Google analytics introduction

March 2014

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I don’t profess to be an expert – much of what I do with Google Analytics has been learned on a ‘need to know’ basis and there are areas of it that I ignore – either if I don’t want to use it, don’t understand it or can’t see the relevance.

So this introduction is very much on the basis of what I find really useful, but it should be a good way to get you started.

The first thing you need to know is that Google Analytics is free of charge.
Topics

• Using log analysis and other analytics
• Starting with Google analytics
• Looking at data
• Producing reports
• Tracking specific or outward-bound links or downloads
• Conversions, funnels and goals
• Looking at visitor information
Using log analysis and other analytics

• Different tools do not give directly comparable measurement.

• Google analytics (GA) currently use ‘Classic analytics’ and ‘Universal analytics’, which is in Beta. The first uses 3 or 4 first-party cookies to create the tracking effect: the second uses one. You can use both. Any site that uses GA must have a high-profile privacy and cookie statement that explains the use of analytics (see, for instance UCS site).

• When you set up a GA account, ensure that you do not opt to share your data with them.
How GA works

- Google Analytics works by the inclusion of a block of JavaScript code on each page in your website. On pageview, this JavaScript retrieves data about the page request and sends it to the Analytics server. The data comes from these sources:
  - The HTTP request of the visitor
  - Browser/system information
  - First-party cookie (or cookies), which collect data about a given browser, along with the information requested and sent by the browser's operator (the visitor)
The version of Google analytics covered here is ‘Classic analytics’. ‘Universal analytics’ was introduced in 2013 and from 2016 will supersede other tracking code. It uses a single cookie that adds an id to the user’s device and then uses non-cookie technology to draw data about what the user is doing. Optional cross-device tracking can also be set up: the privacy implications of that have not yet been fully explored, and I would be dubious about using the code until they are. Both tracking codes can be used at the same time.

The use of cookies and collected data is well described at http://www.koozai.com/blog/analytics/universal-analytics-and-cookies/
The first thing you need is a Google Analytics identity (http://www.google.com/analytics/web) – to get one you will need a Google account, so if you don't have one you'll have to do that first (https://accounts.google.com/SignUp).

When you log into Google Analytics (http://www.google.com/analytics/) within your Google Analytics administrative area are your accounts, in which you can track any number of items (web sites, parts or amalgams of websites, which Google calls 'account properties'). You will also see an overview that includes any accounts that you have been given access to and allows you start a new account if you need to.
How you start putting Google Analytics on a website 2

• To add a new account, first go to the ‘Admin’ in the top right, then you will have the opportunity to add a new account.

• When you request an account you first have to choose between the beta tracking code, ‘Universal analytics’, and the standard ‘Classic analytics’. You will be able to upgrade, so choose the Classic code.

• Fill in details about the name and the URL.

• Set the location and time. You should uncheck all the options for sharing data. You can modify this setting on a live account by going to the account settings.

• Click ‘Get tracking code’.
Your tracking code will look similar to this; the xxxxxx-x will be your web property id-profile number (so the first value will always be xxxxxx-1):

```
<script type="text/javascript">
  var _gaq = _gaq || [];
  _gaq.push(['_setAccount', 'UA-xxxxxxx-x']);
  _gaq.push(['_trackPageview']);
  (function() {
    var ga = document.createElement('script'); ga.type = 'text/javascript'; ga.async = true;
    var s = document.getElementsByTagName('script')[0]; s.parentNode.insertBefore(ga, s);
  })();
</script>
```

You need to copy the code, keep a copy safe and then paste it into your pages, just before the </head> tag or into your CMS.
Managing users in your account

• When you first start you Google Analytics account only you will have access to it. You can opt to give others access to the account, at a number of different levels, for all or for only particular properties or views.

• To add others for the whole account, at the **admin** screen you need to select ‘User management’

• You then add the user credentials and the select the permissions you wish to give them.

• When they log into GA they will see that the account is available to them.
Looking at what your account is tracking

In your initial set up you had the tracking code looking at a single domain (which was the default). You can change the tracking code if you want to extend this. (The overview and examples for the Classic code are on https://developers.google.com/analytics/devguides/collection/gajs/). This is useful for the following circumstances:

- Tracking across a domain and subdomains
- Tracking across multiple domains
- Tracking across a domain and a part of another domain

To then be able to differentiate in reports to which subdomain the request belongs, you will have to add a filter to a copy of the view that adds the URI to each string. See ‘Adding filters’ below for how to do this.
Using views

When you set up a view for a website, data tracking begins as soon as the tracking code is installed on the website and a visitor's browser loads a page. The data is stored in a ‘view’. If, later, you add an additional view, the additional profile will not contain the historical data that you see in the profile created earlier. You cannot access this historical data and you cannot migrate data between accounts.

- Views are used for giving others access to a subset of the data.
- The default view is called ‘All Web Site Data’
- You may have up to 50 views in any given Analytics account.
The master view and adding new views

The first profile for a property (automatically added as ‘All Web Site Data’) should be used as a master view. A master view should have no filters to exclude or include sections of the data from the site being tracked. You might want to set up a duplicate of the ‘All Web Site Data’ to keep as a backup of all data.

- If you want a filtered view (to provide partial data), add a new view and then add a filter to exclude certain data.

- **To set up a new view** – In your Admin screen for the account, in the right hand (VIEW) column of the screen, go to the popdown box and select ‘Create new view’ using a name suitable for the end use.
Adding filters

Adding a filter to a view will allow you to limit and modify the traffic data that is included in a view – predefined filters allow particular content to be included or excluded, or a custom filter can be added that could do a number of different things.

An overview of GA filters is at https://support.google.com/analytics/answer/1033162

There are

- Predefined filters (for measuring particular traffic)
- Custom filters (for instance adding subdomain names to requests)
Example filter

Before you use a filter, you need to add a view, first because you will be filtering out traffic, and second, then you can allow specific people access to that information.

For example, start a new view (Eduroam)

Select **VIEW > Filters** and a new filter with the criteria:

- **Filter name:** wireless
- **Filter type:** Predefined
- **Pop-down choices wanted are:** ‘Include only’ ‘traffic to the subdirectories’ ‘that contain’
- **Subdirectory name:** /wireless/
- **Case sensitive:** No
Account information

Seeing all filters

If you look in the ‘Account’ column of the admin screen and select ‘All Filters’, you have the opportunity to look at all filters you have added to properties and views.

Seeing Change history

If you look in the ‘Account’ column of the admin screen and select ‘Change History’, you have the opportunity to see all changes that have been made, when they happened and who did them.
Looking at data 1

When you log in, select account you want to look at and then click on the appropriate profile, which will take you into the ‘Reporting’ section.

You will see a ‘Audience Overview’ page that shows a set of overview information gleaned from the data collected. By default it will show you

- a graph of the last month of data
- some site usage statistics
- basic visitor data
Looking at data 2

On the left side of the screen, in the navigation, you can access further categories of data about audience, also

- Real Time use
- Acquisition (where you traffic is coming from),
- Behavior (site content, speed, etc.)
- Conversions (goals)

At the bottom the main screen there is access to information about browsers, OS and mobile usage. The categories open and close when you click into and out of them.
Looking at data 3

• You can build a **Dashboard** of your own to contain widgets showing particular features you want to keep an eye on – if you don’t want to start from scratch you can import dashboards already created by others. You can share your dashboard with others, email it or export it.

• You can add **Shortcuts** to reports you want to view often.

• You can view **Intelligence events** (https://support.google.com/analytics/answer/1320491?hl=en&ref_topic=1032994), set as four reports (overview, daily, weekly and monthly). These events are reported automatically for all data when a significant variation occurs over the different timespans. You can also set up custom alerts of your own, setting the thresholds and items you want to track.
**Behavior overview**

**Behavior > Overview** in the left navigation gives some measurements that are similar to **Audience > Overview**, but also give easy access to many other useful measurements. Most of the options for viewing pageviews for pages are self-explanatory.

- Annotate the graph
- Compare number of requests for two periods of time
- See requests for a particular page or directory
  - Use ‘Navigation summary’ to find out more
  - Use ‘Secondary dimension’ to find out more
- Find search terms used
- Find keywords used
Bounces

A "bounce" is a single-page visit to your site. In Analytics, a bounce is calculated specifically as a session that triggers only a single request, such as when a user comes to a single page on your website and then exits without causing any other request to the Analytics server for that session.

The analytics view is that bounces are bad since they show you are losing your user as soon as they arrive. However, for a page imparting a single topic of information or a page people use as their start page, a high bounce rate might be what you expect.
Other uses of content

- Select **Behavior > Site content > Content drilldown** from left menu to go down through your directories and see which are the most frequently used.

- Select **Behavior > Site content > Landing pages** from left menu to where people are entering your site, and select **Behavior > Site content’ > Exit pages** from left menu to see where they exit.

In page analytics

In-page analytics in theory should visualise the link usage from your pages, but it is picky about browsers and doesn’t always work.
Advanced segments

To access segments, select the pop down arrow in the top of the ‘Acquisition’ or ‘Behavior’ screens. You can apply some default filters to show a breakdown in your visitors by a selection of predetermined criteria (one of which is ‘mobile users’, which can be quite useful) or by creating and applying criteria of your own (for full information see https://support.google.com/analytics/topic/3123779)

- I have set up a custom segment that gives an approximation of Cambridge users – it uses the Dimension ‘City’ which matches exactly to the value Cambridge.
Producing reports

To produce a report of any data, you can go to either the ‘Export’ or ‘Email’ tabs in the top of the window and select the appropriate format.

The email option allows you to schedule report sending to a group of users – which may be ideal when you set up a profile filtering only a subset of your information and you wish to send it regularly to those who requested it.

Customised reporting

You can build your own custom reports if you want to, including specific dimensions and metrics – there is excellent help information at https://support.google.com/analytics/answer/1033013
Tracking specific or outward-bound links or downloads

If you have a lot of links that go outwards or are download links, you may like to track how often they are used. On some pages (particularly the home page) you may want to know how many times a particular link is used. In the same way, there are downloadable files for which we would like to know the frequency of use.

The instructions on https://support.google.com/analytics/answer/1136920 tell you how to create outbound tracking and those on https://support.google.com/analytics/answer/1136922?hl=en&ref_topic=1136919 tell you how to track particular links in a page. In both cases the method is different depending on whether you are using the Universal Analytics or the Classic code.
Conversions, funnels and goals

If you have some particular targets on your site and you want to measure how often and how effectively they are used and the routes used to get to them, you can extend the above technique and set up a goal and the route you’d expect them to take (see https://support.google.com/analytics/answer/1006230?hl=en&ref_topic=1631741).
Looking at visitor information 1

It might be useful for you to know what browsers your visitors are using and how this is changing over time.

- To do this you Go to ‘Audience’ in the left hand navigation and choose the ‘Technology’ pop-down, and then select ‘Browsers & OS’
- There are multiple Primary dimensions available above the table, so you can see OS, Screen resolution, Screen colours, and others
- You can then combine this with a secondary dimension, to show, for instance, browser version or operating system
Looking at audience by location

To see your audience location go to **Audience > Geo > Location** – you initially see the map showing Country/Territory but in the line under the map you can change the Primary Dimension to City, Continent or Sub Continent Region

Visitors flow

The screen available at **Audience > Visitors Flow** gives you a good overview of who is using your pages
Sampling in Google Analytics or in any web analytics software refers to the practice of selecting a subset of data from your website traffic: sampling can occur in your reports, during your data collection, or in both places. Sampling takes place if your site gets a traffic level of over 500k in most reports, unless you are a Premium customer, when you can adjust it.
More help

- General Google Analytics help pages - https://support.google.com/analytics/
- GA developer guide - https://developers.google.com/analytics/
- The Analytics Blog is where they announce new features and problems that have occurred: it contains a lot of commercially targeted features - http://analytics.blogspot.co.uk/