



Kepware Technologies

Client Connectivity Guide for Trihedral VTS

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Table of Contents

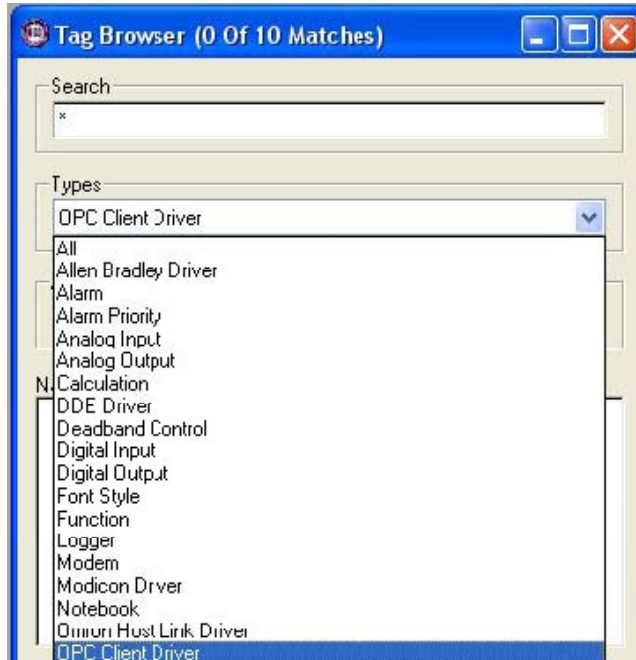
- 1. Overview 1
 - 1.1 Connecting to KEPServerEX Using VTS as an OPC Client..... 1
 - 1.1.1 Creating a Tag..... 2
 - 1.2 Connecting to KEPServerEX Using VTS as a DDE/NetDDE Client 4
 - 1.2.1 Configuring a DDE Driver 5
 - 1.2.2 Configuring a NetDDE Driver..... 6
 - 1.2.3 Creating Tags 7
- 2. Using Kepware's OPC Client 9

1. Overview

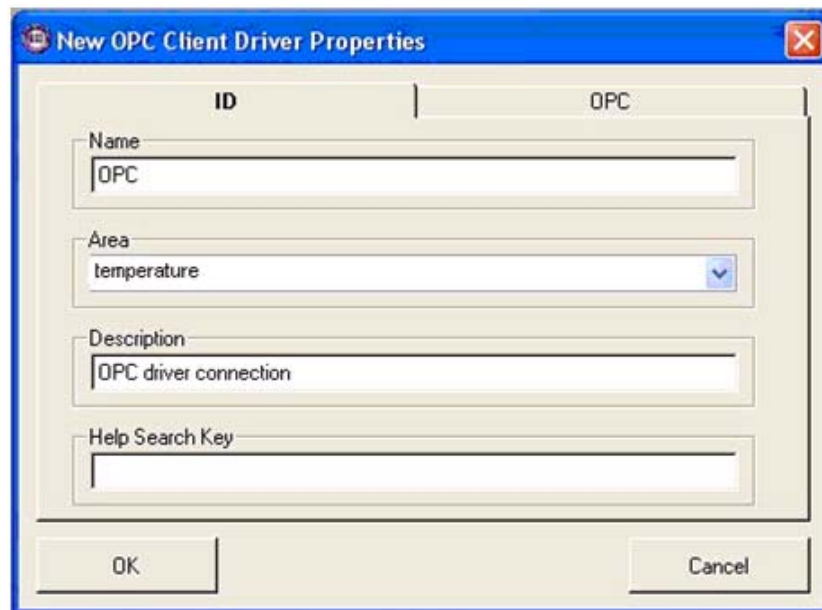
This document intends to discuss how to connect to KEPServerEX from Visual Tag System (VTS) 7.1 as both an OPC client and a DDE or NetDDE client.

1.1 Connecting to KEPServerEX Using VTS as an OPC Client

1. To start, open the VTS project and locate the **Overview** window. Then, click **Configure**.
2. Next, click the **Browser** icon. In the **Types** drop-down menu, locate and select **OPC Client Driver**.

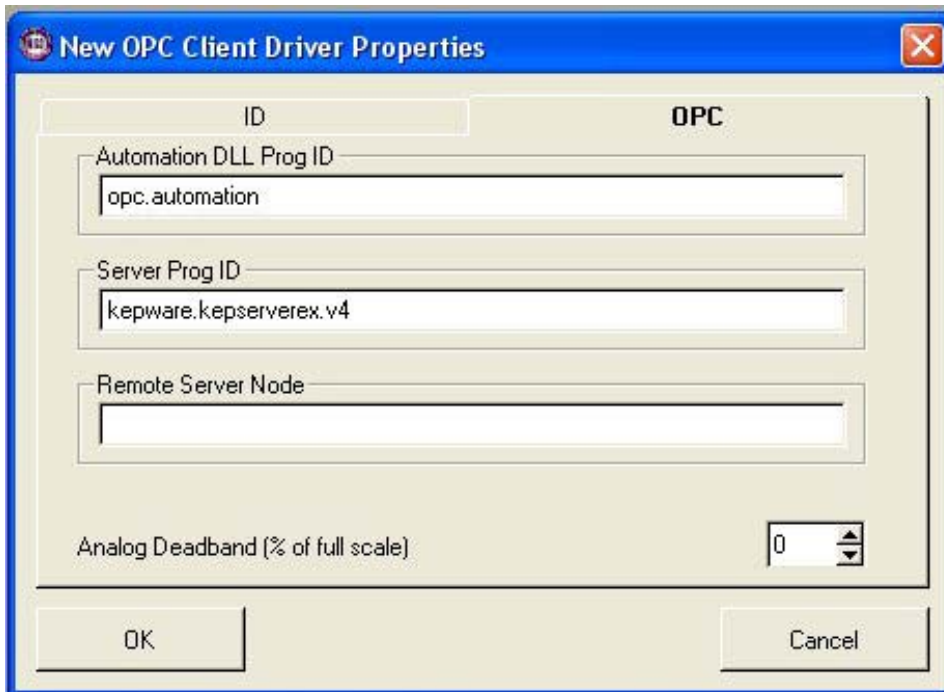


3. Click **New** to open the **OPC Client Driver Properties**.
4. In **Name**, enter a name for the new driver. In this example, "OPC" is used. Then, press **Enter**.



Note: Pressing **Enter** once text is specified in the text boxes ensures that the information registers with the program.

5. In **Area**, enter a unique name that will be easy to identify when creating tags. It also organizes and links tags. In this example, "temperature" is used.
6. In **Description**, enter a short description of the driver for organizational purposes. Although this field is optional, it is very useful when browsing connections and tags in the browser window.
7. Next, open the **OPC** tab. In **Automation DLL Prog ID**, enter "opc.automation".
8. In **Server Prog ID**, enter "Kepware.KEPServerEX.v4".

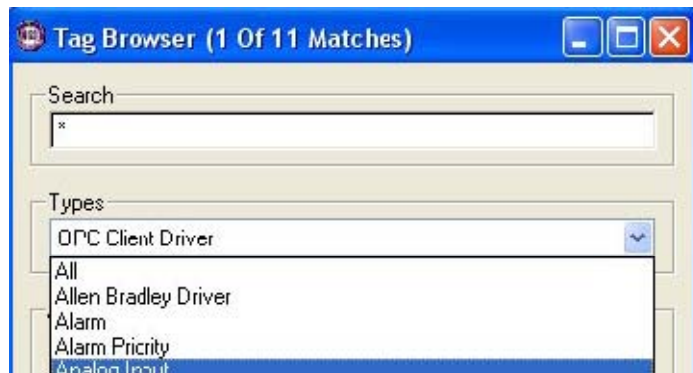


Note: The Server Prog ID is different for Kepserver Enterprise. To find the ID, launch the OPC Quick Client from the server. Then, right-click on the server name at the root of the tree hierarchy and view its properties.

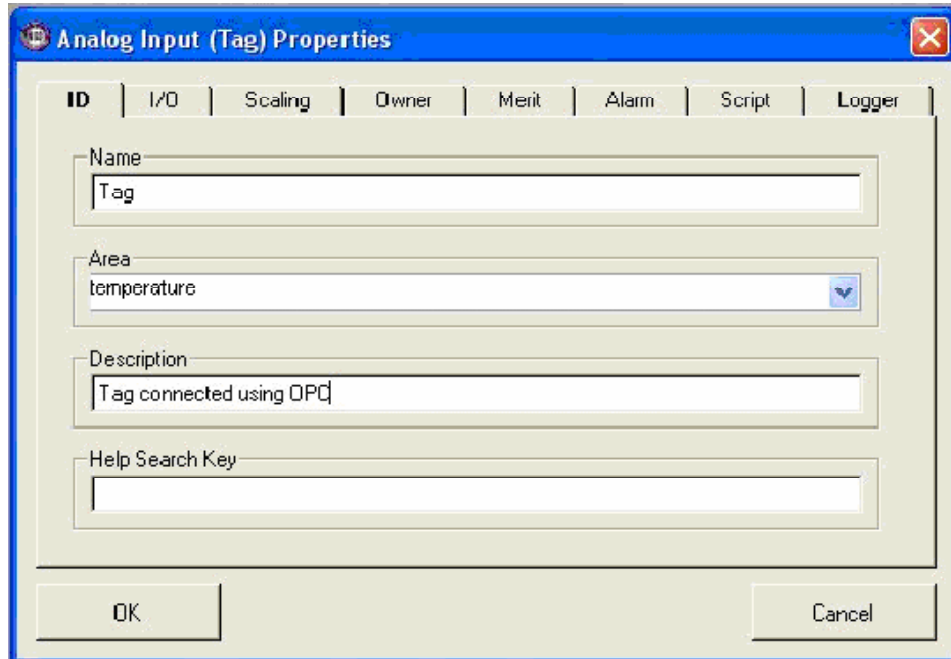
9. To connect to a remote server, enter the remote machine name or the IP Address in **Remote Server Node**.
10. Once finished, click **OK**.

1.1.1 Creating a Tag

1. To create a tag, click the **Browser** icon. In the **Types** drop-down menu, locate and select **Analog Input**.



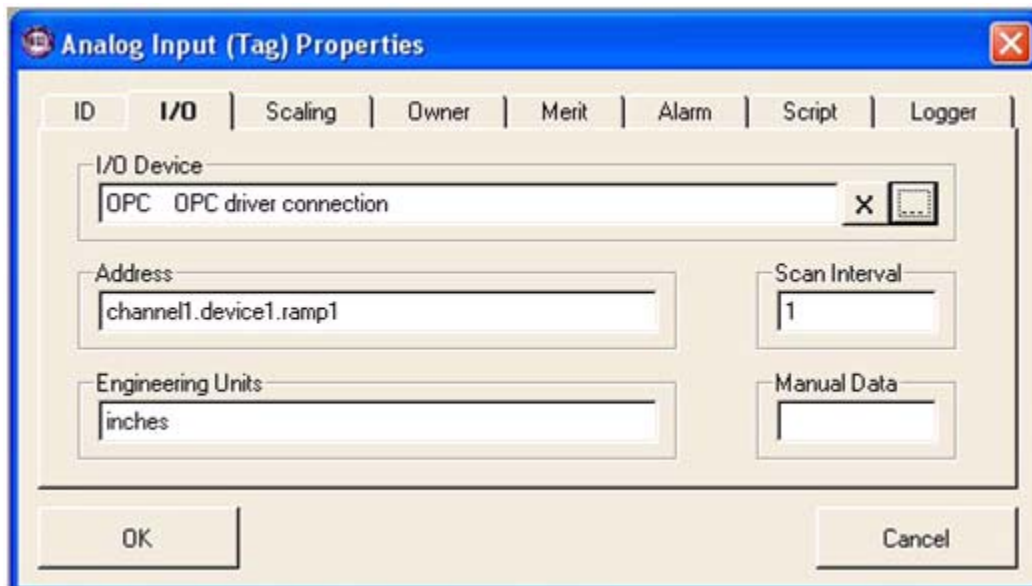
2. Then, click **New** to open the **Analog Input Properties**.



The screenshot shows the 'Analog Input (Tag) Properties' dialog box with the 'Name' tab selected. The dialog has a blue title bar and a close button in the top right corner. Below the title bar is a tabbed interface with tabs for 'ID', 'I/O', 'Scaling', 'Owner', 'Merit', 'Alarm', 'Script', and 'Logger'. The 'Name' tab is active, showing four text input fields: 'Name' (containing 'Tag'), 'Area' (containing 'temperature' with a dropdown arrow), 'Description' (containing 'Tag connected using OPC'), and 'Help Search Key' (empty). At the bottom are 'OK' and 'Cancel' buttons.

3. In **Name**, enter a unique name for the tag. In this example, "Tag" is used. Then, press **Enter**.
4. In **Area**, select the name that was specified during driver creation. In that example, "temperature" was used. This name links tags to the driver.
5. In **Description**, enter a short description of the tag for organizational purposes. Although this field is optional, it is very useful when browsing connections and tags in the browser window.
6. Next, open the **I/O** tab. The **I/O Device** parameter should read "No Tag Selected".
7. Click the **Browse** icon, and then locate and select the OPC device created earlier. Then, click **Select**.

Note: The name should now be visible in **I/O Device**.

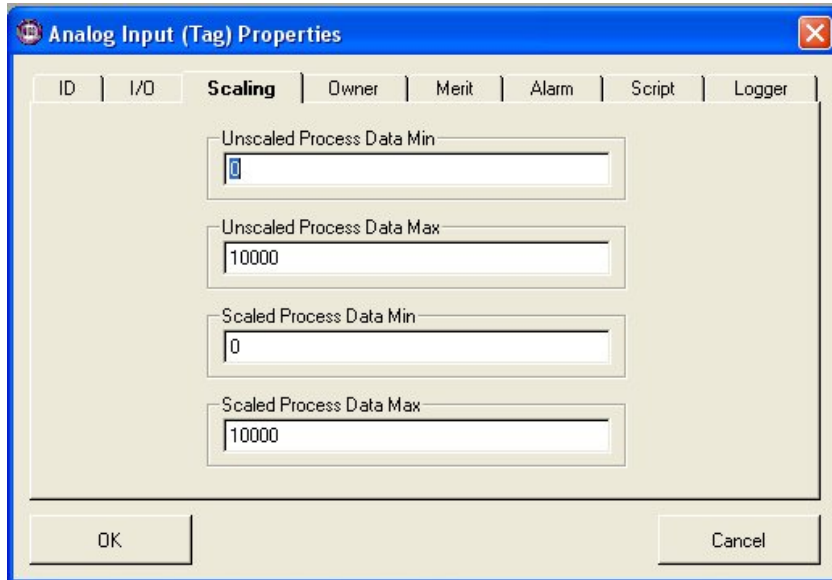


The screenshot shows the 'Analog Input (Tag) Properties' dialog box with the 'I/O' tab selected. The 'I/O Device' field now contains 'OPC OPC driver connection' with a browse icon to its right. Below this are four more fields: 'Address' (containing 'channel1.device1.ramp1'), 'Engineering Units' (containing 'inches'), 'Scan Interval' (containing '1'), and 'Manual Data' (empty). 'OK' and 'Cancel' buttons are at the bottom.

- In **Address**, enter the address of the tag located in KEPServerEX using the following format: *channelname.devicename.tagname*. In this example, "channel1.device1.ramp1" is used. Another example of an acceptable address is "channelA.simulator.r0001".

Note: The remaining **I/O** tab parameters are optional.

- Next, open the **Scaling** tab.



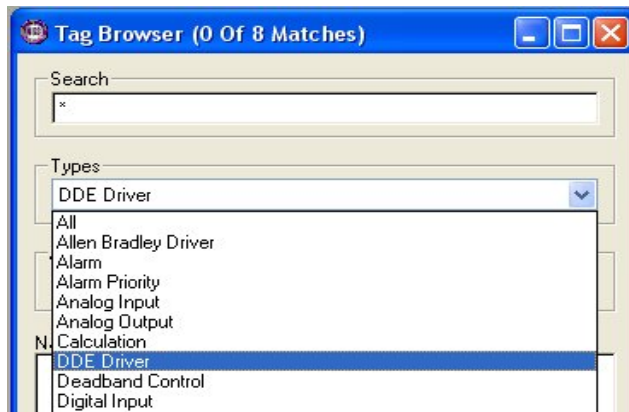
- In **Unscaled Process Data Min** and **Unscaled Process Data Max**, enter the raw data values for the server tag. Then, specify any scalar requirements in the remaining parameters, and click **OK**.
- Next, click the **Browser** icon. Select the tag name, and then click **Draw**.
- Select the **Meter 3** object and then specify where it will be placed on the workspace.



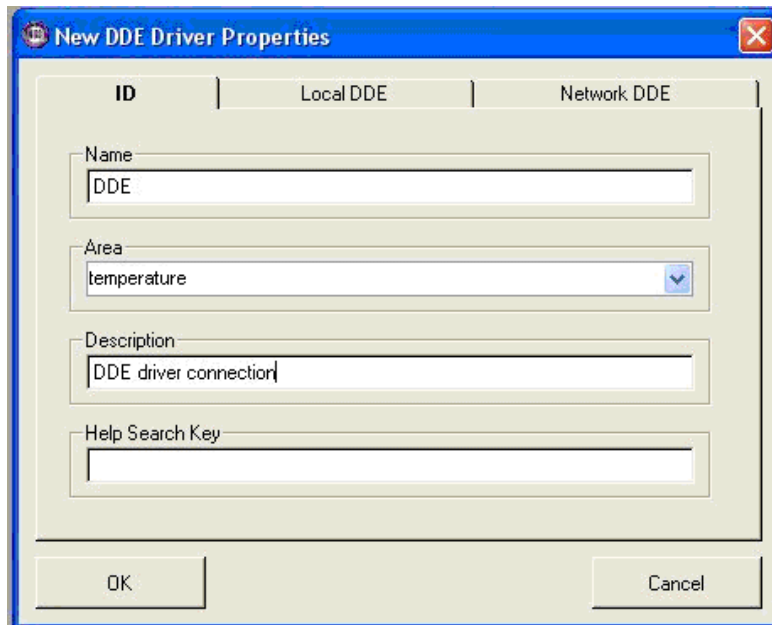
Note: Data should now be visible from the display meter.

1.2 Connecting to KEPServerEX Using VTS as a DDE/NetDDE Client

- To start, open the VTS project and locate the **Overview** window. Then, click **Configure**.
- Next, click the **Browser** icon. In the **Types** drop-down menu, select **DDE Driver**.



3. Click **New** to open the **DDE Driver Properties**.
4. In **Name**, enter a name for the driver. In this example, "DDE" is used. Then, click **Enter**.
Note: Pressing **Enter** once text is specified in the text boxes ensures that the information registers with the program.
5. In **Area**, enter a unique name that will be easy to identify when creating tags. This name is used to organize and link tags. In this example, "temperature" is used.
6. In **Description**, enter a short description of the driver for organizational purposes. Although this field is optional, it is very useful when browsing connections and tags in the browser window.

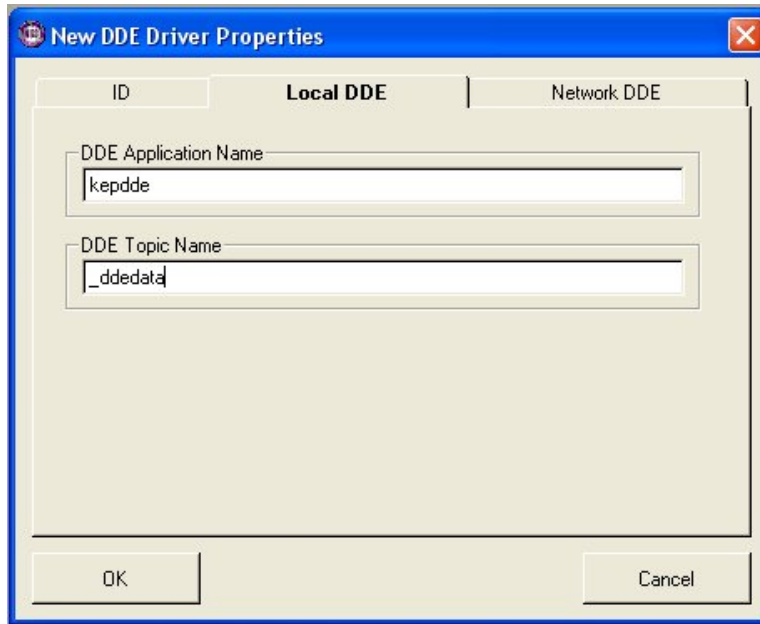


1.2.1 Configuring a DDE Driver

1. In **DDE Client Properties**, open the **Local DDE** tab.
2. In **DDE Application Name**, enter KEPServerEX's service name. The default name is "kepdde".

Note: To locate the service name, open the server and then click **Tools | Options**. Select the **DDE** tab, and then locate the **Service Name** parameter.

3. In **DDE Topic Name**, enter "_ddedata".



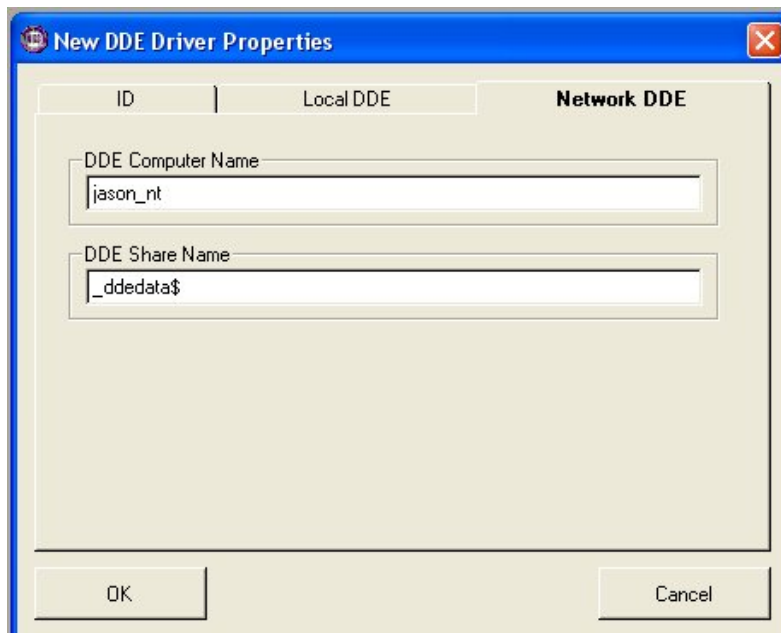
4. Once finished, click **OK**.

1.2.2 Configuring a NetDDE Driver

1. In **DDE Client Properties**, open the **Network DDE** tab.
2. In **DDE Computer Name**, enter the name of the machine running the remote server.

Note: Only use the computer name for this type of connection. IP addresses are not supported.

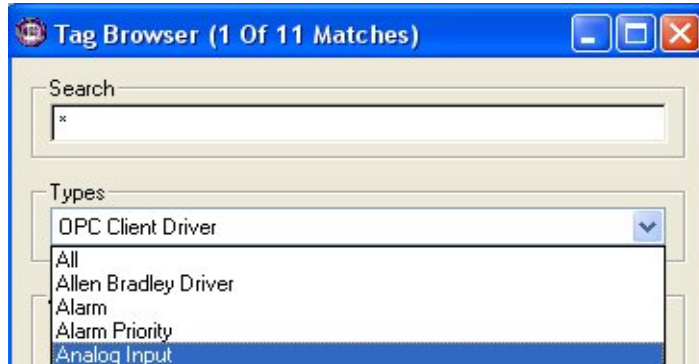
3. In **DDE Share Name**, enter "_ddedata\$".



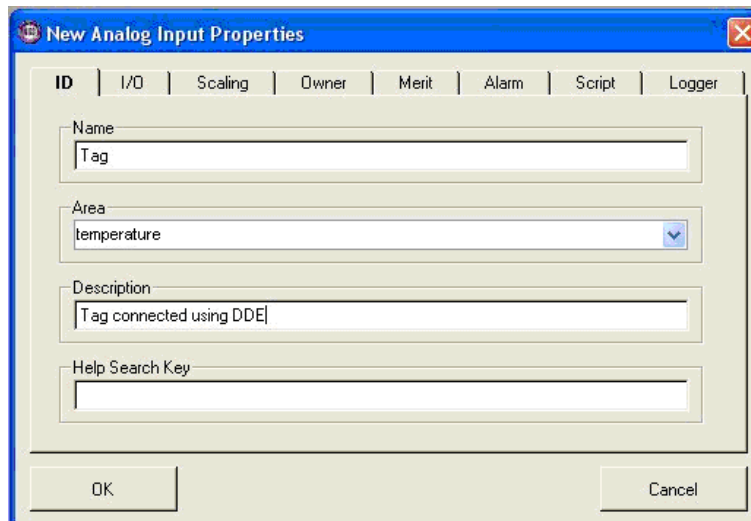
4. Once finished, click **OK**.

1.2.3 Creating Tags

1. To create a tag, click the **Browser** icon. In the **Types** drop-down menu, locate and select **Analog Input**.

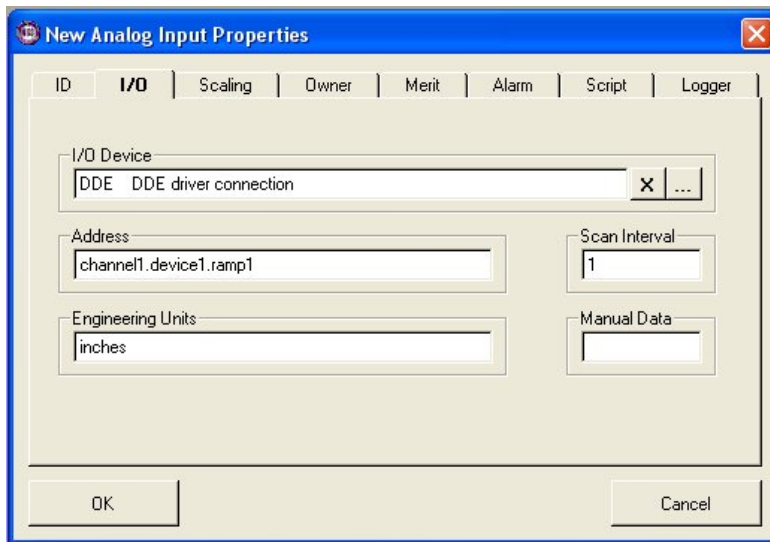


2. Next, click **New** to open the **Analog Input Properties**.
3. In **Name**, enter a unique name for the tag. In this example, "Tag" is used. Then, press **Enter**.
4. In **Area**, select the name that was entered during driver creation. In that example, "temperature" was used. This name links tags to the driver.
5. In **Description**, enter a short description of the tag for organizational purposes. Although this field is optional, it is very useful when browsing connections and tags in the browser window.



6. Next, open the **I/O** tab. The **I/O Device** parameter should read "No Tag Selected".
7. Click the **Browse** icon, and then locate and select the DDE or NetDDE device created earlier. Then, click **Select**.

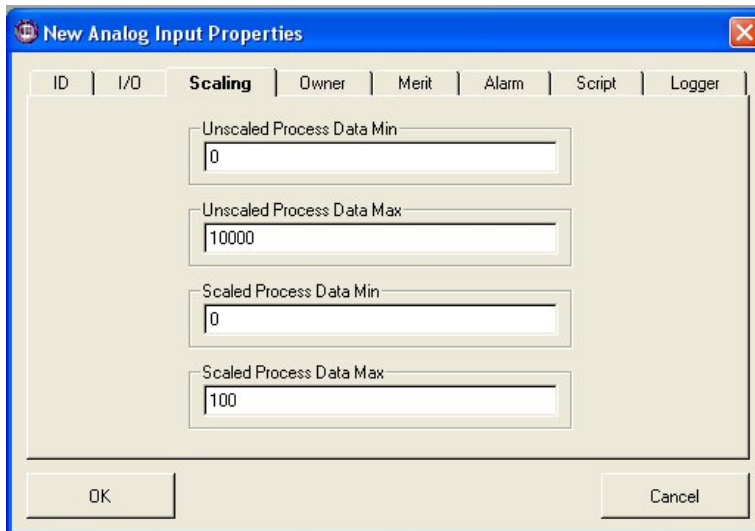
Note: The name should now be visible in **I/O Device**.



8. In **Address**, enter the address of the tag located in KEPServerEX using the following format: *channelname.devicename.tagname*. In this example, "channel1.device1.ramp1" is used. Another example of an acceptable address is "channelA.simulator.r0001".

Note: The remaining **I/O** tab parameters are optional.

9. Next, open the **Scaling** tab.



10. In **Unscaled Process Data Min** and **Unscaled Process Data Max**, enter the raw data values for the server tag. Then, specify any scalar requirements in the remaining parameters, and click **OK**.

11. Next, click the **Browser** icon. Select the tag name, and then click **Draw**.

12. Select the **Meter 3** object and then specify where it will be placed on the workspace.



Note: Data should now be visible from the display meter.

2. Using Kepware's OPC Client

Kepware provides an OPC client application with each installation of KEPServerEX for testing purposes. For more information, refer to the OPC Quick Client help file.