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.

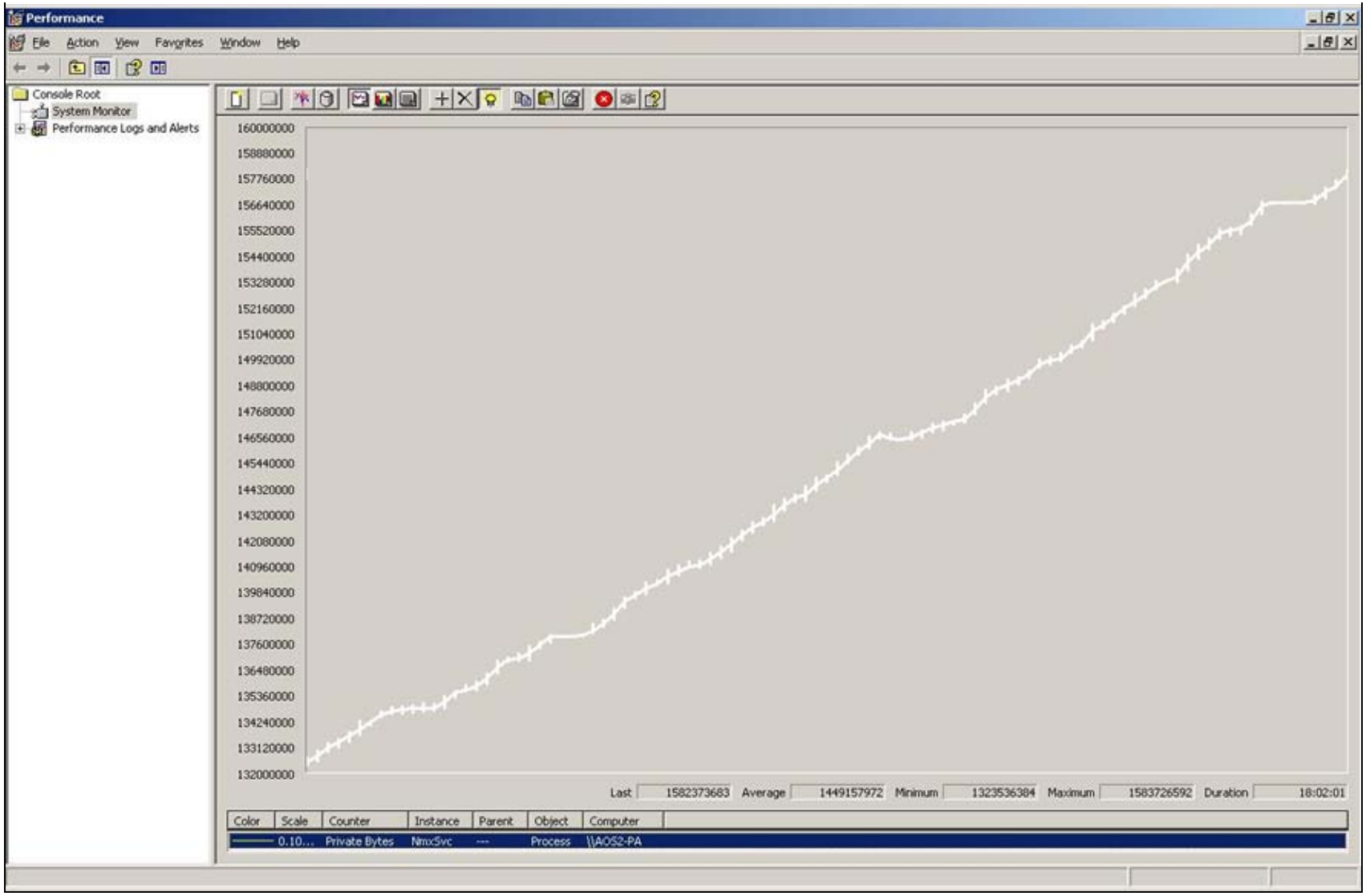

FIGURE 1: PERFORMANCE MONITOR SHOWS RESOURCE PROBLEM

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).

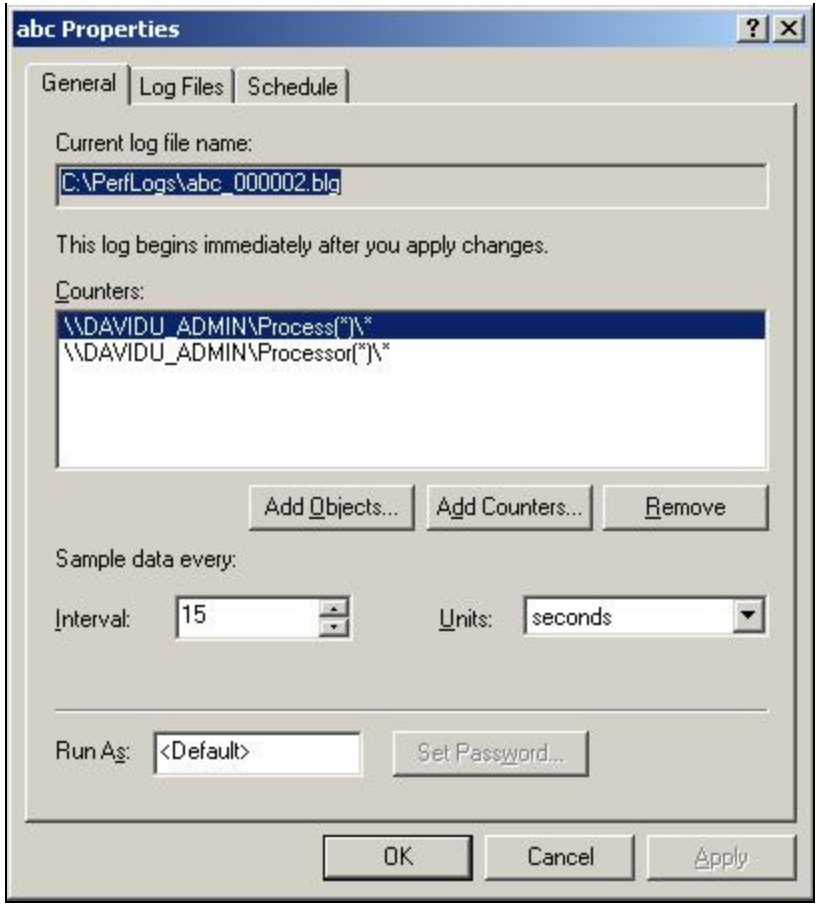

FIGURE 2: COUNTERS LIST

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**.

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

- 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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