GOOGLE ANALYTICS 4

WHAT IT IS AND HOW TO GET STARTED

BRUCE CLAY®

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INTRODUCTION

Google Analytics 4 (GA4) is a completely reimagined analytics platform – the biggest change to Google's analytics product since its inception in 2005.

Even though there are exciting new features in the GA4 platform, for many, this change is daunting. Migrating to a new platform takes work and many are unsure of where to start.

On July 1, 2023 all standard Universal Analytics stopped processing data. For premium users of Universal Analytics 360, though, Google has extended the sunset date from October 1, 2023 to July 1, 2024.

In this guide, we will give a high-level overview of GA4, so you can get a better understanding of the changes that you can expect to see, and how to get started.

Bruce Clay
President of Bruce Clay Inc and "Father of SEO"

1 | WHAT IS GA4?

Google Analytics 4 (GA4) is not just an update to Universal Analytics – it's a whole new platform.

GA4 was designed to meet evolving needs; website owners need to be able to track the customer journey across many channels and devices (like websites and apps). In addition, privacy is a growing concern.

Google says this of GA4:

> It allows businesses to see unified user journeys across their websites and apps, use Google's machine learning technology to surface and predict new insights, and most importantly, it's built to keep up with a changing ecosystem.

Google goes on to point out some of the main differences between Universal Analytics and GA4:

> Universal Analytics was built for a generation of online measurement that was anchored in the desktop web, independent sessions and more easily observable data from cookies. This measurement methodology is quickly becoming obsolete. Meanwhile, Google Analytics 4 operates across platforms, does not rely exclusively on cookies and uses an event-based data model to deliver user-centric measurement.

> And though Universal Analytics offers a variety of privacy controls, Google Analytics 4 is designed with privacy at its core to provide a better experience for both our customers and their users.

For many analytics users, GA4 is now officially the default platform. You can learn more about significant GA4 dates in this help file from Google.

When it comes to the nitty-gritty details, there are several ways that UA and G4 differ in how they collect data, and in the metrics reported. Let's look at that next.

Data Model Differences

Let's go over what we believe to be the most significant change to Google's analytics in how it collects data: Events.

This change impacts everything from the way sessions are recorded to the way the reports are set up. In other words: It's a fundamental change.

Events

One of the biggest differences between UA and G4 is "events." GA4 is based on the idea that any interaction (such as page hits, ecommerce hits, social hits in UA) is an event. So in GA4, all the interactions are recorded as events. Google explains:

> A Universal Analytics event has a Category, Action, and Label and is its own hit type. In Google Analytics 4 properties, every "hit" is an event; there is no distinction between hit types. For example, when someone views one of your website pages, a page_view event is triggered.

> Google Analytics 4 events have no notion of Category, Action, and Label and, unlike Universal Analytics reports, Google Analytics 4 reports do not display Category, Action, and Label. Therefore, it's better to rethink your data collection in terms of the Google Analytics 4 model rather than port your existing event structure to Google Analytics 4.

Some of the old hit types in UA have been converted to GA4 events. For example, a page view hit would be converted to a page view event.

In a Universal Analytics property, a hit type ...	is captured in a Google Analytics 4 property as an ...
Page View	Event
Event	Event
Social	Event
Transaction/e-commerce	Event
User timing	Event
Exception	Event
App/screen view	Event

Image credit: [UA--GA4] Comparing metrics: Google Analytics 4 vs Universal Analytics, Google.

But some measurements have exact equivalents between UA and GA4, as shown in the illustration:

Pageview attribute in Universal Analytics	Pageview attribute in Google Analytics 4
page_title	page_title
page_location	page_location
page_path	page_path
None	page_referrer

Image credit: [UA--GA4] Comparing metrics: Google Analytics 4 vs Universal Analytics, Google.

In terms of the user experience, the biggest impact will likely be in accessing the reports.

UA had report categories such as “Acquisition,” “Behavior,” etc. – all the associated reports were in those sections. GA4 doesn’t have that (for the most part).

For example, the data for the page views report in GA4 is in Engagement > Events > page_view.

Users will need to recreate some of those reports using event counts. If you want it to look exactly the same in GA4 as in UA, you need to create the report or use the Explorations option in GA4.

Metrics Updates

When it comes to metrics, there are a lot of little changes that will add up to a big change overall for tracking. Here are a few changes we think are significant:

- Sessions
- Engagement rate
- Conversions

Sessions
Sessions are counted differently in GA4 versus UA. For example, there isn't a midnight cutoff for sessions in GA4 like UA had, and GA4 doesn't start new sessions for users who come in from different campaigns.

Metric	UA	GA4
Session	• Period of time a user is actively engaged with your website or app • Has defined parameters for what may cause it to end e.g. a session will end when there has been more than a 30-minute period of inactivity (depending on the session timeout settings), the timestamp has been cut off at midnight (according to the timezone the view is set up in), or new campaign parameters are encountered. • If a user comes back after a session timeout, it will start a new session • If the user is on the website when midnight arrives, a new session will be started • If a user picks up new campaign parameters while on the website, a new session will be started	aka Session Start • To determine the session that each event comes from, the `session_start` event generates a session ID and Analytics associates the session ID with each subsequent event in the session • A session will end when there has been more than a 30-minute period of inactivity (depending on the session timeout settings) • Sessions are not restarted at midnight or when new campaign parameters are encountered • If a user comes back after a session timeout, it will start a new session

Image credit: [UA--GA4] Comparing metrics: Google Analytics 4 vs Universal Analytics, Google.

Google says session counts could be lower in GA4 than in UA: "This is because Google Analytics 4 does not create a new session when the campaign source changes mid session, while Universal Analytics does create a new session under that circumstance."

The statistical estimates that GA4 uses for sessions, however, should deliver higher accuracy and lower error rates in data reporting.

Engagement Rate
Bounces are measured differently in GA4. In the new platform, the bounce rate is the percentage of sessions that were not engaged sessions.

An engaged session in GA4 lasts 10 seconds or more, has one or more conversion events or has two or more page or screen views.

If a user doesn't meet any of the criteria listed then it is considered a bounce. Contrast that with the traditional bounce rate in UA, which measured if someone only visited one page on a website and didn't trigger any other event.

Metric	UA	GA4
Bounce rate	Percentage of single page sessions in which there was no interaction with the page. A bounced session has a duration of 0 seconds. For example, if a user visits your website and reviews content on your homepage for several minutes, but leaves without clicking on any links or triggering any events being recorded as interaction events, then the session will count as a bounce.	Percentage of sessions that were not engaged sessions. For example, if a user visits your website, reviews content on your homepage for less than 10 seconds, and then leaves without triggering any events or visiting any other pages or screens, then the session will count as a bounce. An engaged session is a session that lasts 10 seconds or longer, has 1 or more conversion events, or has 2 or more page or screen views. If a user doesn't have an engaged session (that is, they don't meet any of the criteria for an engaged session), then Google Analytics counts the session as a bounce.

Image credit: [UA--GA4] Comparing metrics: Google Analytics 4 vs Universal Analytics, Google.

Conversions
Those who are used to tracking goals in UA will need to get familiar with conversion events in GA4.

In GA4, you will identify a key event important to your business. Once that event is hooked up on your website, it can be promoted to a conversion event inside of GA4.

Depending on how your goals are set up in UA, you may get a close equivalent in GA4.

But Google notes that there are some differences between UA and GA4 that may make it difficult to do an apples to apples comparison:

Metric	UA	GA4
Conversions	You define a ***goal*** to indicate that a particular user action is to be considered a conversion. For example, if you define a "Form Submit" goal, a conversion will be registered each time a user submits the form. UA counts **only one** conversion per session for each goal. So, if a user submits the form twice during the same session, only one conversion will be counted for the "Form Submit" goal.	You specify a ***conversion event*** for each action that you want to count as a conversion. For example, if you specify that the "Form Submit" event is a conversion event, a conversion will be registered each time a user submits the form. GA4 *usually* counts **every instance** of the conversion event, even if the same conversion event is recorded multiple times during the same session. So, if a user submits the form twice during the same session, two conversions will be counted. To reduce conversion count differences between your UA property and corresponding GA4 property, update your GA4 conversion counting method setting to *Once per session*.

Image credit: [UA--GA4] Comparing metrics: Google Analytics 4 vs Universal Analytics, Google.

Google notes:

> Universal Analytics supports five goal types: destination, duration, pages/session, smart goals, and event goals. GA4, in contrast, only supports conversion events. It may not always be possible to use GA4 conversion events to precisely duplicate some UA goal types. For example, it's not possible to duplicate a smart or duration goal using GA4 conversion events.
>
> UA counts only one conversion per session, for the same goal. GA4 counts multiple conversions per session, for the same conversion event.
>
> Your UA reports may be excluding data based on view filters.

You can find out more on how to set up a conversion in GA here.

2 | WAYS TO GET STARTED WITH GA4

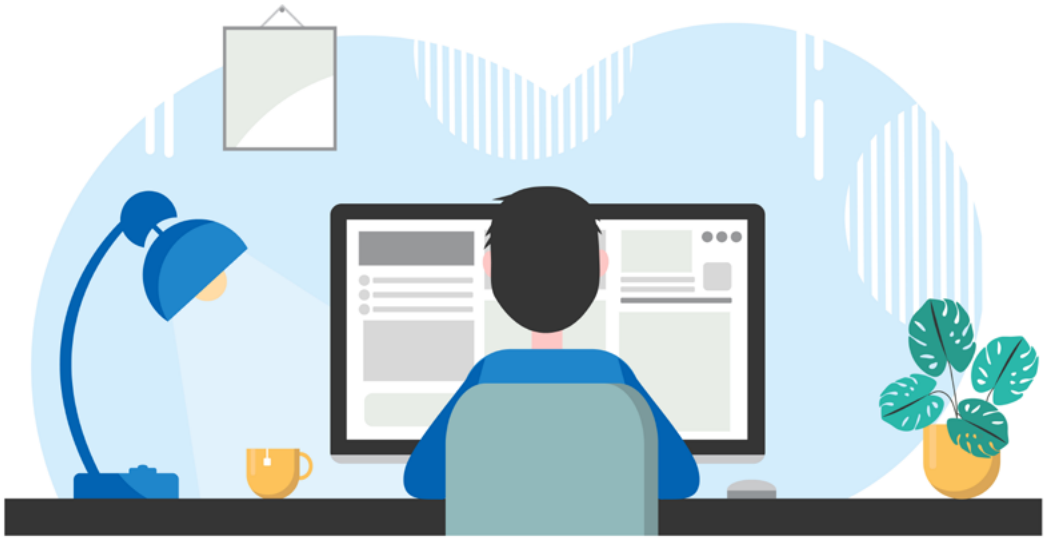
Let's go over a high-level overview on how to get going with GA4.

Google outlines three ways to get started with GA4:

1. If you're a new analytics user (meaning you have not used Google Analytics in the past on a website or app).

2. If you're already a Google Universal Analytics user. This option will use your pre-existing UA tag to populate data into your new GA4 property. The GA4 Setup Assistant helps with this step.

3. If you're adding GA4 to a website builder platform, such as WordPress, Wix, Shopify, etc. This is how you get and input the new GA4 measurement ID into your platform.



To encourage people through the process, Google provides an outline overview of how to make the switch to GA4, with labels that show how much effort is involved in each step.

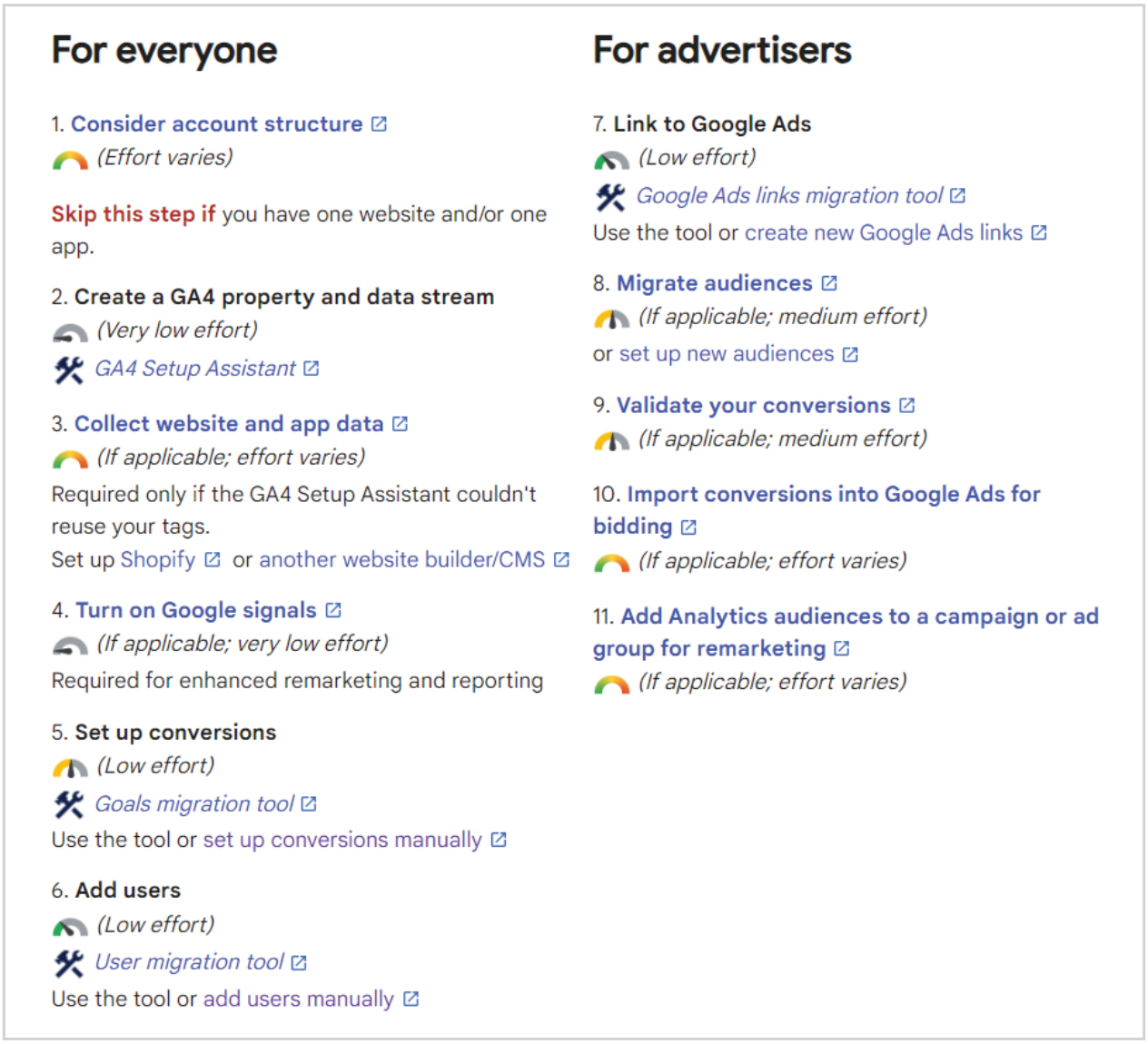


Image credit: [GA4] Make the switch to Google Analytics 4, Google.

Google also provides tools to help you get setup with its GA4 Setup Assistant, which has many handy features for those who already have UA.

The Setup Assistant (from Google):

> - Creates your new GA4 property.
> - Copies the property name, website URL, timezone, and currency settings from your Universal Analytics property.
> - Activates enhanced measurement in your GA4 property.
> - Creates a connection between your Universal Analytics and GA4 properties. This connection makes it possible for you to use Setup Assistant in your Google Analytics 4 property to migrate configurations from your Universal Analytics property to your GA4 property.
> - Sets the GA4 property to receive data from your existing Google tag, if you choose to reuse an existing site tag.
>
> The GA4 Setup Assistant wizard does not backfill your new GA4 property with historical data. Your GA4 property only collects data going forward. To see historical data, use the reports in your Universal Analytics property.

A word of warning before you get started: Google had already sent out emails to Google Analytics users that they would be automatically migrated to GA4 starting the first week in March 2023 if they hadn't already completed the process.

(Check out: Google's GA4 Auto Migration: Here's Why You Should Opt Out at Search Engine Land for a good overview on this topic.)

That means, for some, that Google will have already configured a GA4 property with basic settings.

You will want to check to see where you stand before proceeding. And you will most definitely want to ensure that the settings made for you are, in fact, what you wanted.

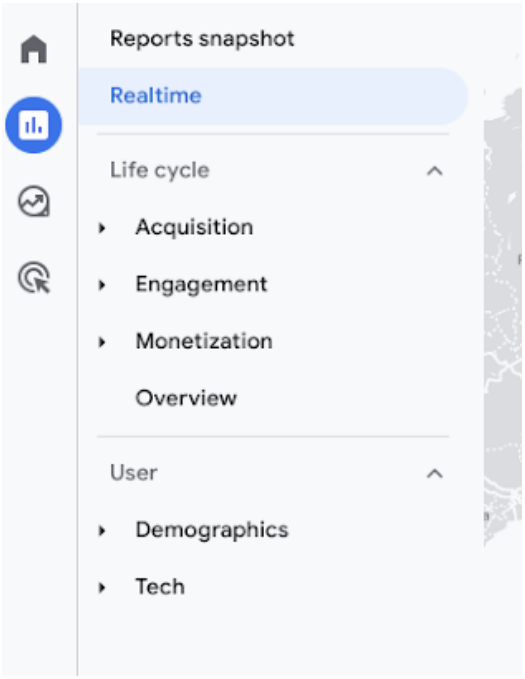
3 | VERIFYING AND CUSTOMIZING YOUR GA4 INSTALL

Once you have installed GA4, you will want to verify the install and customize settings as needed.

Verifying the Install

You can test the GA4 install by using the GA4 Tag Assistant Chrome extension or the GA4 DeBugView.

You can verify that the tracking code is properly sending data to the GA4 account by heading to Reports > Realtime to see that the data is loading.



Realtime report menu in GA4.

As with any system, you need to check often to ensure that data is being ollected and processed correctly, and that the GA4 website is properly configured. Validate the installation and operation of GA4 on a regularbasis – at least once a week.

Address any issues identified during validation as soon as possible to ensure accurate data collection.

At this point the system is installed and gathering data. Wait at least a day or two before you can see meaningful data coming in.

Customizing the Settings

Using the GA4 Setup Assistant, you can configure your property settings.

This includes:

- Turning on Google signals.
- Setting up conversions.
- Defining audiences, including recreating audiences from UA.
- Managing users.

Conversions: The Setup Assistant can migrate goals from UA to conversions in GA4 for you, but you should still review them to make sure they're correct. The migration isn't always perfect. Go to Admin > Property Settings > Conversions to verify.

Custom dimensions and metrics: Custom dimensions and metrics can be created by defining their name and scope and assigning them to the relevant data stream. Go to Admin > Property > Custom definitions to modify.

Take note: Unrelated to any particular settings in the Setup Assistant, you should be aware of any data protection laws and regulations that may apply to your website and ensure compliance. GA4 should be compliant out of the box, but any extra data you capture may not be.

So make sure that you are not storing any information about a user that isn't spelled out in your privacy policy, and that your privacy policy is compliant with whatever laws you are subject to (GDPR, CPRA or something else).

4 | GETTING STARTED WITH GA4 IF YOU DON'T HAVE UA OR GOOGLE TAG MANAGER: STEP-BY-STEP

The following section is helpful for those who don't already have an pre-existing UA account and/or don't use Google Tag Manager, nor have the help of a CMS to install GA4. Follow the steps in this section to get started with GA4.

Step 1: Create a GA4 Account and Get the Tracking Code

1. Go to the Google Analytics website (analytics.google.com) and sign in with your Google credentials.
2. Click the "Admin" button (bottom left corner of the page).
3. Under the "Property" section, click the "+ Create Property" button.
4. Select "Web" as the type of property you want to create.
5. Enter a name and default URL for your website.
6. Accept the terms and conditions (read them first, of course), and click on the "Create" button.
7. Once your property is created, then click on the "Data Streams" tab.
8. Click Add Stream > Web and fill out the form with your website details.
9. Click "Create Stream" to create the data stream.
10. Once created, under "Data Streams", click on the stream you created and you will see your GA4 Measurement ID - it will start with "G-".
11. Get and copy the tracking code by clicking "Get Tag Instructions" and "Install Manually," then paste it into the header of your website.
12. Once you have added the tracking code to your website, you can verify that it is working by using the GA4 Tag Assistant Chrome extension or the GA4 DeBugView.

Step 2: Install the Tracking Code on the Website

1. Make sure you set up the GA4 account and tracking code (see previous section).
2. This is where you add the GA4 code to all pages/templates on your site – and add it to all pages but only once per page.
3. Save the changes to your server if necessary – usually a webmaster task.
4. Verify that the tracking code has been installed across your website correctly.
5. In your GA4 account under Data Streams, you should link your website to your GA4 account.
6. Wait up to 48 hours after installing the GA4 tracking code to verify that data is coming in for your website.
7. Check the “Realtime” report under the “Reporting” tab to see if data is being received in near real-time.
8. Check the “Audience” report under the “Reporting” tab to see if the data is showing users and sessions.
9. Use the GA4 Tag Assistant Chrome extension to verify that the GA4 tracking code is installed correctly and working properly.
10. Use the GA4 DeBugView to troubleshoot any potential issues with the tracking code installation.
11. Check your GA4 account’s data settings to make sure that data collection is turned on and that the correct data stream is selected.
12. Make sure you are aware of any data protection laws and regulations in your area and that your website is compliant with them.

Step 3: Configure GA4 Conversions and Custom Dimensions

1. Login to your GA4 account.
2. Click on the “Admin” link (bottom left corner).
3. Under the “Property” section, select the website that you want to configure.
4. Select “Events” from the menu and click “Create Event,” then click “Create.”
5. Give the event a name and fill out its conditions. This can either be a fired event on the website or a “page_view” event for a certain page.
6. Click “Create” in the upper right.
7. Back on the list of Events, find the event you created and toggle the entry to “Mark as conversion.”
8. In the Property menu, go to “Custom Definitions” and set up custom dimensions and metrics by defining their name and scope.
9. Monitor your GA4 account’s settings and make tweaks as needed.

Step 4: Monitor the GA4 Account for Data Accuracy

1. Calendar your frequent check-ins to review the data in your GA4 account.
2. Use the Realtime report to see any unusual spikes or drops in website traffic.
3. Compare data to identify any trends or patterns.
4. Use segments to analyze specific subsets of your data.
5. Use the GA4’s machine learning features to identify trends and segments in your data.
6. Use the GA4 DeBugView to troubleshoot any potential issues with the tracking code installation.
7. To ensure data accuracy, check it all and maybe adjust filters, custom dimensions, or goals.

5 | GET STARTED NOW

With some GA4 deadlines having already passed, and more looming, it's important to start the process of setting up GA4 right away. While you are doing this, you may still reference UA data until you make the switch.

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Since January 1996, Bruce Clay Inc. (BCI) has been helping websites rank in search engines. Founder and president, Bruce Clay, is known as the “Father of SEO” and credited with coining the term “search engine optimization.”

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More than 5,000 marketers worldwide have learned SEO from Bruce Clay’s acclaimed SEO training courses, offered online, in live classroom settings and at major search conferences. Headquartered in Southern California, BCI also has offices serving markets around the world.

Bruce Clay, Inc.
100 High Street, No. 1338
Moorpark, CA 03021
Voice: 1.805.517.1900
Toll Free: 1.866.517.1900
BruceClay.com