Tech Note 868 Troubleshooting Wonderware Software Resource Issues with Performance Monitor

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Introduction

This *Tech Note* describes how to use Performance Monitor to troubleshoot resource issues with Wonderware products. Performance Monitor can be used to trend resources from customer computers. For example, Figure 1 (below) shows a continual increase in Private Bytes.



FIGURE 1: PERFORMANCE MONITOR SHOWS RESOURCE PROBLEM

This Tech Note covers the following sections.

- Setting up Performance Monitor
- Performance Monitor Log File Analysis Instances
- Performance Monitor Log File Analysis Counters
- Performance Monitor Log File Analysis Counters Maximum

Video Tech Note

A Video Tech Note augments this Tech Note. It shows:

- Using the Performance Monitor version from Windows 7 and Windows 2008 (@ 1:36).
- Using the Performance Monitor version from Windows XP and Windows 2003 (@ 4:53).
- Analyzing a Performance Monitor Log File (@ 6:30).

Application Versions

• All Wonderware Product Versions

Setting Up Performance Monitor

- Start Windows Performance Monitor from Control Panel > Administrative Tools.
- Set up and configure Performance Monitor to log All Processes and Processors.
- There are different procedures for Performance Monitor depending on the OS.

For XP and Windows XP

- 1. In Performance Monitor select Performance Logs and Alerts/Counter Logs.
- 2. Right-click Counter Logs, then New Log Settings and type a name.
- 3. Click the Add Objects button.
- 4. Click Process in the Performance objects list click Add.
- 5. Click **Processor** in the Performance objects list and click **Add**.
- 6. Click Close.
- 7. Under Counters you will see counters like: \\DAVIDU_ADMIN\Process(*)* and \\DAVIDU_ADMIN\Processor(*)* (Figure 2 below).

Troubleshooting Wonderware Software Resource Issues with Performance Monitor

c Properties		? ×
General Log Files	Schedule	
Current log file na	me:	
C:\PerfLogs\abc	_000002.Ыg	
This log begins im	mediately after you apply changes.	
<u>C</u> ounters:		
NDAVIDU_ADM	IIN\Process(*)*	
NDAVIDU_ADM	IIN/Processor(*)/*	
	Add Objects Add Counters Remove	.
Sample data ever	y.	
Internal 15		T
Interval. 113		
Bun As: Defa	Set Password	
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FIGURE 2: COUNTERS LIST

- 8. Keep the default Sample Interval of 15 seconds. If you need to log more than a day's date, change the Sample Interval to one minute. This will keep the Log File smaller.
- 9. Press OK to start Performance Monitor Logging. The location of the .blg file is displayed under the Log File Name column.
- 10. When you finish the test, you can email the .blg file for analysis.

Note: Performance Monitor Help files contain additional information in Creating counter logs under Performance Logs and Alerts.

For Windows 7 and Windows 2008

- 1. In the Performance Monitor left panel, expand Monitoring Tools/Performance Monitor.
- 2. Right-click Performance Monitor and click New/Data Collector Set, type new name, and click Next.
- 3. Accept the default location and click Finish.

file:///Cl/inetpub/wwwroot/t002667/t002667.htm[7/20/2012 1:47:59 PM]

- 4. Click the new Data Collector Set under Data Collector Sets/User Defined.
- 5. Right-click the new Data Collector Set and click **New/Data Collector**. Choose **Performance counter data collector** then click **Next**.
- 6. Click Add, and under Available Counters click Process.
- 7. In the Instances of selected object panel click <All instances> and click Add.
- 8. Repeat steps 6-7 for the **Processor** counter. The added counters should show * for the **Instance** for both Process and Processor.
- 9. Click OK.
- 10. Keep the default Sample Interval of **15** seconds. If you need to log more than a day's date, change the Sample Interval to one minute. This will keep the Log File smaller.
- 11. To start the Performance Monitor Logging, right-click the new data set and click **Start**, or press the green arrow in the Toolbar.

The location of the .blg file is displayed under the Output column.

12. When the test is finished you can email the .blg file for analysis.

Note: The Performance Monitor Help has additional information in Create a Data Collector Set to Monitor Performance Counters.

Performance Monitor Log File Analysis - Instances

Look at the following instances:

- aaEngine*
- aaGR
- aaLogger
- sqlservr
- svchost*
- view*

Performance Monitor Log File Analysis - Counters

Look at the Minimum and Maximum for the following counters:

- % Processor Time
- Handle Count
- Thread Count

Troubleshooting Wonderware Software Resource Issues with Performance Monitor

- Private Bytes
- Virtual Bytes

Performance Monitor Log File Analysis – Counters Maximum

There is a possible resource issue when one of the following counters for a given Process is increasing a lot or if the Maximum value is high as follows:

- % Processor Time > 50
- Handle Count > 1000
- Private Bytes > 500 MB (except SQL Server)
- Thread Count > 100
- Virtual Bytes > 500 MB (except SQL Server)

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