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Understanding Website Statistics: Introduction

This paper will teach you how to make sense of the numbers typically found in a website statistics report generated by AWStats, a website statistics analysis and reporting program typically found in Linux based webhosting systems.

By understanding your website statistics, you will be able to make smart decisions about improving your website content and developing an effective search engine optimization (SEO) strategy.

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1. Introduction to Website Statistics: What do they mean?

Every time someone visits your website, your **web hosting server** (that is, the computer that takes care of displaying your website on the internet) collects information about the time of the visit, which pages were viewed, any keywords used to get the website and so on. Collectively, all this data about the visits to your website is called **website statistics**.

To be meaningful, website statistics are averaged or combined into **monthly totals** and it is useful to present these statistics over the course of several months, in a format commonly referred to as the **Monthly History**.

You website statistics are compiled using a program called **AWStats**, which is commonly installed as part of your web hosting environment, along with many other programs that take care of your website and email.

This document will introduce you to the terminology used in a typical AWStats report and help you to understand what all the numbers mean.

A website statistic report contains a lot of data, some of which is more relevant than others in helping you to understand how well your website is performing. For example, knowing your website's most popular pages and keywords can guide you towards improving your content. In contrast, knowing which operating system or browser people are using when visiting your website, though informative, does not indicate any specific action that you may take to improve your website content or marketing strategy.

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2.   Reading a Website Statistics Report

2.1.   The Summary

For a given month, the **Summary** gives you numbers for **Unique Visitors**, **Number of Visits**, **Pages**, **Hits** and **Bandwidth**. In addition, AWStats presents two compilations, **Viewed traffic** and **Not viewed traffic**.

For most purposes, the "Viewed traffic" is more important because it refers to the people who are actually visiting your website.

The "Not viewed traffic" refers to traffic from computer robots that visit website to gather information, an example would be GoogleBot, the program used by Google to gather website information to build up their search engine pages that we use to find people, places and things on the World Wide Web.

Unique Visitors refers to **distinct visits** to your website, and **Number of Visits** refers to all visits, including **repeat visits** by the same visitor.

The **Pages** count refers to the total number of pages visited by all the visitors. This is a good number to watch because it indicates how much attention visitors are paying to your website pages and how well your site navigation is working. Ideally the ratio of "Pages" to "Visits" should be as high as the number of pages in your website because, ideally, you would like your site visitors to look at all your pages.

The number of **Hits** depends in part on how your website pages are built and what elements (e.g. images, videos) are on each page. A hit represents a request by your web browser to your website for a piece of content (e.g. a web page, an image). For example, if one of your pages has ten images, then that page would get at least eleven hits, one for the page itself and one for each image on the page. In general, the Pages count gives you a clearer indication of the popularity of your pages and content.

Bandwidth is basically the volume of traffic (measured in bytes) of all the content delivered from your website to the site visitors. You only have to pay attention to bandwidth if your website is extremely busy to the point where the web server cannot handle the number of visitors to your website.

Summary					
Reported period	Month Aug 2010				
First visit	NA				
Last visit	31 Aug 2010 - 20:53				
	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Viewed traffic *	57	76 (1.33 visits/visitor)	306 (4.02 Pages/Visit)	1343 (17.67 Hits/Visit)	8.35 MB (112.49 KB/Visit)
Not viewed traffic *			697	1101	2.70 MB

* Not viewed traffic includes traffic generated by robots, worms, or replies with special HTTP status codes.

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2.2. Monthly History - Week, Day & Hour Traffic Patterns

The **Monthly History** gives you a sense of how busy your website is on a month to month basis. Ideally, you want to see the numbers going up steadily or remaining level. If you see a big surge in traffic, you may be getting new traffic due to a recent advertisement campaign, for example, a series of radio commercials. In contrast, if your traffic drops, something may be going wrong, for example, Google may have delisted your website for some reason.

Monthly history

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jan 2010	0	0	0	0	0
Feb 2010	0	0	0	0	0
Mar 2010	0	0	0	0	0
Apr 2010	37	57	776	1905	6.26 MB
May 2010	48	65	195	653	3.51 MB
Jun 2010	44	58	392	1454	10.17 MB
Jul 2010	66	79	321	1152	8.10 MB
Aug 2010	57	76	306	1343	8.35 MB
Sep 2010	3	3	3	24	181.86 KB
Oct 2010	0	0	0	0	0
Nov 2010	0	0	0	0	0
Dec 2010	0	0	0	0	0
Total	255	338	1993	6531	36.57 MB
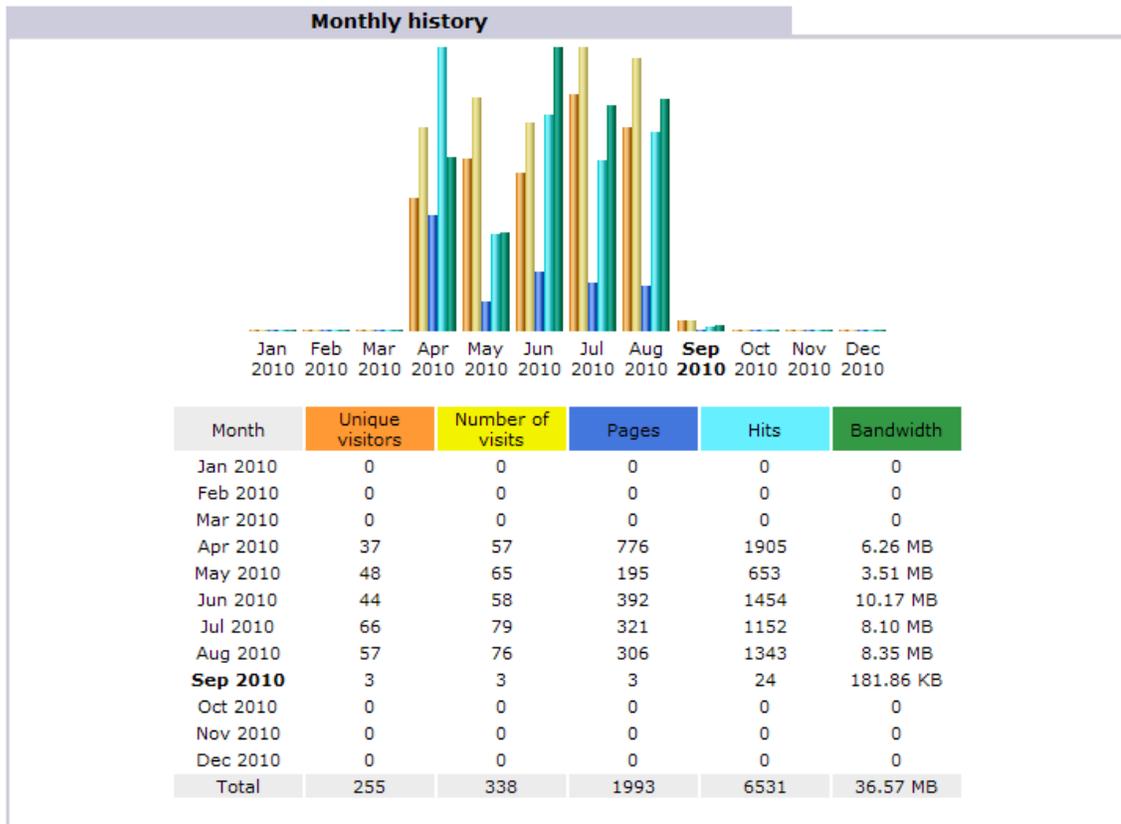
You can get more insight into traffic patterns by looking at **Days of Month**, **Days of Week** and **Hours** summary tables. The **Days of Month** table will help you identify if your website had a **particularly busy day**. This could happen, for example, if you gave a seminar or a talk and then for a few days after, people who attended your talk visited your website. The **Days of Week** table gives you the **average behavior according to the day of the week**. For example, your website may be busy on weekends and quiet on weekends. Finally, **Hours** gives you an indication of **traffic throughout the day**. For example, your website may get busy right before lunch (noon), or a surge of traffic in the early hours of the morning may indicate traffic from overseas (different time zones).

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2.3. Countries and Hosts

AWStats can often discern the country of origin of your website visitors. The **Countries** table gives you a sense of **where your visitors are coming from**. For the most part, you can expect most of your traffic to be from the United States (if your business is located in the USA). You will also get visitors from other countries, either randomly or because you may have friends and family living outside of the country.

If you are running an ecommerce website, and you get a lot of traffic from countries like Russia, China, the Middle East region, your website may have caught the attention of potential hackers. If this is the case, keep an eye on your website and double check your security measures.

Countries		Pages	Hits	Bandwidth	
United States	us	268	1282	7.95 MB	
Germany	de	16	16	82.06 KB	
Netherlands	nl	16	16	82.06 KB	
China	cn	3	3	13.20 KB	
Turkey	tr	1	1	4.51 KB	
Morocco	ma	1	13	114.19 KB	
Cyprus	cy	1	12	108.71 KB	
Others		0	0	0	

Countries (Top 25) - Full list

The **Hosts** tables list the Internet Protocol (IP) address from where your site visitors originated. These usually reflect the addresses of the servers of the Internet Service Providers (ISP) (e.g. ATT, Comcast, Verizon) from which your site visitors are accessing the World Wide Web.

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2.4. Robots and Spiders

Robots and **Spiders** are computer programs that **automatically visit websites and gather content and information about your website**, usually to create a search engine database or an online directory of websites. All the major search engines have robots: Yahoo has "Yahoo Slurp", Microsoft has MSNbot and Google has GoogleBot. If you see these three robots in your list, then your website is being recognized by the major search engines and your website should be listed.

Robots/Spiders visitors (Top 25) - Full list - Last visit	Hits	Bandwidth	Last visit
8 different robots*			
Yahoo Slurp	490	575.81 KB	31 Aug 2010 - 20:46
Unknown robot (identified by 'bot*')	175	887.42 KB	31 Aug 2010 - 12:23
MSNBot	104	530.12 KB	30 Aug 2010 - 06:42
Unknown robot (identified by 'spider')	78	363.05 KB	31 Aug 2010 - 06:42
Googlebot	52	308.55 KB	31 Aug 2010 - 22:31
Alexa (IA Archiver)	2	8.69 KB	30 Aug 2010 - 08:29
Ask	1	4.51 KB	15 Aug 2010 - 12:17
Netcraft	1	4.51 KB	11 Aug 2010 - 00:28

* Robots shown here gave hits or traffic "not viewed" by visitors, so they are not included in other charts.

2.5. Visits Duration

Visits Duration gives you a sense of **how much time people spend on your website**. Typically, most people rush through a website and leave. A serious visitor will take several minutes to read several pages and investigate what your site has to offer. Look for changes in the number of people spending more than 2 minutes per visit.

Visits duration	Number of visits	Percent
Number of visits: 76 - Average: 135 s		
0s-30s	46	60.5 %
30s-2mn	18	23.6 %
2mn-5mn	7	9.2 %
5mn-15mn	3	3.9 %
15mn-30mn	1	1.3 %
30mn-1h		
1h+	1	1.3 %

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2.6. Pages-URL

The **Pages-URL** table is important because it shows you **which pages of your website are getting attention from your visitors**. Typically, your home page (indicated by the "/" or "index.php" or "index.html") is the most popular page.

Two important numbers are **Entry** and **Exit**. **Entry** indicates that the page was the **first page to be viewed during a site visit**. **Exit** indicates that **the visitor left the website after viewing that page**. For your Home page, you want to make sure that the Entry number is higher than the Exit number. If the Exit number is high, this may mean that visitors are leaving your website without visiting other pages. If this were the case, you would have to look carefully at your home page content and design and consider changing it.

Pages-URL (Top 25) - Full list - Entry - Exit					
16 different pages-url	Viewed	Average size	Entry	Exit	
/diane-sholomskas.php	52	5.62 KB	20	19	
/	33	4.51 KB	31	12	
/location.php	32	5.27 KB	3	8	
/index.php	32	4.51 KB	12	8	
/christina-taylor.php	22	5.45 KB	1	2	
/contact.php	21	4.18 KB	5	6	
/stuart-sokol.php	17	5.58 KB		4	
/alan-sholomskas.php	16	5.47 KB			
/panic-disorder-agoraphobia.php	14	5.21 KB	2	3	
/links.php	14	4.77 KB		3	
/general-anxiety-disorder.php	12	4.38 KB		2	
/bibliography-diane-sholomskas.php	11	6.06 KB		1	
/obsessive-compulsive.php	11	5.37 KB		5	
/social-anxiety-disorder.php	9	5.25 KB	1	1	
/bibliography-alan-sholomskas.php	6	5.83 KB	1	2	
/specific-phobias.php	4	4.60 KB			

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2.7.   Operating Systems and Browsers

The **Operating Systems** table gives you a summary of the **type of computers that people use when visiting your website**. For the most part, the numbers indicate that Windows is the world's most popular operating system, followed by Macintosh as a distant second.

Operating Systems (Top 10) - Full list/Versions - Unknown	Hits	Percent
Windows	1181	87.9 %
Macintosh	116	8.6 %
Unknown	35	2.6 %
Linux	11	0.8 %

The **Browsers** table tells you something about **the type of web browser used by your visitors**. Typically, MS Internet Explorer is the most popular browser, followed by Firefox, Safari and Google Chrome. This information is useful to web designers who may need to optimize certain aspect of your web pages to suit different browsers.

Browsers (Top 10) - Full list/Versions - Unknown	Grabber	Hits	Percent
MS Internet Explorer	No	936	69.6 %
Firefox	No	267	19.8 %
Safari	No	70	5.2 %
Google Chrome	No	35	2.6 %
Mozilla	No	27	2 %
Netscape	No	6	0.4 %
Wget	Yes	2	0.1 %

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2.8. Connect to Site From

The **Connect to Site From** table tells you something about **where your website traffic comes from**.

The **Links from an Internet Search Engine** list will tell you how often people came to your website from Google, Yahoo and other search engine listings.

Your website may have a link on other websites (also known as **backlinks**) other than search engine websites. By looking at the list of **Links from an External Page**, you can see how effectively the links are driving traffic to your website.

Connect to site from				
Origin	Pages	Percent	Hits	Percent
Direct address / Bookmark / Link in email...	87	67.4 %	103	71 %
Links from an Internet Search Engine - Full list	25	19.3 %	25	17.2 %
- Google 23 23				
- Yahoo! 2 2				
Links from an external page (other web sites except search engines) - Full list	16	12.4 %	16	11 %
- http://fairfieldocdgroup.freehostia.com 5 5				
- http://fairfieldocdgroup.freehostia.com/aboutus.html 4 4				
- http://www.abct.org/Members/index.cfm 2 2				
- http://abct.org/Members/index.cfm 1 1				
- http://www.sitetalk-network.eu 1 1				
- http://fairfieldocdgroup.freehostia.com/links.html 1 1				
- http://www.christinajtaylorphd.com/affiliations.html 1 1				
- http://www.am-arts.com 1 1				
Unknown Origin	1	0.7 %	1	0.6 %

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2.9. Search Key Phrases and Keywords

The **Search Key Phrases** and **Keywords** tables show you which combination of keywords (key phrases) people typed into various search engine websites in order to find your website. The list of keywords and key phrases gives you some guidance into improving your website content so as to improve your **search engine ranking**, part of your **search engine optimization (SEO)** process.

Search Keyphrases (Top 10) Full list		
20 different keyphrases	Search	Percent
diane e. sholomskas phd	3	12 %
alan j sholomskas md email	2	8 %
anxiety new haven	2	8 %
alan sholomskas	2	8 %
center for anxiety disorders & phobias ct	1	4 %
diane sholomskas	1	4 %
diane e. sholomskas ph.d	1	4 %
first alan last sholomskas	1	4 %
inurl panic-disorder-agoraphobia.php	1	4 %
stuart j sokol	1	4 %
Other phrases	10	40 %

Search Keywords (Top 25) Full list		
43 different keywords	Search	Percent
sholomskas	14	14.4 %
diane	8	8.2 %
anxiety	6	6.1 %
alan	5	5.1 %
e.	5	5.1 %
ct	4	4.1 %
in	4	4.1 %
phd	4	4.1 %
haven	3	3 %
j	3	3 %
new	3	3 %
md	2	2 %
disorders	2	2 %
disorder	2	2 %
email	2	2 %
for	2	2 %
treatment	2	2 %
hamden	1	1 %
&	1	1 %
agoraphobia	1	1 %
ph.d	1	1 %
groups	1	1 %
e	1	1 %
fairfield	1	1 %
dianne	1	1 %
Other words	18	18.5 %

The **Keywords** table is useful for **identifying a particular word that may occur in several key phrases**.

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3. Using Your Website Statistics

3.1. Establish a Baseline

Initially, you need to let your website sit for a period of time so that you have a relevant baseline from which you can compare future traffic and use patterns. In practice, two to three months of data is sufficient to get a basic understanding of you website traffic and key phrase and key word patterns of use.

3.2. Check for Patterns of Use

Look for changes in the number of visitors, changes in page popularity, changes in key words and phrases.

3.3. Monitor Your Statistics on a Regular Basis

You should review your website statistics on a regular basis, at least once per year, ideally, every quarter, especially if you have a seasonal business or if you take active steps to drive traffic to your website (e.g. radio, television, newspaper ads and so on).

4. Improving Your Website Traffic

4.1. Get Visitor Feedback

Every time someone calls your office, ask them if they visited your website and keep a list of any comments concerning the website. If they said, "Found you on Google" or something similar, ask them what they typed in.

4.2. Tell the World About Your Website

Make sure that your website address is visible on your business cards, brochures, letterhead and signage. On your voicemail system, make sure to encourage people to visit your website.

If you are a professional with a LinkedIn profile, make sure your website address is included in your profile.

If you use email, make sure your website is listed in your signature.

4.3. Get Yourself Listed On Major Website Directories

If you belong to a **professional organization**, make sure that your website address is listed your professional profile, especially if there is a publicly searchable directory.

If you have a place of business, an office or store, make sure that you have a **Google profile** and that that your website is listed in your profile. If you do not know how to set up a Google profile, ask your website professional and pay her or him to take care of it for you.