Google Analytics Universal Guide

BEST PRACTICES FOR IMPLEMENTATION AND REPORTING

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Introduction

At a very basic level, Google Analytics is a simple proposition: include a tracking code on every page of your website, and then access reports to view the data that is collected.

Although countless organizations still use this default approach to Google Analytics, it has never been adequate. Without the configuration required for goals/funnels, events, advanced segments, campaigns, and a number of other features, Google Analytics can't paint a complete picture.

And there are now special implementation questions to ponder. Should I install the Classic or Universal tracking code? How do I migrate to Universal? Should I use Google Tag Manager instead?

This guide offers a range of critical considerations for transcending passive data collection and instead taking full advantage of Google Analytics for insight, action, and measurable website performance improvement.

Accounts, Properties, and Views

You don't need a gmail account to create a Google Analytics account.

You do need a Google account to create a Google Analytics account, but your Google account can be associated with a gmail address or any other email address.

You can create 100 Google Analytics accounts and be given access to an unlimited number of accounts.

You can create up to 100 Google Analytics accounts for each Google login/account. (The previous account creation limit was 25 per login.)

If you need to create additional Google Analytics accounts, you can create another Google account.

To use a different approach, other Google Analytics admins can give you access to an unlimited number of accounts, properties, and views, so you can have colleagues or clients create Google Analytics accounts and provide you will full access, thereby circumventing the 100-account limitation.

You can create a separate account, or a separate property, for each website you're tracking.

You can create a separate account for each website, but you don't have to. If you don't create a separate account, you do need to create a separate property. Each property corresponds (in most circumstances) to one website, and each account can contain multiple properties, so each Google Analytics account can be used to track multiple websites.

Why can the same website have multiple views?

A website corresponds with a property, and a property can contain multiple views.

This allows you to apply different filters and goals to the same data. For instance, one department in your organization may want to view data only for one website subdirectory, while a partner may want to see all purchases completed for traffic that was referred from that partner's site.

For more details on configuring different views, see View Settings and Filters below.

You can create 50 views per Google Analytics account.

You can create as many as 50 views per account. (The number of properties per account is therefore limited to 50 as well, since each view belongs to a property.)

Universal Analytics

What's the benefit of Universal?

The core reporting that you already use in Google Analytics Classic has not changed in Google Analytics Universal.

Universal offers some new features, such as custom dimensions (which basically replace custom variables and which you can use in your own custom reports).

Through the "Measurement Protocol", Universal also facilitates the tracking of user activity across different devices and online/offline (e.g., phone and point-of-sale purchases). This type of "universal" tracking requires special coding.

Going forward, new features in Google Analytics will be available only for Universal Analytics.

When I'm creating my Google Analytics account, should I opt for Universal Analytics or Classic Analytics?

In most cases, Universal is now the better option for new accounts (and properties), since all accounts are scheduled to be migrated (with or without owner involvement) in the coming months (from the publications of this ebook).

How do I migrate from Classic to Universal?

There are three main steps for migrating existing properties to Universal. (Note that the migration takes place at the property level, not the account level.)

1. *Convert an existing property from Classic to Universal:* on the Admin screen for your property, click Universal Analytics Upgrade, and continue as prompted.

2. *(optional currently, but required long term) Update your tracking code:* change the Google Analytics tracking code on your website from the ga.js (Classic) version to the analytics.js (Universal) version. If you're using Google Tag Manager, remove the existing Google Analytics tags, and replace with Universal Analytics equivalents.

3. *(not optional if you complete step 2) Update Ecommerce, event, virtual pageview, and*

social tracking code: if you have Ecommerce or manually coded events and social tracking on your site and you want to switch to analytics.js, you must also update all code to Universal syntax.

If you update to analytics.js, you must also update Ecommerce, event, social, and virtual pageview tracking to Universal syntax.

In Universal, can I still use the same Google Analytics methods such as _trackEvent?

You can use the same basic methods and pass the same parameters to the methods, but you need to update the syntax to Universal.

As an example, an event for a video play in Classic might be written as:

```
_gaq.push(['_trackEvent','video','started','company-video']);
```

In Universal syntax, this code would be written as:

```
ga('send', 'event', 'video', 'started', 'company-video');
```

What happens if I don't migrate?

If you haven't migrated your properties by a certain point in the coming months (from the publications of this ebook), Google Analytics will migrate them for you.

After this "involuntary" migration, your ga.js tracking will still work correctly, but you will not be able to take advantage of new Google Analytics features until you update your tracking code to analytics.js as described in step 2 above.

Google Analytics confirms continued support for ga.js for two years, but it will be considered deprecated and eventually unsupported.

> The classic ga.js version of the Google Analytics tracking code will not be supported in the future. If you continue to send data to using the non-Universal Analytics collection method, according to Google: "this data will continue to be processed for up to two years after Universal Analytics has become the new operating standard."

Cookies and Sessions

Google Analytics Universal uses only one cookie.

Universal uses the _ga cookie only.

Cookie expiration and timeouts are refreshed with each user interaction.

When a user first visits your website, Google Analytics sets the following timeouts:

Cookie Name in GA Classic	Purpose	Default Duration	Equivalent in GA Universal
_utma	Track visitor (anonymously)	2 years	_ga cookie
_utmb	Track a single vistor session	30 minutes	Session Timeout setting in the property admin
_utmz	Track visitor source	6 months	Campaign Timeout setting the property admin

With each return visit or additional interaction, cookie expiration and timeouts are extended to the full, original duration.

Pageviews and all other hits refresh the cookies and timeouts.

All types of Google Analytics hits, listed below, refresh cookie and timeout expirations:

- Pageview (page load or virtual pageview)
- Event
- Social action
- Ecommerce transaction

Do many Web users have cookies disabled in their browsers?

Statistically, only a few percent of visitors (at most) have cookies disabled, and the same is true for JavaScript and images, which also must be enabled in the browser for Google Analytics to track a visit.

Do many Web users delete cookies between visits?

Yes. All research indicates that a significant percentage of Web users regularly delete cookies (often while clearing the browser cache completely). This means that, in comparison to actuality, Google Analytics reports:

- more new visits
- more unique visitors
- lower Count of Visits (per visitor) and Days Since Last Visit in the Frequency and Recency report
- shorter paths in the Multi-Channel Funnel reports
- more direct traffic: as discussed in Traffic Sources and Campaigns, a direct visit would not overwrite a more specific traffic source from a previous visit, but without a cookie, Google Analytics has no record of the previous visit

Are Google Analytics cookies shared between different browsers on the same computer or device?

No. All cookies are browser-specific, so the bullets above regarding cookie deletion also apply to users who visit your site with multiple browsers.

Can Google Analytics record a visit if the visitor has enabled private-browsing mode in the browser?

Yes, but since cookies are deleted after the session, the five bullets above apply once again.

If, on the other hand, the visitor has installed the Google Analytics Opt-Out browser plugin, the visit will not be tracked at all.

Google Tag Manager

Does Google Tag Manager replace Google Analytics?

Google Tag Manager provides a "container" in which you can place your Google Analytics tracking code, along with many other types of analytics and marketing codes (or "tags"). In this way, your Google Tag Manager implementation replaces your Google Analytics implementation, but it also accommodates a range of other tags.

Like the Google Analytics tracking code, you should normally include the Google Tag Manager container code on every page of your website.

While the recommended placement for the Google Analytics tracking code is just before the </head> tag, the Google Tag Manager container code should ideally be placed right after the <body> tag.

In any case, once you include your Google Tag Manager container on your website, you still need to use the Google Tag Manager interface to add a Google Analytics tag to the container.

If I'm using the Google Analytics tag within Google Tag Manager, how can I modify the Google Analytics tracking code?

Once you add the Google Analytics tag to Google Tag Manager, you can configure settings such as cross-domain tracking directly within the Google Tag Manager interface without manually updating any code.

Can I use Google Tag Manager for Universal Google Analytics?

Yes. Google Tag Manager offers tag templates for both Classic and Universal Google Analytics. (As explained above, Universal is now the better option in most cases.)

You must reconfigure Ecommerce, event, and social tracking for Google Tag Manager.

Ecommerce, events, virtual pageviews, and social tracking need to be reconfigured for Google Tag Manager.

Google Tag Manager allows you to configure events, virtual pageviews, and social

tracking without adding any code directly to the page. Google Tag Manager also somewhat simplifies Ecommerce tracking, but due to the many parameters needed for Ecommerce, some coding is still required.

If you replace your Google Analytics tracking code with Google Tag Manager and the Google Analytics tag, you must also update Ecommerce, event, social, and virtual pageview tracking for Google Tag Manager.

Clicks are the easiest type of user action to capture in Google Tag Manager.

Click listeners (and link click listeners specifically) are built into Google Tag Manager. You can easily configure these click listeners to generate Google Analytics events, virtual pageviews, and social actions.

Google Tag Manager also provides a form submit listener and a timer listener.

Can I capture other types of user actions in Google Tag Manager?

Yes. You can still use Google Tag Manager data layer coding to manually capture other types of user actions so you can trigger a Google Analytics event or virtual pageview. (As the name suggests, you can also use the data layer to pass in data that you can then use in your Google Tag Manager tags.)

If, for instance, you wanted to generate a Google Analytics event whenever a visitor moused over the logo on your website, you could add the following code to your <img> tag:

```
<img src="/images/logo.png" onmouseover="dataLayer.
push({'event': 'logoMouseover'});">Click Here</a>
```

The event argument above does not generate a Google Analytics event, but you can apply this event argument as a rule to trigger a Google Analytics event tag (or a Google Analytics social or virtual pageview tag, or a tag unrelated to Google Analytics) that you have configured within Google Tag Manager.

Because of the flexibility that Google Tag Manager affords for adding, removing, and modifying marketing and analytics tags independently of your Web development cycles, it can be a better long-term option than Google Analytics tracking with the in-page “hard code”.

Work with your Web developers, however, to trial Google Tag Manager in a test environment before deploying to a production environment.

Access Rights

Google Analytics now has four levels of access rights.

There are now four levels of access rights in Google Analytics:

- Manage Users
- Edit
- Collaborate
- Read & Analyze

Manage Users and Edit correspond to the Administrator level that Google Analytics used previously. Read & Analyze level corresponds to the previous User level. (Collaborate deals with editing of shared assets such as Dashboards and Annotations.)

Edit rights allow you to change the underlying view data that all users see.

If you have Edit rights, you can change view filters and settings and also define goals. These changes alter or calculate property data for all users who access the view.

Why is Read & Analyze not called “Read-Only”?

Apart from viewing reports, users with Read & Analyze rights can create:

- Advanced segments
- Dashboards
- Annotations
- Custom Reports
- Intelligence Alerts

These elements do not alter underlying view data and are visible by default only to the user who creates them.

You can now assign rights at all levels of the account structure.

You can now manage rights at all three levels of the account:

- Account
- Property
- View

If I assign rights to a user at the account level, do I have to specify which properties and views that user has access to?

No. Rights at the account level go down to property, and property level goes down to view.

If you grant rights at the account level, you cannot restrict rights for that user to specific properties or views within the account.

View rights do not flow up to property, and property rights do not flow up to account.

To whom can I grant Google Analytics account access?

You can grant Google Analytics account access to anyone who has an email address that is associated with a Google account (which includes, but is not limited to, all gmail addresses).

All account admins have the same privileges as the account creator, including deletion.

If the account creator grants all four privilege levels to another user at the account, property, or view level, that user has no restrictions, even for deleting the account, property, or view.

View Settings and Filters

Set the Default Page in your view settings so your home doesn't appear as / in your reports.

For many websites, setting the default page in Google Analytics avoids fragmentation of your home page pageviews. If you can access your home page by either the domain name only (such as www.mysite.com) or a default page (such as www.mysite.com/index.php), and you're not 301-redirecting one to the other, you should specify index.php as the default page to prevent some pageviews of the home page appearing as / and others appearing as */index.php*.

Note that the default page applies to all URLs that end in /, such that www.mysite.com/company/ would be rewritten as www.mysite.com/company/index.php (if the default page is specified as index.php).

Use Exclude URL Query Parameters to further consolidate URLs.

This setting serves to consolidate URL variations (rather than exclude entire URLs). Without this setting configured, some websites can generate many thousands of separate URLs in Google Analytics – far too many for most analytics purposes.

If your URLs contain query parameters that do not determine significantly different page content, you can strip them out of the URLs that appear in Google Analytics by including the query parameters in this setting.

If, for example, the userid parameter in the URL below serves only to customize a welcome message, you should probably include userid in Exclude URL Query Parameters:

www.mysite.com/account.php?userid=12345

In this way, Google Analytics won't record a separate URL for each user who accesses the account page.

Conversely, you should not use Exclude URL Query Parameters for those query parameters that do determine different page content. If, for example, articleid below determined most of the page content, you should omit it from Exclude URL Query

Parameters:

www.mysite.com/account.php?articleid=12345

For an assessment of the query parameters used in your URLs, see the Crawl > URL Parameters report for your site in Google Webmaster Tools.

> Note that no Google Analytics setting or filter in any way helps the duplicate URL issues that can affect SEO.

How do I configure Site Search?

If your website has an internal search feature, the search results page most likely includes the search term, preceded by a specific query parameter, within the URL.

For instance, if you enter *elections* as a search term on www.vancouver.com, the search string is identified in the resulting URL by the q query parameter:

www.vancouversun.com/search/search.html?q=elections

To populate the Google Analytics Site Search reports for this website, you'd just have enable Site Search Tracking and specify q as the search query parameter.

As a note, the Site Search reports are unique within Google Analytics because they directly indicate visitor intent and can therefore provide a wealth of data for optimization, marketing, search engine optimization, and even hidden business opportunities, so if you already have search on your site, you can probably take advantage of the very easy Site Search configuration in Google Analytics.

Which filters should I apply to my views?

Hostname: if you have the same Google Analytics tracking code on dev.mysite.com, stage.mysite.com, and www.mysite.com, you can configure a filter as follows to display data only for your production server:

Filter Type: Include

Filter Field: Hostname

Filter Pattern: www\.mysite\.com

Note that \ in the filter pattern "escapes" the dot so it is interpreted as a literal dot and not as a regular expression wildcard for any single character.

Internal IP address range: Excluding internal traffic from your views in considered best-practice. The challenge arises because most organizations access the internet not with a single IP address but an IP address range that often spans 15 IP addresses, such as 34.123.76.1 to 34.123.76.15. Instead of 15 separate filters, however, we can create one filter based on a single regular expression that matches all 15 IP addresses as follows:

Filter Type: Include

Filter Field: IP Address

Filter Pattern: ^34\.123\.76\.([1-9]|1[0-5])$

For a regular expressions reference see: www.e-nor.com/blog/google-analytics/google-analytics-regex-and-keyboard-shortcuts-desktop-backgrounds

Lowercase: You can consolidate case variations of your URLs (or, more specifically your request URIs, which are the portion of your URLs that follow the domain) as follows:

Filter Type: Lowercase

Filter Field: Request URI

However, there is an argument – related to SEO – for not applying this filter. Case variations can hinder SEO, since search engines may treat URLs with case variations as separate URLs, thereby fragmenting the page's link equity and potentially decreasing its ranking. If you don't apply a lowercase filter in Google Analytics, you may be able to more easily identify and address URL case variations and thereby help your SEO efforts.

Maintain three views for each property

Make sure to maintain at least three views for each Google Analytics property:

Raw: no view settings or filters applied at all

Test: use this view to test settings, filters, and goals before applying them to your working view(s)

Working: this view should have basic settings and filters applied. You can most definitely create more than one working view with different filters and goals, but each should start with the "baseline" settings and filters applied as described above.

Goals and Funnels

Should I use the templates provided for goals?

You may get some ideas for goals by reviewing the templates provided, but in most cases it's simplest to just select the Custom option and define your own goal.

In either case, to set up a goal in Google Analytics, you do not have to add any extra code to your site; goals are defined only through the admin screen for a Google Analytics view.

You can match more than one URL in a single goal.

While the match type for a Destination goal defaults to Equals To, you have the option of selecting Begins With or Regular Expression.

For instance, if you want to match /thank-you and /thank-you-expedited-shipping as a single goal, you could define your goal as:

Destination
Begins With
/thank-you

You could define goal to match /confirmationA.html, confirmationB.html, and confirmationC.html but not confirmationD.html as:

Destination
Regular Expression
/confirmation[ABC]\.html

Should I set up funnels for my goals?

If you can identify an expected path to your Destination goal, you should create a funnel for that goal, even for a single page preceding the destination URL, such as a contact form that goes to a thank-you page when submitted.

Configuring a funnel provides two benefits: it demonstrates drop-off in the Funnel

Visualization report, and it allows Google Analytics to calculate an Abandonment Rate (and a specific Funnel Conversion Rate).

What is Abandonment Rate?

A very useful metric, Abandonment Rate is sometimes misinterpreted as the inverse of goal Conversion Rate. Abandonment Rate strictly refers to the percentage of visits during which the visitor entered your funnel (at the first step, if you specified this as required, or otherwise at any step) but did not reach the goal destination.

As a note, you cannot apply advanced segments to the Funnel Visualization report. To generate a funnel for different audience segments, you can create separate views with filters that match to your advanced segment definitions.

If you don't have Ecommerce enabled, specify goal value so Google Analytics can calculate Page Value.

Even for non-monetized goals, specifying an arbitrary goal value such as $1 allows Google Analytics to calculate the very useful but often neglected Page Value metric.

For a given page in a given time period, Page Value is defined as:

$$\frac{\text{goal value + Ecommerce revenue generated after the page was viewed}}{\text{unique pageviews}}$$

(Unique pageviews itself means the number of visits during which the page was viewed at least once.)

Page Value is actually very straightforward as a metric: it indicates how much a page drives towards a goal completion or Ecommerce transaction.

In the case of Ecommerce, you can interpret page value literally: my catalog page is helping to generate, on average, $34.79USD in revenue each time it is viewed.

In the case of goal completions, you can interpret page value literally if your goal monetizations are accurate, but even if you have included an arbitrary goal value, page value is still an excellent indicator of the page's relative contribution to goal completions.

If you have specified a value of $1 for a lead submission goal on a real estate website and you see that your house pages are averaging $0.20 in page value while your agent pages are averaging $0.60 in page value, you'll know that visitors are responding more strongly to the agent pages, and you might consider changing your navigation to direct more visitors to the agent pages.

Goal value can also be useful for custom intelligence alerts. Since goal completions are not available as metrics for custom alerts, you can use goal value as a proxy. (See Intelligence Alerts below.)

Can I use virtual pageviews and events in goals and funnels?

Once a virtual pageview is generated, Google Analytics treats it identically to a physical pageview, so you can use virtual pageviews both a goal destinations and funnel steps.

You can use events to define the separate Event goal type, but you cannot use events as funnel steps.

When should I use Ecommerce instead of goals?

If you sell a wide range of products or services on your site, the Ecommerce reports can provide a level of detail that the goal conversion reports cannot.

However, Ecommerce configuration in Google Analytics does require code-level changes and may therefore take longer to implement, so if you can't implement Ecommerce tracking right away, you can use goals with an estimated average value as an interim approach.

Should I include Ecommerce and goals in the same view?

If you are going to configure goal values and Ecommerce tracking for the same site, you should decide – from a page value standpoint – if it makes more sense to keep goals and Ecommerce separate or to integrate them.

Let's say that visitors to your site can complete a lead form (as a goal) or purchase products (as Ecommerce). If your goal value is relatively accurate (in terms of offline close ratio for your leads, etc.), it might make sense to keep goals and Ecommerce in the same view and thereby allow Google Analytics to calculate overall page value based both on goal completions and on Ecommerce.

If, however, you have configured you goal with an arbitrary or very general value, or if you want to analyze page value separately for your lead submissions vs. your Ecommerce transactions, you may consider keeping goals and Ecommerce in separate views.

Are goal conversion rates based on visitors or visits?

Goal conversion rates are based on visits, not unique visitors. If a visitor visits your site four times and converts only on the fifth visit, the first four visits still lower the overall conversion rate for that goal. For this reason, goal conversion rates are reported lower than they would be if they were based on unique visitors.

A visitor can "convert" only one time per visit, so even if a visitor completes your goal five times in a single visit, Google Analytics will record only a single conversion.

> Note that Google Analytics can record multiple Ecommerce transactions in a single visit; the one-per-visit limitation applies to goal conversions only.

Goals are not retroactive

When you define a goal, it is tracked only from that point forward, so do not delay in setting up goals for purchases, form submissions, and any other type of user action that can be considered either a microconversion or macroconversion.

Campaigns and Traffic Sources

Which traffic channels does Google Analytics recognize by default?

By default, Google Analytics recognizes three traffic mediums:

- Direct
- Referral
- Organic

Within the Acquisition > Overview and Acquisition > Channels reports (and the Multi-Channel Funnel reports), Google Analytics also breaks out two specific types of referral sources by default:

- Social – referrals from domains recognized as social networks, such as facebook.com
- Email – referrals from websites recognized as email providers, such as gmail.com

These five mediums and sources together serve as the *Default Channel Grouping* in Google Analytics.

How do I set up a campaign in Google Analytics?

You do not need to "set up" campaigns per se. In Google Analytics, campaigns are defined only as clickthroughs on inbound links that contain the utm_medium, utm_source, and utm_campaign campaign parameters (also referred to as campaign "tags"), as in the example below:

www.mysite.com/?utm_source=main-list&utm_medium=email&utm_campaign=2014-01-06-promo

To correctly format your campaign tags, you can use E-Nor's URL builder tool:

www.e-nor.com/tools/url-builder

When should I use campaign tags?

The problem with the default channels discussed above is that the default channel/medium/source tracking is in many instances not specific enough. It may be helpful in the following scenarios to use campaign tags to override the default attribution with more meaningful campaign values:

Clickthrough Type	Default Medium	Better Campaign Medium
email (opened in email client such as Outlook)	direct	email
banner ad	referral	banner
retargeting banner	referral	retargeting
pay-per-click	organic	cpc*
affiliate	referral	affiliate
link in document (such as PDF)	direct	document
link in mobile app	direct	app
press release	referral	press-release**

*For AdWords, bypass manual campaign tagging and instead enable Autotagging, which will provide much additional information beyond medium, source, and campaign.

**The potential downside of campaign-tagging press release links (or banner/retargeting campaigns) is that you override the specific referring site as the source with the source value that you provide in your campaign tags. To dynamically include the referrer in the campaign source, see Tracking Traffic from Press Releases in Google Analytics.

You can also use campaign parameters in the following special instances:

- Embedded within shortened URLs
- Redirects for QR codes
- Redirects for vanity URLs (such as www.promoxyz.com) to your site
- Redirects for promo URLs (such as www.company.com/promoxyz) to another page on your site

Apart from the possible exception of redirecting promo URLs as mentioned above, do not use campaign tracking within your site (for internal banners, etc.). Each click will generate a new visit with a new source and medium, which will prevent you from tracing conversions and other activity back to the actual source of the visit (such as an organic search result or an email campaign). In the case of a promo URL, use a clean 301 redirect on the server so the promo URL does not load, does not execute any Google Analytics tracking code, and does not generate an extra visit in Google Analytics before the redirect.

If a visitor clicks through from one channel on a first visit and then from another channel for a second visit, will the Acquisition reports count the visit towards the original channel or the more recent channel?

Google Analytics follows the principle of last-click attribution: the most recent channel gets the credit for the visit.

Because this model is based primarily on clicks, *direct* as a medium for the second visit does not overwrite a more specific medium, such as referral, organic, or a campaign medium. If a visitor clicks through to your site from an organic search result and then returns the next day by entering your Web address directly into the browser, the second visit will count as organic. If that visitor then receives your email newsletter and clicks through on your campaign-tagged link, the third visit will count as the campaign medium that you have appended to your inbound link, since the campaign medium is considered as specific as organic and therefore overwrites it.

The Conversions > Multi-Channel Funnel reports do preserve *direct* as the medium for all direct visits.

Referral Path indicates specific referral pages.

The All Referrals report displays the referring domain as the primary dimension. You can view the specific Referral Paths by clicking any of the referring domains to drill down.

Why does my own website appear as its own referrer?

After expiration of the current session, a clickthrough from one page on your site to another may be recorded as a referral, so a small number of self-referrals is to be expected.

If you're seeing a relatively high number of self-referrals, the Google Analytics tracking code is probably missing from one or more pages on your site. To verify, you can drill down into the Referral Path for the self-referrals as described above, access the page, and either check the page source or display Google Tag Assistant.

> To quickly verify the presence of Google Analytics on any Web page, install the Google Tag Assistant plugin for Chrome.

Advanced Segments

What's the difference between advanced segments and view filters?

Advanced segments and view filters are quite comparable in purpose in that they both allow you to narrow your reporting focus to specific audience characteristics or activity, but advanced segments differ from view filters in significant ways:

- You can apply them dynamically to past time periods.
- They don't alter underlying review data, so you can remove them at any time.
- They're defined on a per-user basis.
- You don't need Edit rights to use them, just Read & Analyze.

Define your own advanced segments.

Google Analytics offers a range of built-in advanced segments. Many, such as Non-bounce Visits, can provide interesting and useful ways to segment your traffic.

The real power of advanced segments, however, lies in custom advanced segments that you define yourself. Custom advanced segments are a critical component of effective traffic analysis in Google Analytics.

Advanced segments based on a Page or Event (Category/Action/Label) value do not limit data to that page or event.

When you define an advanced segment based on page or event value, the page or event is used to characterize the visit rather than limit the reports to that page or event. For example, if your site sells tours of the Australian outback, you can define an advanced segment based on a view of your itinerary page or a virtual tour event, apply that segment to your conversion reports, and thereby determine if that page or event is increasing conversions.

There are now two scopes for custom advanced segments: Visit and User.

When you're defining an advanced segment on the Traffic Sources "starter" panel, or on the "do-it-yourself" Conditions and Sequences panels, you can select either Visit or User as the scope.

The recent addition of User scope is quite profound, since it now allows us to map behaviors (such as a video play, as captured in an event) and characteristics (such as traffic source) from one visit to outcomes (such as goal conversions) in another visit.

To define an advanced segment based on a specific order of user interactions, you can use the new Sequences feature.

Cross-Domain and Subdomain Tracking

How do I track across different subdomains?

With Universal Analytics, you no longer need to amend the tracking code to track across subdomains, since the top-level and second-level domains are already included in the default tracking code:

```
ga('create', 'UA-46XXXX39-1', 'mysite.com');
```

You could use the same code above for integrated tracking across www.mysite.com, blog.mysite.com, and news.mysite.com.

How do I track across different domains?

In Google Analytics Universal, the simplest way to track across linkfrom.com and linkto.com is to complete the three following steps, which take advantage of built-in utilities for cross-domain tracking and minimize manual coding:

1. On linkfrom.com, use the following as the Google Analytics tracking code:

   ```
   ga('create', 'UA-000000-X', 'linkfrom.com');
   ga('send', 'pageview');
   ga('require', 'linker');
   ga('linker:autoLink', ['linkto.com']);
   ```

   If you're redirecting to linkto.com from a form on linkfrom.com, also include the following code:

   ```
   ga('linker:autoLink', ['linkto.com'], false, true);
   ```

2. On linkto.com, use the following as the create statement in the Google Analytics tracking code:

   ```
   ga('create', 'UA-XXXX-Y', 'auto', {'allowLinker': true});
   ```

3. On the property admin screen for linkfrom.com, add linkto.com to the Referral Exclusion List.

How do I track across different domains using Google Tag Manager?

As the equivalent of the steps above, you can use the Auto Link Domains setting in Google Tag Manager as specified below:

1. In the Google Analytics Universal tag, expand More Settings > Cross Domain Tracking, and enter linkto.com in the Auto Link Domains field.

2. In the same section, set Allow Linker to true.

3. On the property admin screen for linkfrom.com, add linkto.com to the Referral Exclusion List. (This step is completed through the Google Analytics admin screen whether you're using the Google Analytics tracking code or Google Tag Manager.)

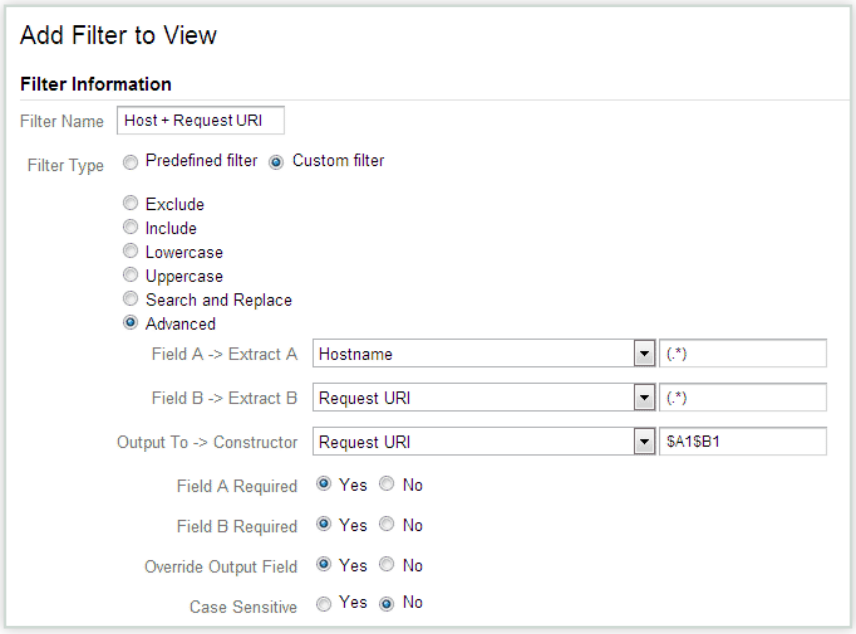
For additional cross-domain tracking options in Google Tag Manager, see:
support.google.com/tagmanager/answer/3561401

If I'm tracking across multiple domains or subdomains, how can I tell where pageviews are occurring?

If the domains or subdomains that you're tracking have identical request URIs, such as /default.aspx, the pageviews of these two pages would be aggregated by default in all Google Analytics reports.

To distinguish between pageviews of www.domain1.com/default.aspx and www.domain2.com/default.aspx, you can use the following view filter to prepend the hostname (that is, the full domain name) to the request URI:

You can also use the hostname in a different type of filter. Even when tracking across domains or subdomains, you may at times want view data for just one website or the other. In this case, you can create two new views and apply Include filters based on hostname value, as described in View Settings and Filters above.



What if I want to track my subdomains as completely separate websites?

To track subdomains separately, you can create separate Google Analytics properties and pass specific subdomains as the cookieDomain parameter in the tracking code on each site:

```
ga('create', 'UA-000000-1', 'www.mysite.com');

ga('create', 'UA-000000-2', 'blog.mysite.com');
```

Events and Virtual Pageviews

Why do I need events and virtual pageviews?

The default installation of the Google Analytics tracking code records data only when a page is requested on your site and loads in the browser. There are, however, many types of actions that do not cause a page load but that you still may want to track, such as:

- Off-site links
- Mailto: and tel: links
- Opens/downloads of PDFs and other file types
- Flash / Ajax / jQuery / HTML5 interactions
- Video plays, pauses, and completions
- Completion of individual form fields

Should I choose events or virtual pageviews for these actions?

For each type of non-page-load interaction, you can choose to configure either a virtual pageview or an event. For an action that is more comparable to a regular pageview, such as a PDF download, you may opt for a virtual pageview; for an action that is less comparable to a regular pageview, such as a video play, you may opt for an event.

How do events and virtual pageviews differ?

Although they serve a similar purpose, events and virtual pageviews do differ in several ways:

- Events appear in dedicated Events reports, while virtual pageviews are integrated into the Site Content reports (and sometimes said to “inflate” overall pageviews).
- Because virtual pageviews are handled identically to regular pageviews throughout Google Analytics, you can use them as goal funnel steps and view them in the Navigation Summary tab of the Pages report. (You can view both events and virtual pageviews in the Behavior Flow report).

- Because event code can accept as many as five parameters (vs. just one parameter for a virtual pageview), you can record events in much greater detail (and thereby enjoy greater flexibility in filtering and segmenting).

How do I generate events and virtual pageviews?

You generate events and virtual pageviews by tying your handlers into built-in listeners that correspond to user activity in the browser, such as:

onclick

onmouseover

onmouseout

onkeyup

onscroll

onfocus (when a user clicks into a form field)

onblur (when a user clicks out of a form field)

Of the listeners listed above, *onclick* is used most frequently for events and virtual pageviews. The example below uses *onclick* to generate an event (with Google Analytics Universal syntax) when a user clicks a link to another website:

```
<a href="http://www.othersite.com"
onclick="ga('send', 'event', 'link', 'offsite', this.
href);">Additional Resource</a>
```

The example below generates a virtual pageview for a PDF link:

```
<a href="/company-directory.pdf" onclick=" ga('send',
'pageview', this.href);">Download Our Catalog</a>
```

How do I generate events for video?

If you're embedding a YouTube video on your page, you can generate play, pause, and complete events by using the YouTube Player API (instead of the default embed):

```
<div id="player"></div>
     <script>
         var tag = document.createElement('script');
         tag.src = "http://www.youtube.com/player_api";
         var firstScriptTag = document.getElementsByTagName('script')[0];
         firstScriptTag.parentNode.insertBefore(tag, firstScriptTag);

         var player;
         var lastAction = '';
         function onYouTubePlayerAPIReady() {
             player = new YT.Player('player', {
                 playerVars: {
                     modestbranding: true,
                     theme: 'light',
                     rel: 0
                 },
                 height: '360',
                 width: '480',
                 videoId: '4GhXXXOOOMlr0',
                 events: {
                     'onStateChange': onPlayerStateChange
                 }
             });
         }

function onPlayerStateChange(event) {
             switch (event.data) {
                 case YT.PlayerState.PLAYING:
                     ga('send','event','video','started','office-tour');
                     break;
                 case YT.PlayerState.ENDED:
                     ga('send','event','video','completed','office-tour');
                     break;
                 case YT.PlayerState.PAUSED:
                     if (lastAction != 'paused') {
                         ga('send','event','video','paused','office-tour');
                     } else {
                         lastAction = 'paused';
                     }
                     break;
             }
         }
       </script>
```

Social Tracking

How does social tracking differ from event tracking?

Social tracking is similar to event tracking, but Google Analytics provides a specific way to record social interactions: the *_trackSocial* method in Classic syntax, and the *social* parameter in Universal syntax.

Make sure that the social actions you track are specific enough.

Likes/shares of your *website content* and likes/follows of your *social profiles* are two completely different types of social interactions. By using separate *socialAction* parameters when you configure your social tracking, you can distinguish them.

For example, you could record a clickthrough from your site to your Facebook page with the following social action:

```
ga('send','social','facebook','likeFacebookPage')
```

You could distinguish a click on a Facebook Like button for your webpage as follows:

```
ga('send','social','facebook','likeWebPage',' document.
location.pathname+document.location.search')
```

As an alternative, you could use the social entity parameter to distinguish them:

```
ga('send','social','facebook','like','facebookpage')
```

```
ga('send','social','facebook','like','document.location.
pathname+document.location.search')
```

With either option, it's important to configure your social actions with enough specificity for reporting and analysis; *like* by itself is not specific enough.

How do I know that the user has actually completed the social action before I record it in Google Analytics?

For the *social profile* actions, you have to assume that the user completed the like/follow after clicking the social button on your site.

For *website content* actions, you have more control. By using *callback* features that the social networks provide, you can record social actions in Google Analytics (or execute any other JavaScript code) once the like/share is completed.

For more information on social tracking with callbacks, see: developers.google.com/analytics/devguides/collection/gajs/gaTrackingSocial and (for LinkedIn) developer.linkedin.com/share-plugin-reference.

Where in Google Analytics do I see the social actions that I have configured for my site?

The Social > Plugins report displays the social actions that you have configured as described above.

Intelligence Alerts

How do the automatic and custom alerts differ?

You set up custom alerts yourself, and you can configure custom alerts to trigger an email or a text message to yourself and others.

What kind of custom alerts should I set up?

Your basic set of custom alerts should probably include:

- 10% weekly increase/decrease in visits
- 10% weekly increase/decrease in conversion rate and/or value for each goal
- 10% weekly increase/decrease in Ecommerce revenue

You can apply your custom advanced segments – as well as the usual broad range of filters based on dimension values – to your custom alerts.

Annotations

If I create an annotation in one report, will it appear in other reports?

Yes. The same annotations appear in the main over-time graph for all reports within a view.

If I create an annotation in one view, will it appear in other views?

No. For this reason, you (and your team) should take care to create all annotations in a single view so you have a consolidated record.

You can view all your annotations as a single list.

From the Admin screen, you can access a list of the all annotations (that were created as Shared or that you created privately) in a view.

What types of occurrences should I create annotations for?

If you don't maintain a comprehensive timeline, you won't be able to correlate real-world happenings with your web analytics data. Make sure to record any date-specific factor that could affect website activity, such as:

- Design changes
- Outages
- Marketing initiatives
- Industry, competitor, and general news
- Weather

Custom Reports

Use custom reports.

While very appropriate and useful for many purposes, the standard Google Analytics reports do not meet every reporting need that arises.

What if you wanted to email your manager about completions for three different goals on mobile devices? Using the built-in Mobile > Devices report, you'd need to forward a different report display for each goal. Using your own custom report, you could integrate completion metrics for the each goal into a single snapshot.

All data that you see in the standard reports is available for your custom reports. If you need to consolidate metrics, or eliminate metrics that are not relevant for your audience, create a custom report.

You can customize existing reports or start from scratch.

There are two ways to start a customized report in Google Analytics:

- Click Customize at the top a standard report.
- Click Customization in the main navigation bar, and then click New Custom Report.

With either option, you'll be able to access your saved report under Customization.

Web Analytics and Search Engine Optimization

Set Up a Google Webmaster Tools account.

Google Analytics tells you what visitors do on your website. Google Webmaster Tools tells you what the Google spider (aka *Googlebot*) does on your website, and how Google visitors get to your site through organic search, and a wealth of other complementary information for Google Analytics.

If you're a Google Analytics admin for a website, you should already be verified to access Google Webmaster Tools for the same site. If this verification option does not work, as is sometimes the case, you can choose one of the several other Google Webmaster Tools verification options.

Use Google Webmaster Tools to view organic clickthroughs by keyword.

Now that all Google organic keywords appear in Google Analytics as (*not provided*), you must refer to the Search Traffic > Search Queries report in Google Webmaster Tools to view clickthrough metrics for specific organic keywords. (The report also displays metrics related to impressions and ranking).

Importing Google Webmaster Tools data into Google Analytics does not provide any additional metrics.

You can populate the Acquisition > Search Engine Optimization reports in Google Analytics by linking Google Webmaster Tools to Google Analytics, but you still will not be able to view any keyword-specific metrics, such as bounce rate or conversion rate. You can see how many visitors a specific keyword drove to your site, but you cannot clearly determine what those visitors did on your site after the clickthrough.

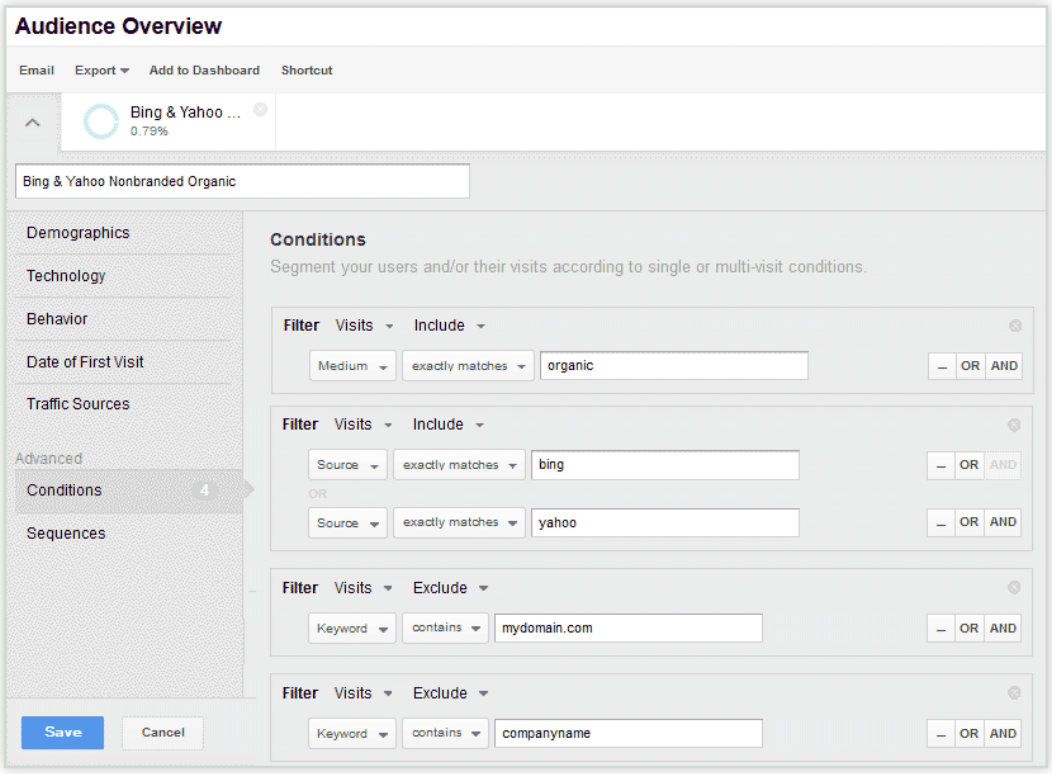
View broken links in the Crawl Errors report within Google Webmaster Tools.

Broken links are bad for search engine optimization, and equally bad for user experience and conversion optimization. The Crawl Error report in Google Webmaster Tools indicates invalid URLs on your site, as well as the internal and external pages that link to the bad URLs.

Don’t use the Non-paid Search Traffic advanced segment built into Google Analytics.

When evaluating metrics such as conversion rate, the built-in Non-paid Search Traffic segment can be very misleading because it includes branded as well as non-branded traffic. Aim instead to analyze your branded organic and non-branded organic traffic as separate segments, even with the challenge posed by the Google (not provided) issue.

You can use the advanced segment below to calculate the branded vs. nonbranded percentages for Bing and Yahoo, which can also help estimate the branded vs. nonbranded breakdown for Google organic traffic.



To apply the advanced segment shown above to your own Google Analytics reports:

1. Log into Google Analytics.
2. Click the link below.
3. Select one or more views to import the advanced segment into.
4. Edit the advanced segment with your own domain and company name for the keyword-exclude conditions.

https://www.google.com/analytics/web/template?uid=2qDTLmGMRDKBO2WCt6Rcuw

As a note, you can share any of your advanced segments with other Google Analytics users through a share link in this way.

Track visits from country-specific search engines.

How many visits to your site came from google.co.uk? If you don't tell Google Analytics to track country-specific versions of the search engine, you'll still be able to see Google visits from the UK, but you won't know which version of the search engine was used.

To track country-specific search engines in Classic Google Analytics, you needed to include a call to *_addOrganic*. Universal makes this much easier – just add google.co.uk to the Tracking Info > Organic Search Sources on the property admin screen.

You can use the same technique for the media-specific versions of the Google search engine, such as images.google.com.

Thanks to our friends at Search Engine Academy for their input.
Visit blog.searchengineacademy.com/ for additional SEO insights.

Blog Metrics

Why is the bounce rate for my blog so high?

If your blog (or any type of site) is designed so that users can fully engage without leaving the home page, Google Analytics will, by default, report a high bounce rate because many visits will never include a second pageview.

As detailed in a post on the Google Analytics blog, you can "adjust" your bounce rate by taking advantage of the JavaScript setTimeout function to generate a Google analytics event or virtual pageview after a visitor has spent a specific amount of time on your page:

```
setTimeout("ga('send','event','adjusted-bounce','30-seconds')", 30000);
```

The code above would automatically generate an event after 30000 milliseconds (or 30 seconds), at which point the visit would no longer be recorded as a bounce.

In Google Tag Manager, you can take advantage of the built-in Timer Listener as a trigger to generate a Google Analytics event for adjusted bounce.

To configure adjusted bounce rate based on scrolling, see:
plus.google.com/+avinash/posts/7dyYhRgohqw

Why is average time on site for my blog so low?

Surprising as it may seem, Google Analytics cannot count the last page of any visit in calculating time on site (unless the user generates another kind of Google Analytics hit on the page). The time on one page is calculated by subtracting its timestamp from the timestamp of the following page, so if there is no following pageview, there is no following timestamp to work with.

Thus, in addition to high bounce rate, many blogs report very low average time on site.

Bonus Tip

Monitor your site's uptime.

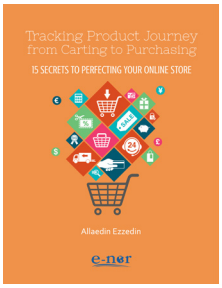
Visitors can't convert if they can't access your site. Use a free or low-cost service such as Siteuptime, Pingdom, or Alertra to monitor your site's accessibility.

Learn More

For ongoing Google Analytics tips and updates, visit www.e-nor.com/blog.

For a comprehensive tutorial and reference on Google Analytics, Brian Clifton's Advanced Web Metrics with Google Analytics (www.advanced-web-metrics.com/blog/about-the-book/) is an outstanding resource.

Our Resources



Tracking Product Journey from Carting to Purchasing
15 Secrets for Perfecting your Online Store

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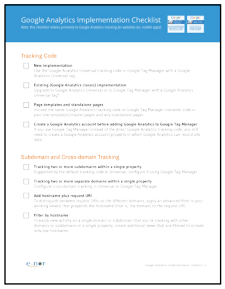

Google Analytics Implementation Checklist

Download Checklist

About

About the Author

Eric Fettman is Analytics Trainer and Coach at E-Nor.

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