

Using Google Analytics in ASP.net MVC Website

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Introduction

Google Analytics is a service offered by Google that generates detailed statistics about a website's traffic and traffic sources and can be configured to measure product conversion rate and sales. Google Analytics is used by many including marketers, webmasters and technologists. It is currently the most widely used website statistics service. Usage of the basic Google Analytic Services is currently free.

Google Analytics can easily be integrated with Microsoft ASP.Net websites.

Implementing Google Analytics on an ASP.net website

The following sections detail the steps required to implement a Google Analytics within an ASP.net website:

Create a Google Account

In order to use Google Analytics, one needs to establish an account with Google. Access the following URL to create a Google Account.

<https://accounts.google.com/SignUpExpress?service=analytics&continue=https%3A%2F%2Fwww.google.com%2Fanalytics%2Fweb%2F%3Fhl%3Den>

You will be required to provide a name, email address, password. You will also need to verify your email address.

Respond to the Google Account Verification Email and Logon to Google

Click on the link provided with your Google Account Verification Email.

Logon to Google with your email address as your user name and the password that you provided when creating your Google Account.

Signup for Google Analytics

After successfully logging into your Google Account using the link from your Google Account Verification Email, you will be forwarded to a page to start the Google Analytics signup process. Click the Signup button.

You will be brought to a page with the option to select Website or Mobile Application. Choose Web Site. You will then have the opportunity to choose Universal Analytics or Classic. At this point in time Universal Analytics is in Beta and is missing a few features, so the common recommendation is to choose Classic at this time.

You will also be asked to provide the following information on this page.

- Account Name
- Website Name
- Website URL
- Industry Category
- Data Sharing

After the above information has been added, click the Get Tracking ID button at the bottom of the page.

You will be presented with the Google Terms of Service. Accepting the terms of Service will launch the user into the user's site ADMIN page.

Google Analytics Site Configuration

From the user's site ADMIN page, the user is given the opportunity to configure the Website Tracking including:

- Subdomains
- Top Level Domains
- Display Advertiser Support
- Custom Campaign Tags

At the bottom of this page, the user is presented with the Google Analytics Tracking code. The tracking code is written in Javascript and is encapsulated in <script> tags. The following is a sample of this code, which is unique for a specific website. Uniqueness is provided by the tracking code ('UA-12345678-1') highlighted below:

```
<script type="text/javascript">

var _gaq = _gaq || [];
_gaq.push(['_setAccount', 'UA-12345678-1']);
_gaq.push(['_trackPageview']);

(function() {
  var ga = document.createElement('script'); ga.type = 'text/javascript'; ga.async = true;
  ga.src = ('https:' == document.location.protocol ? 'https://ssl' : 'http://www') + '.google-
analytics.com/ga.js';
  var s = document.getElementsByTagName('script')[0]; s.parentNode.insertBefore(ga, s);
})();

</script>
```

The website author cuts and pastes this information into the ASP.net MVC's shared View page, usually `_Layout.cshtml`.

Embedding Google Analytics Tracking code into a ASP.net MVC Website

To track information about all website users, the above tracking code is placed into the users top level `_Layout.cshtml` page as follows. The code must be placed in the Head section of the page in order to

function correctly. To minimize the complexity of the `_Layout.cshtml` page, it is recommended to use a partial page to encapsulate the Google Analytics Tracking Code.

If configured correctly, the code will fire every time the user browses to the site, to a new web page within the site or refreshes their current page, within the site.

`_Layout.cshtml` page

```
@using System.Web.Optimization
<!DOCTYPE html>
<html>
<head>
    <meta charset="utf-8" />
    <meta name="Description" content="John Gnazzo Application Development Consultant" />
    <meta name="keywords" content="Google Analytics" />

    <title>@ViewBag.Title</title>
    @Html.Partial("_GoogleAnalytics")
</head>
<body>
    <div id="page_content">
        @RenderBody()
    </div>
    @RenderSection("scripts", required: false)
</body>
</html>
```

`_GoogleAnalytics.cshtml`

```
<script type="text/javascript">

var _gaq = _gaq || [];
_gaq.push(['_setAccount', 'UA-12345678-1']);
_gaq.push(['_trackPageview']);

(function() {
    var ga = document.createElement('script'); ga.type = 'text/javascript'; ga.async = true;
    ga.src = ('https:' == document.location.protocol ? 'https://ssl' : 'http://www') + '.google-
analytics.com/ga.js';
    var s = document.getElementsByTagName('script')[0]; s.parentNode.insertBefore(ga, s);
})();

</script>
```

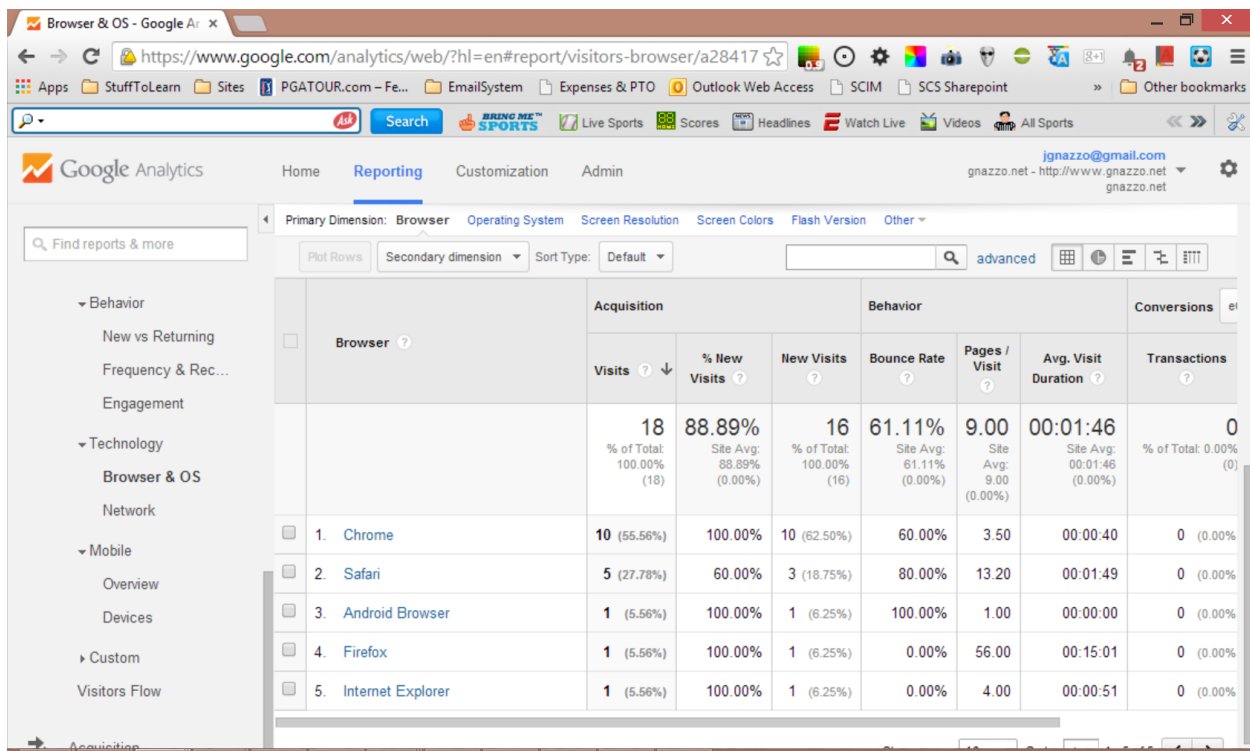
Basic Measurements Provided by Google Analytics

The following is a listing of key measurements that are provided out of the box with Google Analytics.

- Visitor Demographics – Age, Sex
- Interests
- Geo – Language, Location
- Behavior – New vs. Returning, Frequency & Recency, Engagement
- Technology – Browser & OS, Network
- Mobile – Desktop/Tablet, Mobile Devices
- Custom Variables – Sky is the limit here, User Defined
- Visitors Flow – Flow of visitor through site

The website author may also add Custom and User Defined variables to add more information regarding a user's website experience, and to track things such as sales conversion rates.

The following figure shows information from Google Analytics, illustrating which browser the user was using when accessing the website.



The screenshot shows the Google Analytics reporting interface for the 'visitors-browser' report. The primary dimension is set to 'Browser'. The table displays metrics for Acquisition, Behavior, and Conversions across five browser types: Chrome, Safari, Android Browser, Firefox, and Internet Explorer.

Browser	Acquisition			Behavior			Conversions
	Visits	% New Visits	New Visits	Bounce Rate	Pages / Visit	Avg. Visit Duration	Transactions
	18	88.89%	16	61.11%	9.00	00:01:46	0
	% of Total: 100.00% (18)	Site Avg: 88.89% (0.00%)	% of Total: 100.00% (16)	Site Avg: 61.11% (0.00%)	Site Avg: 9.00 (0.00%)	Site Avg: 00:01:46 (0.00%)	% of Total: 0.00% (0)
1. Chrome	10 (55.56%)	100.00%	10 (62.50%)	60.00%	3.50	00:00:40	0 (0.00%)
2. Safari	5 (27.78%)	60.00%	3 (18.75%)	80.00%	13.20	00:01:49	0 (0.00%)
3. Android Browser	1 (5.56%)	100.00%	1 (6.25%)	100.00%	1.00	00:00:00	0 (0.00%)
4. Firefox	1 (5.56%)	100.00%	1 (6.25%)	0.00%	56.00	00:15:01	0 (0.00%)
5. Internet Explorer	1 (5.56%)	100.00%	1 (6.25%)	0.00%	4.00	00:00:51	0 (0.00%)