# **Google Analytics**

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Google Analytics	
Developer(s)	Google
Operating system	Cross-platform (web-based application)
Type	Statistics, Analysis
Website	www.google.com/analytics [1]

**Google Analytics** is a service offered by Google that generates detailed statistics about a website's traffic and traffic sources and measures conversions and sales. The product is aimed at marketers as opposed to webmasters and technologists from which the industry of web analytics originally grew. It is the most widely used website statistics service.

The basic service is free of charge and a premium version is available for a fee.

Google Analytics can track visitors from all referrers, including search engines and social networks, direct visits and referring sites. It also displays advertising, pay-per-click networks, email marketing and digital collateral such as links within PDF documents.

## **History**

Google acquired Urchin Software Corp. in April 2005. Google's service was developed from Urchin on Demand. The system also brings ideas from Adaptive Path, whose product, Measure Map, was acquired and used in the redesign of Google Analytics in 2006. [2] Google continued to sell the standalone, installable Urchin WebAnalytics Software through a network of value-added resellers until discontinuation on March 28, 2012.

The Google-branded version was rolled out in November 2005 to anyone who wished to sign up. However due to extremely high demand for the service, new sign-ups were suspended only a week later. As capacity was added to the system, Google began using a lottery-type invitation-code model. Prior to August 2006 Google was sending out batches of invitation codes as server availability permitted; since mid-August 2006 the service has been fully available to all users — whether they use Google for advertising or not.

The latest version of Google Analytics tracking code is known as the asynchronous tracking code, which Google claims, is significantly more sensitive and accurate, and is able to track even very short activities on the website. The previous version delayed page loading and so, for performance reasons, it was generally placed just before the </body> body close HTML tag. The new code can be placed between the <head>...</head> HTML head tags because, once triggered, it runs in parallel with page loading.

In April 2011, Google announced the availability of a new version of Google Analytics, featuring multiple dashboards, more options of custom reports and a new interface design. This version was later updated with some other features such as real-time analytics and goal flow charts.

### **Features**

Integrated with AdWords, users can now review online campaigns by tracking landing page quality and conversions (goals). Goals might include sales, lead generation, viewing a specific page, or downloading a particular file.

Google Analytics' approach is to show high-level, dashboard-type data for the casual user, and more in-depth data further into the report set. Google Analytics analysis can identify poorly performing pages with techniques such as funnel visualization, where visitors came from (referrers), how long they stayed and their geographical position. It also provides more advanced features, including custom visitor segmentation.

Google Analytics e-commerce reporting can track sales activity and performance. The e-commerce reports shows a site's transactions, revenue, and many other commerce-related metrics.

A user can have 50 site profiles. Each profile generally corresponds to one website. It is limited to sites which have a traffic of fewer than 5 million pageviews per month (roughly 2 pageviews per second), unless the site is linked to an AdWords campaign. [3]

Google Analytics includes Google Website Optimizer, rebranded as Google Analytics Content Experiments.

## **Technology**

Google Analytics is implemented with "page tags". A page tag, in this case called the Google Analytics Tracking Code is a snippet of JavaScript code that the website owner user adds to every page of the website. The tracking code runs in the client browser when the client browses the page (if JavaScript is enabled in the browser) and collects visitor data and sends it to a Google data collection server as part of a request for a web beacon.

The tracking code loads a larger physcript file from the Google webserver and then sets variables with the user's account number. The larger file (currently known as ga.js) is typically 18 KB. The file does not usually have to be loaded, though, because of browser caching. Assuming caching is enabled in the browser, it downloads ga.js only once at the start of the visit. Furthermore, as all websites that implement Google Analytics with the ga.js code use the same master file from Google, a browser that has previously visited any other website running Google Analytics will already have the file cached on their machine.

In addition to transmitting information to a Google server, the tracking code sets first party cookies (If cookies are enabled in the browser) on each visitor's computer. These cookies store anonymous information such as whether the visitor has been to the site before (new or returning visitor), the timestamp of the current visit, and the referrer site or campaign that directed the visitor to the page (e.g. search engine, keywords, banner or email).

If the visitor arrived at the site by clicking on a link tagged with Urchin Tracking Module (UTM) codes such as:

http://toWebsite.com?utm\_source=fromWebsite&utm\_medium=bannerAd&utm\_campaign=fundrais
the tag values are passed to the database too.

#### Limitations

In addition, Google Analytics for Mobile Package allows Google Analytics to be applied to mobile websites. The Mobile Package contains server-side tracking codes that use PHP, JavaServer Pages, ASP.NET, or Perl for its server-side language.

However, many ad filtering programs and extensions (such as Firefox's Adblock and NoScript) can block the GATC. This prevents some traffic and users from being tracked, and leads to holes in the collected data. Also, privacy networks like Tor will mask the user's actual location and present inaccurate geographical data. Some users do not have JavaScript-enabled/capable browsers or turn this feature off. However, these limitations are considered small—affecting only a small percentage of visits.

The largest potential impact on data accuracy comes from users deleting or blocking Google Analytics cookies.<sup>[4]</sup> Without cookies being set, Google Analytics cannot collect data. Any individual web user can block or delete

cookies resulting in the data loss of those visits for Google Analytics users. Website owners can encourage users not to disable cookies, for example by making visitors more comfortable using the site through posting a privacy policy.

These limitations affect the majority of web analytics tools which use page tags (usually JavaScript programs) embedded in web pages to collect visitor data, store it in cookies on the visitor's computer, and transmit it to a remote database by pretending to load a tiny graphic "beacon".

Another limitation of Google Analytics for large websites is the use of sampling in the generation of many of its reports. To reduce the load on their servers and to provide users with a relatively quick response for their query, Google Analytics limits reports to 500,000 randomly sampled visits at the profile level for its calculations. While margins of error are indicated for the visits metric, margins of error are not provided for any other metrics in the Google Analytics reports. For small segments of data, the margin of error can be very large.

#### **Performance concerns**

There have been several online discussions about the impact of Google Analytics on site performance. [5][6][7] However, Google introduced asynchronous JavaScript code in December 2009 to reduce the risk of slowing the loading of pages tagged with the ga.js script. [8][9]

## **Privacy issues**

Due to its ubiquity, Google Analytics raises some privacy concerns. Whenever someone visits a website that uses Google Analytics, if Javascript is enabled in the browser then Google tracks that visit via the user's IP address in order to determine the user's approximate geographic location. (To meet German legal requirements, Google Analytics can anonymize the IP address.)

Google has also released a browser plugin that turns off data about a page visit being sent to Google. Since this plug-in is produced and distributed by Google itself, it has met much discussion and criticism. Furthermore, the realisation of Google scripts tracking user behaviours has spawned the production of multiple, often open-source, browser plug-ins to reject tracking cookies. These plug-ins offer the user a choice, whether to allow Google Analytics (for example) to track his/her activities. However, partially because of new European privacy laws, most modern browsers allow users to reject tracking cookies, though Flash cookies can be a separate problem again.

It has been anecdotally reported that behind proxy servers and multiple firewalls that errors can occur changing time stamps and registering invalid searches.

Webmasters who seek to mitigate Google Analytics specific privacy issues can employ a number of alternatives having their backends hosted on their own machines. Until its discontinuation, an example of such a product was Urchin WebAnalytics Software from Google itself.

## Legislation

In May 2011 it was ruled that EU websites must get user permission to store non-essential cookies on client computers. Website owners were given 1 year to comply before legal action is enforced. This resulted in all EU websites having to stop collecting Google Analytics data without the consent of the end user.

## Support and training

Google offers free Google Analytics IQ Lessons, [10] a \$50 Google Analytics certification test, [11] free Help Center [12] FAQ and Google Groups forum [13] for official Google Analytics product support. New product features are announced on the Google Analytics Blog. [14] Enterprise support is provided through Certified Partners. [15]

## APIs for third-party application support

The Google Analytics API<sup>[16]</sup> is used by third parties to build custom applications<sup>[17]</sup> such as reporting tools. Many such applications exist. One was built to run on iOS (Apple) devices and is featured in Apple's app store. There are some third party products also provide Google Analytic based tracking.<sup>[18]</sup>

## **Popularity**

Google Analytics is the most widely used website statistics service, currently in use on around 55% of the 10,000 most popular websites. Another market share analysis claims that Google Analytics is used at around 49.95% of the top 1,000,000 websites (as currently ranked by Alexa).

Google Analytics is used by 66.2% of the 10,000 most popular websites ordered by popularity, as reported by BuiltWith in August, 2013. [19] In May 2008, Pingdom released a survey stating that 161 (or 32%) out of 500 biggest sites globally according to their Alexa rank were using Google Analytics.

- Twitter
- Myspace
- Dailymotion
- · Answers.com

#### References

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#### **External links**

- Google Analytics Official Website (http://www.google.com/analytics/)
- Google Analytics Official Blog (http://analytics.blogspot.jp/)
- Google Analytics Similar Websites (http://www.cutestat.com/tag/google-analytics/)

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