Webserver Monitor Version 1.2 Manual

Byteplant GmbH

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Contents

Chapter 1

Realtime in-depth Webserver Monitoring

Businesses today increasingly rely on the availability of their webservers. With Webserver Monitor you can not only detect and analyze problems when they actually occur - continuous monitoring of your web server also enables you to discover problems long before they get serious. Webserver Monitor is designed to give you this knowledge: With Webserver Monitor, you will have detailed and *realtime* insight in what is happening:

- See if your webserver is available and fully functional at a glance.

- Find out about problems with your website before your visitors do.

- Watch visitors moving around your website and see the impact of changes in configuration or content in realtime.

- See how many unique visitors are currently browsing your website, or how many visitors are accessing a specific resource on your website, right now.

- See a chart of the network traffic generated by visitors browsing your website in the last minutes.

- See how often a resource was downloaded from your website.

- Track events and scenarios of special interest with customizable counters and charts.

Webserver Monitor already provides many predefined tables and statistics charts, and you can still add your own custom statistics and charts very easily.

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1.1 Benefits

This is why real-time web server monitoring with Webserver Monitor is indispensable:

- Increased profits - avoid losses caused by undetected problems on your webservers.

- Improve customer satisfaction by providing more reliable web services.

- Ease of use: Webserver Monitor is easy to set up and easy to use.

1.2 How Does It Work?

Webserver Monitor is an easy-to-use software for real-time logfile analysis and monitoring of Windows and Linux webservers. It provides you with detailed status information about your webserver by analyzing the logfiles in realtime. There is no need to change your existing website by page tagging or embedding any code.

The Webserver Monitor software package consists of two parts:

- You need to install the so-called *Logfeeder* agent on every webserver you want to monitor, to provide network access to your web server's log files. Log file access is encrypted and password-protected. The Logfeeder agent is available for both Windows®[1] and Linux platforms.

- Install the Webserver Monitor client on a Windows PC to view web server data. The Webserver Monitor client connects to Logfeeder agents worldwide to collect web server data, and generates charts and tables based on the data collected.

1.3 Overview

Installation procedures are covered in *Installation* (chapter 2). This chapter also describes the configuration of the Logfeeder agents.

Learn about the features of Webserver Monitor, and how to use them in *Monitoring* (chapter 3).

See *Licensing* (chapter 4) for ordering and license details.

Webserver Monitor support can be contacted by email to webmon@byteplant.com.

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[1]Windows is registered trademark of Microsoft Corporation

Chapter 2

Installation

The Webserver Monitor solution consists of two separate components:

- the Logfeeder Service (available for Windows and Linux servers)

- the Webserver Monitor Client

Both components can be downloaded from our website.

You need to install a Logfeeder Service on every web server you wish to monitor, and a Webserver Monitor client on every PC you want to use for collecting and analyzing log data.

2.1   Logfeeder Setup

There are two editions of the Logfeeder service available, one for Windows servers, and one for Linux/i386 servers. If you require support for other platforms, please contact us by email (support@byteplant.com).

2.1.1   Windows Logfeeder Setup

The Logfeeder setup features a standard Microsoft Windows®setup interface and you need only complete a few steps. You can cancel setup at any time by clicking the 'Cancel' button.

Double click `Logfeeder.exe` (or similar filename) file on either the distribution media or from the downloaded `.ZIP` file. This will launch the Logfeeder Setup Wizard.

Click 'Next' on the Welcome screen.

Read the Logfeeder license and click 'I accept' to agree with this license.

Choose a folder where Logfeeder should be installed. The setup program will suggest a default location. If you do not want to use the default location, you can browse for a specific directory in the provided input field (placing Logfeeder in a location other than the default will not affect the operation of the program). Unless your Logfeeder directory already exists (either the suggested, default directory or one of your choosing), the setup program will ask you if it can create that directory. Click "yes." If you want to change the location of the program, click 'No'. This will keep you on the directory screen to choose another location.

The next step is to decide upon the name of the Logfeeder "Program Group Name" that you will see in the Start Menu. Logfeeder suggests a default, but you can change that to whatever name you would like (changing the name of the Logfeeder program group will not affect the program operation in any way). After you have decided upon a name, click 'Next'.

Click on the 'Next' button to continue. Logfeeder will now install the program files and options. If there were no problems during installation (if you encounter problems during installation, please visit the Trouble Shooting section of this manual), you will see the Finish screen. From here you can launch the Logfeeder. If you don't want to launch Logfeeder, un-check the corresponding checkbox. Click the 'Finish' button when done.

After that, the Logfeeder Admin Wizard will be started automatically. It guides you through the Logfeeder configuration. In the first step the IP address and Port Logfeeder listens on have to be configured:
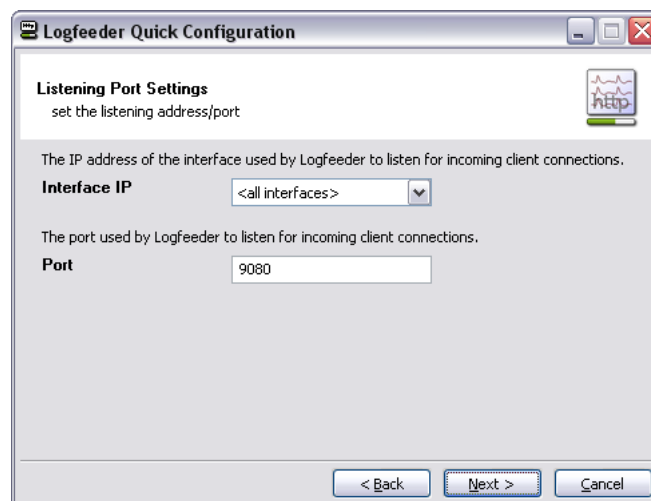

Figure 2.1: Logfeeder Admin Wizard

On the next page, you have to specify the path to your web server's logfiles and a pattern for the logfiles itself:

The next page lets you change the password to access the feeds on this server. It is
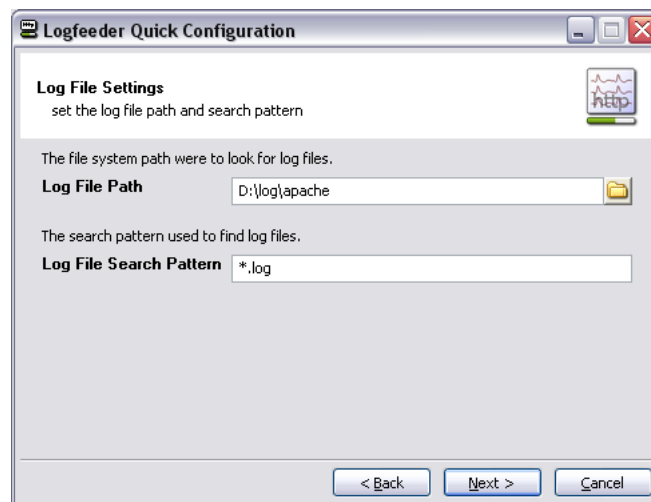
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Figure 2.2: Logfeeder Admin Wizard

recommended to leave this unchanged when setting up Webserver Monitor for the first time. It can be changed later at any time.

On the final page, the Logfeeder Windows Service is (re-)started to apply the configuration changes you made.

Figure 2.3: Logfeeder Admin Wizard

2.1.2 Linux Logfeeder Setup

The Logfeeder Linux Edition is available as a compressed tar archive (`.tgz` file). To install, follow these steps:

1. Unpack the logfeeder.tgz archive to a directory of your choice.

2. You can use the shell script `logfeeder` (provided with the distribution files) to start and stop the logfeeder daemon (`logfeederd`). Edit the first lines of this script to reflect your installation path.

3. Logfeeder by default binds to the port 9080 of all network interfaces. You can override the default setting by editing the configuration file (`logfeeder.cf`).

4. By default, Logfeeder monitors all *.log files in the /var/log/apache subtree:

   ```
   DocumentRoot="/var/log/apache"
   SearchPattern="*.log"
   ```

   If your logfiles are saved elsewhere, please edit `logfeeder.cf` to reflect your setup. When in doubt, check Apache's config file (usually `/etc/httpd.conf`).

5. Start Logfeeder by entering `./logfeeder start`. To stop the logfeeder daemon, use `./logfeeder stop`.

Whenever you change the configuration file, you need to restart the daemon to use the new settings. You can do this by running `./logfeeder restart`.

In usual Apache web server installations, the log files are not readable from normal user accounts. For this reason make sure that the account you use for the Logfeeder can access the log files, or run the logfeeder daemon with `root` privileges.

To run `logfeederd` automatically on system boot, edit the system startup configuration. For debian Linux, copy the `logfeeder` script to `/etc/init.d`, and use the `update-rc.d` command to make logfeeder start/stop automatically.

2.1.3 Logfeeder Troubleshooting

After installing Logfeeder you should make sure that it is able to accept connections on port 9080 (or the incoming port you configured). The best way to test this is to use `telnet` on the Windows PC you want to use as monitoring client:

```
telnet <Logfeeder-Host> <Logfeeder-Port>
```

If the connection can not be established, please check if

- the firewall on your web server allows incoming connections on port 9080

- the firewall on your client PC allows outgoing connections to port 9080 of your web server

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- the Logfeeder service is running (using e.g. "ps ax" on Linux, or the services manager on Windows)

- if you changed the default password, make sure you use the same password in both the Logfeeder service and the Webserver Monitor client.

2.2   Webserver Monitor Setup

The Webserver Monitor setup features a standard Microsoft Windows®setup interface and you need only complete a few steps. You can cancel setup at any time by clicking the 'Cancel' button.

Double click `WebserverMonitor.exe` (or similar filename) file on either the distribution media or from the downloaded `.ZIP` file. This will launch the Webserver Monitor Setup Wizard.

Click 'Next' on the Welcome screen.

Read the Webserver Monitor license and click 'I accept' to agree with this license.

Choose a folder where Webserver Monitor should be installed. The setup program will suggest a default location. If you do not want to use the default location, you can browse for a specific directory in the provided input field (placing Webserver Monitor in a location other than the default will not affect the operation of the program). Unless your Webserver Monitor directory already exists (either the suggested, default directory or one of your choosing), the setup program will ask you if it can create that directory. Click "yes." If you want to change the location of the program, click 'No'. This will keep you on the directory screen to choose another location.

The next step is to decide upon the name of the Webserver Monitor "Program Group Name" that you will see in the Start Menu. Webserver Monitor suggests a default, but you can change that to whatever name you would like (changing the name of the Webserver Monitor program group will not affect the program operation in any way). After you have decided upon a name, click 'Next'.

Click on the 'Next' button to continue. Webserver Monitor will now install the program files and options. If there were no problems during installation (if you encounter problems during installation, please visit the Trouble Shooting section of this manual), you will see the Finish screen. From here you can launch the Webserver Monitor. If you don't want to launch Webserver Monitor, un-check the corresponding checkbox. Click the 'Finish' button when done.

2.3   Supported Log File Formats

Webserver Monitor supports the following log file formats:

- Common Log Format (CLF)

- Common Log Format with Virtual Host

- NCSA extended/combined log format

The Apache webserver uses the NCSA extended/combined log format by default. If your web server runs IIS, you may need to change the log file format to a supported format.

2.4   Uninstall

When uninstalling the Webserver Monitor client or a Logfeeder Service, do not forget to undo any changes you might have made in your firewall configuration.

Both Webserver Monitor and Logfeeder can be uninstalled in one of two ways.

2.4.1   Using the Uninstall Start Menu Item

This program is located in the Webserver Monitor/Logfeeder program group (the program group name may be different if you chose another name during setup). You can access it through the Start menu: Find and select 'Uninstall Webserver Monitor' to run the uninstall program.

You will be asked if you want to "completely remove Webserver Monitor (Logfeeder) and all of its components." Click 'Yes' to continue with the de-installation or "No" to cancel. If you click 'Yes', all installed files will be removed, any configuration files you created will be preserved. If removal was successful, a "success" message will appear (if you encounter problems during de-installation, please visit the Trouble Shooting section of this manual). Click okay to close this message. Webserver Monitor (Logfeeder) is no longer installed on your computer.

2.4.2   Using The Microsoft Windows Control Panel

Select 'Add or Remove Programs' icon and then Webserver Monitor (Logfeeder). This will launch the Webserver Monitor (Logfeeder) uninstall program. Follow the process as described in the *previous section* (section2.4.1).

Chapter 3

Monitoring Webservers

The Webserver Monitor main view is divided in two subwindows. To the left you see the logfeeds Webserver Monitor is currently monitoring, and the views available for these feeds. Click on a view to select it. The right part of the window displays the selected view.

The buttons on top of the left subwindow allow to add and remove logfeeds, or custom statistics. Another button can be used to reset all Webserver Monitor's statistics counters.

To monitor a web server, you have to add a logfeed first. The procedure is explained in the next section.

3.1   Setting Up a New Logfeed

To add a logfeed, choose *Add* from the Logfeeds menu, or press the *Add Logfeed* button.

The view on the right side of the main window will be replaced with the *Add Logfeed* dialog.

To add a logfeed, you have to enter three values first:

- the server's IP address (or hostname)

- the listening port of the Logfeeder agent

- the Logfeeder password

These settings must be the same values you used in the Logfeeder agent setup.

To continue, press the *Show Logfiles* button. This will display log files available from this Logfeeder agent in the window below. You can now choose one of the
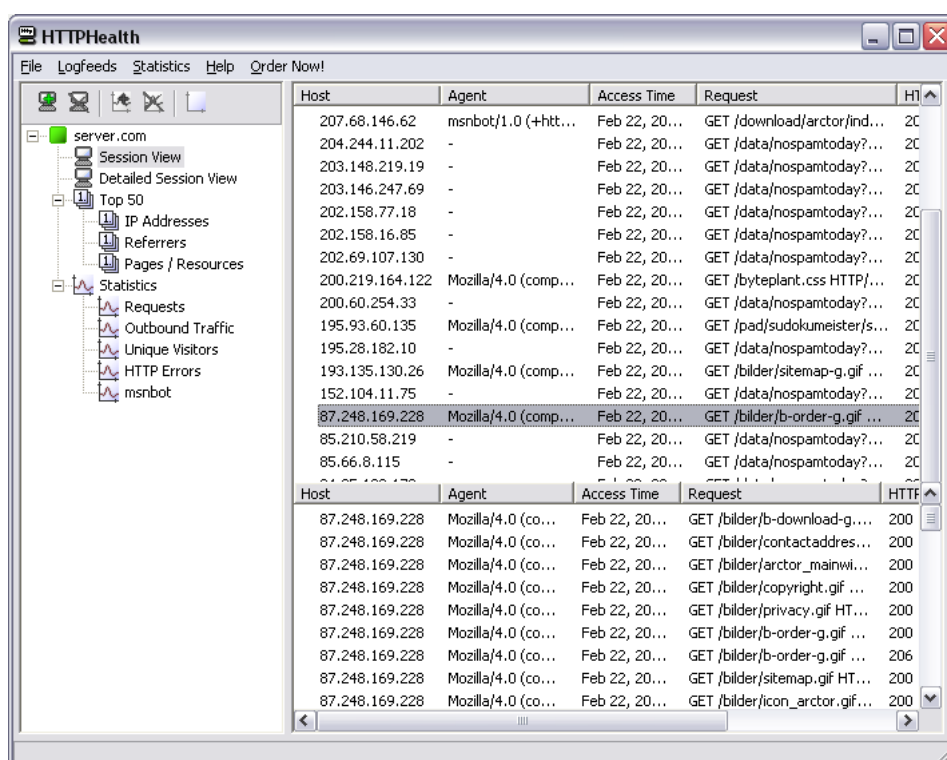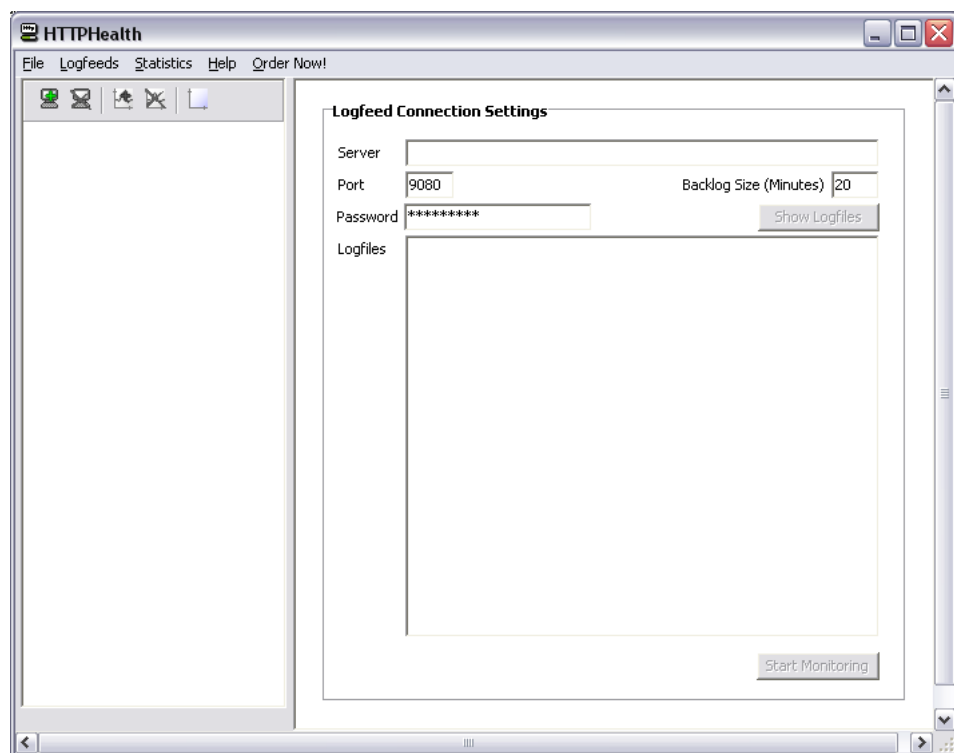
Figure 3.1: Webserver Monitor Main View

Figure 3.2: Adding a Logfeed

log files for monitoring, and press *Start Monitoring*. After this, Webserver Monitor will begin to collect and display data of this logfeed.

Tips and Tricks

- If you want to monitor more than one log file on a server, you can add multiple connections to the same server, choosing a different log file every time.

- The backlog time setting controls the time (in minutes) how long http session information is kept in memory for display purposes. On busy servers, you may want to reduce this time.

3.2   Session View and Detailed Session View

The session view displays what resources are accessed by which users. Each unique visitor to your website is represented by a one line entry in the table. In the default sort order, the most recently active visitor is on top.

The detailed session view shows all HTTP requests to a server, with the latest request on top of the table.

The session views display can be changed using the mouse.

- You can change the column width by dragging the separators of the column descriptions.

- Click a column description to sort the table by this column, clicking a second time reverses the sort order.

- Double-clicking a line opens a detailed session subview, showing only HTTP requests done by a specific visitor.

- You can bring up a context menu with the right mouse button. For the IP address associated with the currently selected line, you can either view geographical location information for this IP address in your web browser or the detailed session subview.

Tips and Tricks

- A green square appearing in the *Host* column indicates that the associated visitor was sending requests within the last 5 seconds.

- If you want to know the country where a visitor is from, you can bring up a context menu with the right mouse button. For the IP address associated with the currently selected line, you can view geographical location information for this IP address in your web browser.

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Figure 3.3: Webserver Monitor Session View

- Session views allow very complex sorting configurations. If you want, for example, to sort by virtual host, and within a virtual host by HTTP request, click the HTTP request column first, and then the virtual host column.

- If you misconfigured the session view, you can get back to sane values by restarting Webserver Monitor. This restores dafault column widths and sort order.

3.3   Top 50 Views

These views provide insight about which visitors were the most active recently, which resources (web pages) were requested most often, and which websites referred visitors to your site most often.
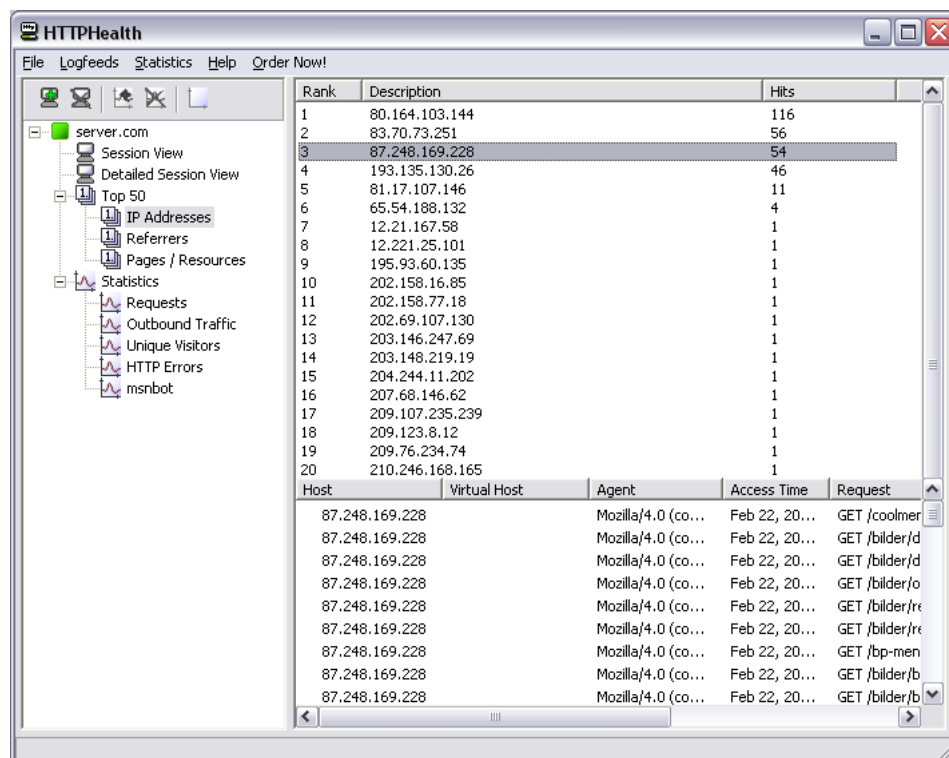

Figure 3.4: Webserver Monitor Top50 IP Addresses View

Tips and Tricks

- Double-clicking a line opens a detailed session subview, showing only matching HTTP requests.

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- In this session subview, you can bring up a context menu to open the request or the referrer URL in your web browser.

- In the *Top50 IP Addresses* View you can bring up a context menu with the right mouse button. For the IP address associated with the currently selected line, you can either view geographical location information for this IP address in your web browser or the detailed session subview.

3.4   Chart Views

Webserver Monitor by default offers these statistics charts:

- Requests: counts incoming HTTP requests

- Outbound Traffic: counts the Outbound Traffic

- Unique Visitors: counts all unique IP/Agent pairs

- HTTP Errors: counts all HTTP errors and gives you a detailed view of the last 10 HTTP errors that occurred.

In the chart view, you can switch between logarithmic and linear display. The 5 minute average setting can be used to smoothen the chart.

In the default setting, the charts cover the last 20 minutes of server activity. This can be changed by using a different back log time when creating a logfeed.

Additionally, each chart has a *Total* counter in its upper right corner showing the cumulated count. You can reset all counters by hitting the rightmost button on top of the left subwindow to reset all Webserver Monitor's statistics counters.

3.5   Adding Custom Statistics

Custom statistics allow you to watch for specific events in the webserver log. A custom statistics setting consists of two parts: a symbolic name (which will be used as the caption in the left window), and a regular expression, describing the log file entries that should be counted. To add a statistic to a Logfeed, please select a Logfeed first and then click on the "Add Statistics Graph" icon in the toolbar or select "Add" from the "Statistics" menu.

Custom statistics can be put to use in manifold ways.

An example are the spiders used by search engines to index web content. These spiders usually identify themselves in the *Agent* field of the HTTP request, which is duly logged by your webserver.

So a regular expression like this can be used to summarize the traffic caused by the Google spider (which identifies itself as "msnbot"):
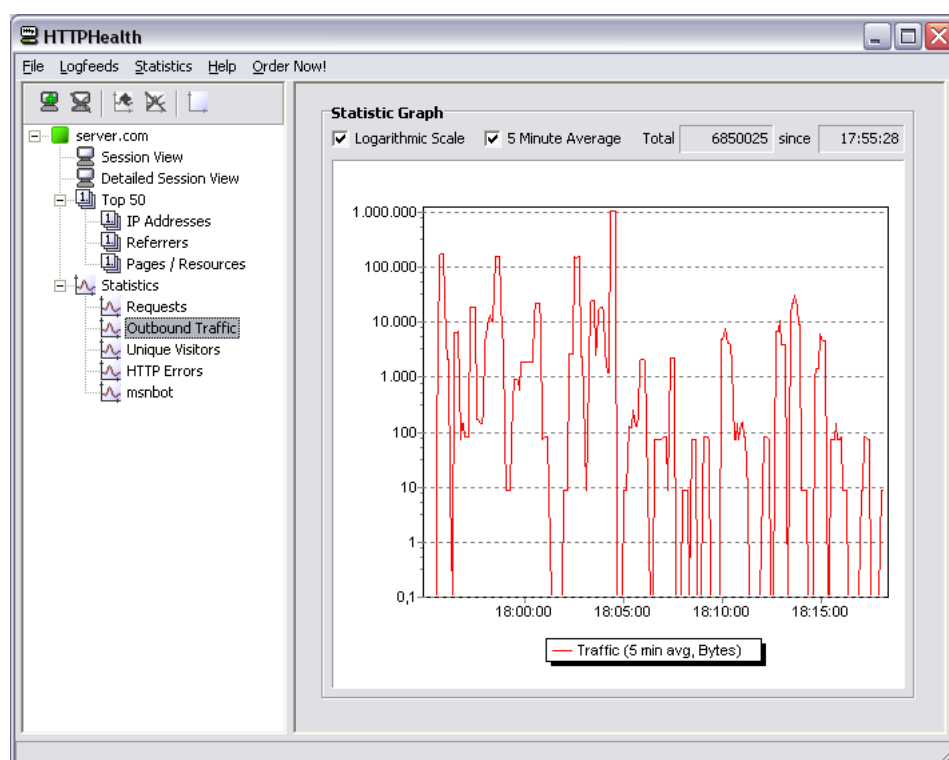
Figure 3.5: Outbound Traffic View showing 5 min averages

```
msnbot
```

Please note that this example requires that your webserver uses the NCSA extended/combined log format.

The following regular expression can be used to count the times when Google indexes your site:

```
Googlebot
```

You can reset all statistics counters by clicking the "Reset All Statistics" icon in the toolbar or selecting the corresponding entry from the "Statistics" menu. Any custom statistics can be deleted by selecting the statistics graph in the left window and hitting the "Del" key or by clicking the "Delete Statistics Graph" icon in the toolbar.

Tips and Tricks

- To the uninitiated, regular expressions can look like so much tty noise. However, it is just nothing but a more versatile form of wild card character matching, known from command shells. The ? wildcard (any character) has an regular expression equivalent of ., and * wildcard (any number of any character) has an equivalent of .*. For more advanced topics, consult one of the many regular expression resources in the Internet, for example the Wikipedia.

- While the examples above work with all log file formats, more advanced regular expressions may depend on the log file format used by the web server.

Chapter 4

Licensing and Contact Information

4.1 Ordering Webserver Monitor

Prices for Webserver Monitor start at EUR 39.- (USD 49.-). For the latest pricing information, please visit our online shop.

Webserver Monitor is distributed online electronically and shipped on CD-ROM, if requested. Please visit our online shop to place your order online. Ordering online and paying by credit card is by far the fastest way to order: Your license key is usually delivered in a matter of minutes.

If you do not want to order online using your credit card, we offer a variety of alternative ordering methods. Please visit our online shop to find out more.

4.2 Support

A purchase of Webserver Monitor includes free email support. Please write to us at webmon@byteplant.com. We will also try to help you with the Trial version of Webserver Monitor if we can.

Contact us for information regarding other support options by email to webmon@byteplant.com

For the latest version always check the Webserver Monitor download page.

Byteplant offers consulting and the development of custom software. Please inquire by email to support@byteplant.com.

4.3   Copyright

Webserver Monitor is copyright ©by Byteplant GmbH

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Company Homepage: http://www.byteplant.com

4.4   License and Usage Terms

For payment of the license fee the licensee is granted one (1) non-exclusive, non-transferable license to install and use Webserver Monitor on one (1) computer at a time or install Webserver Monitor on one (1) computer to be used by multiple users. It is expressly forbidden to install Webserver Monitor for use on multiple computers without paying additional license fees. The licensees warrant that they will make a reasonable effort to remove unused licenses of Webserver Monitor.

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