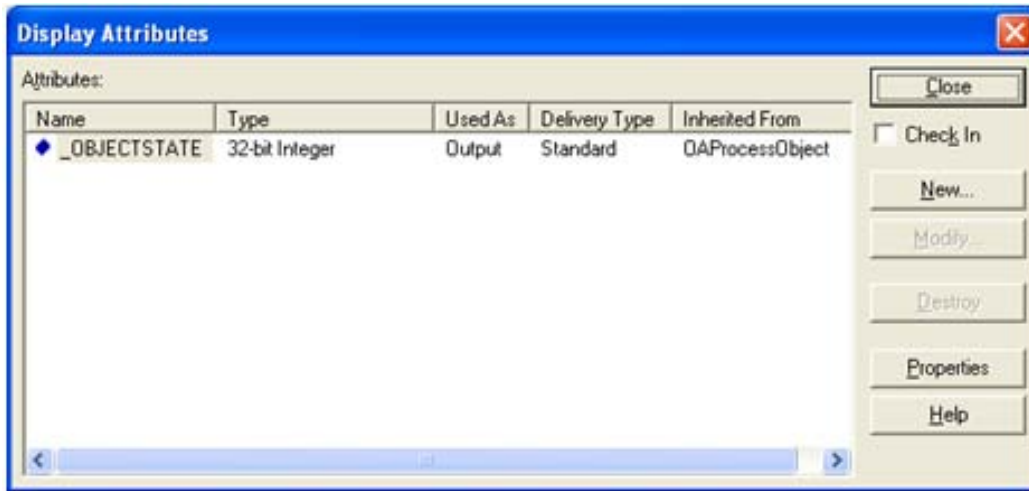


2. In the tree browser, expand **OAenterprise**. Then, right-click on **Classes** and select **New Class**.

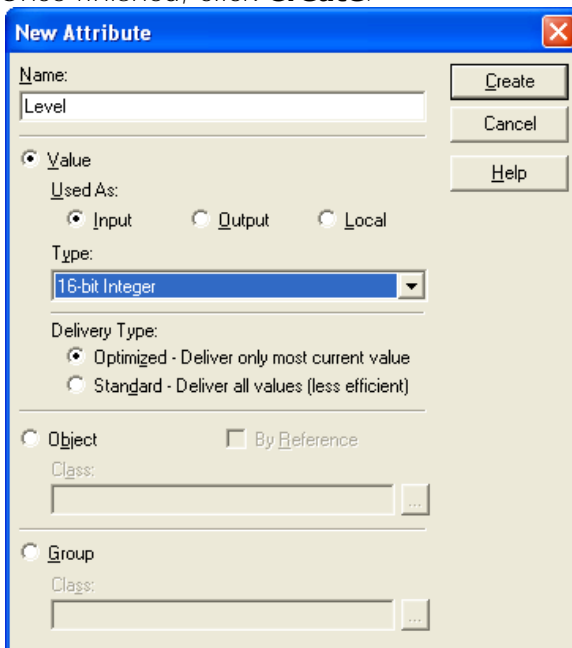
3. Enter a class name, and then select the parent class. Make sure that **Configure class** is checked. Once finished, click **Next**.



4. In **Display Attributes**, select the new class object. To add a new attribute, click **New...**

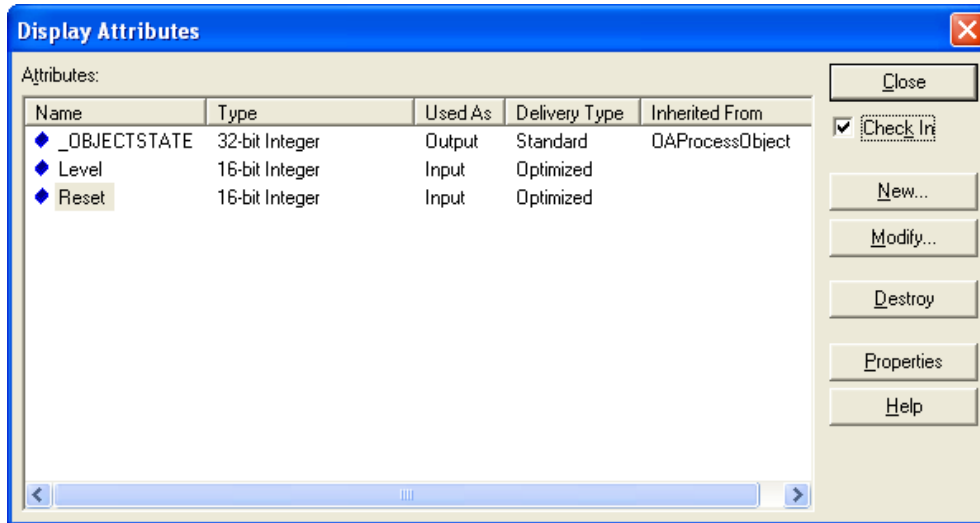


5. In **New Attribute**, change the parameters as follows:
 - Enter a name. In this tutorial, "Level" was chosen.
 - Select **Value**, specifying how it will be used. In this tutorial, "Input" was chosen.
 - Select the object's data type.
6. Once finished, click **Create**.

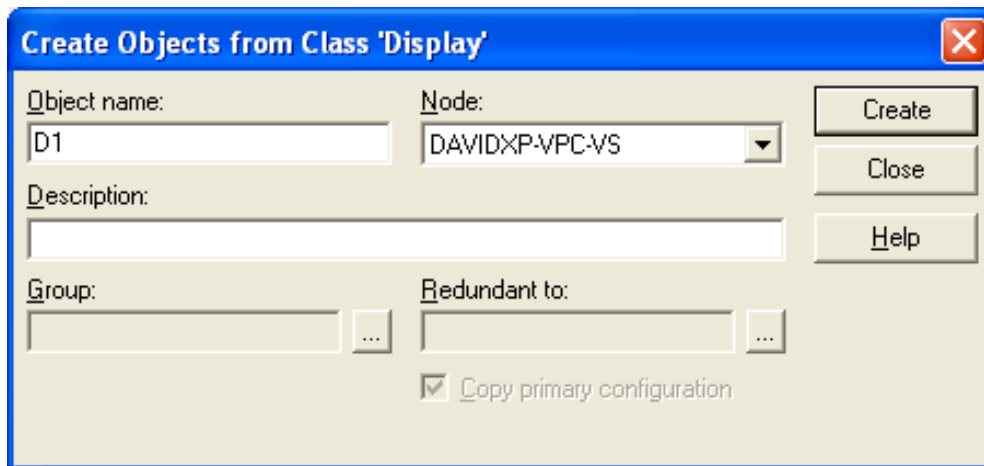


Note: Additional attributes can be added to the object. In this tutorial, an attribute named "Reset" was added in order to write back to the object.

7. Once all the desired attributes have been added for the class, check **Check in**. Then, click **Close**.

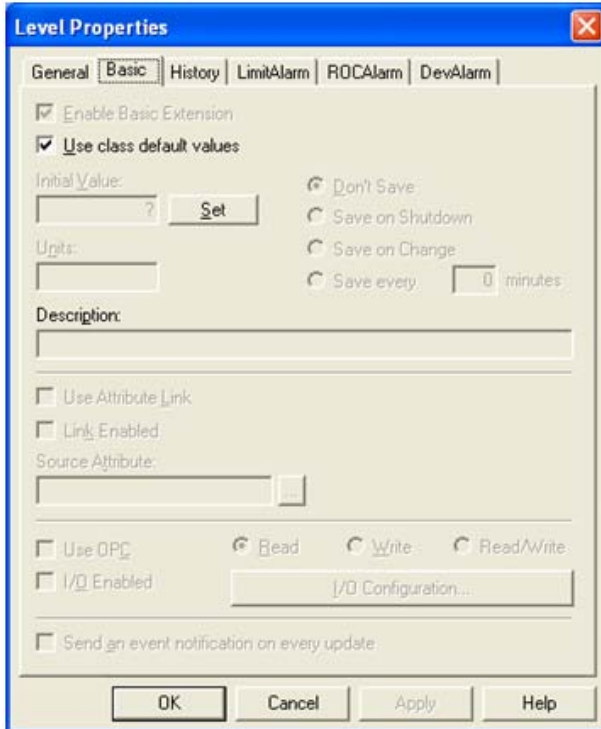


8. Next, right-click on the new class and select **Create Object From**. This will create the object.
9. Beneath **Object Name**, enter a name for the new object. Then, click **Create**.
10. Once finished, click **Close**.

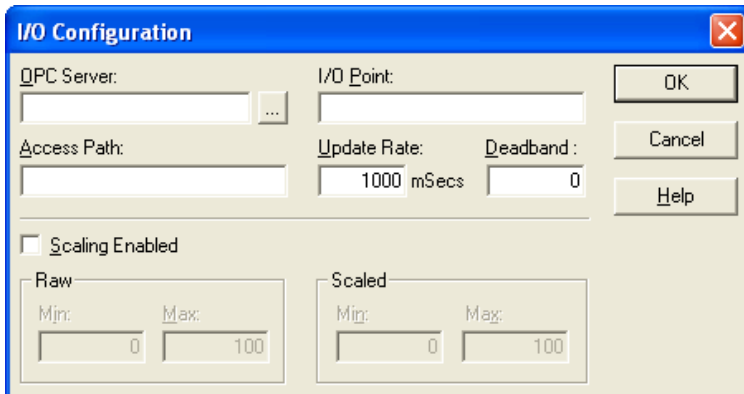


11. In the OAWorkbench tree browser, under **OAenterprise | Objects**, expand the object to display the attributes. Then, right-click on an attribute and select **Properties**. In this tutorial, the attribute selected is "Level."
12. Select the **Basic** tab, and then change the parameters as follows:
 - Uncheck **Use class default values**.
 - Check **Use OPC**.
 - Check **Read** or **Write**, depending on the attribute's intention.

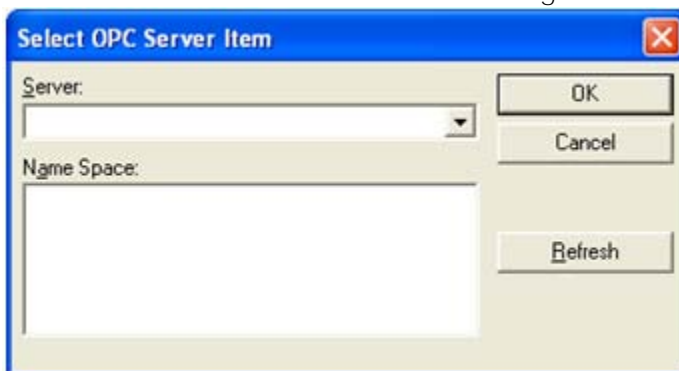
13. Once finished, click **I/O Configuration**.



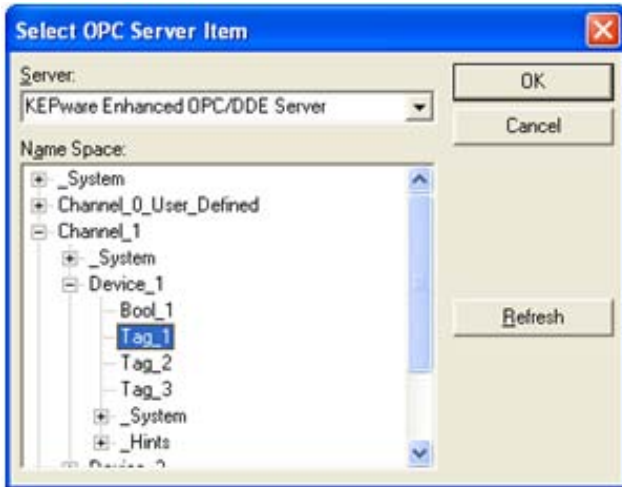
14. In **I/O Configuration**, click the OPC Server browse button.



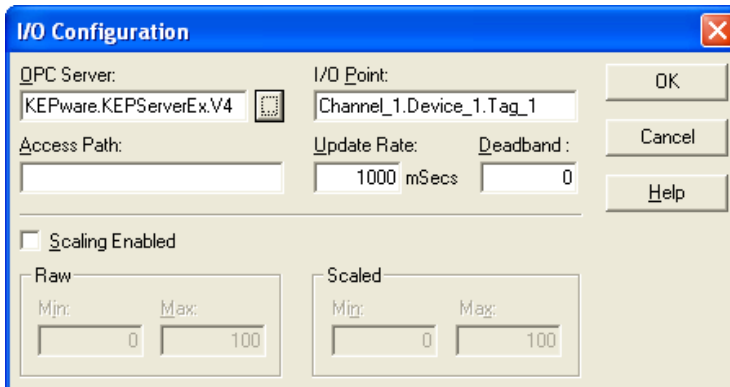
15. Locate and select the server desired for connection. In this tutorial, **Kepware Enhanced OPC/DDE Server** (which has a Program ID of "Kepware.KEPServerEX .V4") was selected. KEPServerEX V5 has a Program ID of "Kepware.KEPServerEX .V5."



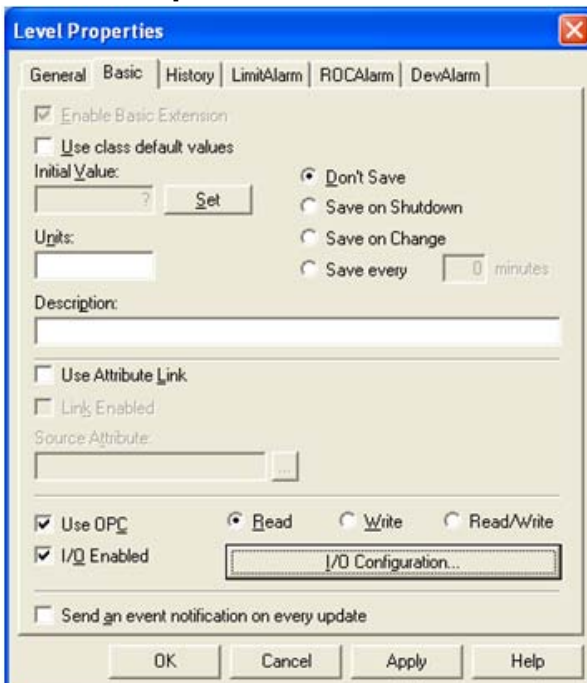
16. In **Select OPC Server Item**, expand the tree list beneath **Name Space** to locate the access path containing the I/O point that will be associated with this attribute. In this tutorial, "Channel_1.Device_1.Tag_1" was selected.
17. Once finished, click **OK**.



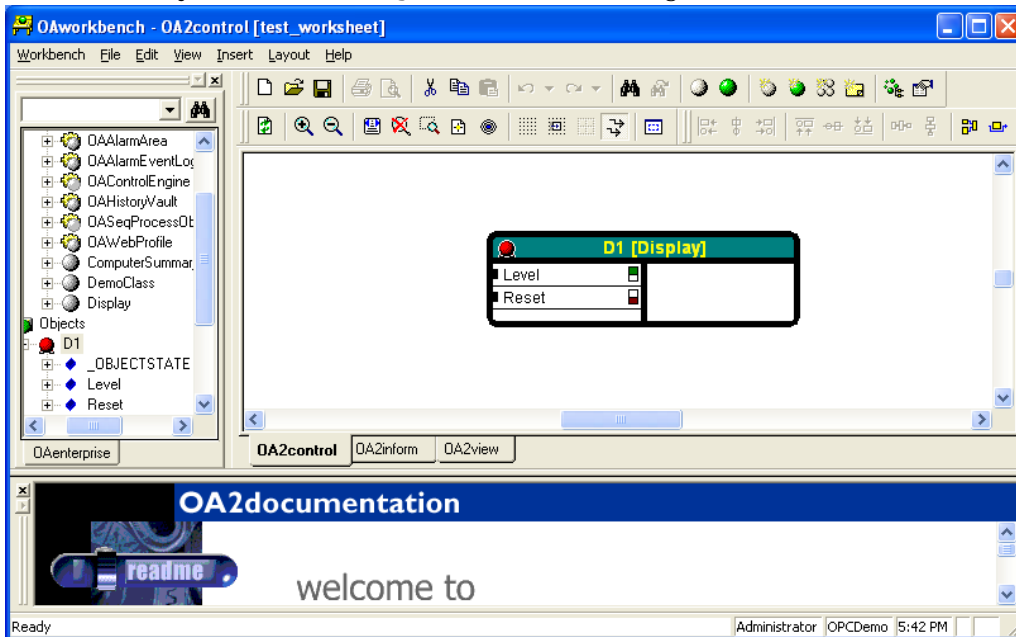
18. In **I/O Configuration**, click **OK**.



19. In **Level Properties**, click **OK**.

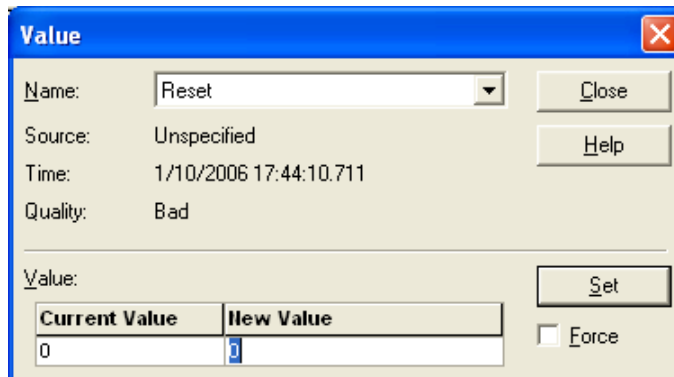


20. Repeat the last steps as necessary for any other attributes. Then, return to the OAworbench.
21. Locate the object beneath **Objects**, and then drag it to the work area.



22. Then, do the following:

- Right-click on the object header and then select **Watch On**.
- Right-click on the object header and then select **Start and Set Online**. This will start the object and establish OPC connections.
- Right-click on the attribute configured for write I/O and then select **Value**. This will allow data to be written to the OPC item for that attribute.



23. Next, enter a new value and then click **Set**.

24. Once the write to the OPC item completes, click **Close**.