

# Using Microsoft Performance Monitor

*Guide*

December 2005

**Laserfiche®**

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## What to Monitor

Performance Monitor is a Microsoft utility which includes counters for monitoring different aspects of system performance. You can use these performance counters to measure many different aspects of your system, both hardware and software. Performance logs can tell you the patterns of usage over days, weeks or months, and help you locate and diagnose bottlenecks that can slow your system down.

In Performance Monitor, a counter is simply a chart of a single aspect of a specific system over time. Thus, the %Processor counter looks at the percentage of the processor in use and graphs it over time, and the Read-only licenses in use counter looks at the number of read-only Laserfiche licenses connected to the Laserfiche server and graphs that number over time.

## Hardware Monitoring

To ensure that your system isn't becoming overloaded, you can use it to monitor your hardware on a regular basis. Keeping regular performance logs will allow you to identify trends and establish a baseline for system use. Performance Monitor is an excellent tool for identifying hardware bottlenecks where upgrades would be most useful.

You can run Performance Monitor as often as you feel is useful. You might run it once a week for a very heavily used server. For less trafficked servers, once a month or once a quarter would be sufficient. Performance Monitor logs will be most useful to you when they include several days of data, to make sure that the data accurately reflects normal use patterns and to minimize the impact of any anomalous days on your data. These logs of system loads can serve both as troubleshooting tools and as evidence to back up requests for hardware upgrades or additional servers.

The main counters to monitor are:

**Processor** - %Processor, the percentage of processor capacity used

**PhysicalDisk** – Avg. Disk Queue, the average number of requests waiting to be processed

**Memory** – Pages/sec, the number of pages written to and read from memory each second

Other useful counters include Processor Queue, %Disk Write Time, % Disk Read Time, Buffer Cache Hit Ratio, and Page Writes/sec.

Roughly speaking, % Disk Time shouldn't go above 60 for more than ten minutes at a time, and % Processor shouldn't go above 80 for more than ten

minutes at a time. Disk queue length should average 2 or less.

## Laserfiche Monitoring

With Laserfiche 7.1 and above, you can use Performance Monitor to look at specific aspects of your Laserfiche system. For instance, you might want to compare the number of read-write and read-only licenses in use at different times, in order to decide whether to acquire additional licenses. Or you could monitor your repositories to see how many documents or pages are being created per second, to see which repositories are most heavily used.

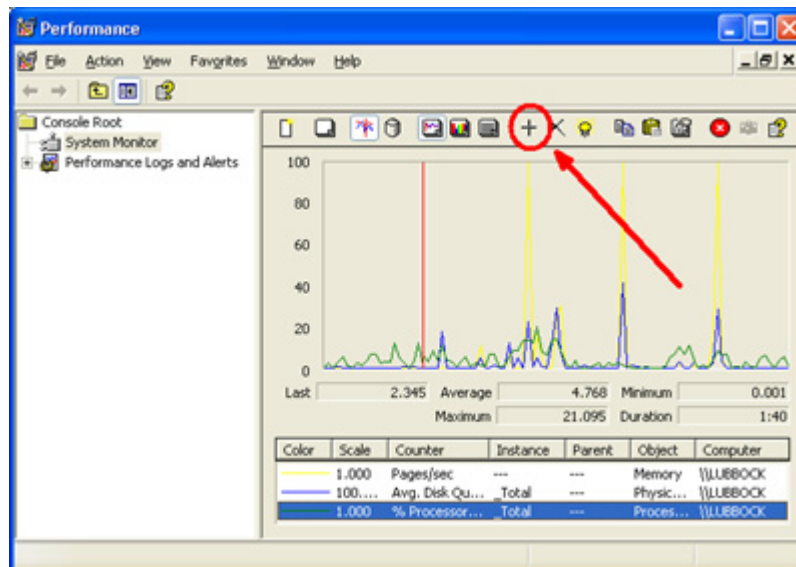
## Setting up Performance Monitor

To run Performance Monitor:

1. Go to the Start menu and select Run. Type in *perfmon* and click OK.

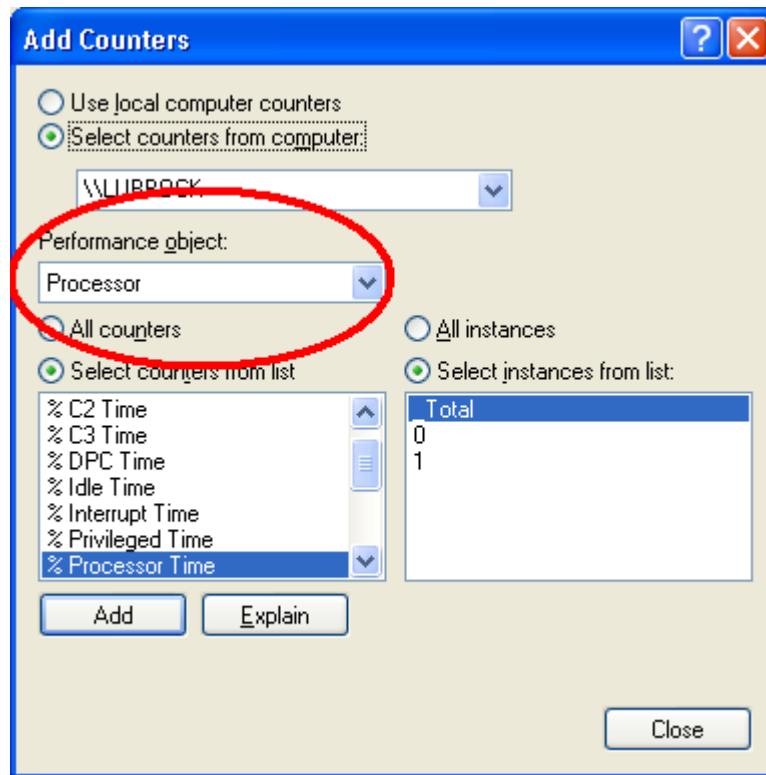
To add counters to Performance Monitor:

2. The Performance Monitor, by default, shows counters measuring aspects of memory, hard disk, and processor load. Add counters by pressing the button with a plus sign icon (circled in diagram.)



3. From this dialog you can add any performance counter available on your computer. Select a category from the Performance Object drop-down list, such as Processor, Memory, or Physical Disk (for hardware)

or Laserfiche Server or Laserfiche Repositories (for software.)



4. Select counters from the list that appears below the Performance Object selection box. These counters will be specific to the performance object you selected. You can select more than one counter by holding down the Ctrl key, or you can select all available counters by selecting the "All counters" radio button above the list.

**Tip:** Use the "Explain" button below the list to get a better idea of what each counter monitors.

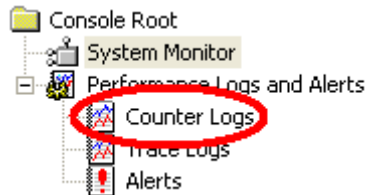
5. Next to the list of counters is a list of "instances" to monitor. This is for counters that could apply to multiple items. For example, if you are selecting Laserfiche Repositories counters, the list of instances will list all the repositories available on the current computer.
  - a. To monitor one instance, select that instance.
  - b. To monitor more than one instance using a separate counter for each instance, hold down the Ctrl key to select multiple

instances.

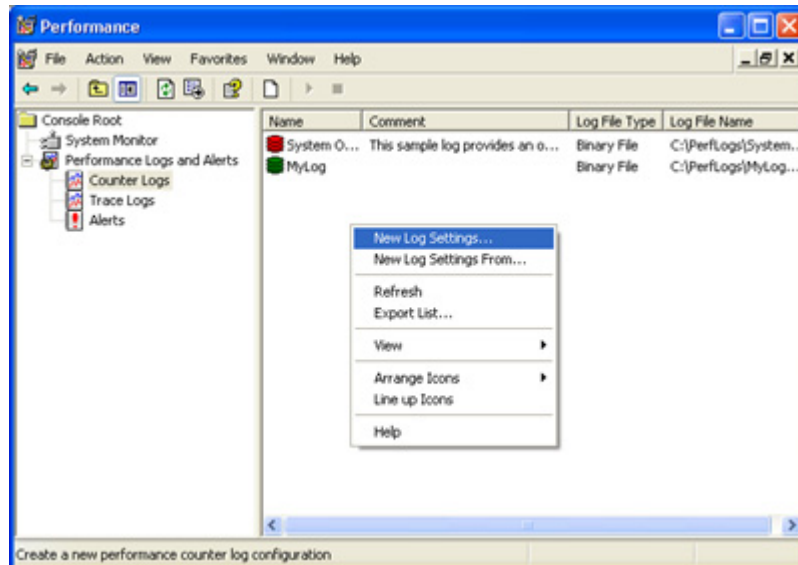
- c. To monitor all instances at once using a single counter for all instances, select "\_Total."
6. Once you have selected the counters and instances you want, click Add.
7. Repeat steps 3-6 until you have added all the counters you want. Don't add too many, or they will be difficult to tell apart.
8. Click Close when you are finished adding counters.

To make logs of counter information:

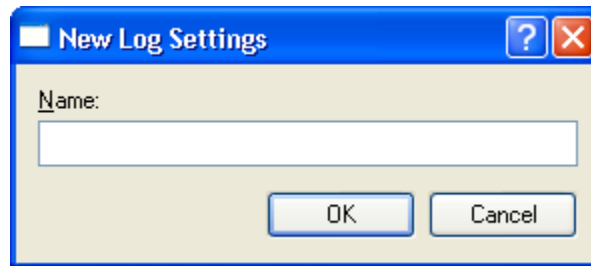
9. Expand Performance Logs and Alerts in the left-hand pane. Click on Counter Logs.



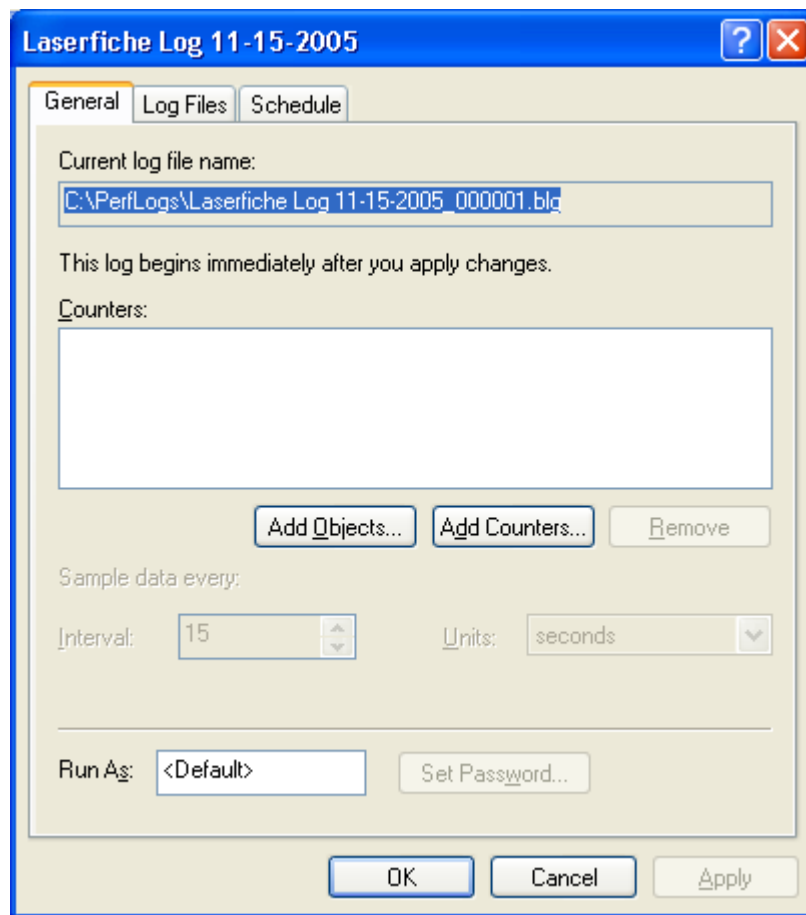
10. Right click in the right-hand pane and select "New log settings" from the drop-down menu.



11. Select a name for your log.



12. From the log configuration screen, click "Add Counters...", and follow steps 3-6 above. To add all of the counters for a specific object to the log at once, use "Add Objects..."



By default, Performance Monitor will begin adding data to the log as soon as you apply your changes. To learn about other options for logging, read the Performance Monitor help file.



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