[Tech Note 989](#)

Historizing AppServer Objects to Partner Historians and Retrieving Data Using HistClient Trend

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Introduction

A Wonderware Historian can be configured to have a symmetrical "partner" Historian that you can use as a backup if the primary/main Historian is not available. When the primary Historian is unavailable, a Historian Client (also called HistClient) automatically switches over to the configured partner Historian. The client remains connected to the partner Historian, even when the primary Historian becomes available again. A HistClient switches back to an available primary Historian if it fails to connect to the partner or during a new attempt to connect to the primary Historian, such as when restarting Trend.

This Tech Note shows you an example how you can configure an object in AppServer to push data to both primary and a partner Historian Servers. It then shows the Historian Client automatically switches over to the configured partner Historian

Application Versions

- Wonderware Historian Server 2012R2 (version 11.0) and later

- Wonderware Historian Client 2012R2 (version 10.1) and later

- Wonderware Application Server 2012R2 (version 3.6) and later

- Microsoft SQL Server 2008 SP3 or Microsoft SQL Server 2012

Note: This Tech Note assumes that you are familiar with Wonderware Historian Server, Historian Client, and Application Server. If you have any questions regarding the Microsoft SQL Server or the Operating System, please contact Microsoft Technical support at www.microsoft.com for further assistance.

For more information on configurations of Historians in a partner setup, please see **Tech Note 987 Configuring AppServer to Store Data in Primary and Partner Historians.**

Historians in a partner setup are not intended to be a synchronized pair, where both the Historian configuration and data are fully and automatically synchronized. It is up to you to make sure that the two historians are symmetrical and synchronized.

This example uses three computers. One is for the AppServer and the other two are for the primary and partner Historians. HistClient Trend can run on the AppServer to monitor data from either of the Historians.

Configuring AppServer Objects for Historization

Before you begin, review **Tech Note 987 Configuring AppServer to Store Data in Primary and Partner Historians** for more information about configuring the AppServer Platform and Engine objects in the Galaxy to specify the Store&Forward folder and to provide the name of the primary Historian.

In the following steps, we will add a new instance of UserDefined object and configure a UserDefined attribute to historize data in the Historian Servers.

1. From the AppServer IDE, click the **Template Toolbox** and expand the **Application** folder

2. Right-click on **$UserDefined** and click **New/Instance**.

3. From the **Development View/Unassigned Host** panel, right-click the object and click **Assign To... object** (UserDefined_001 is assigned to Area_001 in this example).

4. Double-click on the assigned object to open the **Properties** dialog box.

5. Click the **UDAs** tab and add a new UDA. In this example it is called **MyUDA1**.

    • Data type: **Integer**
    • Category: **User writable**
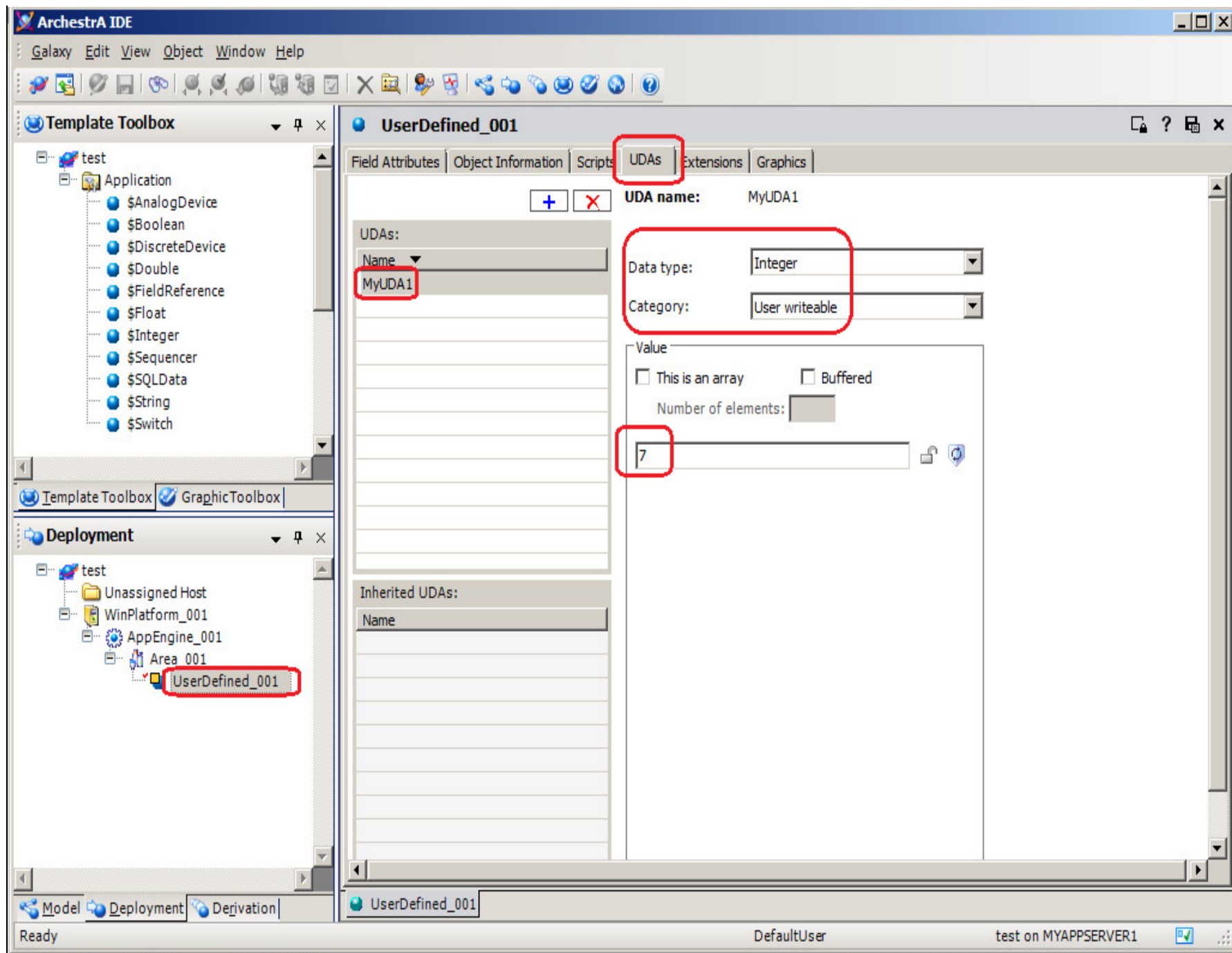   • Value: **7** (This is just an initial value for this example)

FIGURE 1: UDA CONFIGURATION

6. Click the **Extensions** tab.

7. Scroll down and highlight the extendable attribute with the same name as the UDA created in step 5 above (**MyUDA1**).

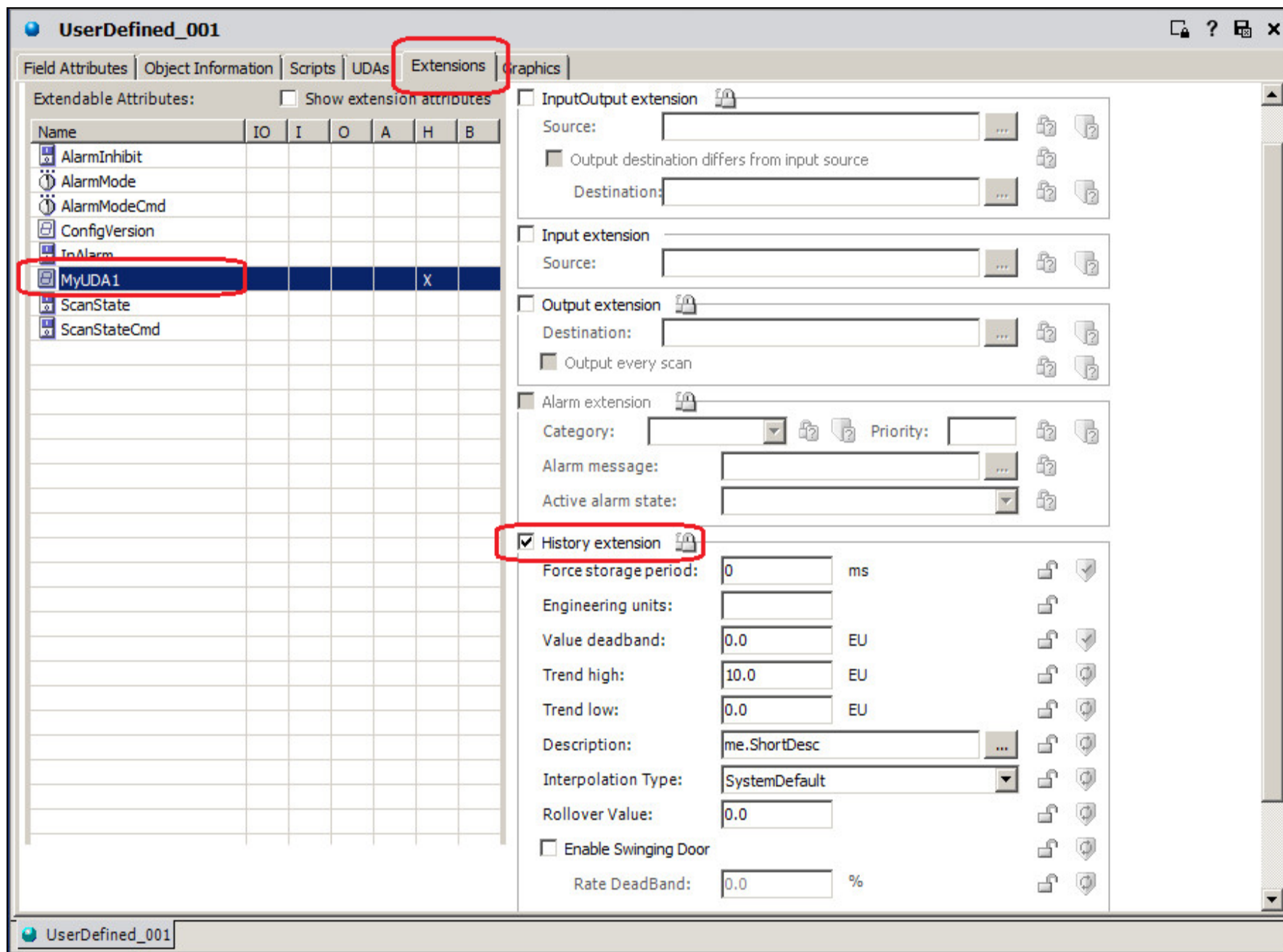8. Make sure the **History Extension** option is checked.

FIGURE 2: HISTORY EXTENSION OPTION

9. Save and close the editor, then check in the object.

10. Deploy the object. Deploying the object with the **History extension** configuration creates a corresponding tag in the Historian.

Verifying Creation of MDAS Tag in Primary and Partner Historians

The AppServer attribute (**MyUDA1** in this example) is now pushed to both the Primary and Partner Historians.

Verify the tag is created:

1. On each of the Historians, open the ArchestrA System Management Console (SMC).

2. Expand the server (MYSERVER1 in this example).

3. Expand Configuration Editor - Data Acquisition - MDAS/Manual Tags.

4. The (MDAS) tag appears on the right pane.
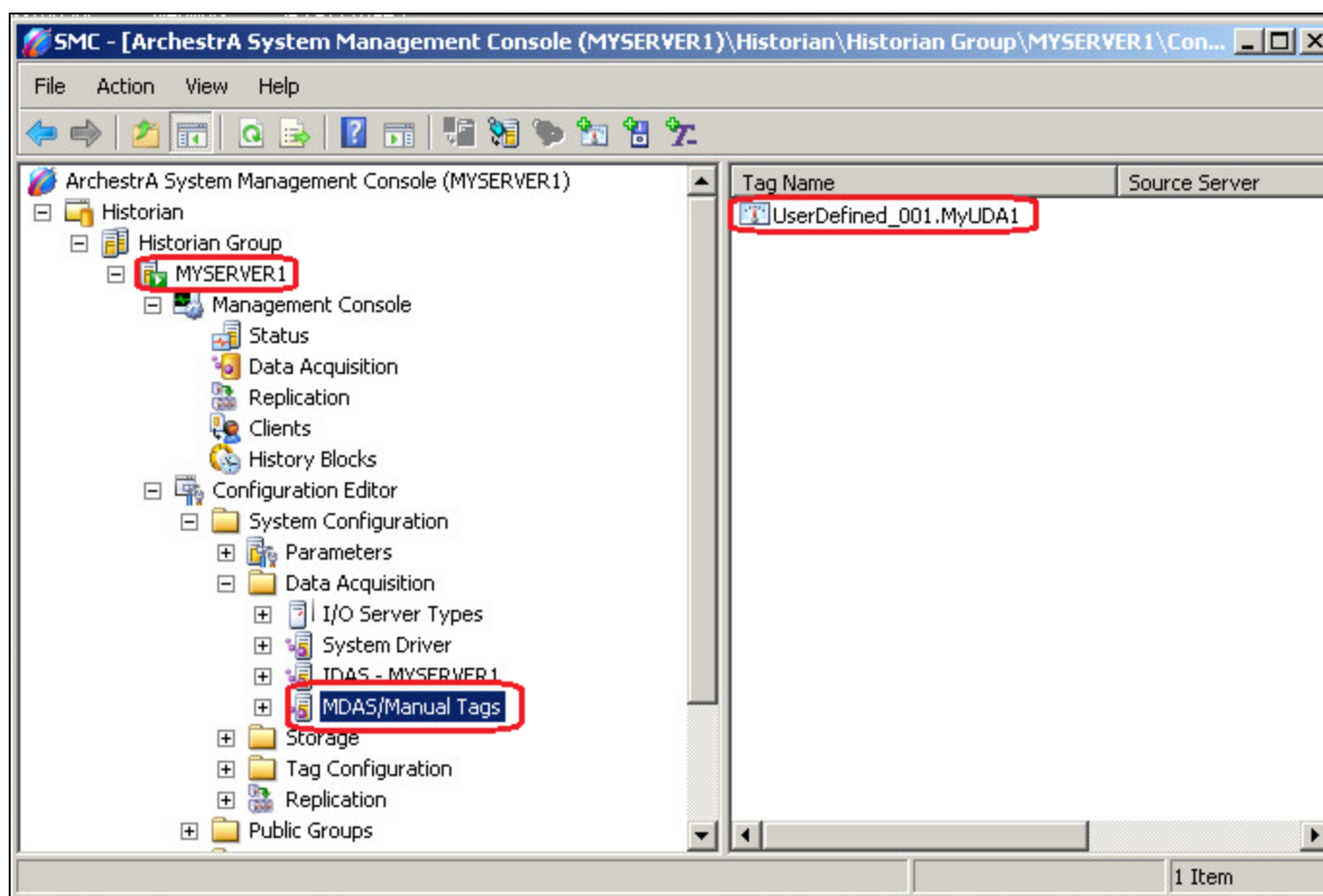
FIGURE 3: MDAS TAG ON PRIMARY HISTORIAN
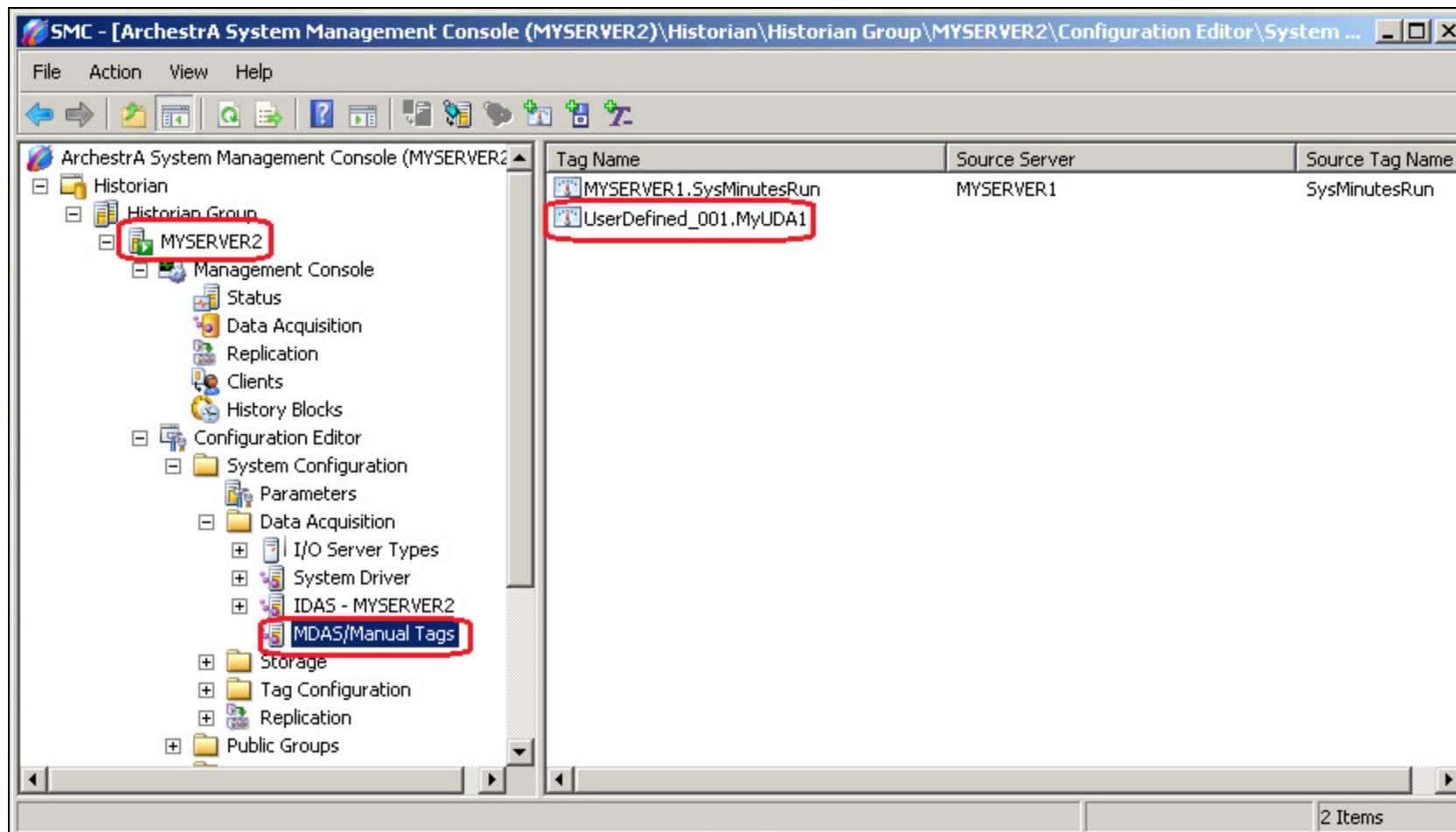
FIGURE 4: MDAS TAG ON PARTNER HISTORIAN

Connecting HistClient Trend to a Historian in Partner Setup

You are ready to verify that HistClient Trend automatically switches to the partner Historian when the primary historian is not available.

- The Historian name shown in the Tag Picker is always the name of the primary Historian, even when the client is connected to the partner.

- When a HistClient successfully connects to either the primary Historian or its partner, columns Server and I/O Address are updated with the connected Historian server name in the tags list of the selected tags.

- There is no automatic synchronization built in to the redundant Historian setup; it is up to the Historian server administrator to make sure that the two Historians in the pair are symmetrical and synchronized.

- If the SQL Server Service is running while Historian Service is not running, this is not recognized by the Historian Client as a scenario in which the Historian Server is unavailable.

Procedure

1. Open the ObjectViewer and add the MyUDA1 attribute attribute (created in the **Configuring AppServer Object for Historization**) section to the Watch window.

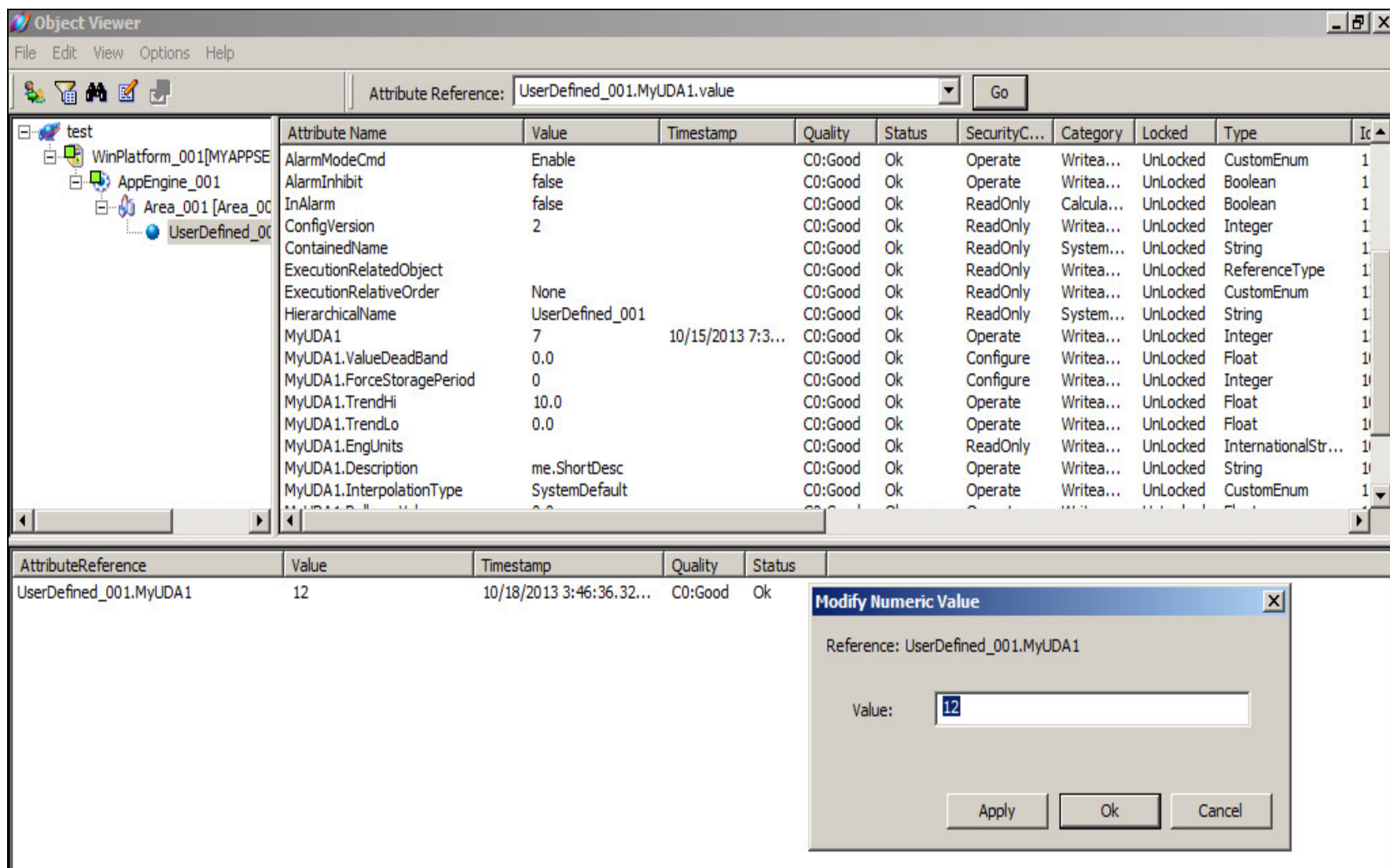2. Double-click the attribute and type another value.

FIGURE 5: MODIFY THE VALUE OF THE ATTRIBUTE

3. Click **Start/All Programs/Wonderware/Historian Client/Trend** to open the HistClient Trend.

4. On the main menu, click **Tools/Servers**. The **Server List Configuration** window appears.

5. Type the primary Historian Server name along with login information to connect the Trend to the Primary Historian (**MyServer1** in this example).
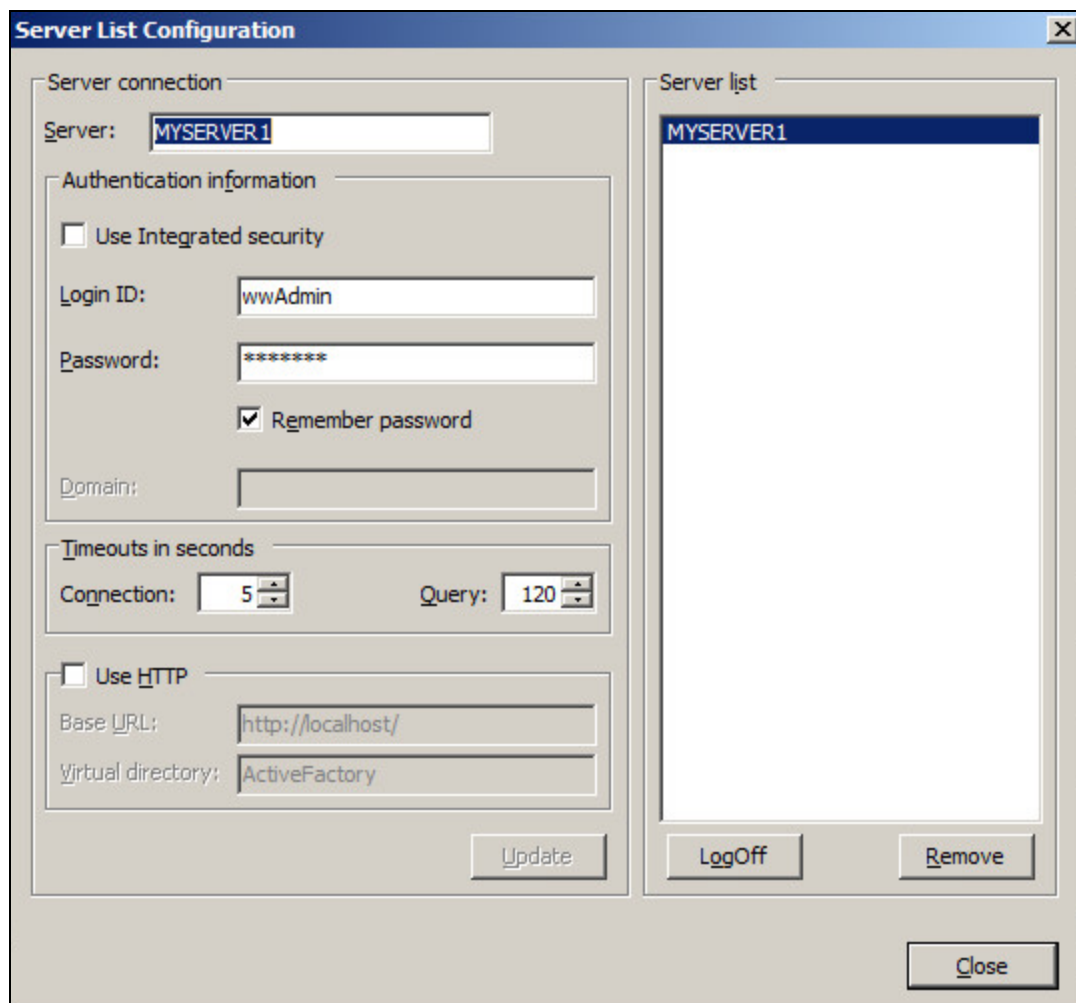
FIGURE 6: SERVER LIST CONFIGURATION

6. The Trend chart (Figure 1 below) shows the Primary Historian in the Tag Picker as well as in the tag list below the trend.
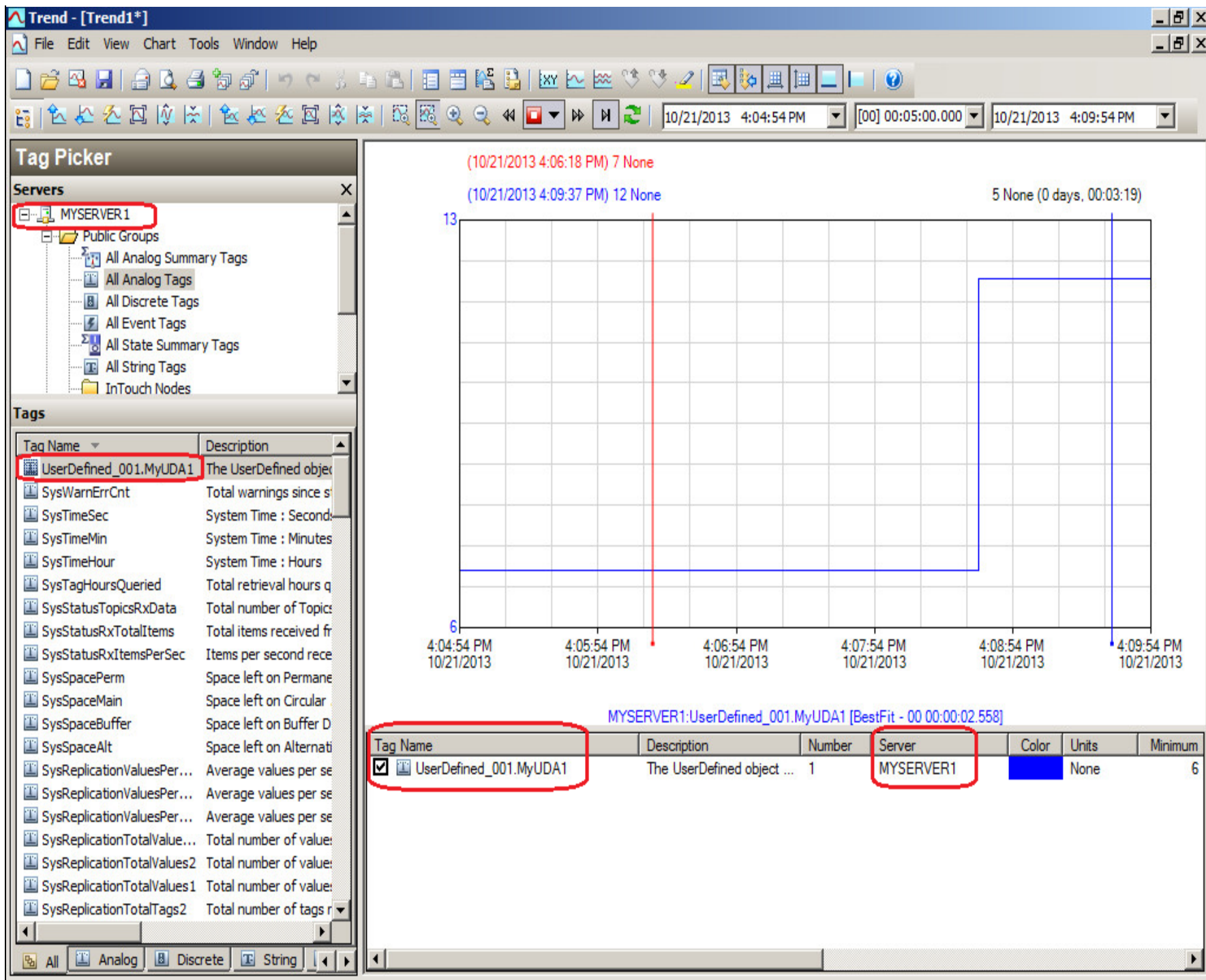
FIGURE 7: TREND THE PRIMARY SERVER USERDEFINED TAG

7. Shutdown the primary Historian server. The Trend chart below now shows the partner Historian in the Tag Picker as well as in the tag list below the trend.

FIGURE 8: TRENDING THE PAIRED HISTORIAN USERDEFINED TAG

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

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