The Sentry-go Monitoring System
Monitoring System Performance

Last Updated Thursday, 19 April 2012

http://www.Sentry-go.com

Be Proactive, Not Reactive!

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Symbols

Thank you for choosing Sentry-go® as your monitoring solution for Windows. In this guide, the following symbols are used to denote specific items …

Important information which should be noted – it may affect what you are trying to do.

Additional information relating to the operation being described is shown.

Background

Keeping a check on the performance characteristics of the server, key software services as well as Web Server and related databases is vital to those wishing to proactively monitor any Windows system. In fact, many errors can be avoided by being alerted to early signs of performance problems and reacting accordingly.

Monitoring the performance of the server, operating system & software is both quick & easy with the Sentry-go Performance monitoring component.

Pre-configured Options & Counter Availability

Unlike many other solutions, which require you to manually include each performance counter before you start, Sentry-go comes pre-configured to monitor the key aspects of the both server and software you're likely to need. The settings on this window refer to performance counters on the local server. Although all can be configured here, their activation depends on the counters available on the server itself. If any counters are missing when the server is started, a notification will be sent to the System Administrator and an error written to the Verify Configuration Report.

If you are running Sentry-go on a non-English version of Windows, a message will have been displayed during Setup, explaining that some counters may not be pre-configured. In this case, some options may need to be added manually as described in the pages that follow.

Recommended Monitoring Settings

The counters you monitor will depend greatly on the software installed & running on the server. Some standard counters include …

- High CPU usage
- Memory low
- % Paging File in use high
- System Registry size near or at maximum
- High no. Running processes
- Suspicious no. Server Access attempts
- Suspicious no. Server Logon attempts
- High no. Internal Server Errors
- High Disk Queue Length

Quick Facts

Here is a summary of the options available with this component. They are discussed in more detail in the pages that follow …

Component :	Performance Monitor
Aim/Description :	To provide periodic monitoring of selected performance counters against defined thresholds & to take the appropriate action when thresholds are exceeded.
Main Monitoring Features :	• Monitor against defined thresholds • Provide the ability to monitor any installed counter • Optional Performance Optimiser • Optionally determine baseline data over time • Optionally log data to a log file • Optionally perform trend analysis from logged data
Periodic Monitoring :	✓
Scheduled Monitoring :	
Local Monitoring :	✓
Dial-up Support :	
Alerting :	All alerting & auto-response options available
Web Reports :	Status report, Performance log, Performance Optimiser, Trend analysis
External software req's :	None

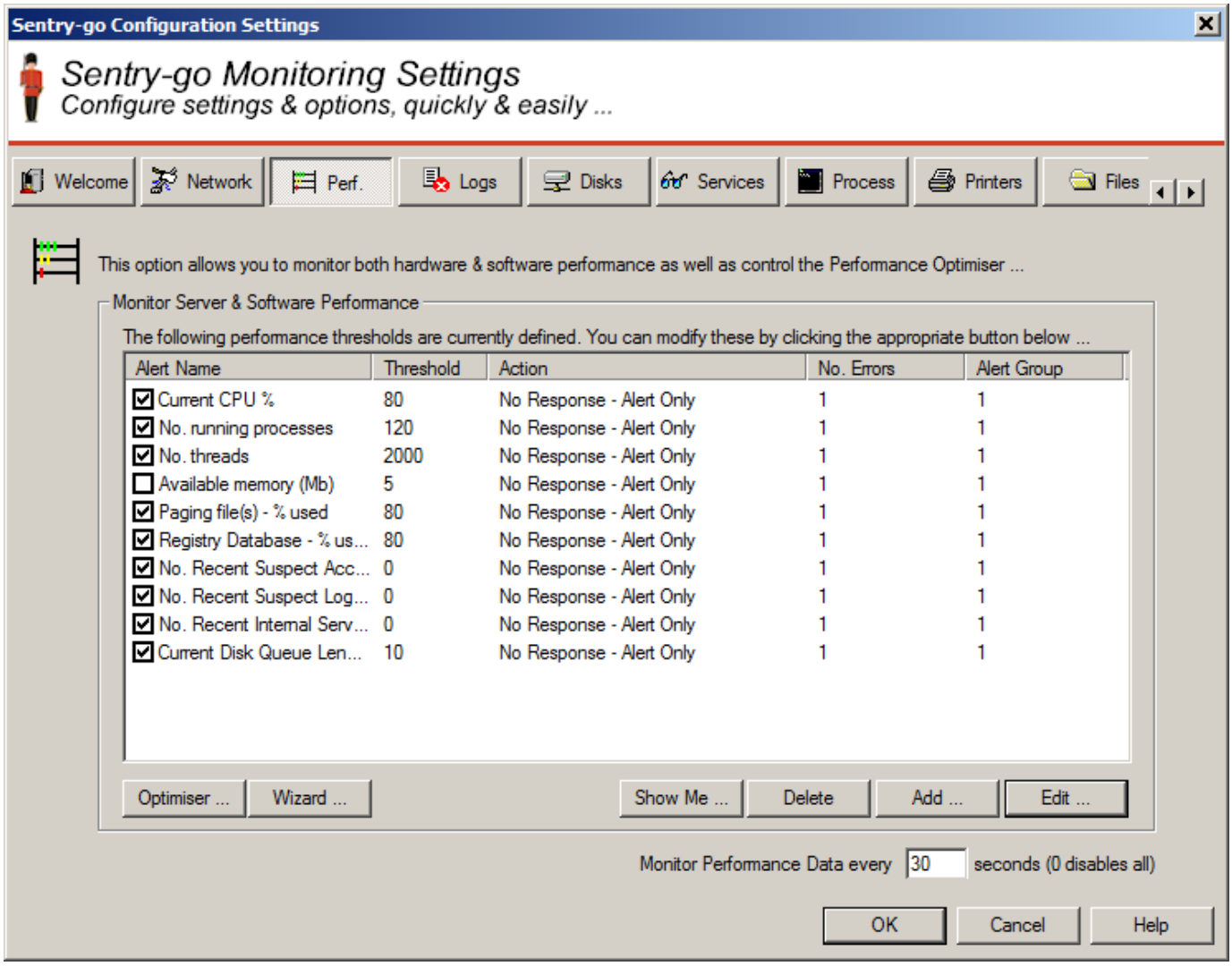
Monitoring System Performance

To monitor system performance simply select the Sentry-go monitor from the Client Console with the right mouse button and click "Configure".

A window containing a number of tabs will be displayed. To monitor available disk space, select the "Perf." tab. From here, you can configure the following …

- The monitoring of one or more performance counters.
- The associated threshold to measure the counter's value against
- What should happen in the check fails.
- How often each check should be run.
- Temporarily disable the monitoring of one, more or all sites/pages.
- Access the Performance Optimiser

The resulting list will show all the currently defined performance counters being monitored that are to be periodically checked. From here you can add new monitored items, edit existing ones or delete them from the monitor's scan …



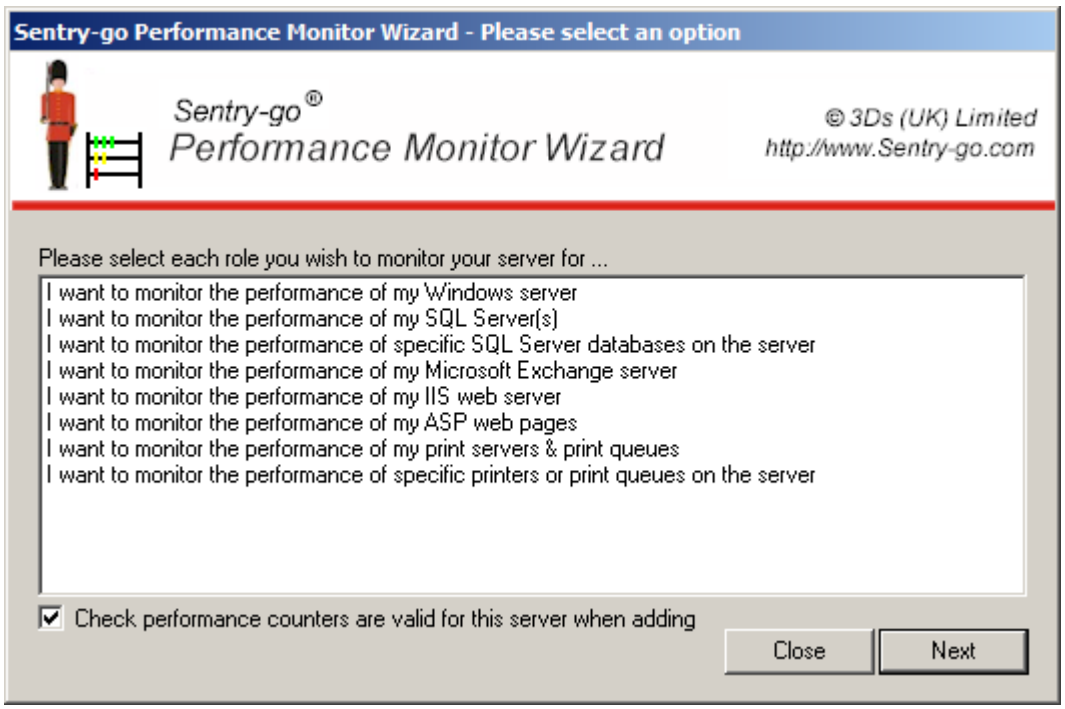
Wizard/Choose Server Role(s) …

To bulk load standard settings on a locally configured monitor, click the 'Wizard' or 'Choose Server Role(s) button.

The Wizard will overwrite any unsaved changes made to the current configuration. Before running it, ensure you save any existing configuration changes already made.

Changes made by the Wizard will be saved automatically upon completion. You can then further edit these options as described below.

This allows you to preselect a number of settings which can then set the thresholds for …



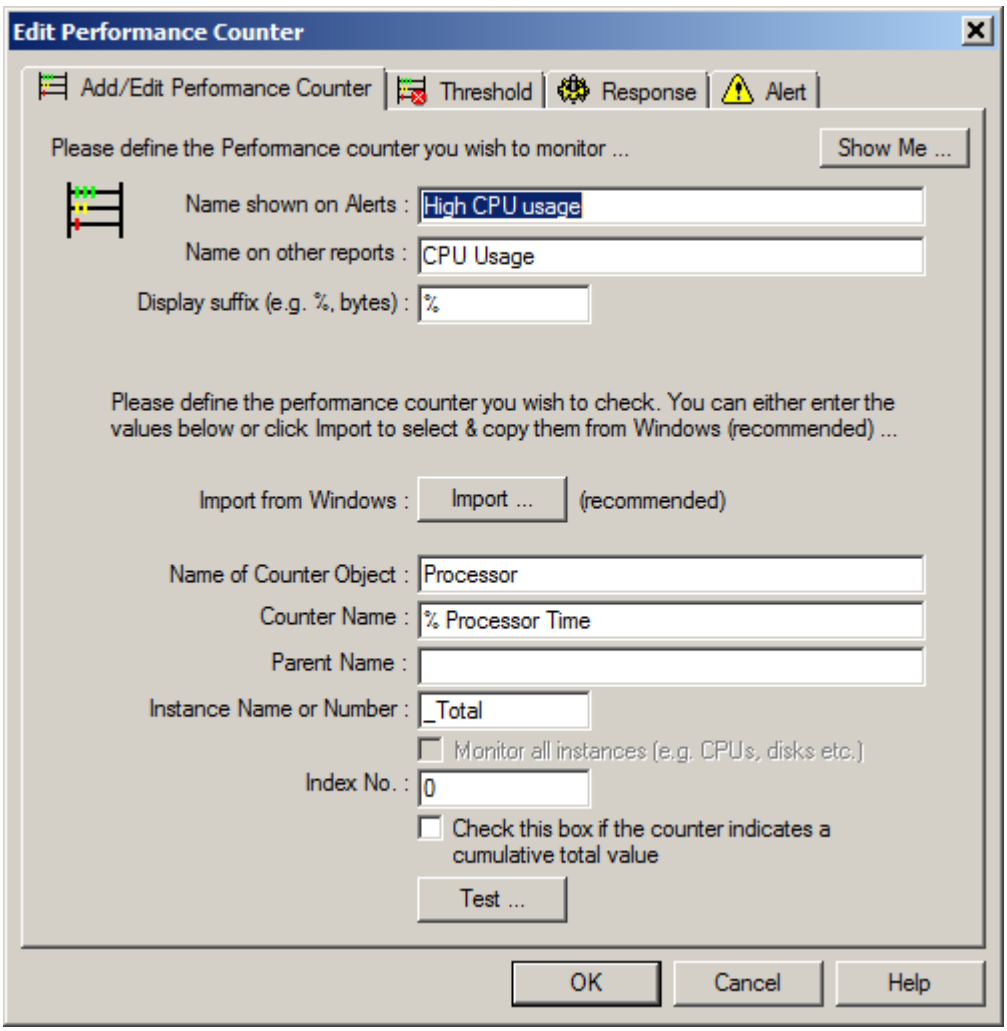
Click here for more information on running the Performance Setup Wizard.

Monitor Performance Data every (seconds)

This value specifies how often, in seconds Sentry-go should check performance counter values against the expected thresholds. Setting this value to 0 disables the monitoring of all counters.

Configuring Performance Counter Monitoring

To monitor a new performance counter, or edit an existing one, select the Add or Edit option from the main window. This window allows you to define the counter that will provide the value to be checked as well as the threshold value that it should be checked against.



From here you can either define or edit a performance counter or import it's definition from Windows (recommended).

Name shown on Alerts

This is the name that will appear when an alert is triggered. It is typically a phrase such as "High no. of XXXX detected".

Name on HTML Status Report

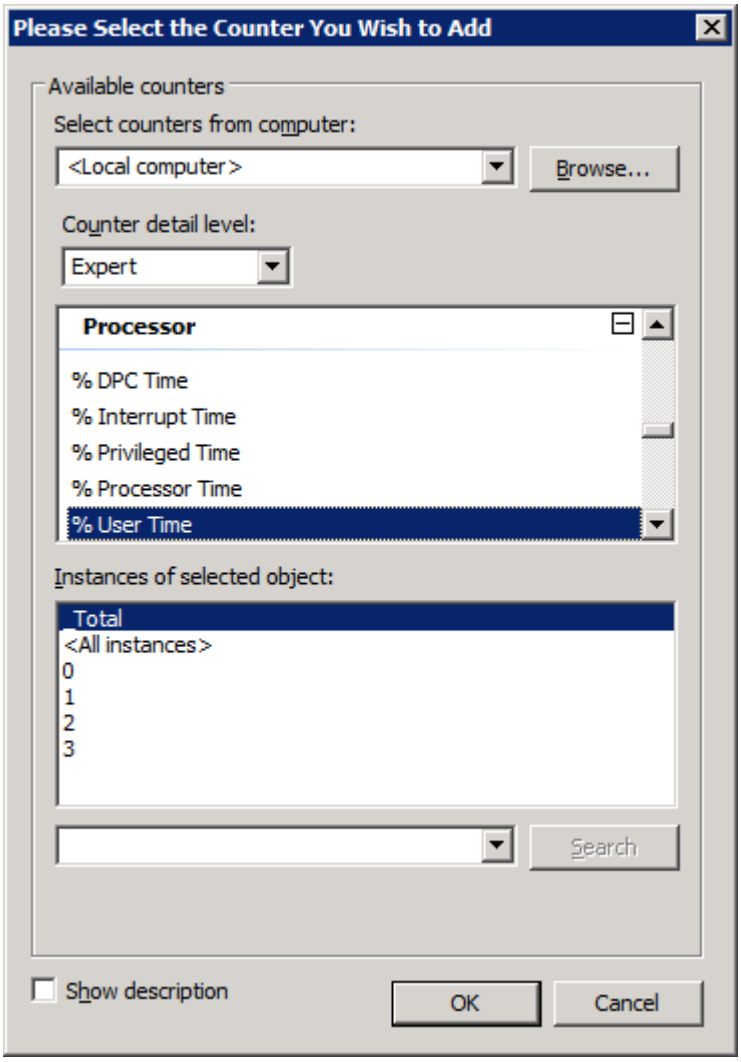
This is the name which will appear on the Current Status web report. It is typically the name of the counter - e.g. "No. XXXX" etc.

Display suffix

This is the suffix, if any that will appear on the Current Status web report. For example, %, sessions, bytes, bps etc.

Importing Counters from Windows (recommended) …

The easiest way of selecting an available counter is to select it from Windows. To do this, simply click the appropriate button to display the Windows Add Counter dialog as used by Windows Performance Monitor ...



For more information on an individual counter, click the “Explain” button, or tick the “Show description”. For more information on this specific dialog box, please refer to your Windows documentation.

Name of Counter Object

This is the name of the Performance Counter object you wish to monitor - as defined within Windows.

Counter Name

This is the name of the counter you wish to monitor - as defined within Windows.

Parent name

This is the name of the Parent object you wish to monitor - as defined within Windows.

Instance name or number

This is the instance name or number of the counter you wish to monitor - e.g. total, CPU 1, process name etc. Its value, if any is dependent on the information you wish to monitor. (See also 'Monitor All Instances' below)

Monitor All Instances

Some counters can concurrently be applied to multiple instances at the same time – e.g. counters relating to CPUs where multiple CPUs are available. By default only a single instance will be imported/added but you can tick this box to automatically replicate the check for each instance.

Instances must be numeric in order to automatically replicate the settings.

When added, the check will be duplicated for each instance found to be valid on the server. The instance number will be appended to the name of the check.

This option is only available when adding a new performance check.

Index number

This is the index number of the counter you wish to monitor - as defined within Windows.

If the counter indicates a cumulative total value, check this box

Check this option if the counter being monitored is a cumulative figure that simply increments as time passes (until the next Windows reboot). It allows the monitor to save current values and calculate the difference when performance counter data is retrieved.

If the value is an average value or a value retrieved within the sampling time, then this option should remain unchecked.

Testing Performance Counter Availability

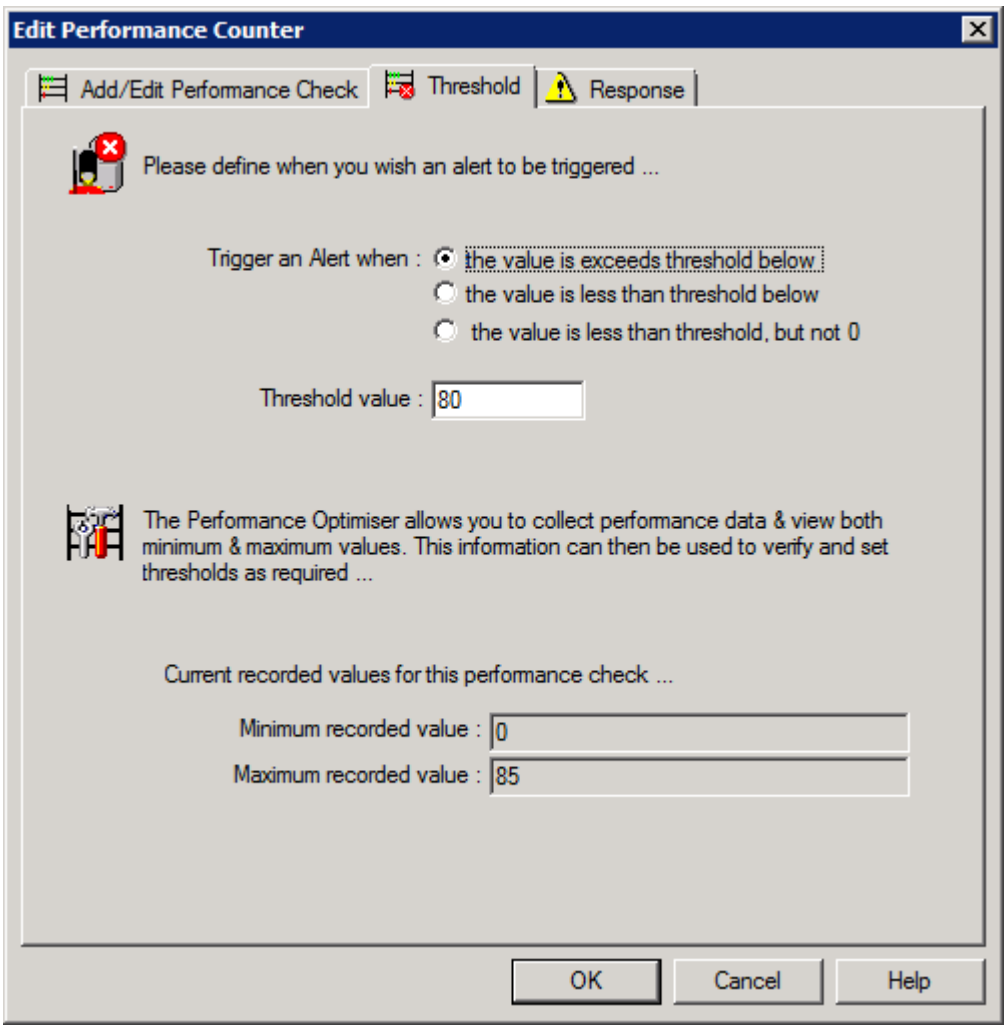
The availability of performance information depends on a number of factors including …

- The software installed on the target server
- The version of the software running
- The version of Windows on which the software is installed
- The current state of the software providing the data

To verify that a counter is valid on the server, click the “Test” button. This will request the monitor to verify the performance counter & display its results in a web page.

Setting the Threshold

The second tab allows you to specify the threshold against which the check will be made.



Setting the threshold is important as incorrect values may cause false alerts to be generated, or no alerts to be presented even though problems are occurring. You may need to adjust these values from time to time as your server's workload or role changes.

The Performance Optimiser can help track high/low values allowing you to perform trend analysis and set levels accordingly.

Trigger an Alert when ...

Select the option that matches the required test - i.e. when the monitor should trigger an alert. The threshold limit is defined below.

An alert can be raised if ...

- The value exceeds the threshold below
- The value is below the threshold below
- The value falls below the defined threshold but not 0

  This option is particularly useful when monitoring the rate at which something such as a network card is running (e.g. bytes per second). In this case, if the service is legitimately not performing any work, the rate will be zero, but is not an error. When work is required, a poor performing service will show a low rate, but usually higher than zero - thus triggering an alert.

Threshold Value

This is the numeric value against which the counter's runtime value will be compared to.

Minimum Recorded Value

If available, shows the lowest value recorded by the Performance Optimiser.

Maximum Recorded Value

If available, shows the highest value recorded by the Performance Optimiser.

Temporarily Ignoring a Configured Check

In some cases, you may wish to exclude a check from monitoring without removing it permanently. To do this, simply remove the "tick" or check against the entry you wish to ignore in the main list.

Configuring an Automatic Response

In the event an error is detected, an alert will be triggered. In this case, Sentry-go can be configured to either respond automatically (i.e. take action itself), alert one or more Administrators, or both.

To configure what the monitor should do in the event an error is detected, select the entry from the list and click Edit. On the resulting window, select the Response tab.

For more information on the options available as well as details on how to configure alerts & responses, see Sentry-go - Configuring Alert & Automatic Response Options.

The Performance Optimiser

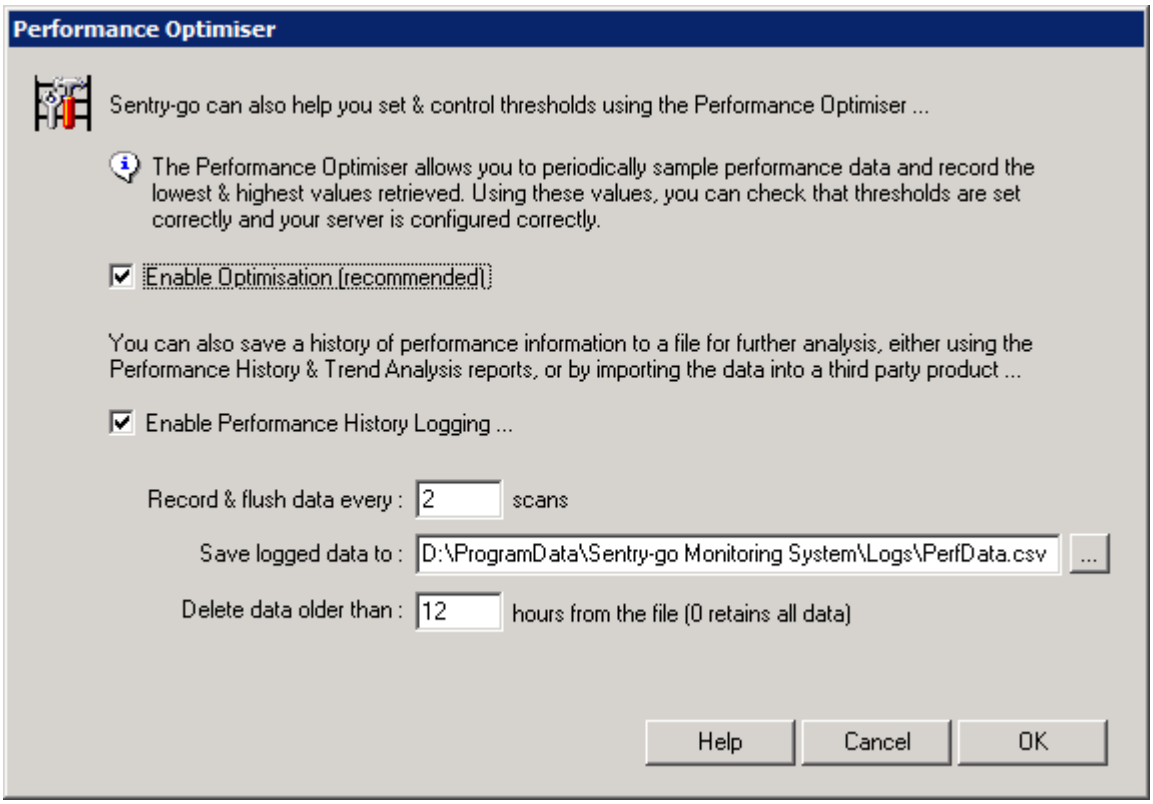
The Performance Optimiser is an option that can be enabled with the Performance Monitoring component. With it, Sentry-go will periodically record sample performance values. In particular these allow you to ...

- Record performance information over longer periods of time
- Automatically record details of the counters you wish to monitor
- Highlight the lowest & highest values recorded against current monitoring threshold, allowing thresholds to be updated and/or resources added if the server is found to be overloaded.

Data can be displayed as a web report & for trend analysis.

Once samples have been taken, you will have a series of base-line figures - the typical values encountered by the system. You can then use these figures as the benchmark threshold, allowing you to set the appropriate monitoring limits for alerting etc.

To access the Performance Optimiser settings click the “Optimiser …” button on the Performance tab …



Enable Optimisation

Tick this option to enable the optimiser within the Performance monitoring component on the server. Once enabled, details of high/low performance results will be monitored and recorded.

Enable Performance History logging

Tick this option to enable performance logging. When enabled, recorded performance data will be saved to a file, allowing trend analysis to be performed.

Record & flush data Every X scans

This option determines how often (in scans) the cached data is written from memory to the file. A typical value for this setting is 3.

Save Logged Data to

This is the name of the file in which logged data will be stored. Enter a fully qualified path or the file using the '…' button.

For performance and to ensure reliability, it is recommended that the file be stored locally.

The Performance Log & Trend Analysis web reports use the data stored here to display their results.

Delete data older than X hours

To conserve space and optimise system performance, the above file is periodically trimmed. When trimmed, data older than the value entered here will automatically be removed.

The higher this value, the longer data will be stored in the file.

The more often scans are performed & the higher this value, the larger the file will become.

To prevent data automatically being removed (not recommended), set this value to 0.

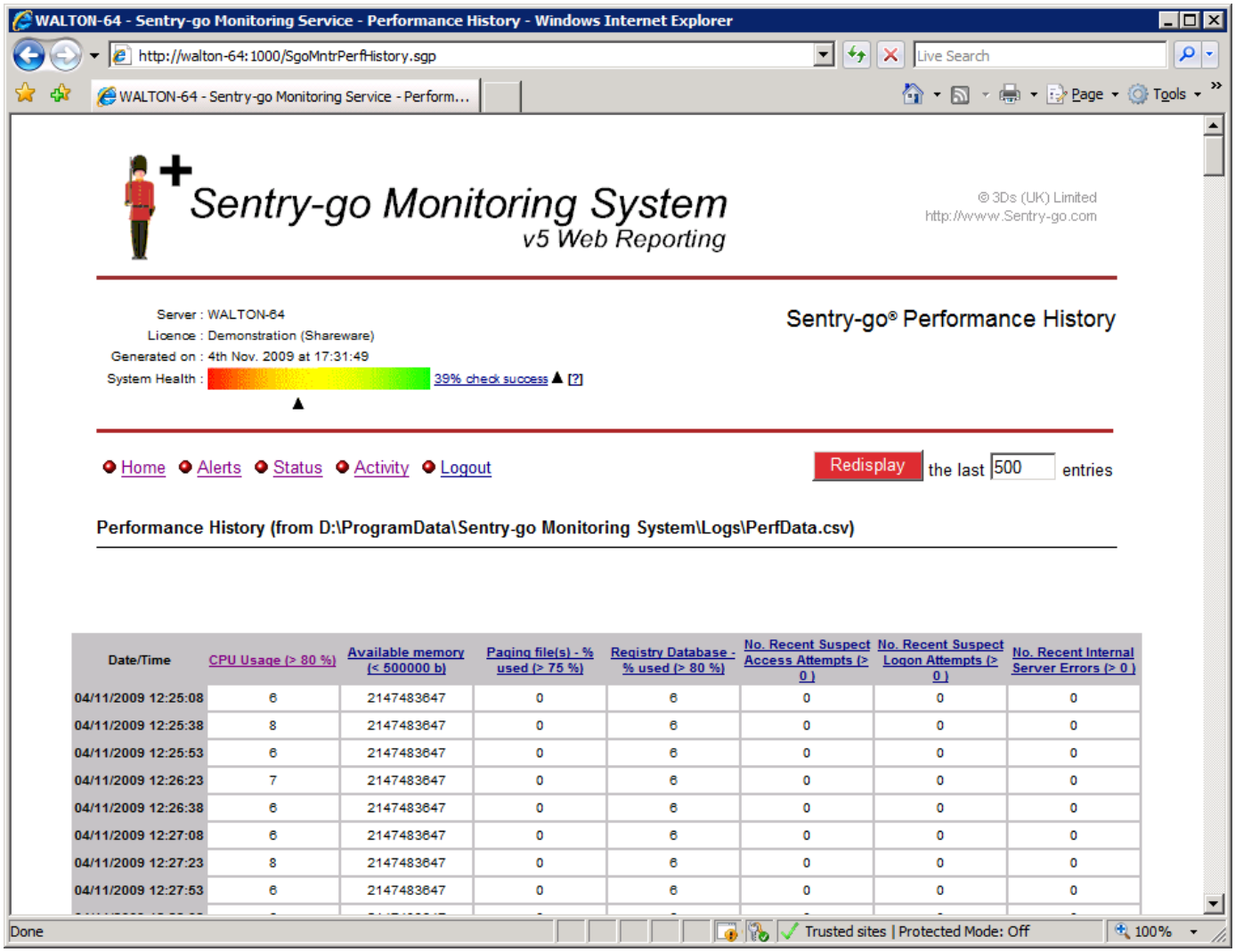
Web Reporting with this Monitoring Component

In addition to the standard Sentry-go web reports, this component provides the following additional reports. These can be accessed directly from the URL, or from the monitor's home page.

The Performance History Report

If performance logging is enabled, this report shows the latest saved values and is colour coded to show where they exceed the defined threshold. It also provides links to the Trend Analysis report where available.

Page URL: http://<Server Name>:<Port>/SgoMntrPerfHistory.sgp

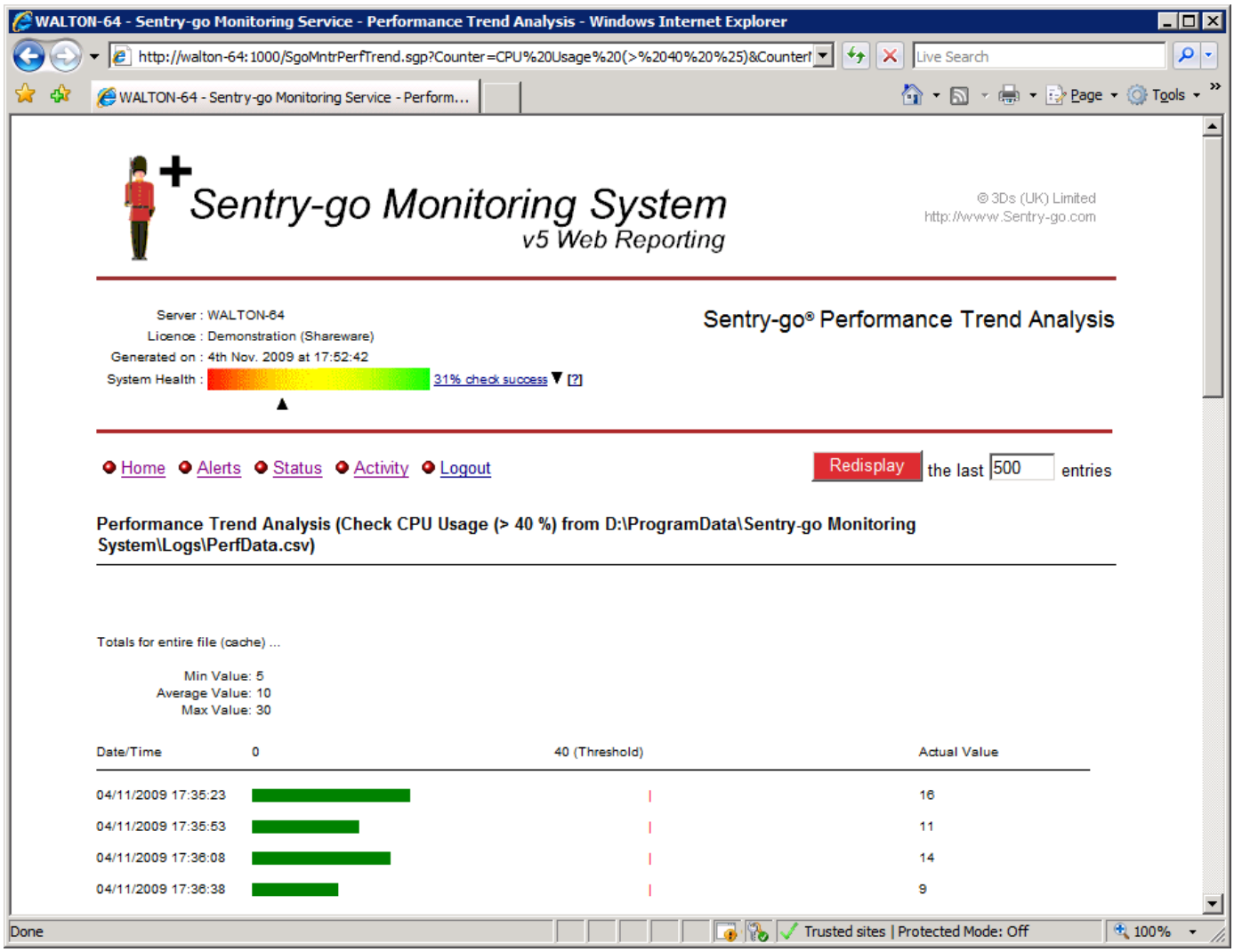


Date/Time	CPU Usage (> 80 %)	Available memory (< 500000 b)	Paging file(s) - % used (> 75 %)	Registry Database - % used (> 80 %)	No. Recent Suspect Access Attempts (> 0)	No. Recent Suspect Logon Attempts (> 0)	No. Recent Internal Server Errors (> 0)
04/11/2009 12:25:08	6	2147483647	0	6	0	0	0
04/11/2009 12:25:38	8	2147483647	0	6	0	0	0
04/11/2009 12:25:53	6	2147483647	0	6	0	0	0
04/11/2009 12:26:23	7	2147483647	0	6	0	0	0
04/11/2009 12:26:38	6	2147483647	0	6	0	0	0
04/11/2009 12:27:08	6	2147483647	0	6	0	0	0
04/11/2009 12:27:23	8	2147483647	0	6	0	0	0
04/11/2009 12:27:53	6	2147483647	0	6	0	0	0

The Trend Analysis Report

If performance logging & optimisation is enabled, this report shows the latest saved values for the given check and charts it against the given threshold. This allows you to see peaks as well as the performance of the counter over time.

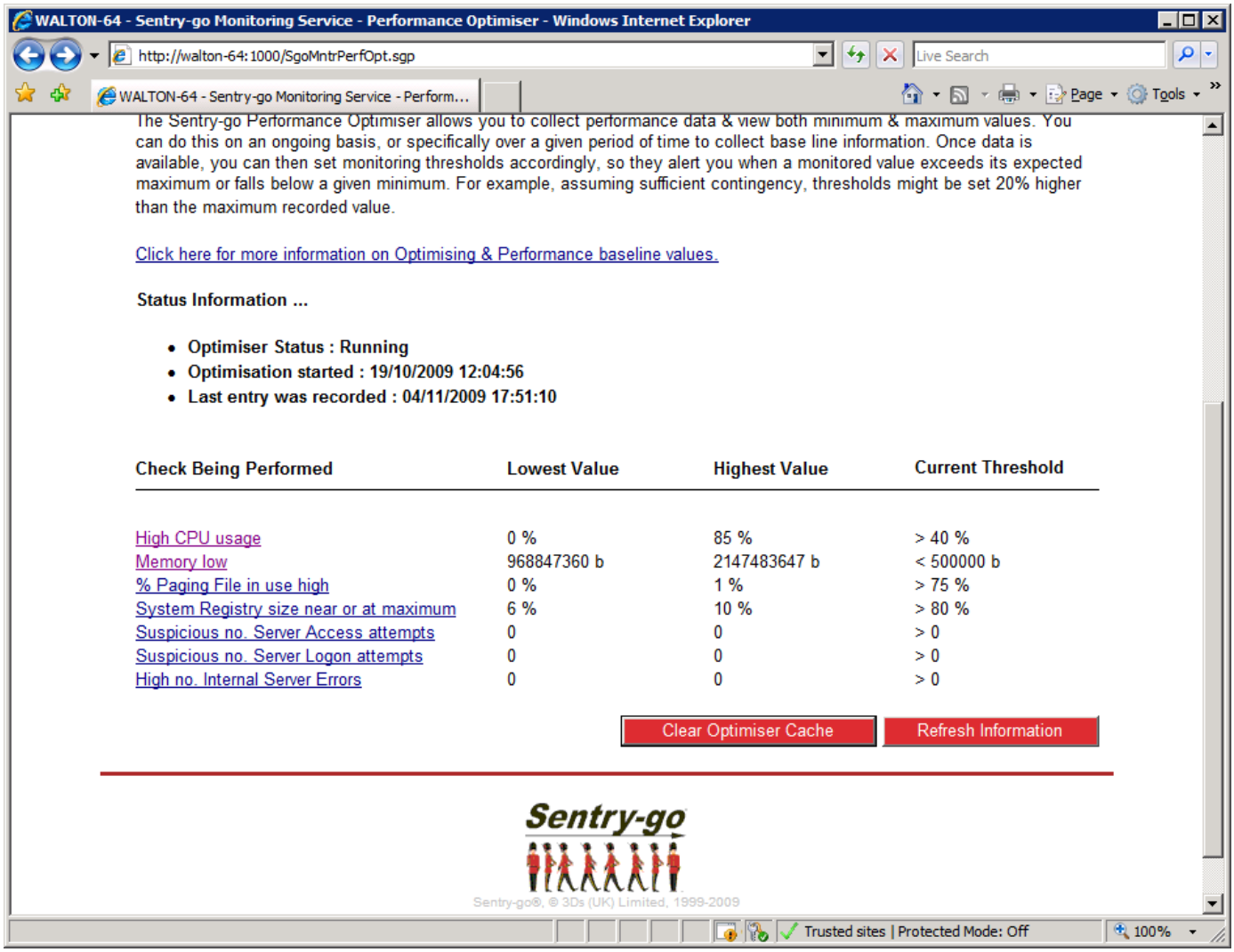
Page URL: Accessed from the Performance History & Performance Optimiser reports



The Performance Optimiser Report

This report shows the current status of the Performance Optimiser & the high/low values for each check being performed. The current cache of values can also be reset (cleared) from here.

Page URL: http://<Server Name>:<Port>/SgoMntrPerfOpt.sgp



More Information, Help & Support

More information can be found in the guides that accompany the Sentry-go software. You can also access the following resources …

- For the very latest information & product updates, please visit http://www.Sentry-go.com
- For sales advice, please e-mail Sales@Sentry-go.com
- For technical support, please e-mail Support@Sentry-go.com

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