Tech Note 1026
Using the $PingNode Object Template in Wonderware Application Server

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Topic#: 002861
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Introduction

This *Tech Note* describes using a custom **$PingNode** object template created for Wonderware Application Server.

An Object based on that template provides ping status for a given machine (node). The $PingNode object template includes the Ping script that can be customized to provide additional features. By default the enabled object will ping the configured node every 10 seconds and report general status and reply time. It also can be configured to alarm if a ping timeout is incurred. This type of information should be useful for monitoring system health of network hardware and other machines that are not part of the galaxy.

Note: This *Tech Note* is an Update of TechNote 80 from **Wonderware West** (Mark Boisvert).

Application Versions

- Wonderware Application Server 3.6

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$PingNode Object Template Configuration

1. Download the **PingNode.zip** file.

   That file contains the custom $PingNode object template.

2. Start the ArchestrA IDE (Start/All Programs/Wonderware/ArchestrA IDE).

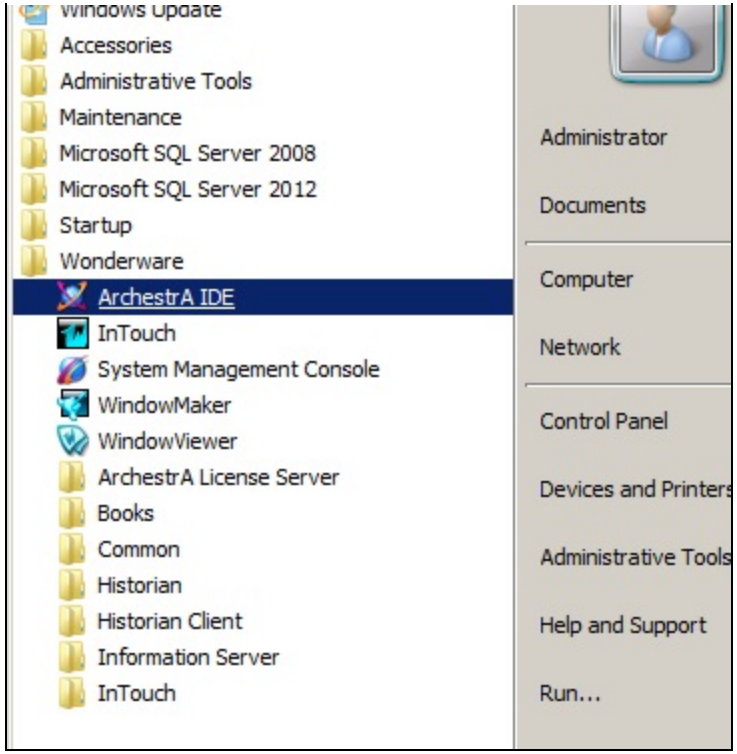

FIGURE 1: START THE IDE

3. Import the **$PingNode** object template into the ArchestrA IDE (Galaxy/Import/Object(s)). Use the default options when prompted during this import.

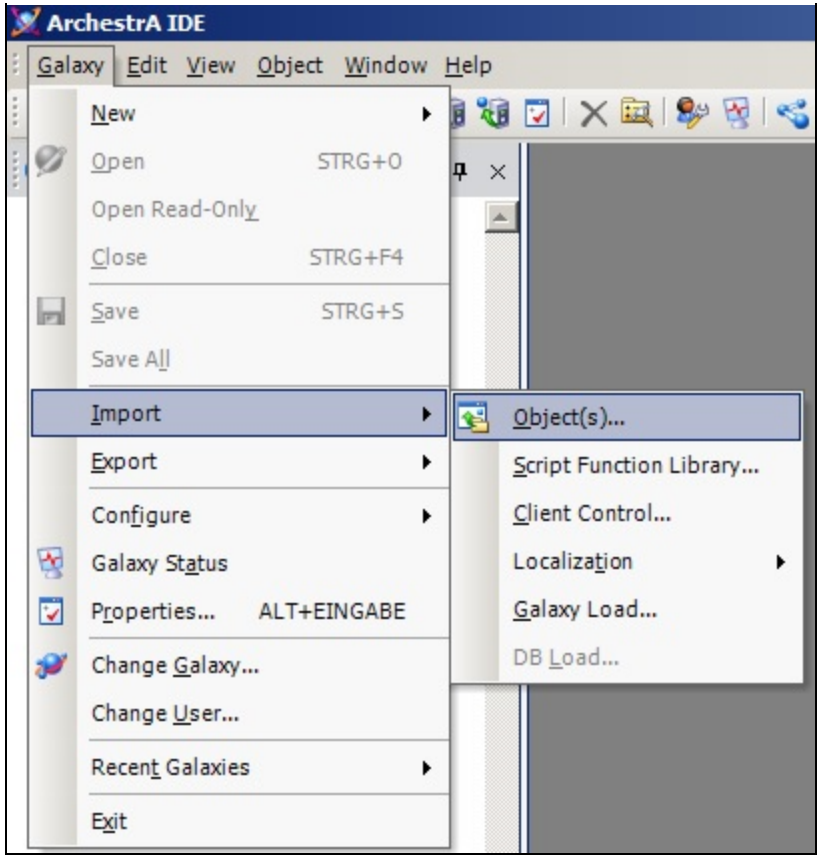

FIGURE 2: IMPORT THE $PINGNODE OBJECT

4. Navigate to the directory where the $PingNode.aaPKG file was saved and click the Open button.

   After the import completes, you see a new folder in the Template Toolbox called **PacWest** with a new template called **$PingNode**.

5. Create an instance of the $PingNode object template and assign it to the appropriate area.

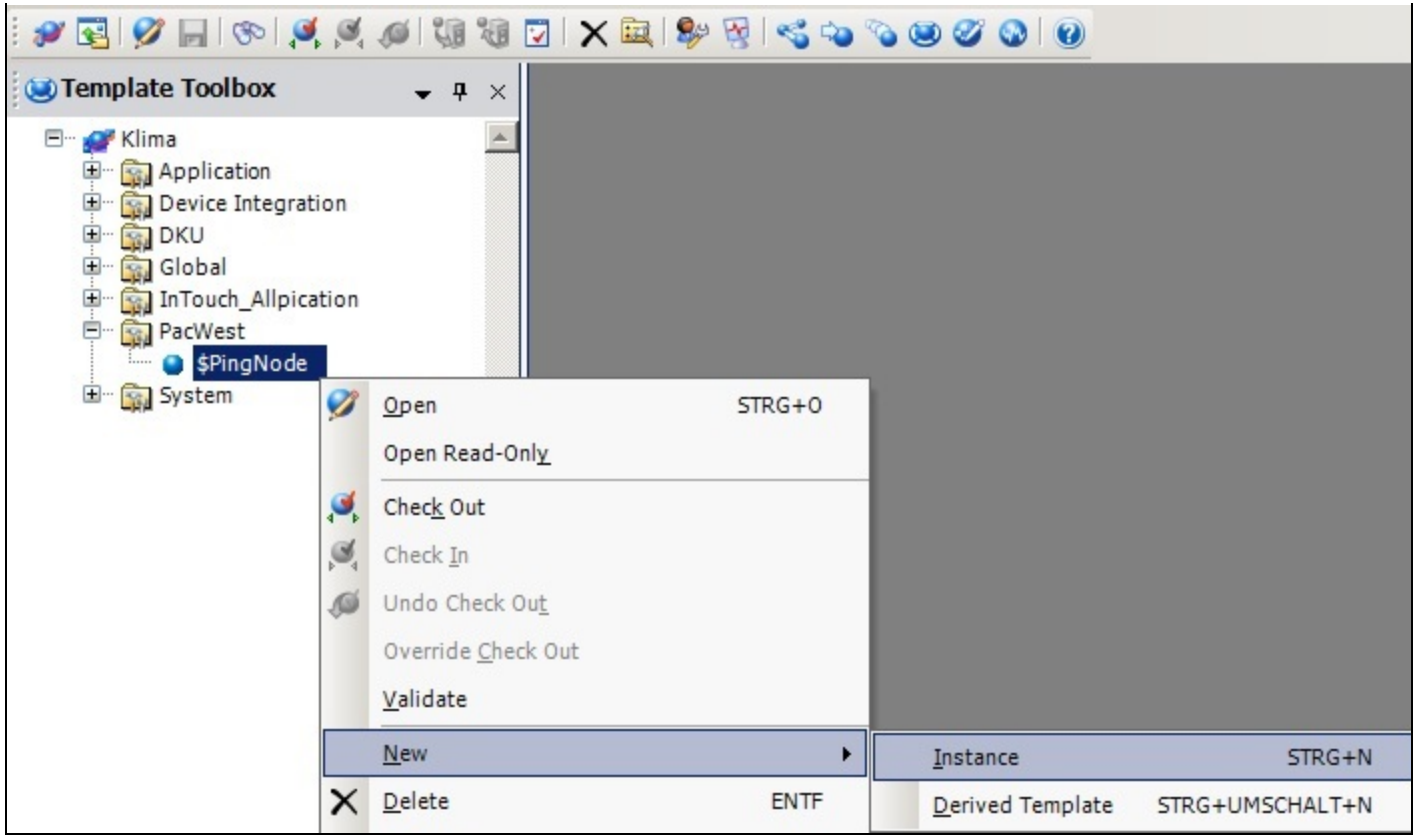

FIGURE 3: $PINGNODE INSTANCE

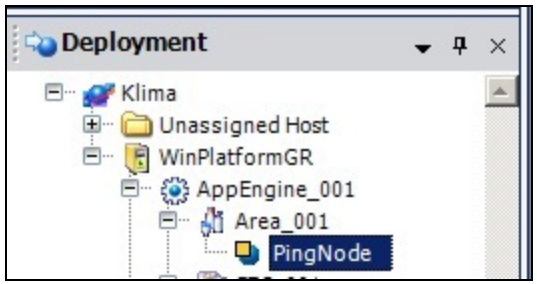

FIGURE 4: ASSIGN THE OBJECT TO AN AREA

6. Open the object instance configuration by double-clicking and clicking the **UDA** tab.

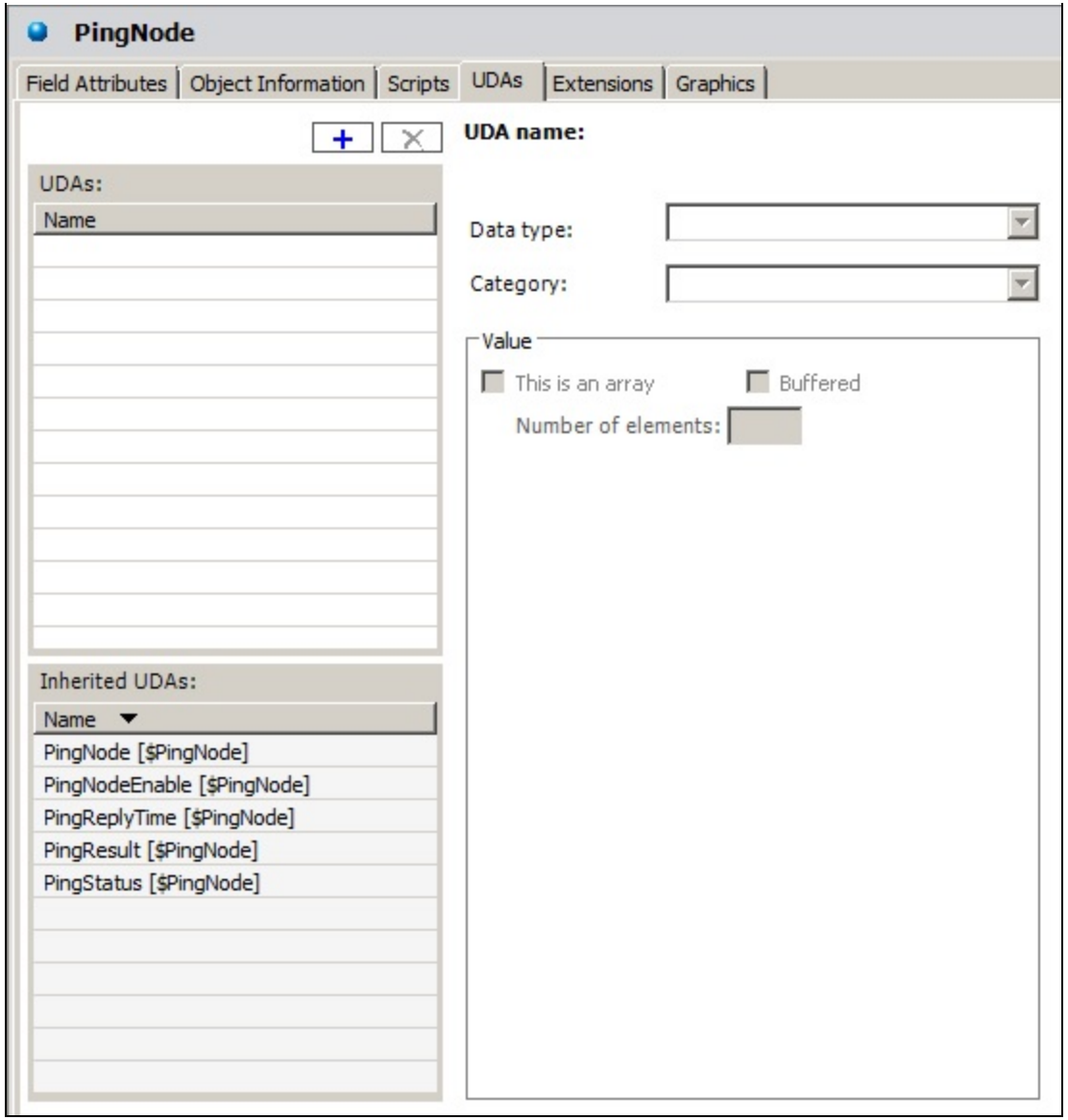

FIGURE 5: PINGNODE OBJECT UDAS TAB

The following object attributes belong to the object:

- **PingNode:** Configured node or IP address to ping
- **PingNodeEnable:** Enables the ping script
- **PingReplyTime:** Show round trip time in milliseconds [ms]
- **PingResult:** Provides the ping result (e.g. 'Success', 'Timeout')

PingStatus: Boolean flag indicating the node status

- The PingNode inherited user defined attribute is default set to **(localhost)**.

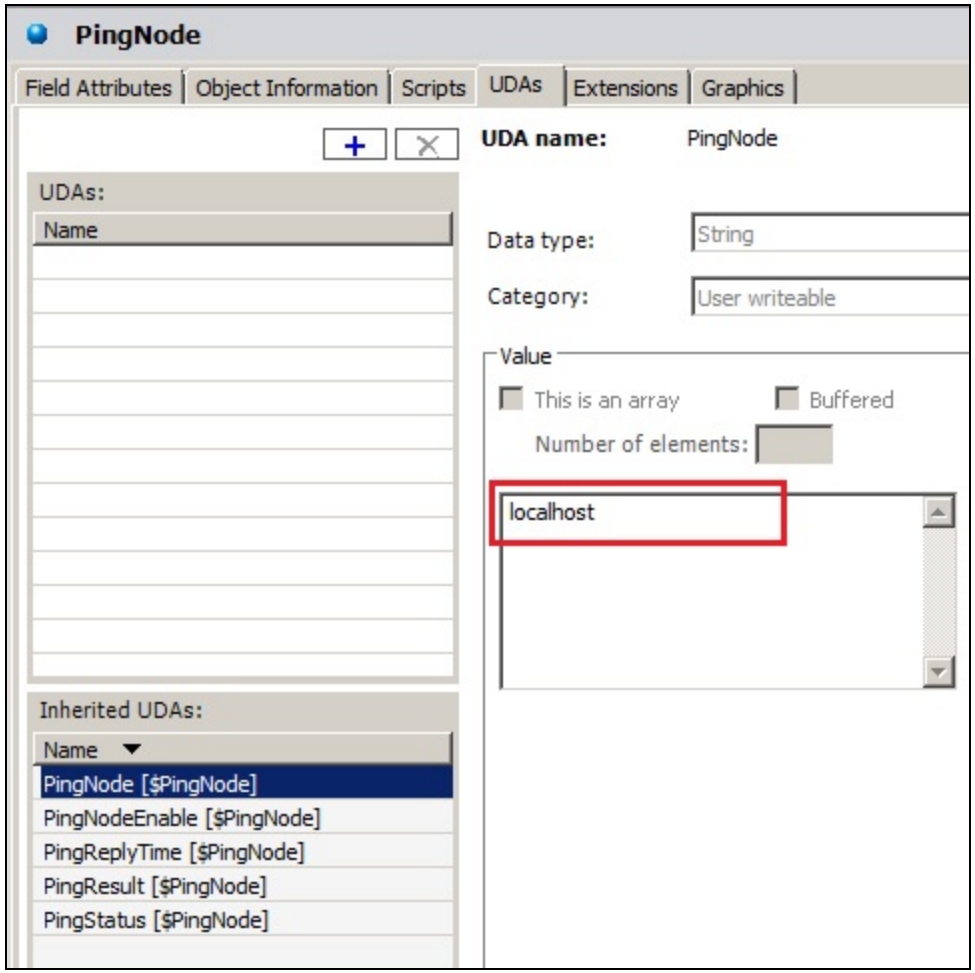

FIGURE 6: LOCALHOST FOR INHERITED USER

7. Click the **Scripts** tab to review the **Ping** script and save the changes.

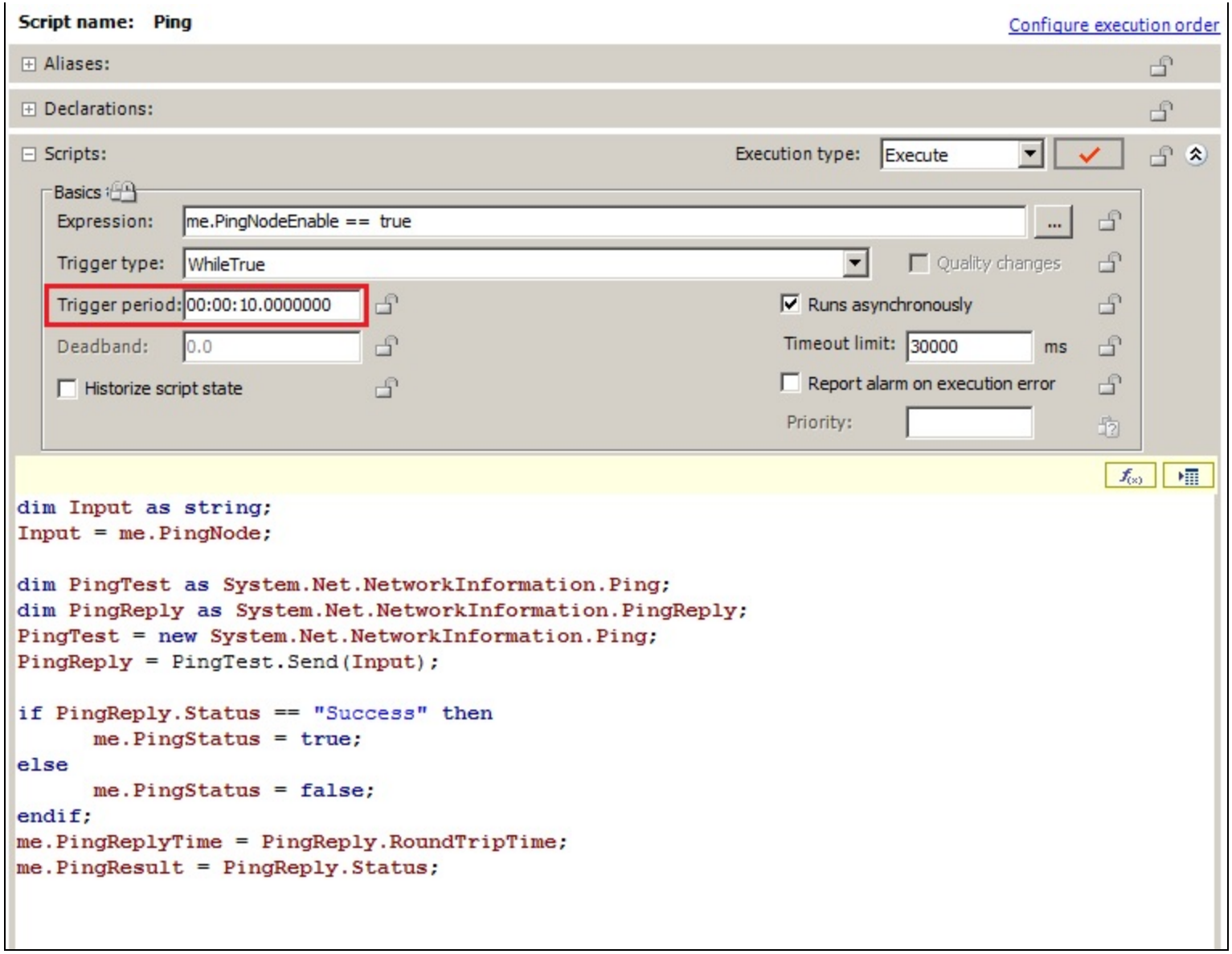

Figure 7: Ping Script

If the ping frequency needs to be changed, modify the **Trigger period** value of the **Ping** script.

'Ping' script analysis

You can modify the **Ping** script within the object template. The following section provides an analysis of the script and its functions:

```
'prepare a local variable to contain the value of the target node name
dim Input as string;
Input = me.PingNode;
```

```
'declare an instance of the system.net.networkinformation.ping class called 'PingTest'
dim PingTest as System.Net.NetworkInformation.Ping;

'declare an instance of the system.net.networkinformation.pingreply class to contain the returned results of the ping
dim PingReply as System.Net.NetworkInformation.PingReply;

'initialize PingTest instance
PingTest = new System.Net.NetworkInformation.Ping;

'perform the ping and return results to the PingReply instance
PingReply = PingTest.Send(Input);

'set the Boolean status of the PingStatus UDA which is used for alarming
IF PingReply.Status == "Success" THEN
me.PingStatus = true;
ELSE
me.PingStatus = false;
ENDIF;

'set the PingReplyTime (latency) and test Status UDAs
me.PingReplyTime = PingReply.PundTripTime;
me.PingResult = PingReply.Status;
```

Using the PingNode Graphic in InTouch

Each PingNode object instance includes a graphical status display which can be used in Wonderware InTouch WindowMaker.

To use the 'PingNode' graphic

1. Open InTouch WindowMaker and create a window to host the graphic.
2. Click the **Embed ArchestrA Graphic** toolbar button.

Figure 8: Embed ArchestrA Graphic

3. Click the **Instances** toolbar button in the Galaxy Browser and locate the **PingNode** graphic contained under the **PingNode** instance.

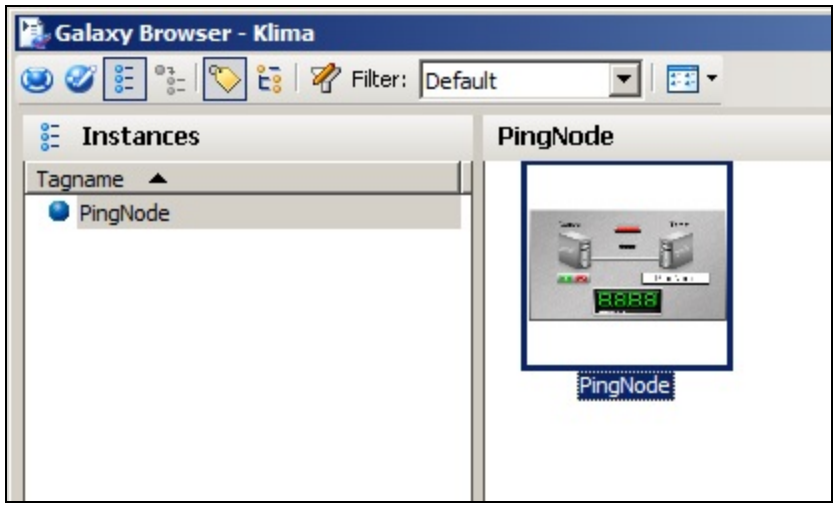

Figure 9: PingNode Graphic

4. Select the graphic and click **OK**.

5. Drop the **PingNode** graphic on the appropriate window and switch to **Runtime** to test.

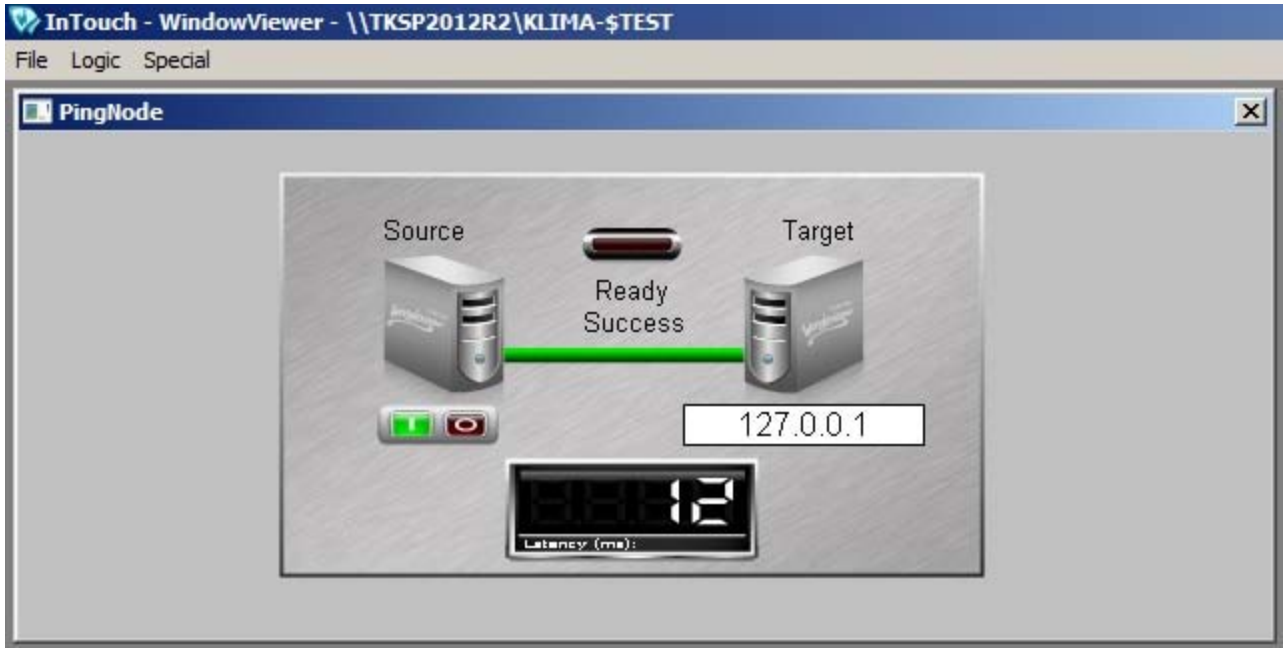

FIGURE 10: PINGNODE TEST

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