Monitoring Your Website

Summary

In the business world today, every business has at least one website. The website serves as one of the primary public interfaces with the company. While there are many critical success factors that contribute to converting website hits into revenue, the two key factors that will drive people away from a website are availability and performance. This paper presents how websites can be monitored to ensure proper availability and performance.

Measurements

There are several methods to monitor the availability and performance of a website. The most common is ICMP or ping. This is not a reliable method for three key reasons:

1. Many websites block ICMP requests to prevent attacks .
2. For many websites the IP address that is resolved from the website url is not the IP address of the actual website's server.
3. The ICMP protocol does not provide any indication of the performance of the protocol used to present the website.

Another method is to measure the total time for a website to load. This is not recommended for websites that have automation to change images or videos. Also, this should not be used as a comparison to competitor websites as the results can be misleading. A simple website could be seen as better performing than a more complex website

The recommended base method to monitor a website is HTTP or HTTPS response time. This method utilizes the same protocol that the users use to access the website. The response time is based on the speed of the network as well as the performance of the server that is hosting the website.

For detailed and specific monitoring, synthetic transactions can also be utilized. Synthetic transactions measure the time to perform specific functions on the website. This measures true user experience and can include the impact of many functions within the website, including response time from supporting servers (i.e. database server). Synthetic transaction should not be used to compare with other websites. It is best to set a threshold duration for each synthetic transaction and alerts when any threshold is exceeded. When measuring synthetic transactions, it is important to note that any change to the website could cause the execution of the synthetic transactions to fail.

HTTP/HTTPS Monitoring

There are many advantages to using HTTP or HTTPS to monitor a website. Businesses can identify important factors that impact user experiences. Some of these include when the web server is busy performing processing such as backups or a key time when the website is more utilized. The specific data obtained from the monitoring can be used to work with the IT department or the vendor hosting the website to assist with troubleshooting issues and capacity management. With HTTP or HTTPS monitoring, thresholds can be set and alerts can be emailed or texted to the impacted business or IT support personnel when the thresholds are exceeded. From analyzing the HTTP / HTTPS response time businesses can also compare their website to other businesses in their industry.

The response time thresholds should be established based on the function of the website and the relative location as compared to the monitoring server. Interactive websites should have a lower response time than static websites. In general, high performing websites have a response time under 400 ms. If the response time is over 800 ms, the user experience is usually impacted.

The response time is impacted by the location of the web server in relation to the location to the monitoring server. If the monitoring server is in the same datacenter as the web server, the impact of the internet is not seen.

Case Study 1: Highly advertised websites

One of the most common methods to bring traffic to a website is to advertise on search engines like Google and Bing. When users search a related keyword, advertisements that look very similar to the search results appear. Businesses pay anywhere from a few cents to over $50 each time a user clicks on the advertisement, depending on the demand for the specific keyword.   See the diagram below (source: http://designtaxi.com/news/35378/Google-s-Most-Expensive-Ad-Keywords/) that shows the most expensive keywords.
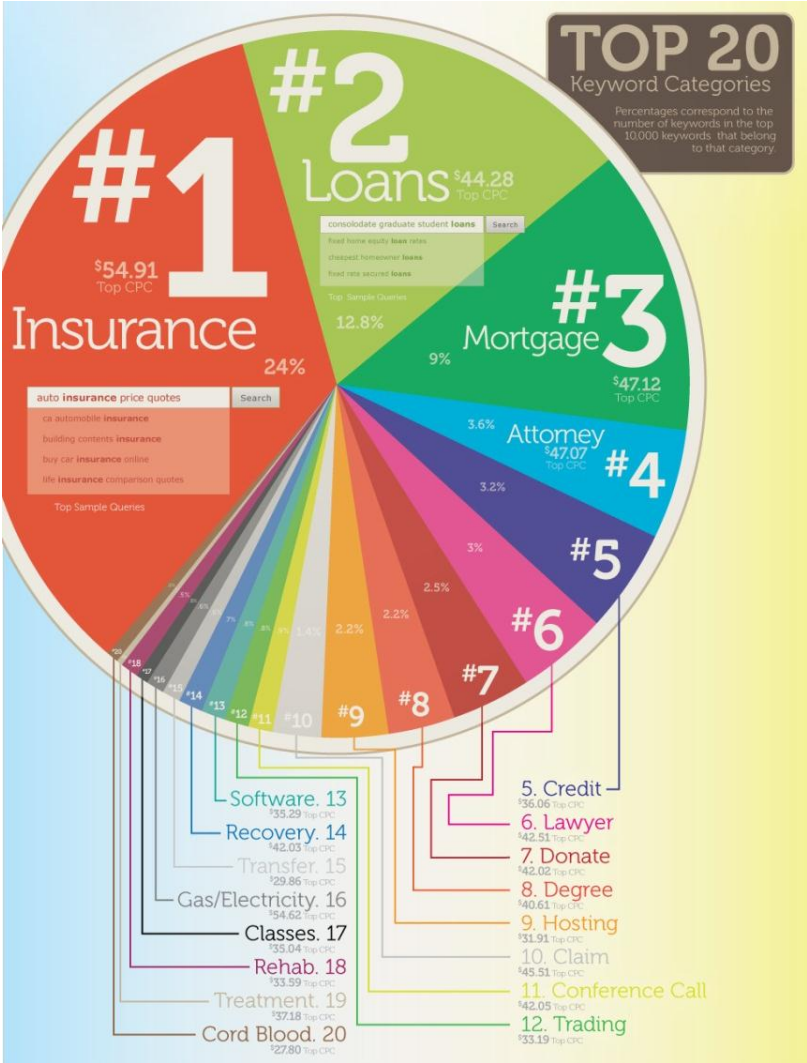

An example of an expensive keywords is "Structured Settlements". The current Google Cost per Click (CPC) is $24.67 (as shown below).

	Keyword	Global Monthly Searches ?	Local Monthly Searches ?	Estimated Avg. CPC
☐	☆ structured settlement ▾	49,500	40,500	$24.67

Results (1)

If user click on an Ad and the performance of the website is poor, most users quickly hit the Back button and look for another business. The website performance is a poor reflection on the business. This is also a lost opportunity and a direct expense for each user's click from the search engine's advertising fee.

Phixios setup HTTP monitoring for the top advertisers of Structured Settlements' websites to compare response times within this specific industry. The graph below shows the results of HTTP response time over one day. Most all the websites are below the 800 ms response time, but there are several with performance issues, and others that have distinctive peeks that should be investigated.
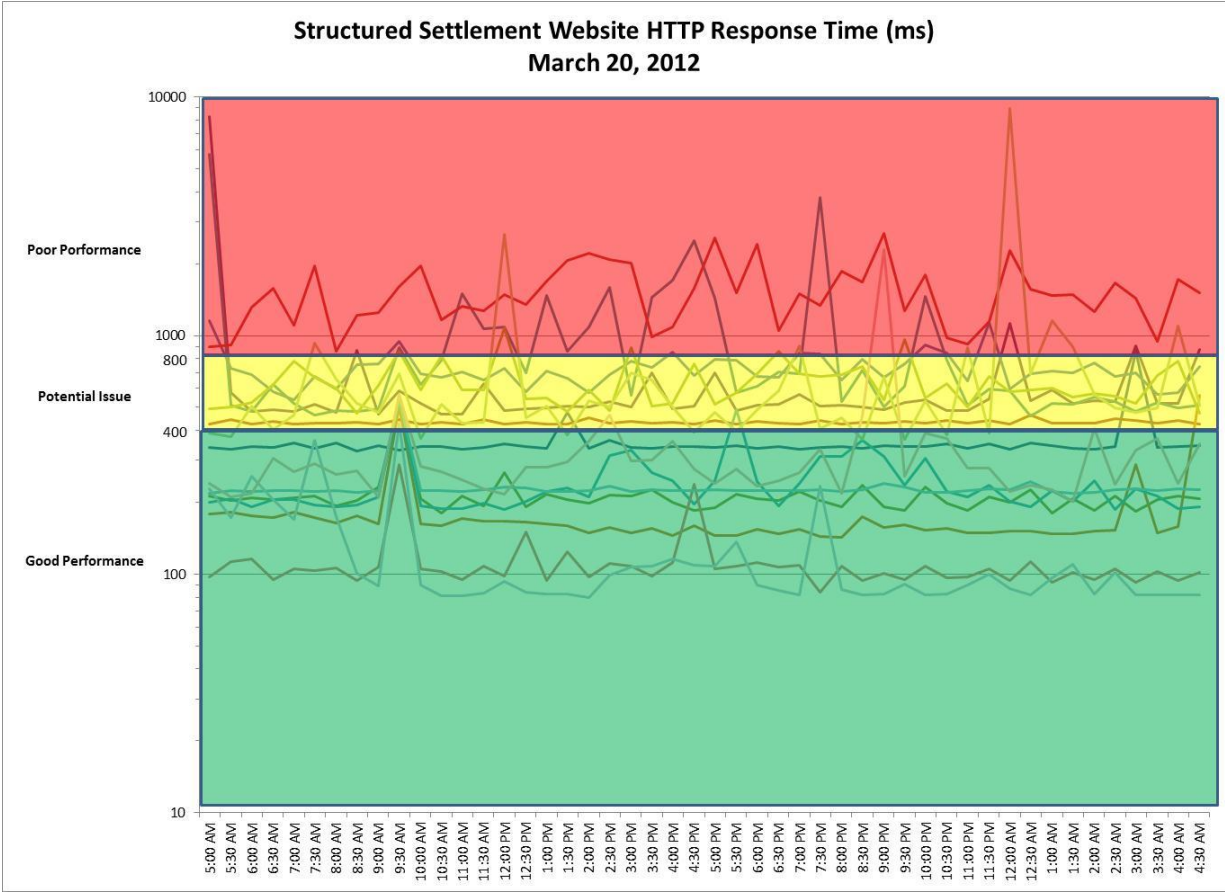

Structured Settlement Websites Monitored:

- rslfundingllc.reachlocal.com
- structured-settlements.net
- woodbridgeinvestments.com
- www.4structures.com
- www.americangeneral.com
- www.annuitytransfers.com
- www.boardwalkfunding.com
- www.cbcsettlementfunding.com
- www.clearviewfundinginc.com
- www.epssettlements.com

- www.fairfieldfunding.com
- www.imperialstructuredsettlements.com
- www.jgwentworth.com
- www.novationcap.com
- www.olivebranchfunding.com
- www.peachtreefinancial.com
- www.rapidcashfunding.com
- www.settlepro.com
- www.stonestreet.com
- www.structuredsettlement-quotes.com

Case Study 2: Top eCommerce websites

Many websites have the direct function of selling the business's product or service. Website performance is critical for these eCommerce websites. This case study shows eCommerce websites from several different industries. Most of these websites response times are under 400 ms, which shows good performance. However, there are several websites that are in a warning or critical response time range and should be investigated.
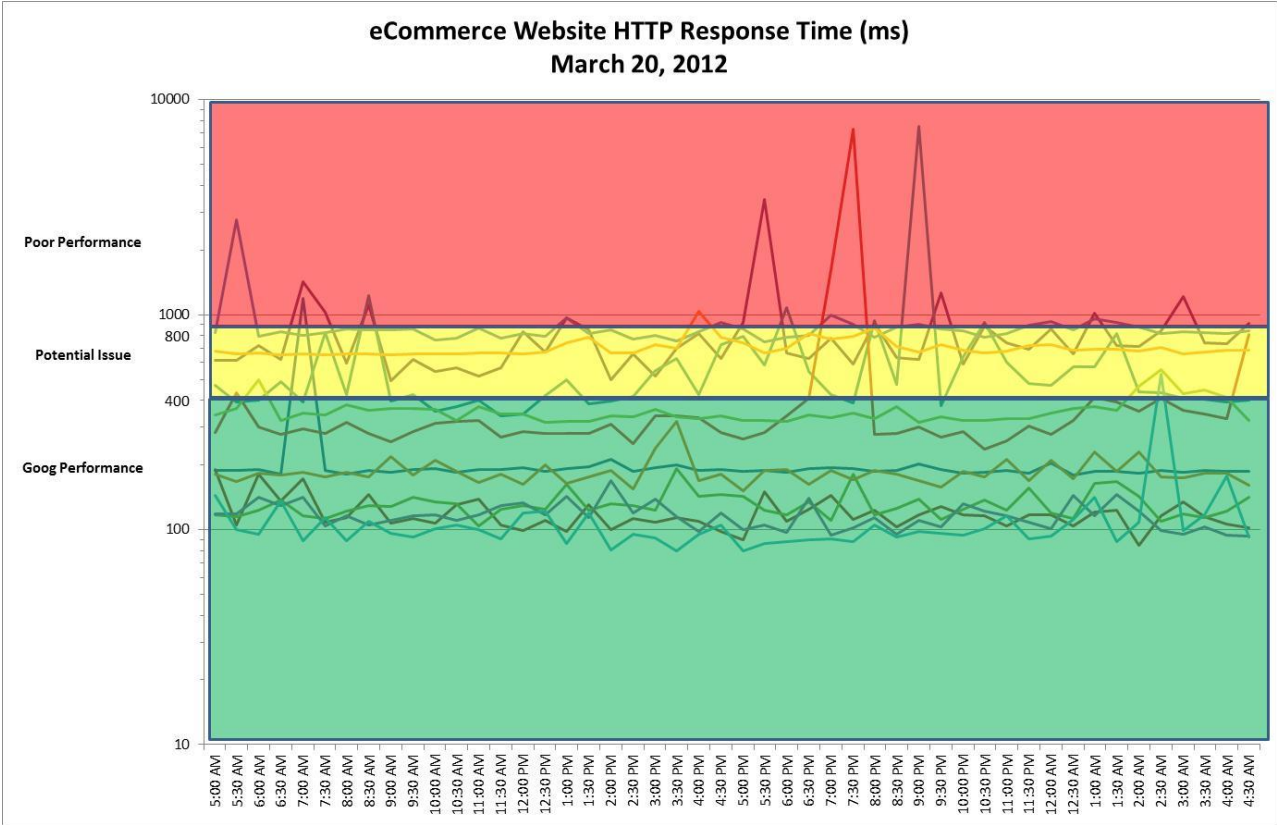
eCommerce Websites Monitored:

- www.1800petmeds.com
- www.blair.com
- www.officedepot.com
- www.orientaltrading.com
- www.proflowers.com
- www.qvc.com

- www.roamans.com
- www.runningwarehouse.com
- www.schwans.com
- www.vitacost.com
- www.womanwithin.com
- www.zappos.com

Monitor Your Website

Phixios provides a cloud based website monitoring service. The service includes portal access to view performance history, email and text alerts. The table below outlines the monitoring services and the costs.

For more information, visit http://phixios.com, email at contact@phixios.com , or call at 972-731-4346.

Function	Free	Standard	Professional	Enterprise
Portal View	Yes	Yes	Yes	Yes
Email / Text Alerts	None	1 email / text address	5 email / text addresses	10 email / text addresses
Polling Frequency	20 Minutes	15 Minutes	5 Minutes	2 Minutes
Portal Customization	No	Yes	Yes	Yes
Groupings	1	1	5	15
Link Status Report	None	Monthly	Weekly	Weekly
Historical Reporting	Unlimited	Unlimited	Unlimited	Unlimited
Monthly Price Per url	Free	$ 4.99	$ 9.99	$ 19.99