![kepware®]

Client Connectivity Guide

KEPServerEX® with Wonderware® InTouch®

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1. Overview

This guide demonstrates how to establish a connection between the KEPServerEX® data server and Wonderware® InTouch®.

⬤ **Note:** For this guide, InTouch version 2014R2SP1 and KEPServerEX version 6.1 are installed locally (on the same PC).

Wonderware InTouch is able to act as a SuiteLink client to get data from a SuiteLink Server. SuiteLink protocol was developed by Wonderware and uses a TCP/IP based communication protocol. SuiteLink places a time stamp and quality indicator on all data values delivered to VTQ-aware peers, such as KEPServerEX.

KEPServerEX can be configured as a SuiteLink server, providing data to one or more InTouch instances.

1.1 Installing Wonderware Common Components

The Wonderware Common Components must be installed on the same computer as KEPServerEX. Wonderware Common Components are automatically installed with any Wonderware software product, so these instructions can only be followed if Wonderware software is not already installed.

To use Kepware products on the same PC as Wonderware products, install Wonderware products first. To use KEPServerEX on a PC without Wonderware software serving data to a remote PC where Wonderware will run, refer to the instructions below to install Wonderware Common Components on the PC that will run KEPServerEX:

1. Open the **Wonderware Device Integration** installation DVD.
2. Find the "setup.exe" file located under DIFolders\WW\SuiteLink\2.0 SP3\SuiteLink\.
3. Double-click to run the "setup.exe" installation program.
4. To confirm installation, verify the Common Components are installed under <Root Drive>\Program Files (x86)\Common Files\ArchestrA.

⬤ **Note:** If KEPServerEX and Wonderware InTouch will run on different computers, make sure **SuiteLink port 5413** is open to enable the communication.

1.2 Installing KEPServerEX

1. Double-click the KEPServerEX icon.
2. Select **Run** or **Open** to start the install. If an active content warning is displayed, click "Yes" to continue.
3. In the installation welcome screen, click **Next**.
4. In End-User License Agreement, click **I accept the terms in the License Agreement**, then click **Next**.
5. Continue through the installation, and adjust the settings for your environment.

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6. In the Vertical Suite Selection, choose a vertical, Typical, or Custom options.

7. In Select Features, expand the tree to view and select the drivers to install.

8. Under Communications Server, expand **Native Client Interfaces**.

9. Open the **Wonderware SuiteLink and FastDDE** drop-down menu and select **Will be installed on local hard drive**.

10. Click **Next**.

11. Click **Install** to start the installation.
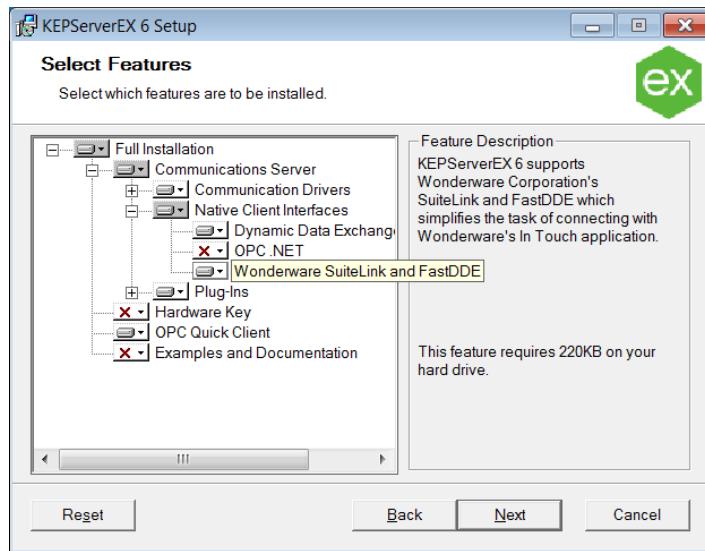
2. Preparing KEPServerEX for a FastDDE / SuiteLink Connection

Wonderware provides connectivity to third-party servers like KEPServerEX through FastDDE and SuiteLink. To create FastDDE and SuiteLink connections to KEPServerEX, follow the instructions below.

Complete the following before continuing:

- Configure KEPServerEX. Select the appropriate driver and settings or run the **Simulation Driver Demo** included with KEPServerEX. The Simulation Driver Demo project is used for all examples in this guide.
- 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 is connected.

2.1 Configuring FastDDE and SuiteLink

1. In the KEPServerEX user interface, right-click on **Project** and select **Properties**.

2. Select the tab (visible if Wonderware is installed).

🔶 **Important**: If the FastDDE/SuiteLink tab is not available, install the Wonderware Common Components on the same machine as KEPServerEX. The SuiteLink connections to the server cannot function without the components.

3. Verify that **Enable FastDDE/SuiteLink connections to the server** is checked.

🟢 **Tips**:
   a. The application name may be changed, but this example uses the default "server_runtime" name.

b. KEPServerEX version 4 used application name "servermain," which can be entered to avoid affecting Historian configurations upgrading from KEPServerEX version 4.

4. In **Timing**, change the client update rate, if desired, or leave it at the default rate (100 ms). This setting may be changed at any time.

5. Click **OK**.
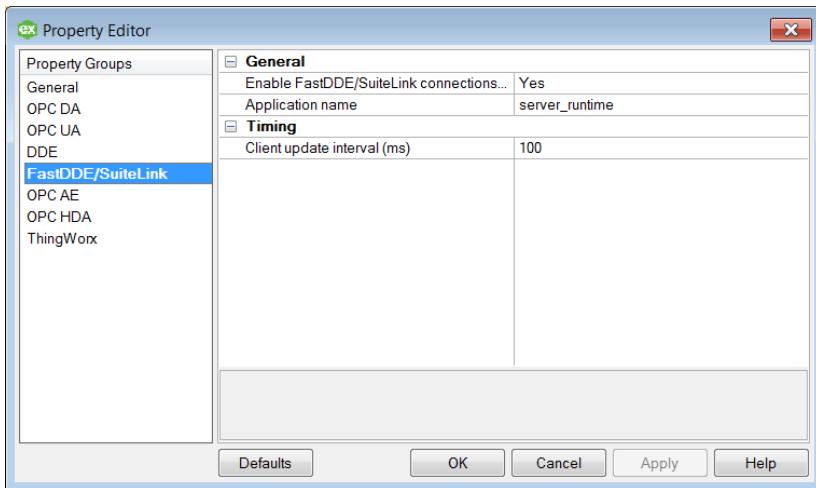
To confirm that any SuiteLink client can access KEPServerEX, run the following command in a MS-DOS window from the PC where Wonderware InTouch will run:

● **Note:** If KEPServerEX is running on a different machine, substitute "localhost" with the name or IP address of the machine running KEPServerEX. If the connection is not successful, confirm that port 5413 is open in both machines.

2.2   Creating Aliases for SuiteLink Topics

SuiteLink connections consist of three components: an application name, a topic, and an item. When connecting to KEPServerEX via SuiteLink, the application name can be configured in the server in Project properties. For this example we left the default string: "server_runtime". The topic component can be specified by using server's Alias Map feature. The Alias Map has been designed to simplify the use of server data in DDE and SuiteLink client applications.

● *For more information on topic references, refer to the "How Do I..." section of the KEPServerEX help file.*

To create an alias, follow the instructions below.

1. To start, open KEPServerEX and click **Aliases**.

2. Right-click **Aliases** and select **New Alias**.

3. Map the string "Demo" to "Simulation Examples.Functions" and click **Close**.

   🌼 **Tip**: To find the correct string to map to, click the "..." button next to "Map to" field.
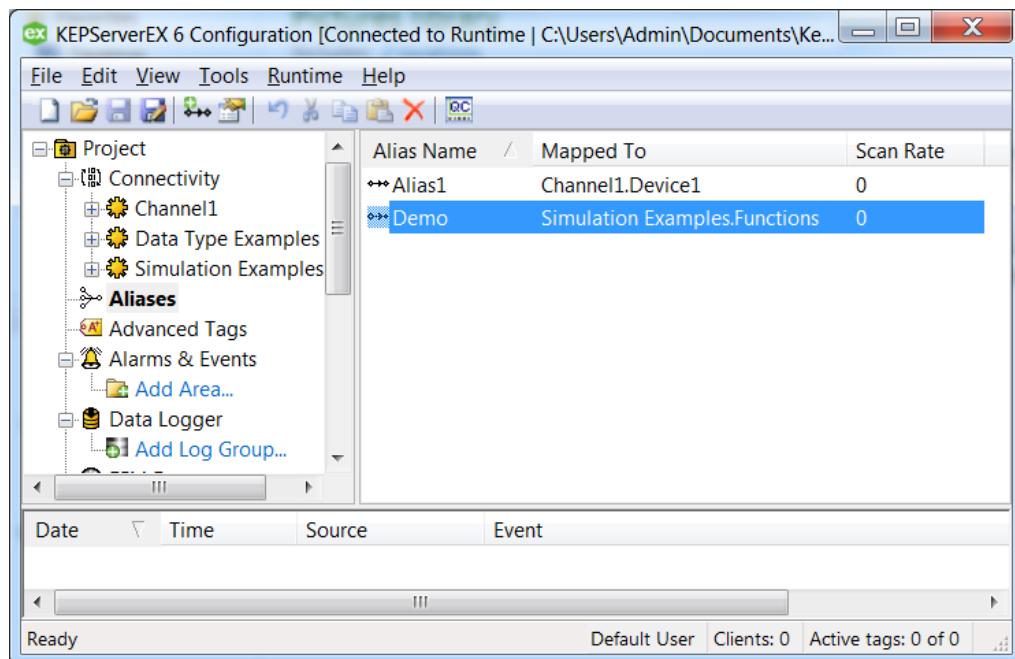
🌼 **Notes**:
1. The aliased strings referenced above are from the "Simulation Driver Demo" project.
2. To change an existing alias, right-click the alias and select **Properties**.

3. Creating a Wonderware InTouch Project

A Wonderware InTouch project acts as the SuiteLink client to KEPServerEX.

3.1 Creating a Path, Folder, and Name for a New InTouch Project

1. Select **Start | Programs | Wonderware | InTouch**.

2. In the **InTouch-Application Manager**, select **File | New**.

3. Select **Legacy InTouch Application** as the application type and click **Next**.

4. Click through the Create New Application wizard, making the following changes:

   - In the first dialog, specify a path for the InTouch project. For this example, the default path is used.

- In the second dialog, specify a folder name. For this example, "Tutorial" is used.

- In the final dialog, specify a name for the new project. For this example, the "KEPServerEX_Demo" project is used.

- 🌸 **Tip**: Enter descriptive text in the Description field.
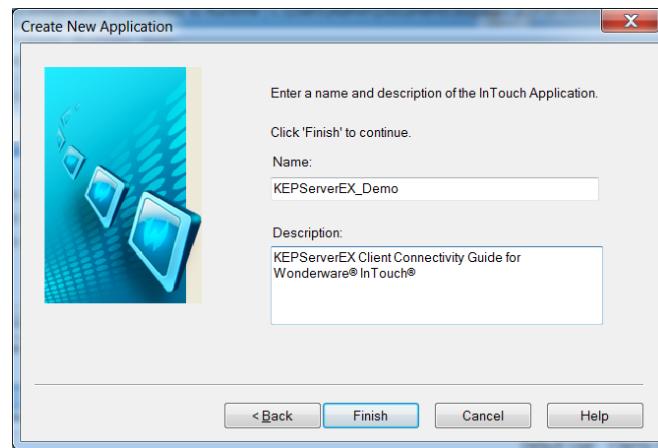
5. Click **Finish** to return to the InTouch-Application Manager.

3.2   Adding Access Name Links to the New InTouch Project

Users must add communication links to the server project. InTouch refers to these communication links as "Access Names" and requires that each device in the project has a unique access name.

Any Access Name must be made by these three components:

- **Node Name**: The machine name or IP address of the node running KEPServerEX. If InTouch and KEPServerEX are running on the same machine, this field can be left blank, or "localhost" can be used.

- **Application Name**: Name of the application acting as a SuiteLink server, as defined in Project Properties in KEPServerEX configurator (See chapter 2.1). In this example, the default "server_runtime" is used.

- **Topic Name**: Name of the Alias in KEPServerEX, as defined in Aliases.

In this example, one access name is created and linked to a device that appears in the Simulation Driver Demo project: "Simulation Examples.Functions".

To add access names to the project, follow the instructions below.

1. In InTouch-Application Manager, the new project name should appear in the list of applications. Select the project name and choose **File** | **WindowMaker**.
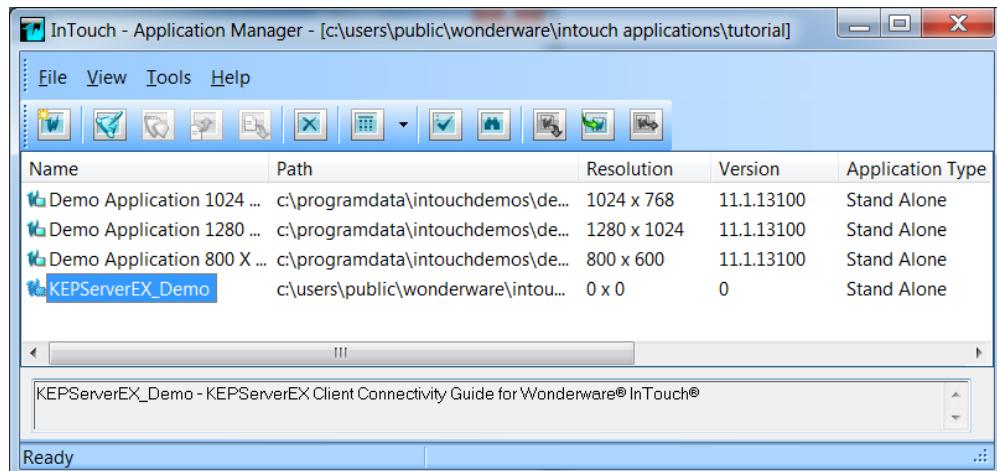
2. In InTouch-WindowMaker, select **Special** | **Access Names**.
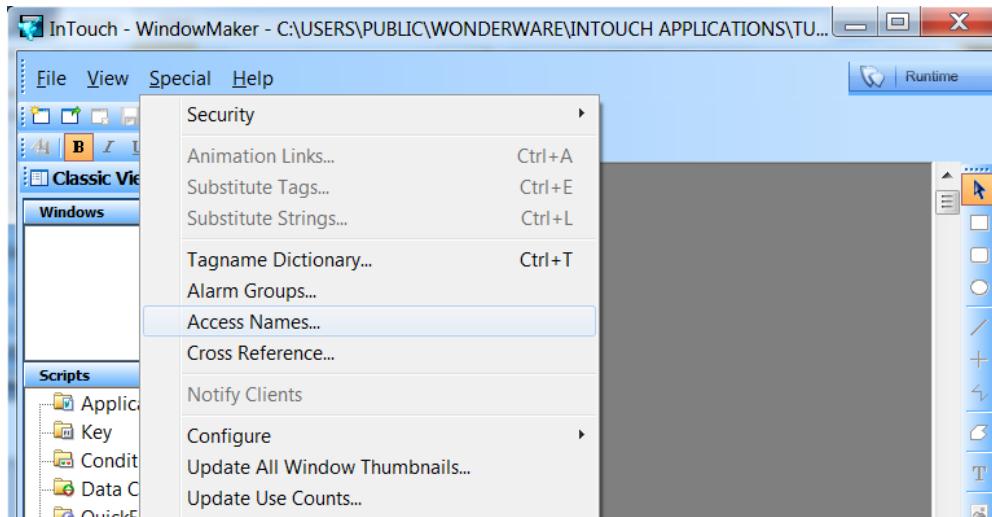
3. In the Access Names dialog, click **Add...** .
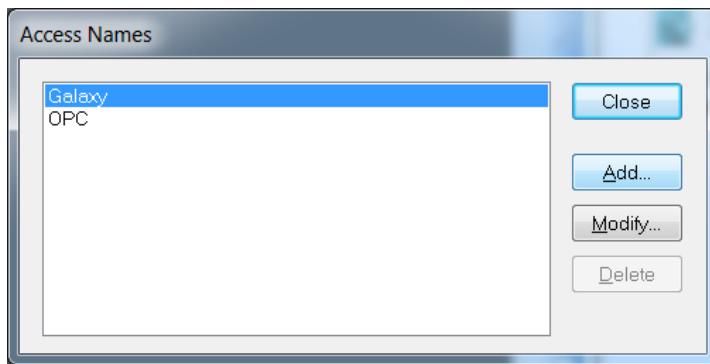
4. In the Add Access Name dialog, make the following changes:

- **Access Name**: Enter a unique name.

- **Node Name**: Leave this field blank.

- **Application Name**: Use the default entry "server_runtime".

- **Topic Name**: Enter the name of the alias created.

- **Which protocol to use**: Select **SuiteLink**.

- **When to advise server**: Select **Advise only active items**. For more information on the Advise options, refer to the InTouch User's Manual.
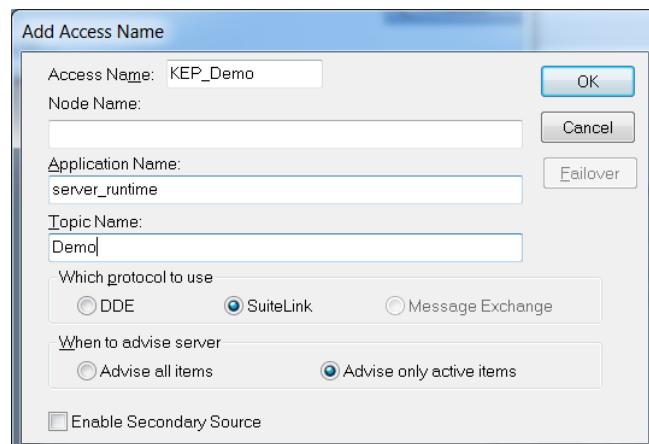
🔶 **Important:** SuiteLink InTouch versions 10.0 and later support KEPServerEX V6 in Service or Interactive Mode. In these cases, SuiteLink may require changes (adequate access rights) to the service's Log On parameters in order to interact with the desktop.

5. Once finished, click **OK**.
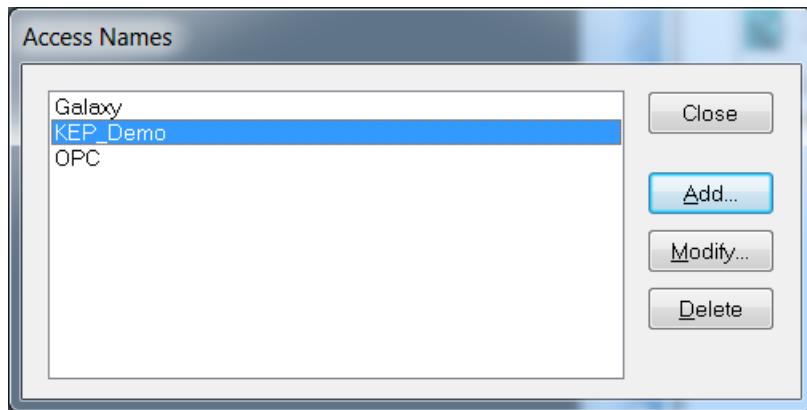
3.3   Adding Tags to the Tagname Dictionary

1. In WindowMaker, select **Special** | **Tagname Dictionary**.

2. To add a new tag, click **New**, then click **Type...** .
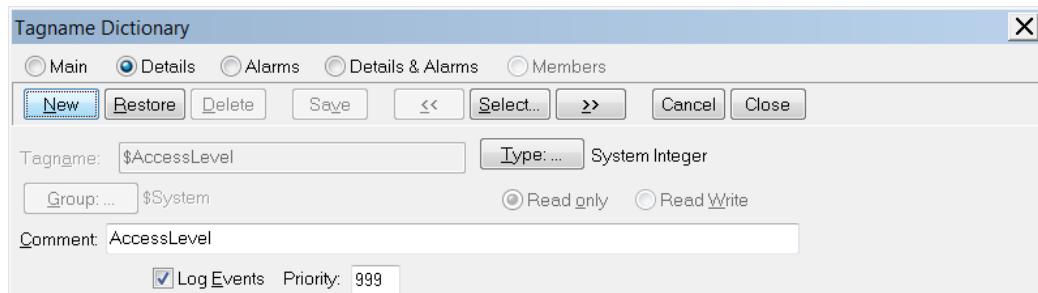
3. In Tag Types, check **I/O Real** and click **OK**. When defining it as an I/O type tag, the Access Name button will appear.
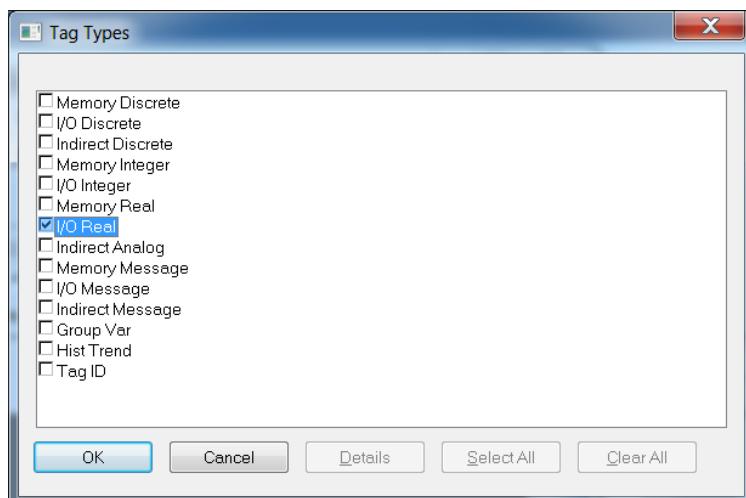
4. In Tagname Dictionary, click **Access Name…** .
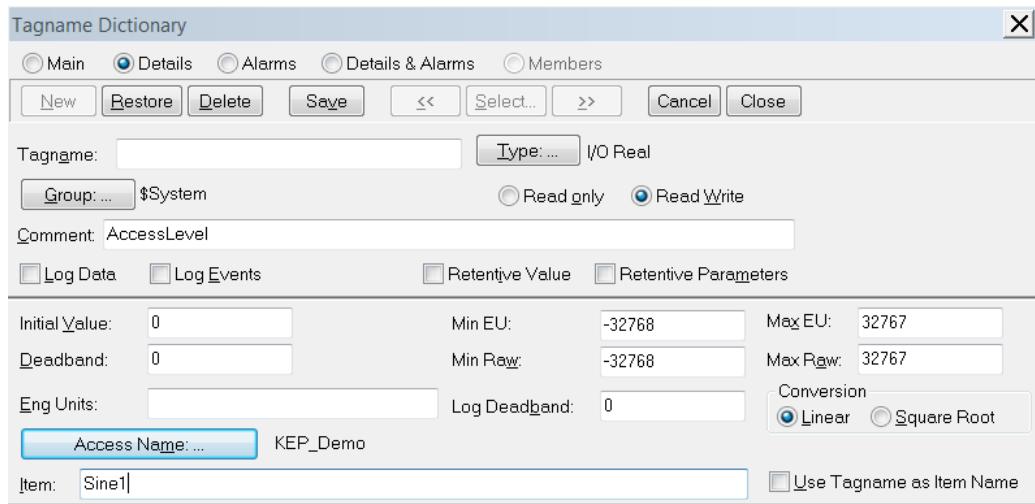
5. Select KEP_Demo as the new tag's data source, and click **Close**.

6. For **Tagname Dictionary**, enter "Sine1" as the name of the static tag found in the Simulation Driver Demo server project.

7. For **Tagname**, specify a name, such as "KEPServerEX_Sine1".
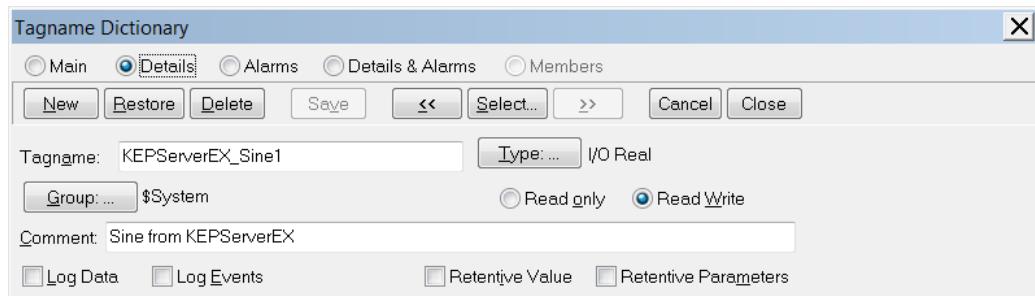
8. Click **Save** to accept the new tag.

9. Repeat steps 1-8 to create a second tag. For a dynamic tag, enter "R200" as the **Item**.

   ⬤ **Note:** "R200" is not the name of any static tag defined in the server project, but is a valid register address defined in the Simulator driver.

10. Specify the new tag name as "KEPServerEX_Dynamic" and assign it to the SuiteLink Access Name KEP_DEMO. Once finished, click **Close**.
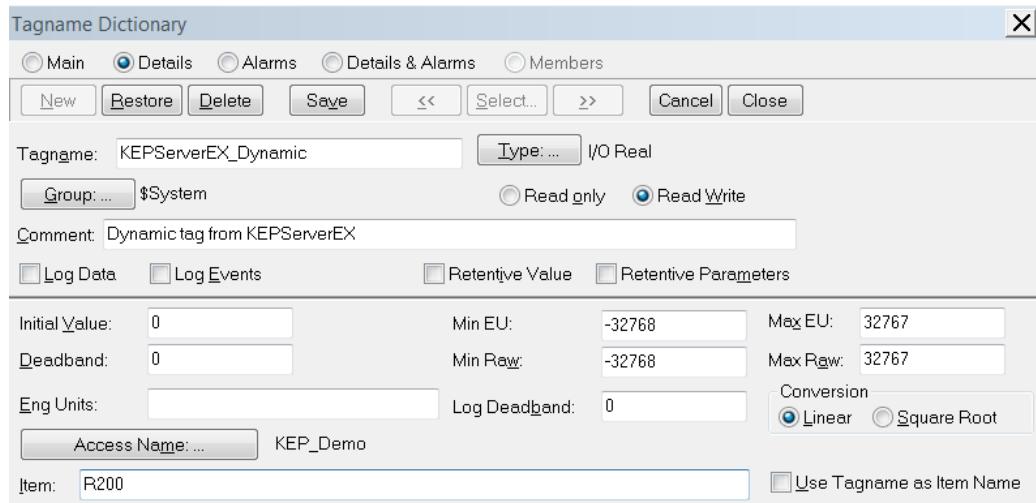
3.4   Creating a Window for Displaying the Device Values

1. In WindowMaker, select **File** | **New Window**.

2. Assign a name to the window.
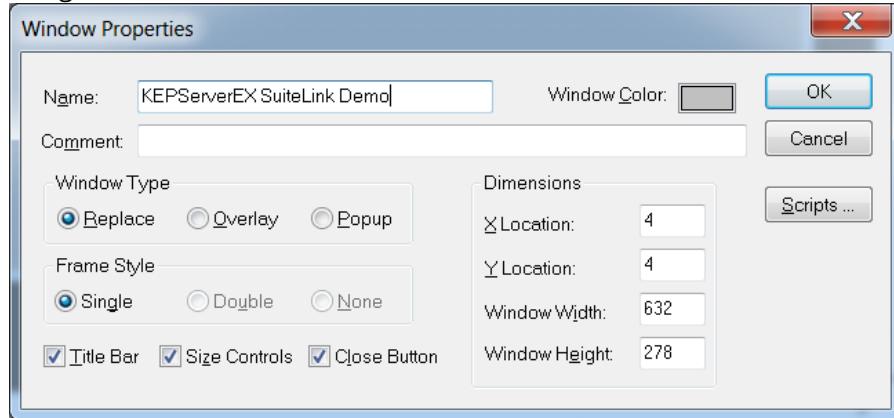
3. Verify or change the other settings as needed, then click **OK**. A new blank window should appear in the WindowMaker work area.
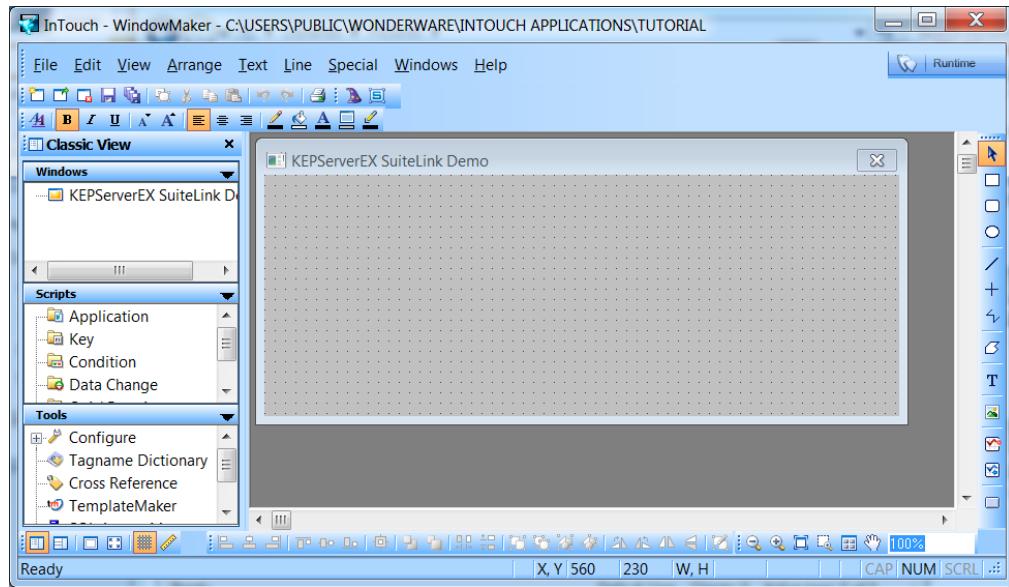
3.5   Adding and Animating a Text Object

To add a text object to display the value of one of the defined tags, follow the instructions below.

1. In WindowMaker, click the **Text** icon.

2. Click the new window and enter "#.##" to create a data display object.

   🔷 **Tip:** By writing "#.##", two decimals will be displayed in Runtime.
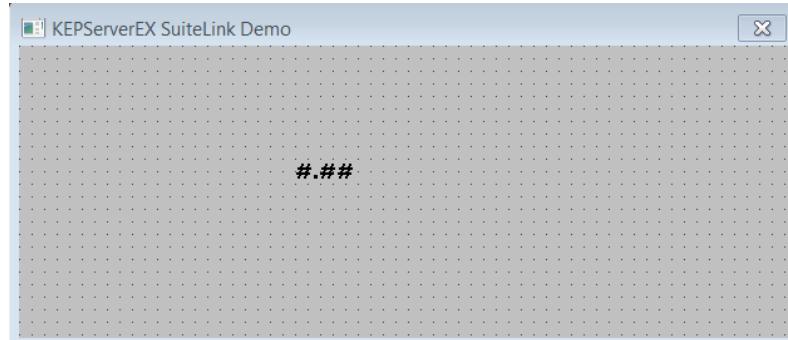
3. To add an animation link, double-click the new text object.

4. In Value Display, enable **Analog** User Inputs.
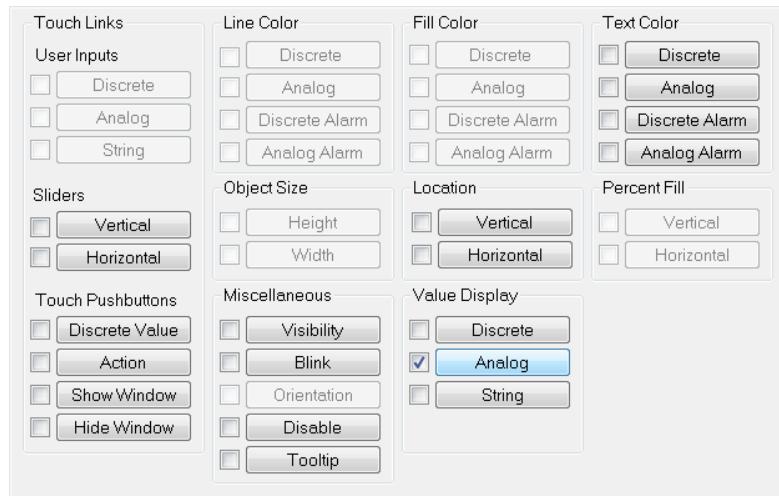
5. For the Expression field, enter the name of one of the tags created earlier. Once finished, click **OK**.
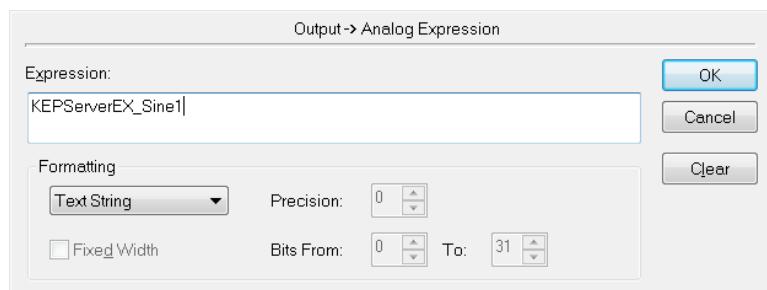
6. Create a new text object in the window to show a static text with the name of the tag.
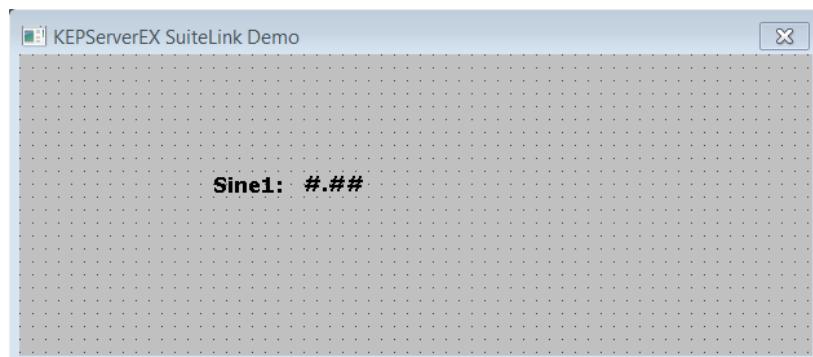

7. Repeat steps 1-6 to create text objects to display the value of the other tag.
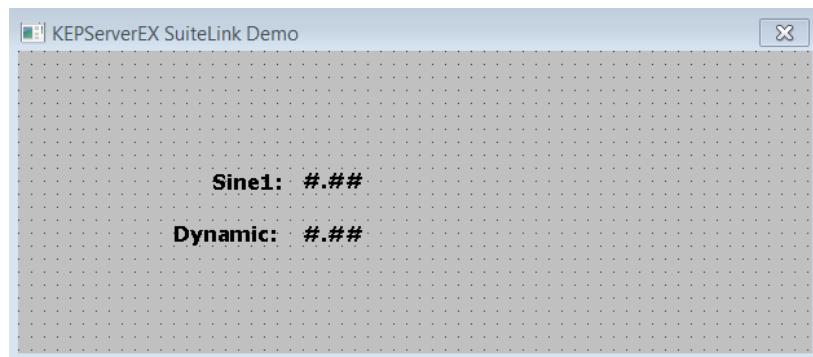
4.   Viewing Active Data

To view the active data, access the Runtime in WindowMaker (top right corner). This displays the sine and the ramping data in WindowViewer. If no data is displayed, verify the configuration is correct according to the steps in this guide.
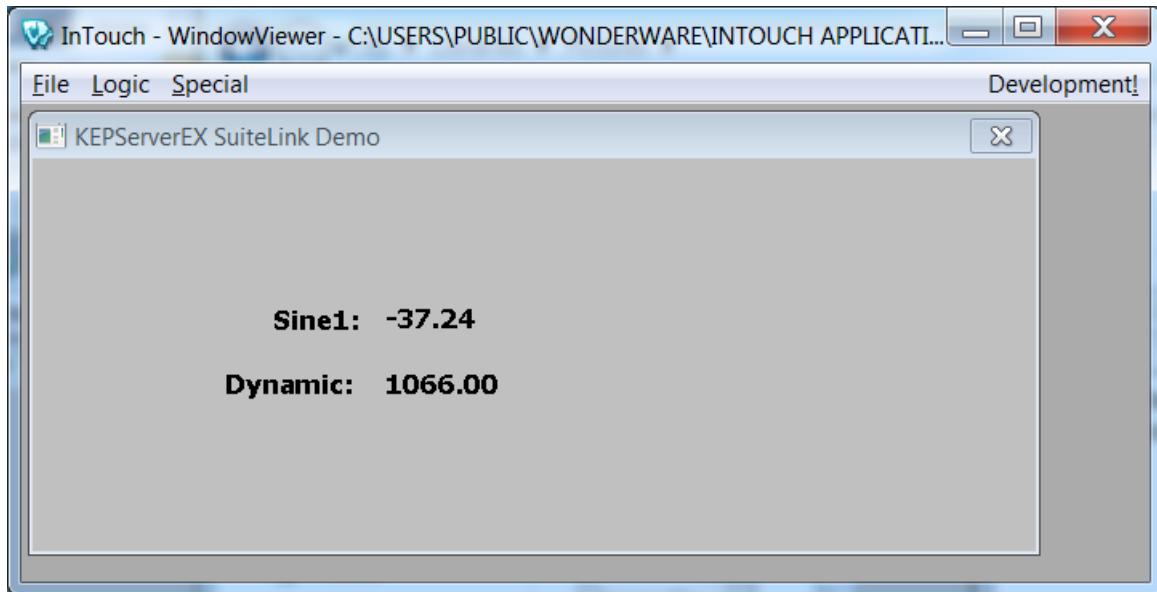
5. Checking the Connection to the Server

To confirm that the InTouch application is connecting to the server, check the server Connection Status Bar (which should display an active client and items) and any messages by looking in the Event Log pane.
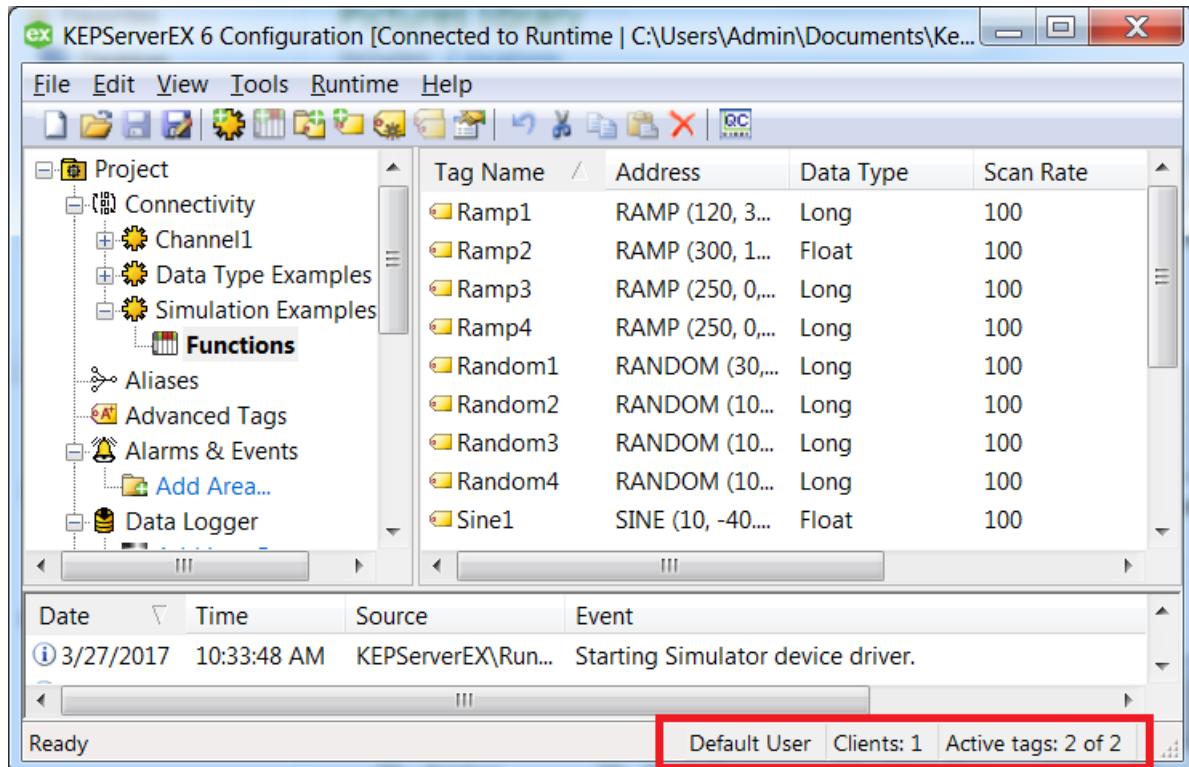
🔹 *For more information or for technical support assistance, refer to the Support section of www.kepware.com.*