

www.apacheviewer.com



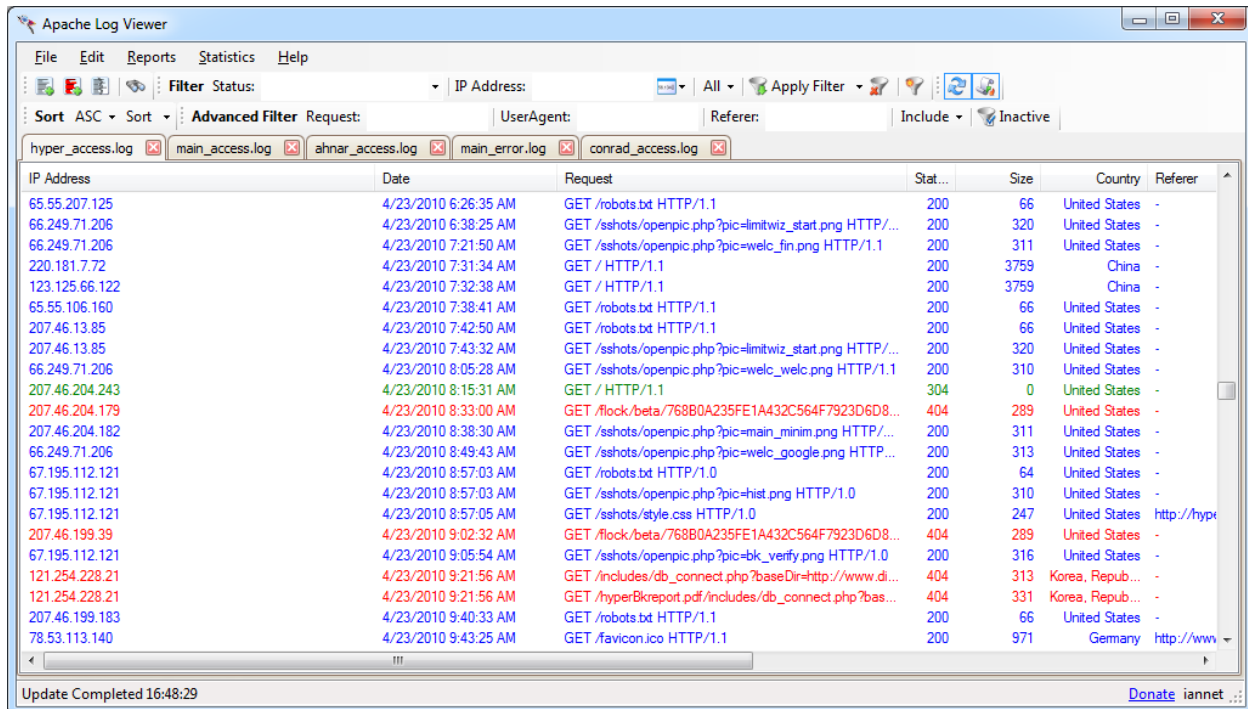
Apache Logs Viewer Manual

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1. Introduction

Welcome to Apache Logs Viewer, the free tool that will help you analyze and monitor your apache or IIS log files. Apache Logs Viewer has a number of features which makes it quite a powerful tool, namely Filters, Search functionality, Reports and Statistics. Throughout this manual each of these features will be explained in detail so that you can get the most out of Apache Logs Viewer.



The screenshot shows the Apache Log Viewer application window. The main area displays a table of log entries. The table has the following columns: IP Address, Date, Request, Stat..., Size, Country, and Referrer. The data is sorted by IP Address in ascending order. The status codes are color-coded: 200 (green), 404 (red), and 304 (yellow). The status codes 404 and 304 are truncated in the 'Stat...' column.

IP Address	Date	Request	Stat...	Size	Country	Referrer
65.55.207.125	4/23/2010 6:26:35 AM	GET /robots.txt HTTP/1.1	200	66	United States	-
66.249.71.206	4/23/2010 6:38:25 AM	GET /sshots/openpic.php?pic=limitwiz_start.png HTTP/...	200	320	United States	-
66.249.71.206	4/23/2010 7:21:50 AM	GET /sshots/openpic.php?pic=welc_fin.png HTTP/1.1	200	311	United States	-
220.181.7.72	4/23/2010 7:31:34 AM	GET / HTTP/1.1	200	3759	China	-
123.125.66.122	4/23/2010 7:32:38 AM	GET / HTTP/1.1	200	3759	China	-
65.55.106.160	4/23/2010 7:38:41 AM	GET /robots.txt HTTP/1.1	200	66	United States	-
207.46.13.85	4/23/2010 7:42:50 AM	GET /robots.txt HTTP/1.1	200	66	United States	-
207.46.13.85	4/23/2010 7:43:32 AM	GET /sshots/openpic.php?pic=limitwiz_start.png HTTP/...	200	320	United States	-
66.249.71.206	4/23/2010 8:05:28 AM	GET /sshots/openpic.php?pic=welc_welc.png HTTP/1.1	200	310	United States	-
207.46.204.243	4/23/2010 8:15:31 AM	GET / HTTP/1.1	304	0	United States	-
207.46.204.179	4/23/2010 8:33:00 AM	GET /flock/beta/768B0A235FE1A432C564F7923D6D8...	404	289	United States	-
207.46.204.182	4/23/2010 8:38:30 AM	GET /sshots/openpic.php?pic=main_minim.png HTTP/...	200	311	United States	-
66.249.71.206	4/23/2010 8:49:43 AM	GET /sshots/openpic.php?pic=welc_google.png HTTP...	200	313	United States	-
67.195.112.121	4/23/2010 8:57:03 AM	GET /robots.txt HTTP/1.0	200	64	United States	-
67.195.112.121	4/23/2010 8:57:03 AM	GET /sshots/openpic.php?pic=hist.png HTTP/1.0	200	310	United States	-
67.195.112.121	4/23/2010 8:57:05 AM	GET /sshots/style.css HTTP/1.0	200	247	United States	http://hypr...
207.46.199.39	4/23/2010 9:02:32 AM	GET /flock/beta/768B0A235FE1A432C564F7923D6D8...	404	289	United States	-
67.195.112.121	4/23/2010 9:05:54 AM	GET /sshots/openpic.php?pic=bk_verify.png HTTP/1.0	200	316	United States	-
121.254.228.21	4/23/2010 9:21:56 AM	GET /includes/db_connect.php?baseDir=http://www.d...	404	313	Korea, Repub...	-
121.254.228.21	4/23/2010 9:21:56 AM	GET /hyperBkreport.pdf/includes/db_connect.php?bas...	404	331	Korea, Repub...	-
207.46.199.183	4/23/2010 9:40:33 AM	GET /robots.txt HTTP/1.1	200	66	United States	-
78.53.113.140	4/23/2010 9:43:25 AM	GET /favicon.ico HTTP/1.1	200	971	Germany	http://www...

Figure 1 Apache Log Viewer Main Window

2. Installation

Apache Logs Viewer can be installed on any Windows system provided that you have Microsoft .NET Framework v2.0 or later installed (<http://www.microsoft.com/net>). This is already installed on Windows Vista/2008 and Windows 7. On Systems such as Windows XP and Windows 2003 you need to download it and manually install it before you can continue with the Apache Logs Viewer installation.

If you are unsure if this is already installed the setup will prompt you and open the website for you to download this component from Microsoft website.

Hardware Requirements:

- 1 (GHz) or faster 32-bit (x86) or 64-bit (x64) processor
- 512 MB RAM or more
- 30 MB available hard disk space

To complete the installation please follow the setup and press *Finish* to finalize the installation. Once done you can open Apache Logs Viewer from the start menu.

3. Using Apache Logs Viewer

3.1 Apache Log Files

There are two types of Apache Log files: access and error logs. Apache Log Viewer is used to analyze the access log files since they contain the most important information, i.e. client requests to the web server.

Access logs are normally formatted in two common ways: Common and Combined. Below you can see detailed information on each log format and what data it contains.

- Common log format

This log format includes the basic information that is required to identify the host and the request. It is normally displayed as this:

```
%h %l %u %t \"%r\" %>s %b
```

%h	IP Address of client (remote host)
%l	Identd of client (normally unavailable)
%u	User id of user requesting object
%t	Time of request
%r	Full request string
%>s	Status code
%b	Size of request (excluding headers)

- Combined log format

This log format contains the information available in the common log format but it also includes the referrer information and the browser information.

```
%h %l %u %t \"%r\" %>s %b \"%{Referer}i\" \"%{User-agent}i\"
```

%{Referer}i	The previous webpage
%{User-agent}i	The Client's browser

Apache Logs Viewer accepts both of these log formats. To add a new log file click the Add log button from the main toolbar this can be seen below.



Figure 2 Main Toolbar

This toolbar has 4 buttons the Add Access log button, Add Error log button, the Split Log button and the Find Button.

3.1.1 Open Apache Access Log File

When you open a new log from the 'Add Access Log' button in the main toolbar you can select what log format you should use.

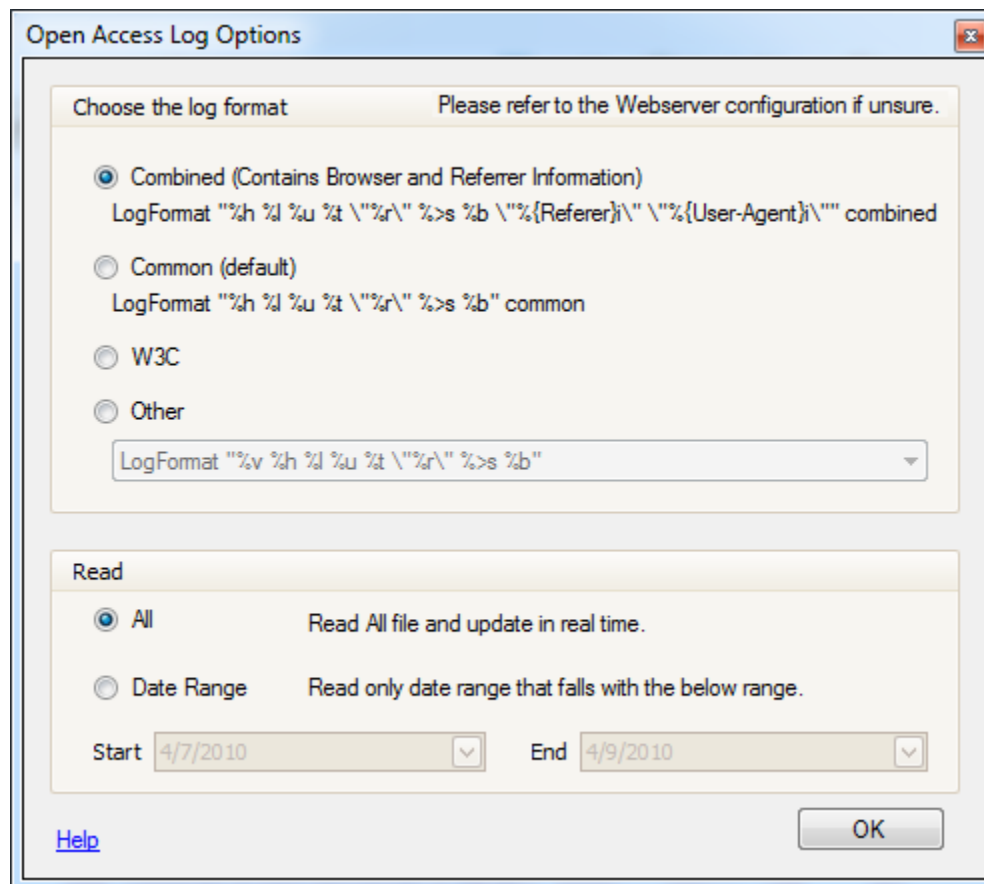


Figure 3 Add Access Log - Selecting the Log Format

The window shown above will be shown after you select the log file. In the top section you can choose the format (common/combined). If common is selected then it is assumed that the log file does not contain referrer and user agent information. On the other hand if combined is selected then the log file would contain referrer and user agent information.

For other different formats you can select the *Other* radio button and choose the respective format from the drop down list.

If common is selected and the log file is in combined format Apache Log Viewer will still load the file correctly but the referrer and user agent information will be missing.

In the lower section you can specify if the whole file will be read or just a section of it. This is particularly useful if the log is very large. Specify the date range and Apache Logs Viewer will load only that part.

Note: You can add even log files that are in use by the apache server, making Apache Logs Viewer ideal to monitor the log file in real time and generate real time data on the fly.

3.1.2 Open Apache Error Log File

Another type of Apache log file is the error log file. This file will contain errors that apache will meet while servicing requests. In most cases a line in the error log will have the equivalent entry in the access log.

3.1.3 Open IIS Access Log File

IIS uses two common formats which are supported by Apache Logs Viewer. These are the:

- NCSA format
- W3C format

Please refer to your IIS configuration to determine which format you have. The NCSA format is the identical to the Apache Logs Viewer Common format.

3.2 Log Lines

When you open a log file the log will be read and each entry will be displayed in the Apache Logs Viewer window.

Log lines are identified by a distinct color depending on the status code for access log files and error codes for error log files. The default colors are shown below. These can be changed from the settings panel.

Access Log Lines Colors:

Color	Status Code	Description
Grey	100 - 199	Informational
Blue	200 - 299	Successful
Green	300 - 399	Redirection
Red	400 - 499	Client Error
Orange	500 - 599	Server Error

Error Log Lines Colors:

Color	Error Description
Red	Emergency
Orange	Warning
Dark Red	Alert
Violet	Notice
Light Violet	Critical
Green	Information
Dark Red	Error
Black	Debug

3.3 Log File Split

If a log file is very large then it is possible to split it up into smaller files to make processing easier. Once split, the files on disk can be opened individually in Apache Logs Viewer. The original file is left intact as new files are always created.

You can split both access and error logs using any of the following two methods:

- by size
- by time (days or months)

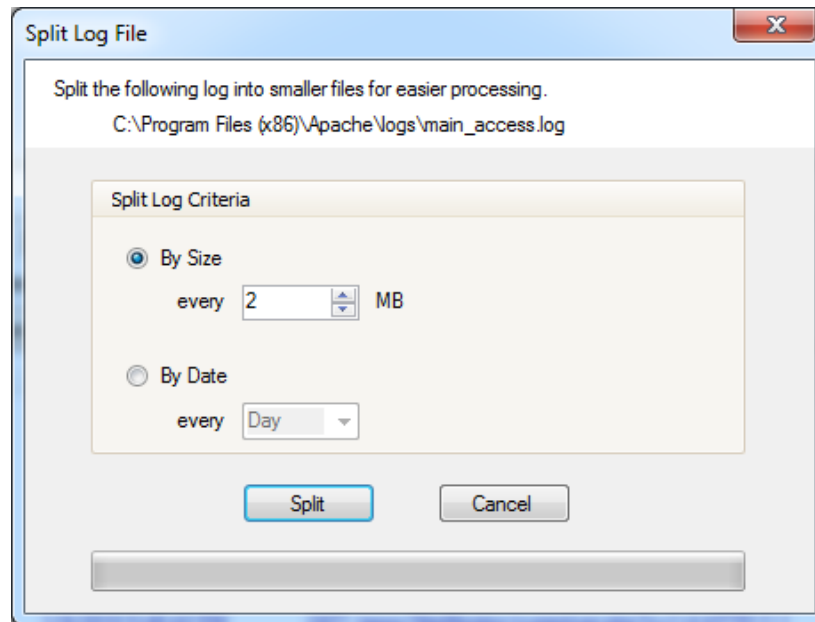


Figure 4 Split Log File Options Window

To split a file click on the 'Split Log File' button in the toolbar and select the file to split. Then you will be prompted with the window shown above so as to select the split parameters. Click on *Split* to start the file split operation. The resultant files will be found in the same directory where the original file is.

3.4 Filters

Apache Logs Viewer lets you filter either by IP Address, by Status code or by both. Start by selecting a status code from the drop down list. You can either select a specific code or else you can select a range of codes denoted by two subsequent 'xx' like 4xx which will take all 401 and 404 errors. At the end of the list there is also a specific code named 'none' which will match all codes.

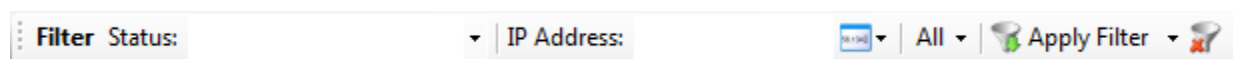


Figure 5 Filter toolbar

You will then need to select if you want to include or exclude this code and the IP Addresses. Basically 4 (four) filter modes exist. These are:

- Include Both (IP and Status Code)
- Exclude Both (IP and Status Code)
- Include IP Exclude Code
- Exclude IP Include Code

IP Addresses can be delimited by a semi-colon ';' thus you can filter by multiple IP Addresses. You can also compute a set of IP Addresses quickly by clicking on the 'Get IP Addresses....' button.

The Request type can be set to filter the type of requests you want i.e. GET, HEAD, POST, or else All request types.

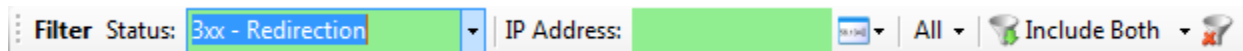


Figure 6 Filter toolbar in 'Include Both' mode

The above filter configuration will match all not found/moved i.e. 301, 302, 303, 304 errors and all IP addresses (since the IP Address field is blank).

Once that the filter has been activated you can export the list to a CSV, for more analysis. You can also select one of the statistics (described below). To return to the full list click on the Clear button to disable any filter that is active.

3.4.1 Advanced Filtering

Advanced Filtering¹ is used in conjunction with the filters listed in the previous section. With advanced filtering you can either filter by request, User-Agent and or by referrer. The advanced filter can be either active or inactive and it can be in include or exclude mode. These criteria can be specified through the Advanced Filter toolbar shown below.



Figure 7 Advanced Filter - Active in Include mode

To include/exclude specific criteria enter something in the respective text box. If a text box is left empty then this is not taken into account. To filter the items according to this filter use the button found on the Filter toolbar (Figure 5). It is possible to include or exclude the criteria of the advanced filter.

In the figure above the Advanced Filter will match all items that have 'Firefox' in the User-Agent header and have 'google.com' in the Referrer URL. (It will also consider the criteria specified in the Basic Filter – not shown here.)

¹ (Note that the Advanced Filter is only available in the unlocked versions of Apache Logs Viewer. See section 5 – Unlocking.)

3.5 Sorting

Sorting is available from the sort toolbar shown in Figure 8. You can sort on one of the following fields: *Size*, *Request*, *Referrer*, *Country* or *User Agent*. Simply select the requested field by clicking on the Sort drop down button. Once the desired column has been selected, click on it to apply the sort. It is also possible to choose the sort direction prior sorting, either ascending (ASC) or descending (DESC).

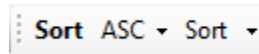


Figure 8 Sort Toolbar

You can also combine a Filter with the sort functionality. First apply the required filter and then sort the list using any column as the sorting order.

3.6 Search

In Apache Log Viewer you can search for a particular request. The find dialog box (see Figure 9) can be used to lookup a particular line using one of the criteria found in the table below.

Search Column	Criteria
Request	Part of
Date	Exact, Greater of Less match (no time)
IP Address	First part
Referrer	Exact match

When searching for a request, all requests which contain the criteria (at any position) will be matched. The IP Address on the other hand will be matched from the start. Thus if you need to look for an IP address that ranges from 192.168.12.0 to 192.168.12.255 you will enter 192.168.12. The referrer will need to match exactly (ignoring case).

Once that the criteria has been specified you can click on *Find* to find the first item. Then you can either select *Find All* to find all lines that match the particular criteria entered or *Find Next...* (or press F3) to find the next matching line.

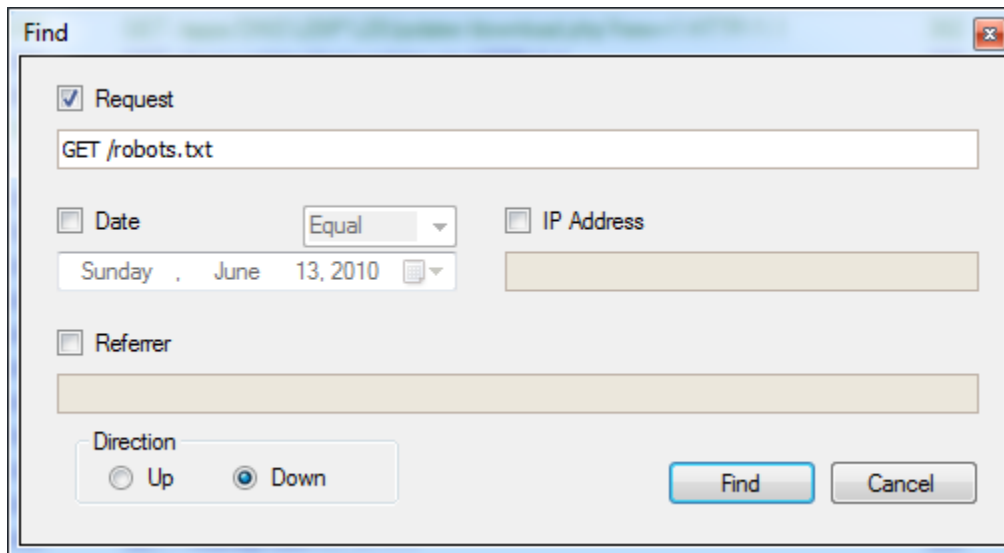


Figure 9 Find Dialog Box

Once that some items are selected you can easily export them from Apache Log Viewer to a number of different formats (see below).

3.7 Export

The export function can be used to export log lines from Apache Log Viewer to various file formats. This is particularly useful if you need to import the data into another program such as a spreadsheet for further analysis.

You can export the entire list or just the selected items such as after a search (using Find All). The following file formats are supported: Text file (.txt), Comma Separated Value (.csv), HTML file (.html) or Log file (.log).

Exporting is simple just click on *Export List* to export the entire list or *Export Selected* to export just the selected items. Specify the filename and click on save to save the file to disk.

3.8 Reports

There are two main kinds of reports: pie/bar charts and maps. These give you a visual representation of the data in the log file. There are two modes for the Reports set from the Preferences section (Reports Scope):

1. Visible List

Using this mode of operation the report data is generated from what's visible in the list. This means that any active filters will be taken into account. Thus if you want to generate the

Status Codes per Day report but you want to leave the 4xx errors out of the report first you filter the list to omit 4xx status codes and then you generate the *Status Codes per Day* report which will consist of a bar chart with 404 status codes omitted.

2. All List

The reports work on the log file in whole and enabled filters don't have any effects on the reports.

For bar/pie charts once the report is generated you can either Print or Export. The export functionality lets you either export to Microsoft Excel Workbook or else to an Adobe PDF document. For maps you can save to a BMP, JPEG, GIF or PNG file.

The available reports, their type and a description on each report are shown in the table below.

Report Name	Chart Type	Description
User Agents	Pie	Shows user agents (Browsers/bots) requests
Hits each Day	Bar	Total requests each day for the whole log file loaded
Visits by Country	Pie	Total requests and the originating Country
Visits by Country (reduced)*	Pie	Same as above but omits some small countries and lists them as "Other"
<u>Browsers</u>		
Desktop	Pie	Shows desktop user agents
Mobile	Pie	Shows mobile user agents
Mobile vs Desktop	Pie	Shows ratio difference between Mobile and Desktop user agents
By Request	Pie	Specify part of Request
By Country	Pie	Specify Country
<u>Hits</u>		
Visits (Hits) by IP*	Bar	Specify IP and shows number of requests from that IP each day
Visits (Hits) by Referrer*	Bar	Specify Referrer and shows number of requests each day using that referrer.
Visits (Hits) by Request*	Bar	Specify Request and lists them per day
Visits (Hits) from Country*	Bar	Specify Country and shows number of requests per day for that country.
Visits (Hits) by User Agent (Browser)*	Bar	Specify User Agent identifier and shows number of requests for that User Agent
<u>Unique Hits</u>		
Visits (Unique Hits) by IP*	Bar	Hit for IP counted only once in an hour Specify IP and shows number of unique hits for that IP. (each hits is counted once per hour)
Visits (Unique Hits) by Referrer*	Bar	Specify Referrer and shows number of unique hits each day using that referrer.
Visits (Unique Hits) by Request*	Bar	Specify Request and lists them per day
Visits (Unique Hits) from Country*	Bar	Specify Country and shows number of unique hits per

Visits (Unique Hits) by User Agent (Browser)*	Bar	day for that country. Specify User Agent identifier and shows number of unique hits for that User Agent
Visits (Unique Hits) by IP & Request Combined *	Bar	Specify IP and part of Request and uses this criteria to construct the chart
Visits by Request and User Agent (Browser)	Bar	Specify part of request and part of Browser string and uses this criteria to construct chart
Visits by Country and Request	Bar	Specify country and part of request and uses this criteria to construct chart
<u>Hits Per Hour</u>		
Hits per Hour *	Bar	Hits per hour for a particular day.
Hits per Hour from IP Address *	Bar	Hits per hour for a particular day from an IP
Hits per Hour for Request *	Bar	Hits per hour for a particular day for a particular Request
Hits per Hour for Request (substring) *	Bar	Hits per hour for a particular day for a particular part of the Request header field.
Hits each Month*	Bar	Total requests per month for the whole log file loaded
<u>IPv6</u>		
IPv6 visits per day *	Bar	Hits from an IPv6 Address
IPv6 visits per day (Unique) *	Bar	Number of Unique hits from IPv6 Addresses
<u>General</u>		
Unique Hits*	Bar	Treats identical IP visit as one request (for each day) assuming that it is one visit.
Unique Hits (bots excluded)*	Bar	Same as above but does not consider any requests coming from bots.
Bot Hits*	Bar	Shows requests which originated from bots (detected by requests to robots.txt)
Request Analysis*	Pie	Shows which parts of the website were accessed and by what percentage.
Traffic Sources*	Bar	Shows the sources of hits (Direct, Referrer or Search Engine)
Geo Country Visits	Map	Shows graphical representation of world map with most visited countries. The brighter the more requests originated to that country.
Search Visits *	Bar	Shows requests that came from search queries.
Spider Visits *	Bar	Shows requests from bots.
Operating System *	Pie	Operating systems used by clients in requests.
Bandwidth	Line	Bandwidth usage per day in megabytes
<u>Status Codes</u>		
Status Code *	Pie	Status codes found in log file
Status Codes per Day *	Stacked Bar	Status codes per day in a stacked bar chart

Note: Reports marked with an * are only available with an unlock code. (see Unlocking)

Note: Hits vs. Unique Hits

The difference between *hits* and *unique hits* is that a hit is a single request to the web server. A web page can consist of multiple hits from the same IP Address over a period of time. On the other hand a unique hit is grouping of hits from an IP Address during that day. Thus if a client request a page using 5 different hits in the same day then they would be counted as only one.

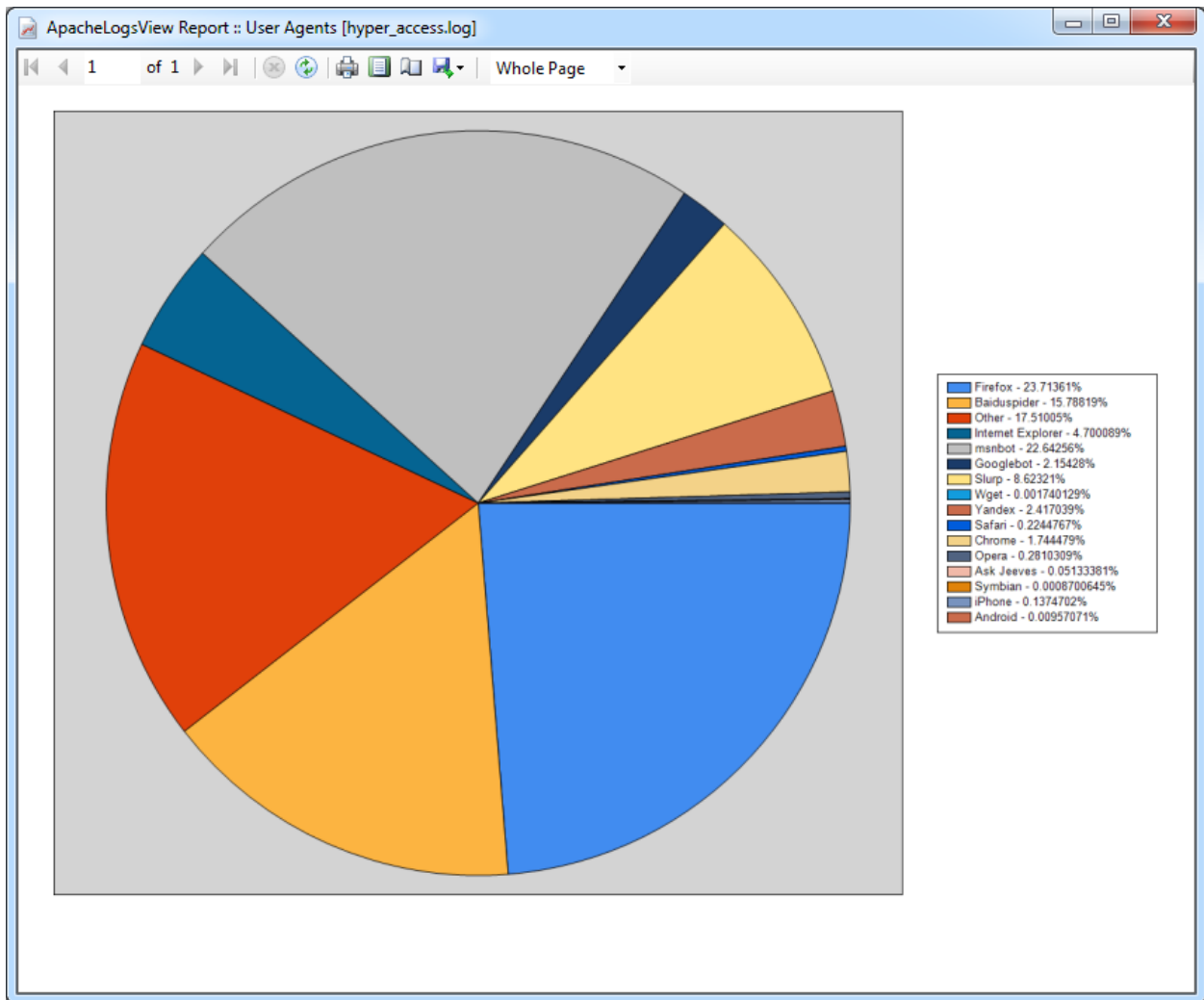


Figure 10 User Agents Report

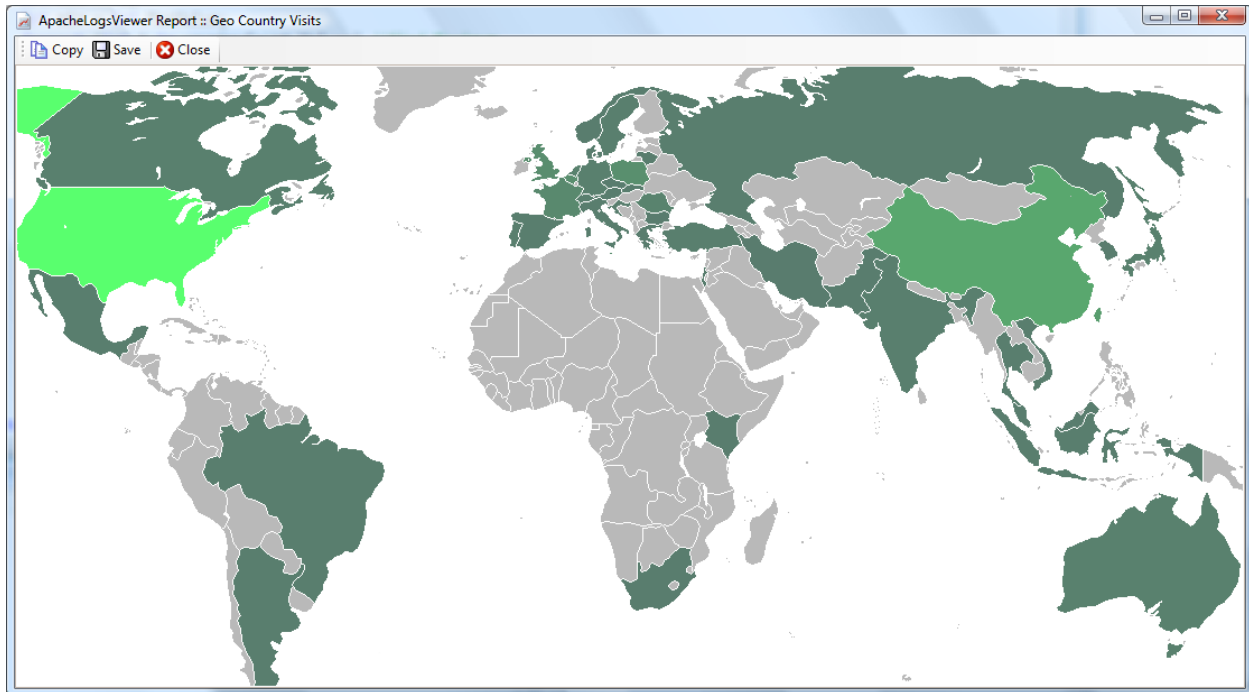


Figure 11 Geo Country Visits Report

3.9 Statistics

Statistics give a numerical representation for number of criteria. Unlike reports statistics work either on the log file as a whole or else on the visible log including any enabled filters (see Preferences section for more info about this).

The statistics available can be found in the table below. Some statistics prompt for a start date when to start counting as can be seen below.

Name	Start Date	Description
Hits	<input checked="" type="checkbox"/>	Hits (number of requests) each day
Status Codes	<input checked="" type="checkbox"/>	Count of status code each day
Bandwidth	<input checked="" type="checkbox"/>	Total bandwidth per day
Top IP Addresses	<input checked="" type="checkbox"/>	The IP Addresses which made the most number of hits
Top Error IP Addresses	<input checked="" type="checkbox"/>	IP Addresses which caused 404 errors
Top Requests	<input checked="" type="checkbox"/>	The Requests that were requested most
Top Countries	<input checked="" type="checkbox"/>	The Countries that made the most number of hits
Top 404 URLs	<input checked="" type="checkbox"/>	The most frequent 404 URLs
Top Referrers	<input checked="" type="checkbox"/>	The most frequent referrers
Top User Agents	<input checked="" type="checkbox"/>	The most popular User Agents found in log file.
Bot IP Addresses	<input checked="" type="checkbox"/>	The whole set of IP Addresses of bots (identified from requests to robots.txt)
Country IP Addresses	<input checked="" type="checkbox"/>	The whole set of IP Addresses from a particular country
Error IP Addresses	<input checked="" type="checkbox"/>	List of IP Addresses which had a hit which resulted in a 4xx or 5xx status code.
Unique IP Addresses	<input checked="" type="checkbox"/>	List of unique IP addresses

Unique Request	<input checked="" type="checkbox"/>	List of unique requests
Unique Referer	<input checked="" type="checkbox"/>	List of unique referrers
Unique User-Agent	<input checked="" type="checkbox"/>	List of unique user agent strings
File Types	<input checked="" type="checkbox"/>	The file types requested
Referrer Visits	<input checked="" type="checkbox"/>	The visits from referrers
Referrer Hotlinking	<input checked="" type="checkbox"/>	Visits from referrers which requested a media type.
Search Terms	<input checked="" type="checkbox"/>	Terms/keywords used in searches (from referrer data)
Visit Count	<input checked="" type="checkbox"/>	Count of Visits from the same IP Address
IPv4 vs IPv6	<input checked="" type="checkbox"/>	The number of IPv4 and IPv6 hits per day

3.10 Refresh Toolbar

The refresh toolbar is used to enable or disable the automatic refresh functionality and the automatic scrolling.



Figure 12 Refresh Toolbar

These features are particularly useful when the log file is being written to by the apache server and the log file is being analyzed in real time. The third button forces ALV to refresh the log, similar to pressing F5.

3.11 Command Line Arguments

The following command line arguments can be used when calling Apache Logs Viewer:

Argument	Description
/lowmem	Start Apache Logs Viewer in low memory mode to reduce the memory usage.
/tray	Minimize Apache Logs Viewer to the tray on startup.
/?	Display the supported command line arguments and exit.
/default	Restores default configuration and starts ALV. This is particularly useful if ALV is taking too long to start up due to a very large log file.

4. Preferences

You can change some of Apache Logs Viewer settings from the Preferences Dialog Page. This dialog is accessible from Edit...Preferences.

General

Auto Monitor on startup – Tick if you want ALV to start monitoring files when ALV is opened.

Truncate Large Logs – Tick if you want to read only the last part of the log file. The size is specified in KB in the adjacent box.

Enable Auto Refresh – Tick to enable refreshing of the list automatically when new lines are added (for realtime viewing)

Scroll to the last entry on refresh – Tick if you want to scroll to the last entry when the log file is refreshed. You can also set the refresh timeout in the textbox beneath.

Reports

Reports Scope – Change the scope you want to be used for your reports. The scope can be on the whole list (no filters) or else it can be on the visible list (ie taking into consideration any enabled filters.)

Statistics

Statistics Top Number – Set the value which will be used when optioning the top statistics. The default value is 10.

Statistics Scope – Change the scope you want to be used in your statistics. The scope can be on the whole list (no filters) or else it can take into consideration any enabled filters.

Colors

HTTP Status Code Colors - Set the colors for each different status code.

Error Log Codes - Set the colors for the different error codes in the error log.

Columns

Select the columns that you want to display for each log.

Apache Logs Viewer always saves a backup copy of your settings in case they get lost or corrupted. This file is saved in %appdata%\apachelogsview

5. Unlocking

Apache Log Viewer has some features (some reports and statistics) which are disabled by default. To enable such features you require a unique unlock code. Please note that you can still use Apache Log Viewer without an unlock code. Apache Logs Viewer is free and will remain free.

An unlock code can be obtained by donating €10 or more to ian.bugeja@gmail.com from PayPal. Please follow the links either in the Apache Logs Viewer window or on the website. All donations will be used to continue maintaining Apache Logs Viewer.

Once the donation has been received a unique unlock code will be emailed to you which will be valid for any future versions. You can enter the unlock code from the Help menu.

6. Support

If you have any queries or suggestions for Apache Logs Viewer please leave your feedback on <http://www.apacheviewer.com/contactus.php>. All your suggestions / queries are welcome.

Similarly if your log format is not supported by Apache Logs Viewer, let us know and we will try to add it. You should submit the LogFormat directive of the Apache configuration file and a sample log file would be appreciated.

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