Tech Note 550
Configuring the aaTrendControl for a Managed InTouch® Application

All Tech Notes, Tech Alerts and KBCD documents and software are provided "as is" without warranty of any kind. See the **Terms of Use** for more information.

Topic#: 002297
Created: September 2008

Introduction

ActiveFactory provides some of its application and functionality as .NET Controls. This allows you to run an ActiveFactory Trend program from within a .NET container such as a managed InTouch application.

This *Tech Note* describes how to configure the aaTrendControl in a managed InTouch application so that you can query tags from a Historian database and plot them on a graphical display within the InTouch application.

Download the zipped example files used for this *Tech Note* **here**.

Assumptions

This *Tech Note* assumes that you are knowledgeable on the following products:

- Historian (or InSQL Server) v9.0 or later
- ActiveFactory v9.2 or later
- InTouch v10.0 or later
- Wonderware® Industrial Application Server (WAS) version 3.0 or later
- MS SQL Server 2000 or 2005

Procedure

When you install ActiveFactory, a .NET Control called **aaHistClientTrendControl.dll** is automatically installed. Using the ArchestrA IDE's Import Client Control(s), this .NET Control can be imported into the galaxy and will be displayed as the aaTrendControl in the ArchestrA IDE's Graphic Toolbox.

Creating a Symbol with an Embedded aaHistClientTrendControl

1. Follow the instructions in **TechNote 510: Creating an ActiveFactory Graphic Symbol**. The *Tech Note* shows you how to import ActiveFactory .NET Controls into the ArchestrA IDE and then embed the aaTrendControl in an ArchestrA object as a graphic symbol.

2. You need to follow steps 6, 7 and 8 (**below**) to open the TrendControl symbol and embed the aaHistClientTrendControl.dll into the symbol, which should then appear as shown in Figure 1 below. Make sure to click on the symbol's canvas after you selected aaHistClientTrendControl.dll object so that you can effectively place and embed the control into the symbol.

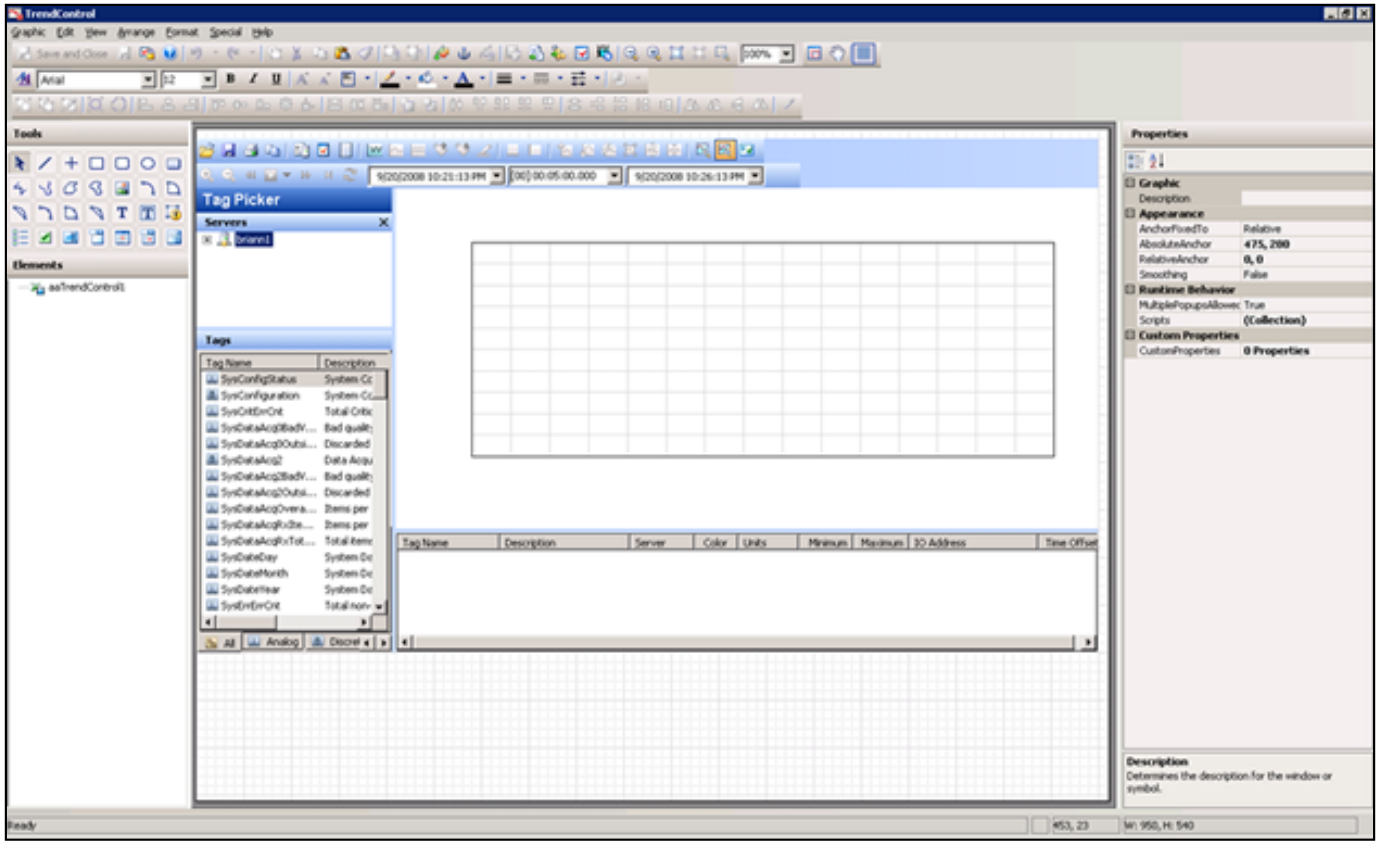

Figure 1: Symbol TrendControl with Embedded aaHistClientControl.dll

Creating a Managed InTouch Application for System Platform

A managed InTouch application is one that is created from within the ArchestrA IDE and deployed or published as an object in Wonderware Application Server. A managed InTouch application allows the use of ArchestrA Symbols and exhibits the same kind of behavior as other objects in the IDE.

To create the Managed Application

1. From the IDE, in the Template Toolbox, expand the System Toolset.

2. Right-click **$InTouchViewApp** and select **New/Derived Template**.

3. Rename the new template to a meaningful name for your application. For this example, it is called **MyManagedApp**.

4. Assign the new template to an existing template toolset. In this example, the new template is moved to Training Objects template toolset as shown in Figure 2 (below).

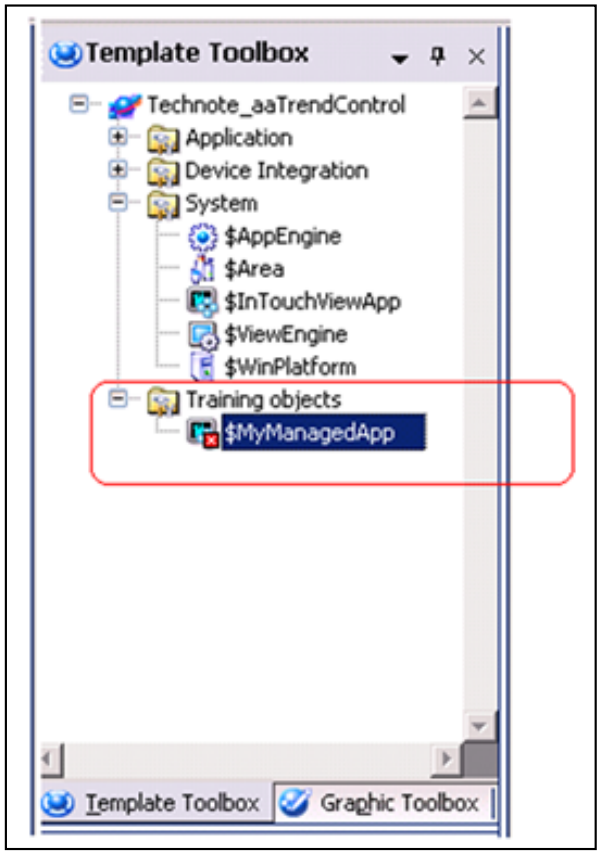

Figure 2: Assigning/Moving $MyManagedApp to Training Objects Toolset

5. Double-click **$MyManagedApp**. Accept the default setting to **Create new InTouch application**. The InTouch WindowMaker™ should now appear as shown in Figure 3 (below).

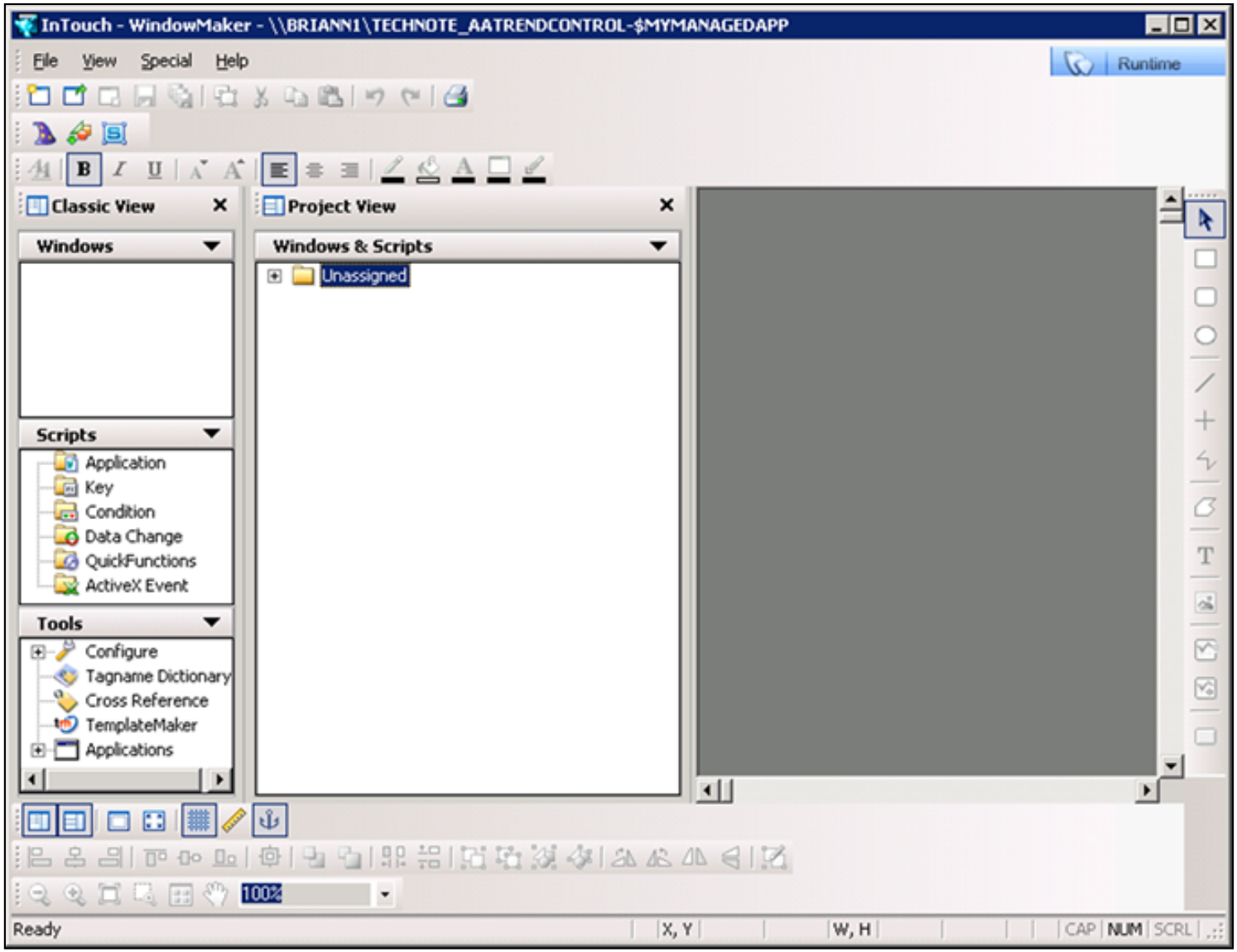

Figure 3: WindowMaker for the Managed InTouch Application

6. In WindowMaker, click **File / New Windows** to create a new screen. Enter a name for this new screen. **MyTrendControl** is used in this Technote.

7. Click the **Embed ArchetrA Graphic** button on the toolbar to place the symbol TrendControl (with embedded aaHistClientControl.dll) created in the above steps.

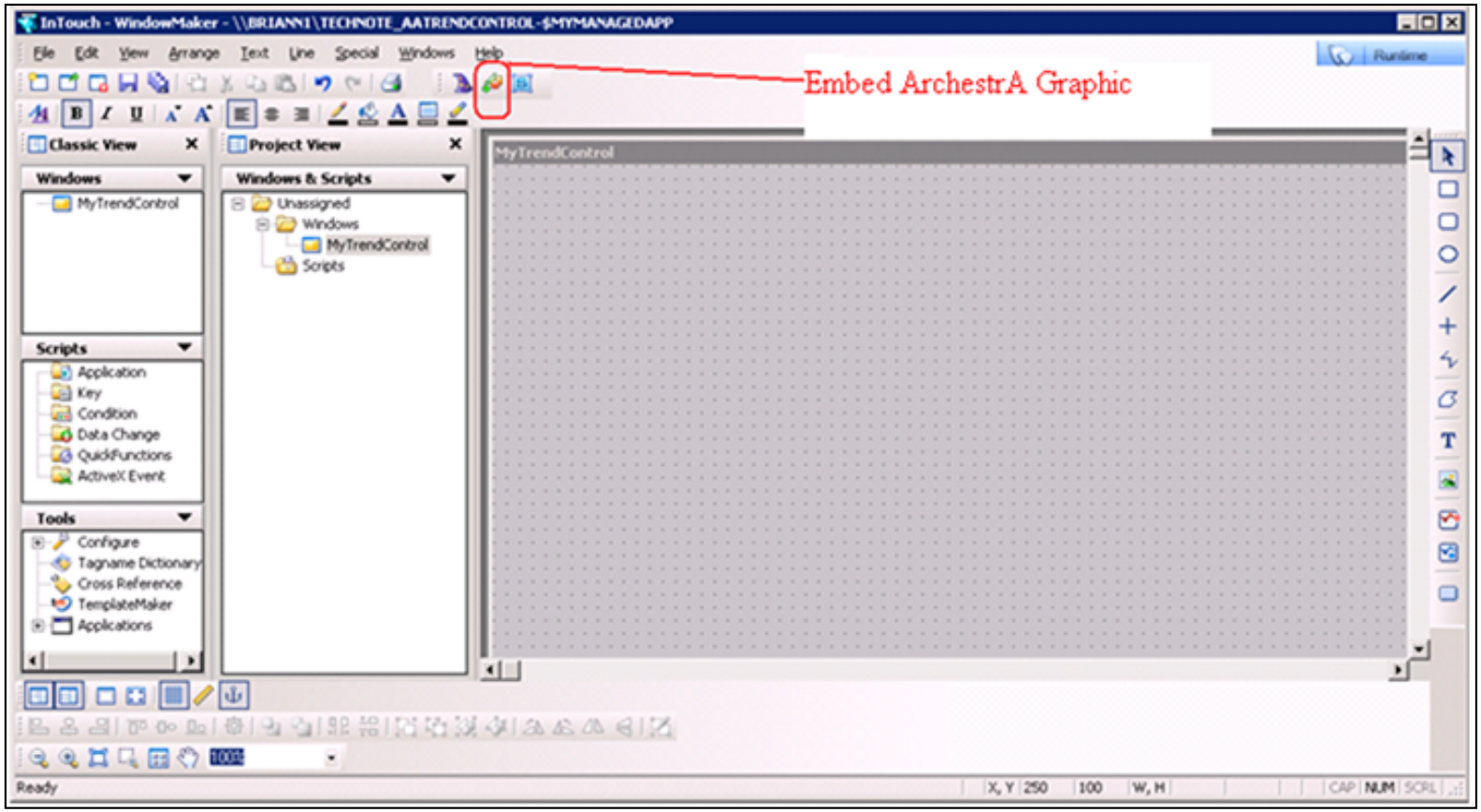

Figure 4: Embed ArchestrA Graphic

8. The Galaxy Browser appears. Click on the Graphic Toolbox and select the TrendControl symbol in the ActiveFactory toolset as shown in figure 5 below.

9. Click **OK**.

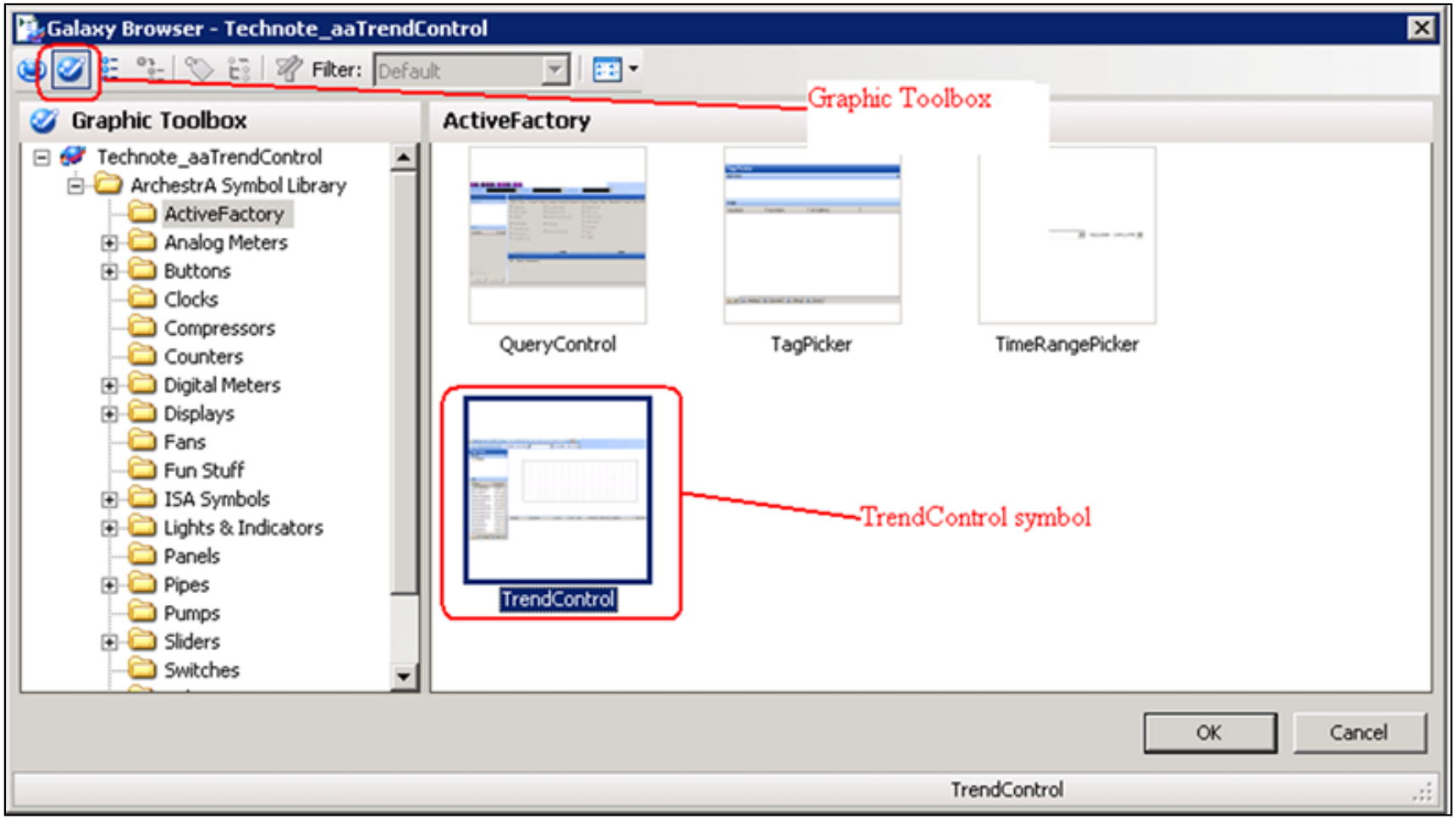

Figure 5: Selecting TrendControl Symbol

10. When the **MyTrendControl** window reappears, click on the screen to embed the symbol into it.

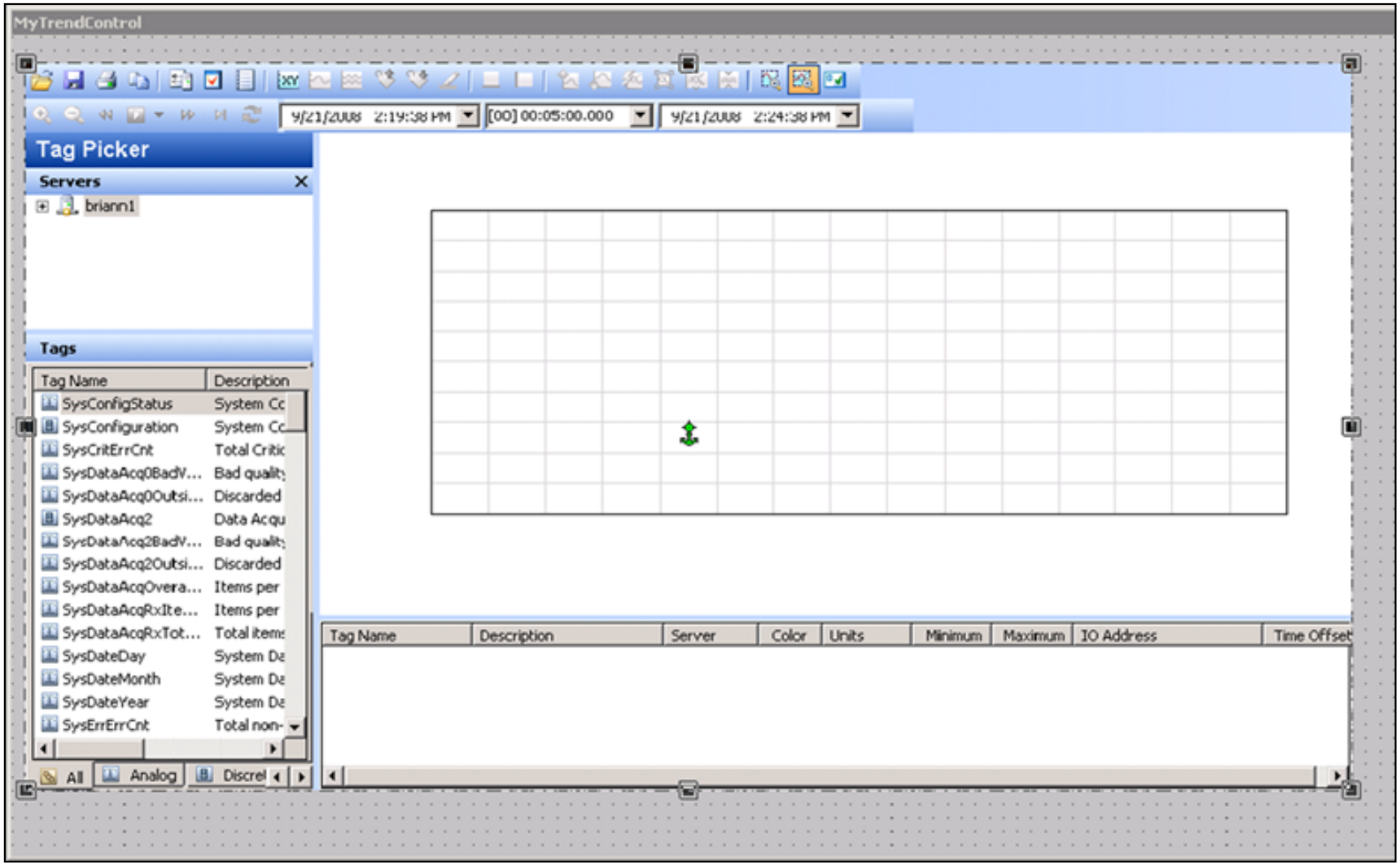

Figure 6: TrendControl symbol embedded into WindowMaker screen

11. Click **File / Save Window**. Then close WindowMaker and perform the check in.

Configuring the aaTrendControl

1. From the IDE, click on the Graphic Toolbox and double-click on the TrendControl symbol to open it.
2. Right-click on the window canvas and select Scripts... (F10). The **Edit Scripts** window appears.
3. Select Trigger type **On Show**, then click on the **Display Attribute Browser**.

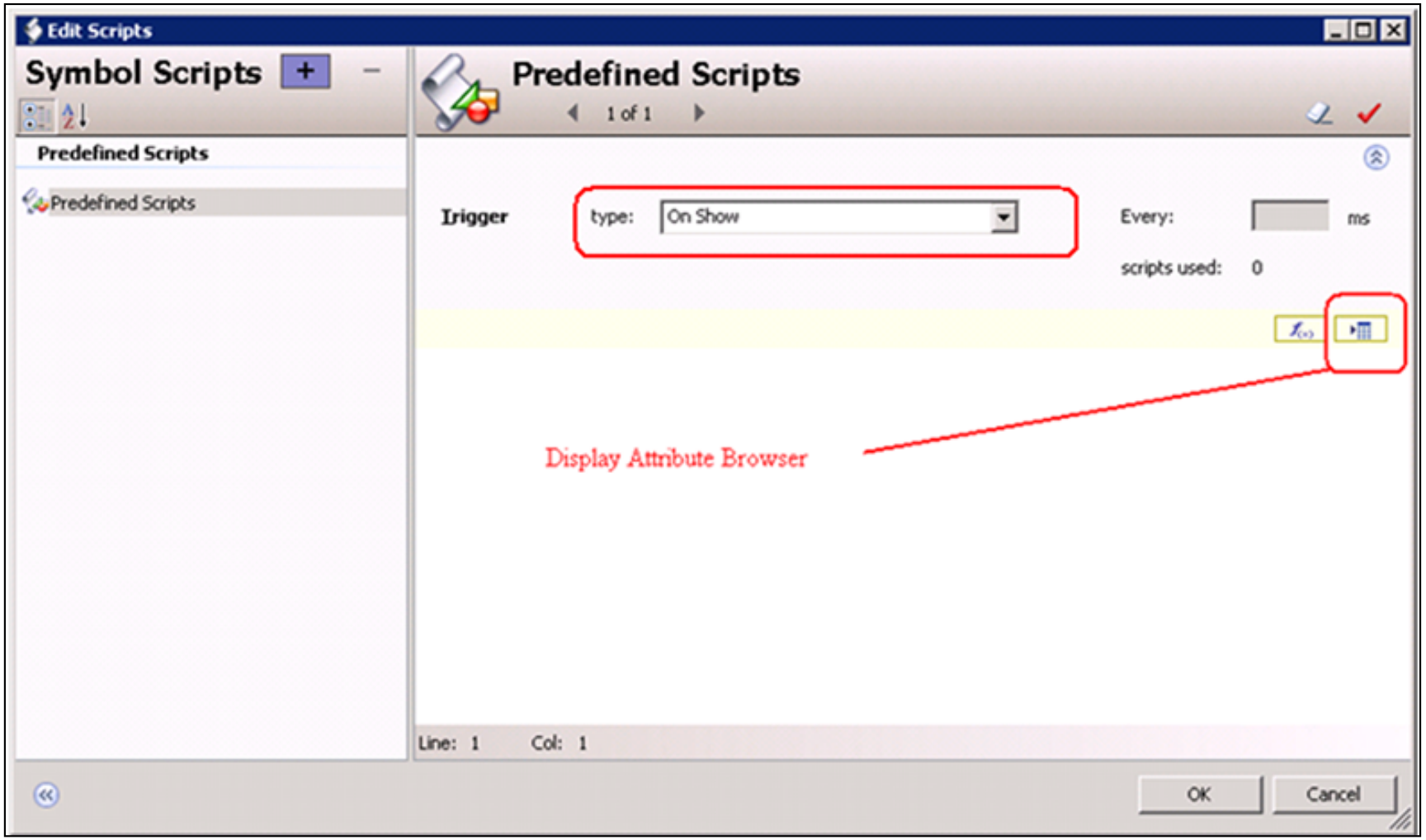

Figure 7: Edit Scripts Dialog Box

4. Click **Element Browser**, expand TrendControl, select aaTrendControl1.
5. Select the **AddServerEx** method to add the InSQL Server name to the Trend control.
6. Click **OK** to accept the selection.

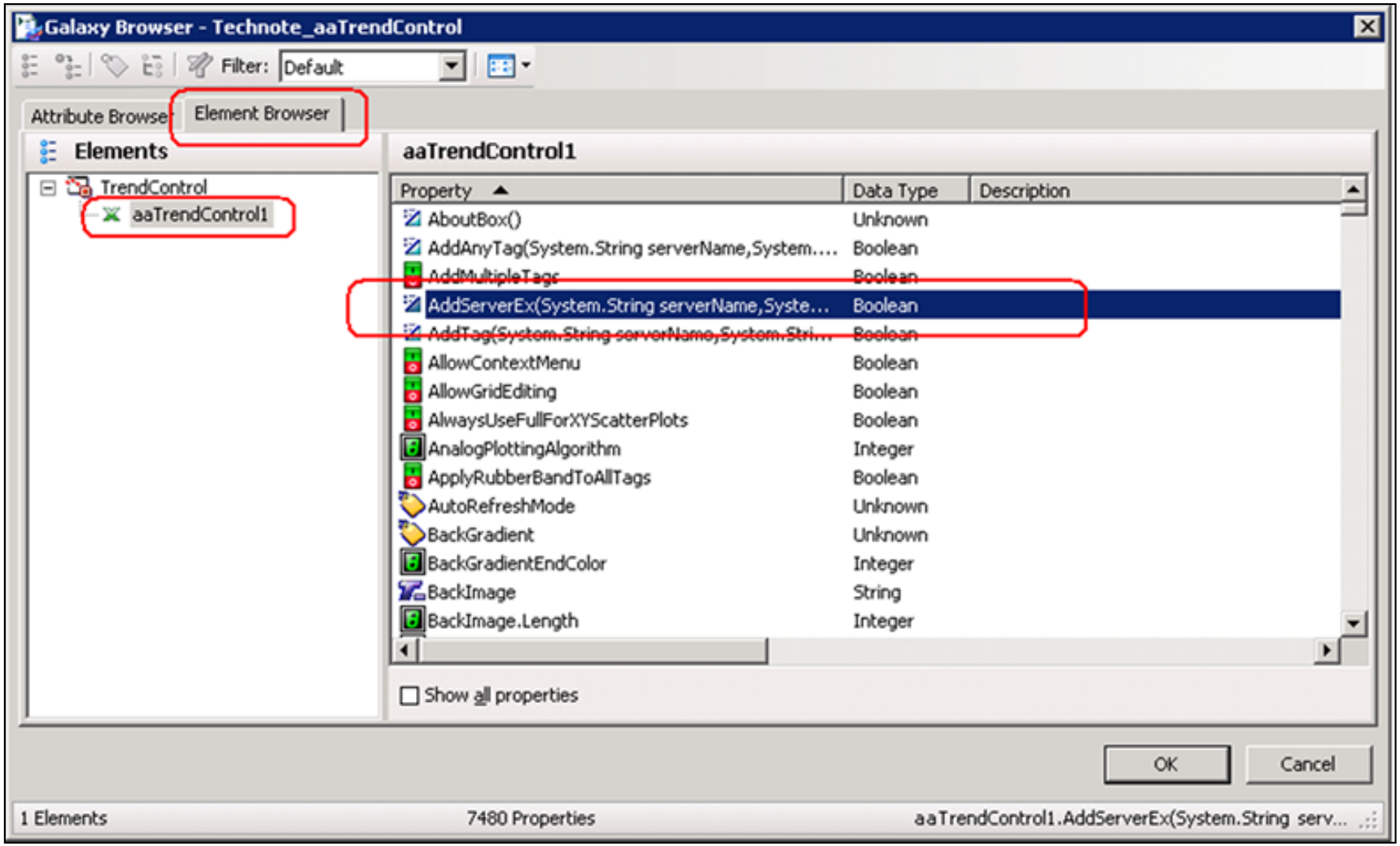

Figure 8: Using Element Browser to Pick AddServerEx( ) Method

7. Copy the following script into the script area:

```
aaTrendControl1.AddServerEx(System.String serverName,System.String loginName,System.
String password,System.Boolean bPersistPassword)
```

Where
- **serverName** is the Historian name and is of string type. **briann1** is used in this TechNote.
- **loginName** is the login name used for the Historian and is of string type. **sa** is used in this TechNote.
- **password** is the corresponding password used for the Historian and is of string type. **sa** is used in this TechNote.
- **bPersistPassword** is of Boolean type. If set to True, the password is remembered for the next time a connection is attempted. The password is only remembered for a single application; the persisted password is not available to all applications. **1** is used in this example.

Therefore, your AddServerEx method will be similar to the following:

```
aaTrendControl1.AddServerEx("briann1","sa","sa",1);
```

8. Similarly, we will use the **AddAnyTag( )** method to verify and adds a tag to the trend. Copy the following script into the script area:

```
aaTrendControl1.AddAnyTag(System.String serverName,System.String tagName)
```

Where
- **tagName** is the name of a tag in the Historian database.

Let's use a predefined Historian tag such as **SysMinutesRun** for this example and modify the script as follows:

```
aaTrendControl1.AddAnyTag("briann1", "SysTimeSec");
```

9. Click **Validate Value** to verify the scripts are properly entered. Then click **OK** to close the Edit Scripts dialog box.

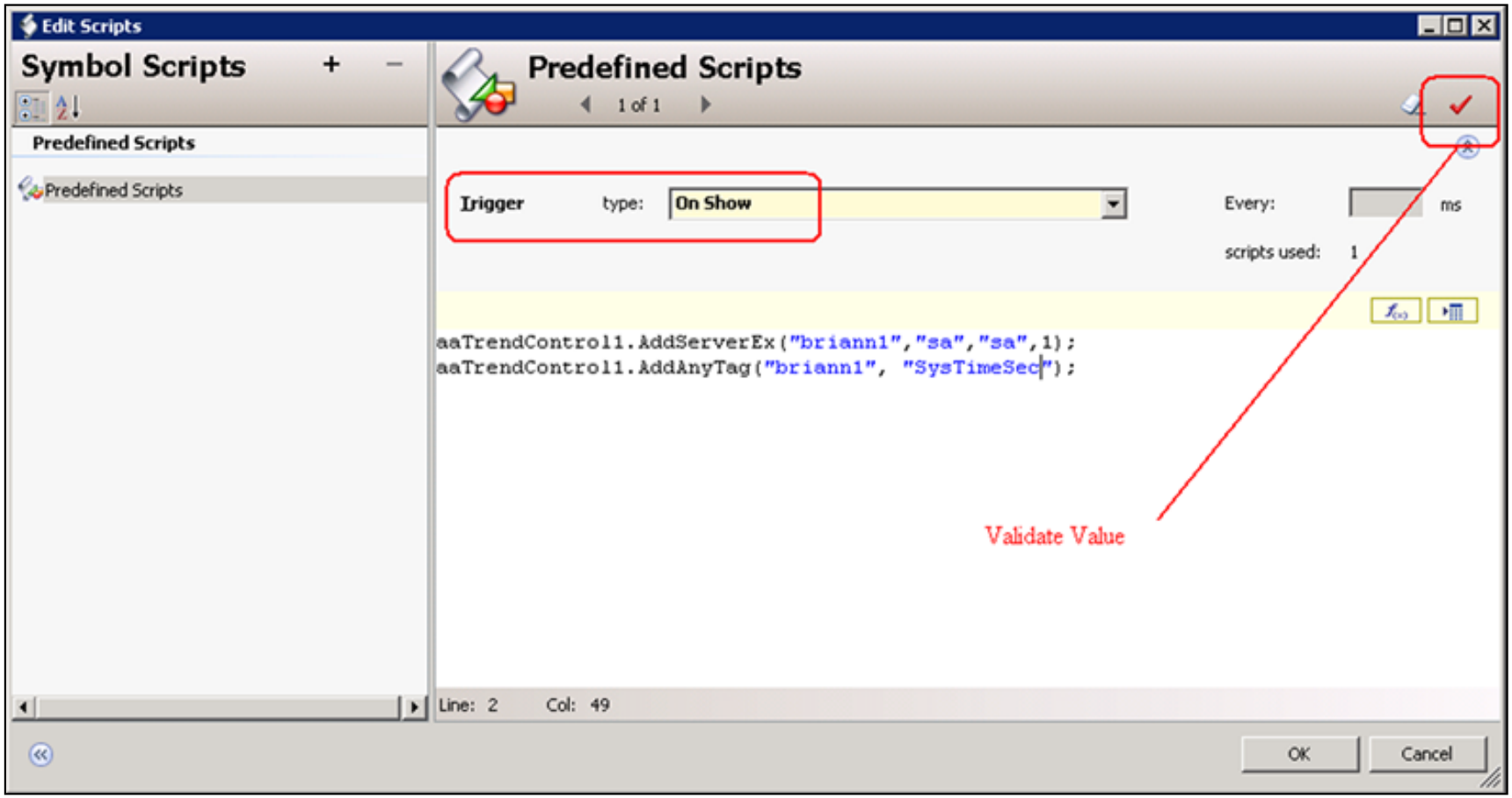

Figure 9: On Show Example Scripts

10. The TrendControl symbol reappears. Click **Save and Close**, and check it in.

Figure 10: Save and Close

11. Now double-click on **$MyManagedApp** in the Template Toolset **Training objects** to start InTouch WindowMaker. Then switch it to WindowViewer™ to see aaTrendControl in action as in Figure 11 (below).

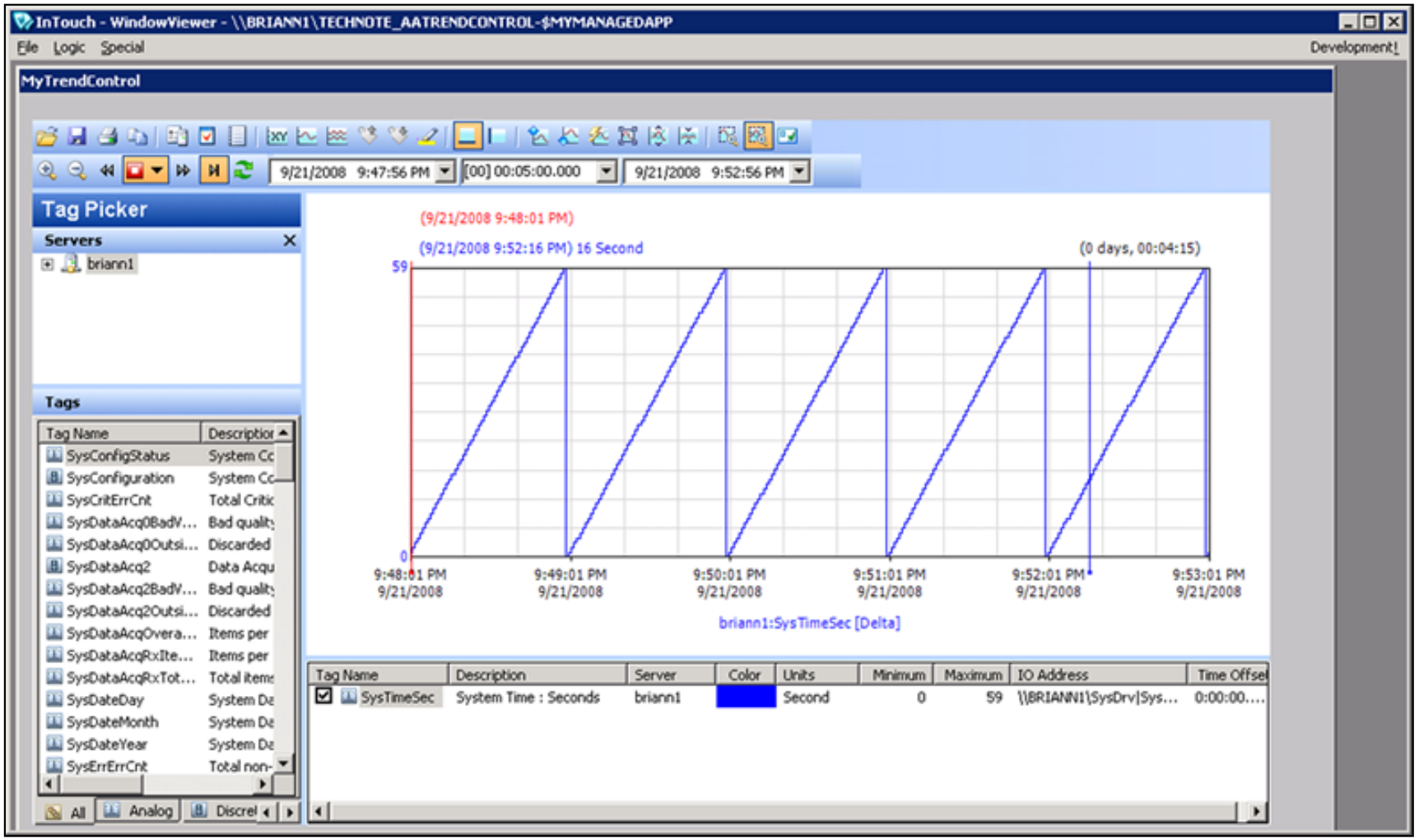

Figure 11: MyTrendControl

12. The **$MyManagedApp** derived template is now ready for use. You can deploy it to a platform within the galaxy or publish it to a fixed location.

13. To do so, right-click on **$ViewEngine** and select **New / Instance**. The new instance ViewEngine_001 will be placed in the Unassigned Host.

    Drag the **ViewEngine_001** from the Unassigned Host to a proper platform.

14. Right-click on the **$MyManagedApp** derived template and select New/Instance. The new instance MyManagedApp_001 is placed in the Unassigned Host. Drag the MyManagedApp_001 from the Unassigned Host to the ViewEngine_001.

15. Perform a cascade deploy for **ViewEngine_001**.

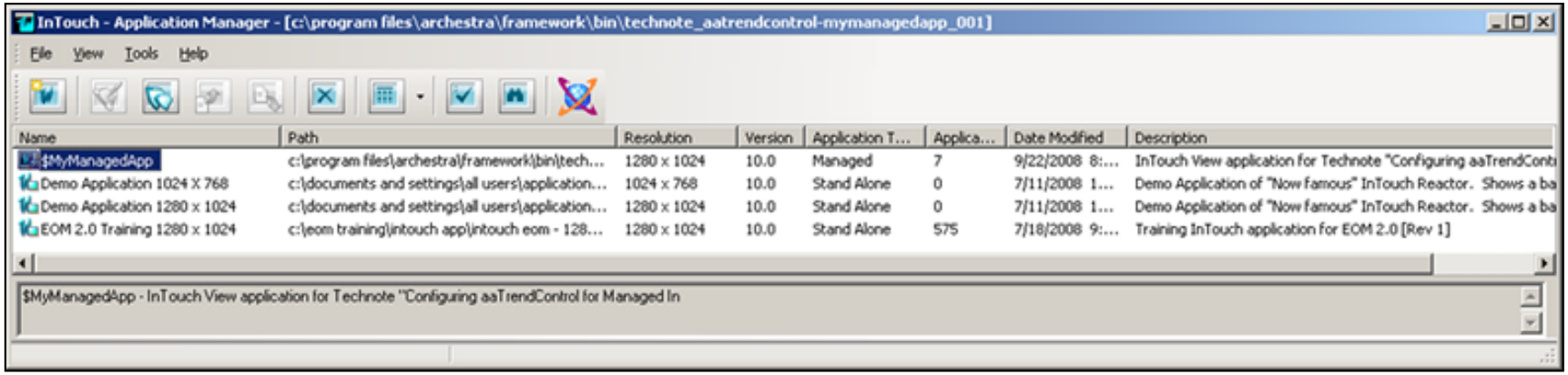

Figure 12: InTouch Application Manager Showing $MyManagedApp Template

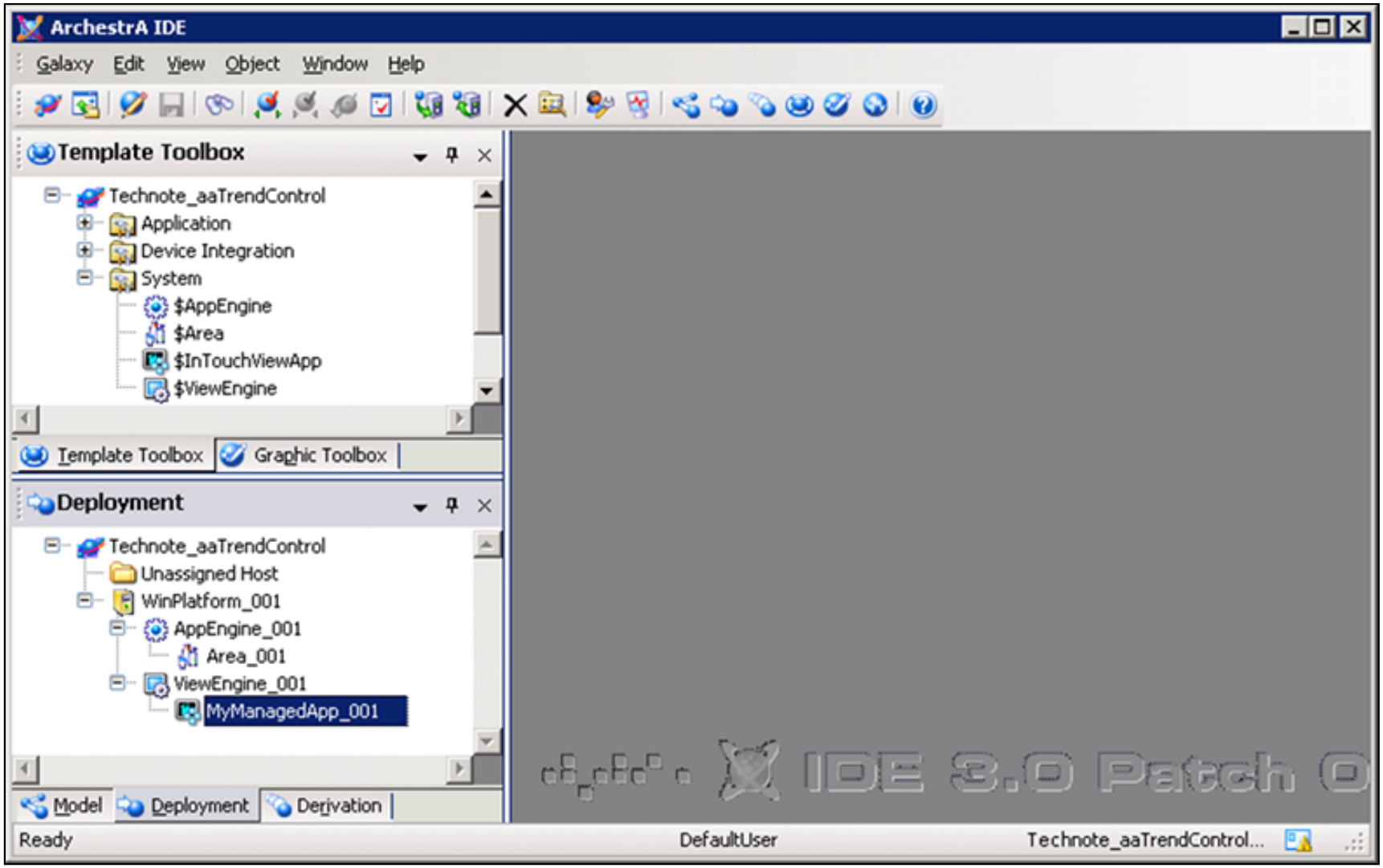

Figure 13: Deployment View

After deployment, the managed InTouch application **$MyManagedApp** will be pushed to the InTouch Application Manager allowing you to start up the managed InTouch App from there.

B. Nguyen and K. Nourbakhsh

Tech Notes are published occasionally by Wonderware Technical Support. Publisher: Invensys Systems, Inc., 26561 Rancho Parkway South, Lake Forest, CA 92630. There is also technical information on our software products at **Wonderware Technical Support.**

For technical support questions, send an e-mail to **support@wonderware.com**.

Back to top

©2008 Invensys Systems, Inc. All rights reserved. No part of the material protected by this copyright may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, broadcasting, or by anyinformation storage and retrieval system, without permission in writing from Invensys Systems, Inc. **Terms of Use.**