



# A Comprehensive Guide to Google Analytics 4

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1.

# Introduction to Google Analytics 4

Google Analytics 4 (GA4) is a web analytics tool developed by Google that helps businesses and organizations understand and analyze their website traffic and user behavior. It provides a range of features and capabilities that can help businesses and organizations understand their customers and optimize their online presence.

Google released GA4 in October 2020, which is very different from its predecessor, Universal Analytics (UA). So, for users shifting from UA to GA4, there will be a slight learning curve. And starting July 2023, Universal Analytics properties will stop processing new data. So, if you plan to use Google Analytics for your website or are still stuck with UA, it is worth the time to familiarize yourself with GA4. Click here to learn ["The Best Way to Export Raw Data from Google Analytics"](#)



## 2.

# Distinct Features of Google Analytics 4

Let us begin by exploring some new features that make Google Analytics 4 unique and differentiate it from previous versions. Here are some things that are new to Google Analytics 4:

### 1. Introduction of Events

While Universal Analytics offers session-level reporting with metrics like page views, GA4 considers every hit as an event. There is also a new feature called Enhanced events. These events include scroll data, file downloads, site searches, and video engagement.



Google Analytics 4	Universal Analytics
Event	Page view
Event	Event
Event	Social
Event	Transaction/e-commerce
Event	User timing
Event	Exception
Event	App/Screen view

## 2. Comprehensive Data

GA4 provides a wide range of data about website traffic and user behavior, including events, parameters, and user properties. This helps businesses and organizations get a complete picture of how their website is being used and how to optimize it for their users.

In addition to events, you will see metrics like engaged sessions, engagement rate, engagement time, attribution, demographics, and more in your GA4 property.

## 3. Improved Reporting

GA4 provides detailed yet flexible reports even in real-time. You can customize reports and visualize them for better analysis. There is also a feature called Analysis Hub. Earlier it was limited to GA360 users, but now it is free for all GA4 users. With Analysis Hub, you can see the following:

- Heat maps as an additional dimension
- Segment overlap reports show the relationship between targeted segments.

- Funnel customization options that enable the setup of specific funnels.
- User explorer report for your most relevant user segments.
- Path analysis to identify common navigation paths taken by users across the website.
- Visualization techniques to apply to your analysis.
- Export analysis data in several formats.

## 4. Machine Learning Capabilities

GA4 uses machine learning to analyze data and provide insights & recommendations. This can help businesses and organizations identify trends and patterns that they might not have been able to see otherwise.

Machine learning and AI capabilities enable GA4 to offer users predictive metrics. For example, with predictive metrics like purchase probability, churn probability, and revenue prediction, users can accurately segment audiences based on their behavior.

## 5. Cross-Platform Tracking

Google Analytics 4 records website and mobile app data under a single centralized analytics tool, allowing organizations to track users across devices and platforms. GA4 gives complete cross-platform consumer journey tracking.

GA4 assigns a unique ID to users when they visit the website or log in to the mobile app. So, businesses can accurately track the entire

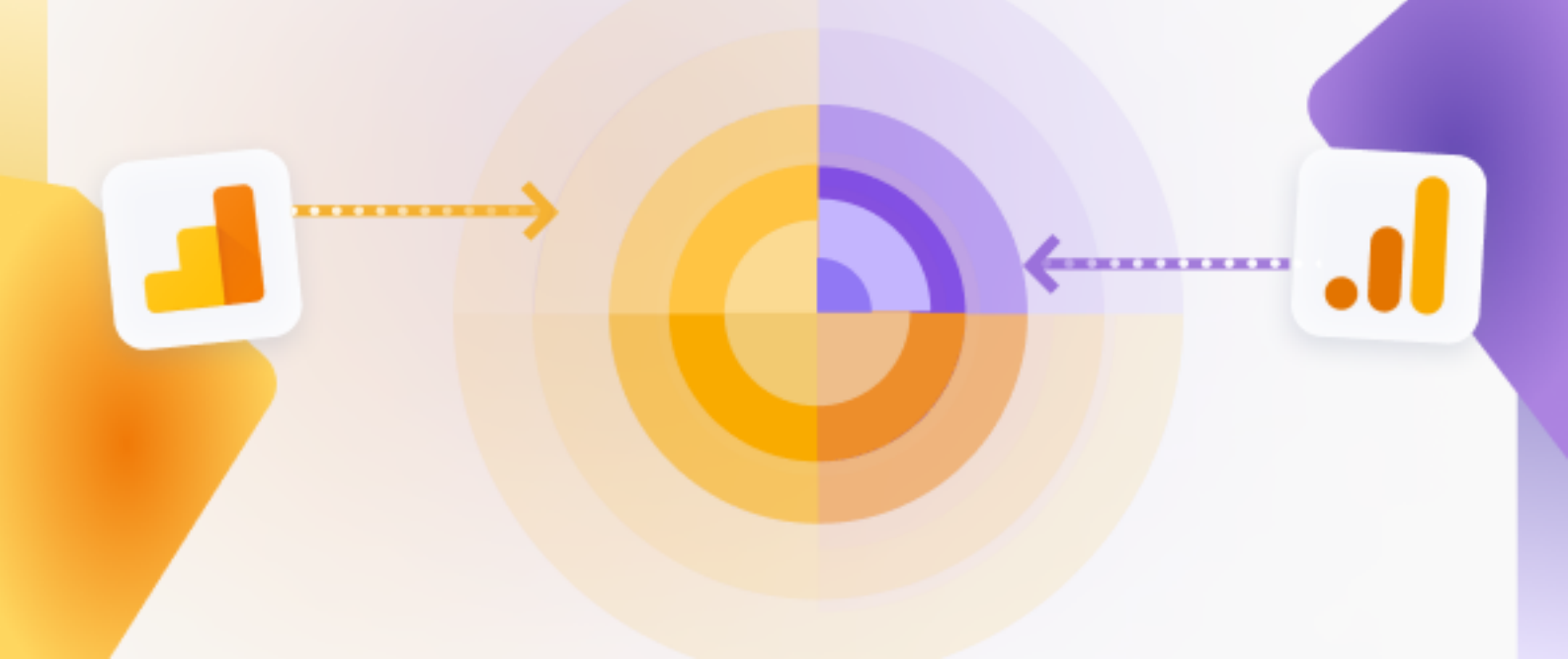
customer journey from head to toe, including acquisition, engagement, monetization, and retention.

## 6. Integration with Other Google products

Users can link their GA4 property with other Google products, such as Google Ads and Google Search Console, providing businesses and organizations with even more data for detailed reporting.

GA4 is essential for businesses and organizations looking to understand and optimize their online presence. It helps you get a complete picture of your website traffic and user behavior. At the same time, it provides insights and recommendations for improving your website and marketing efforts.

Click here to learn ["New things that can be done via Google Analytics4 – GA4"](#)



### 3.

## Calculation Difference Between Universal Analytics and GA4

Besides introducing events, Google Analytics also changes how it calculates traffic, engagement metrics, and conversions. Let us understand the calculation differences between Google Analytics 4 and its previous versions.

# Traffic Calculations

## 1. Session

In UA, a session comprises user interactions like multiple pageviews, events, transactions etc. And it usually ends with 30 minutes of inactivity. On the contrary, a session in GA4 starts with an automatically collected event called "session\_start". Session duration is calculated as the time between the first and last event.

## 2. Active Users

In UA, the active user count depends on the firing of an interactive hit, while GA4 automatically detects users who have engaged in sessions as active users.

## 3. Session Count

In UA, a new campaign starts a new session and hits are processed if they arrive up to 4 hours of the preceding day. On the other hand, a new campaign does not begin a new session in GA4 and events are processed if they arrive within up to 72 hours.

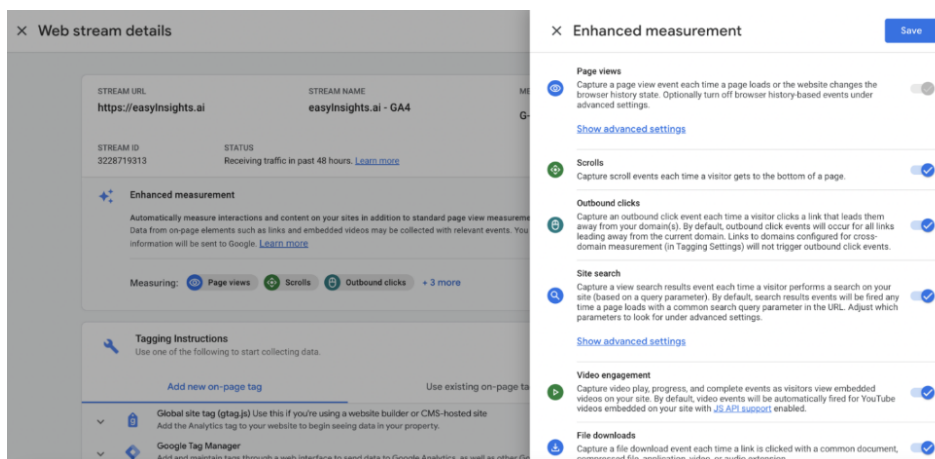
# Engagement Metrics Calculations

Bounce Rate was one of the most observed metrics in Universal Analytics. It is the percentage of sessions which has only one hit in it. The metric is no longer available in the GA4. Instead, GA4 has introduced a far better metric called Engaged Users.

Engaged Users are those who spend more than 10 secs on your website. You can change the default duration from 10 secs to 60 secs in Data Stream settings.

## Event Count Calculations

In Universal Analytics, events have category, action, and label parameters. But in GA4, all the hits are considered as an event. Therefore, events have no parameters associated with them. GA4 also offers "enhanced events" that you can enable in Data Stream settings. Enhanced events include page views, scrolling, outbound clicks, site search, view engagement, and file downloads.



## Conversion Count Calculations

UA used goals to create conversions and has no goals by default. On the contrary, GA4 uses its newly introduced events to create conversions.

Also, GA4 offers these five conversions by default:

1. purchase (web and app)
2. first\_open (app only)
3. in\_app\_purchase (app only)
4. app\_store\_subscription\_convert (app only)
5. app\_store\_subscription\_renew (app only)



## 4. Getting started with Google Analytics 4

Setting up GA4 is really fast and straightforward. Follow these steps to configure the GA4 property for your website and application.

### For New Users

If you are starting afresh with GA4, follow these steps:

#### 1. Account Setup

To create a new Google Analytics account, head over to [google.analytics.com](https://google.com/analytics) and log in with your Google Account.



Click Start measuring, enter the new account name (you can use your business name as the account name), and tick all checkboxes except "Google products and services." Hit Next.

ADMIN USER

Account setup

Account details

Account name (Required)  
Accounts can contain more than one tracking ID.  
My New Account Name

Account Data Sharing Settings ⓘ  
Data you collect, process, and store using Google Analytics ("Google Analytics data") is secure and kept confidential. This data is used to [operate and analyze](#) the Google Analytics service, to perform system critical operations, and to solve anomalies for high reasons as described in our [privacy policy](#).

The data sharing options give you more control over sharing your Google Analytics data. [Learn more.](#)

☐ Google products & services  
Share your Google Analytics data with Google to help improve Google's products and services. Turning on this setting enables Google Analytics to provide best in class intelligence and insights services, maintain critical Spam Detection services that benefit all linked products and users, and offer [Enhanced Demographics and Interests reporting](#) when Google signals are enabled. If you disable this option, data can still flow to other Google products linked to your property. Visit the product linking section in each property to view or change your settings.

☒ Benchmarking  
Contribute anonymous data to an aggregate data set to enable features like benchmarking and publications that can help you understand data trends. All identifiable information about your website is removed and combined with other anonymous data before it is shared with others. [Show Example](#)

☒ Technical support  
Let Google technical support representatives access your Google Analytics data and account when necessary to provide service and find solutions to technical issues.

☒ Account specialists  
Use Google marketing specialists and your Google sales specialists access to your Google Analytics data and account so they can find ways to improve your configuration and analysis, and share optimization tips with you. If you don't have dedicated sales specialists, give this access to authorized Google representatives.  
[Learn how Google Analytics safeguards your data.](#)

You have access to 99 accounts. The maximum is 100.

Next

## 2. Property Setup

Clicking Next will bring forth Property setup options. Enter the property name (use your website name as the property name). Set time zone and currency depending on your location. Click Next.

ADMIN USER

Account setup

Property setup

Property details  
A property represents a business's web and/or app data. An account can contain one or more properties. [Learn more](#)  
[Migrate to your Firebase account](#) if you want to create a new property for an existing Firebase project.

Create a Google Analytics 4 property to measure your web and/or app data.

Property name

Reporting time zone  
United States - (GMT-07:00) Los Angeles Time

Currency  
US Dollar (USD \$)

You can edit these property details later in Admin.

Show advanced options

Next Previous

Answer the optional questions if you prefer to, click on Create and accept the terms and conditions.

Account setup

Property setup

About your business

Business information

Help us tailor your experience by answering the following.

Industry category

Select one

Business size

☐ Small - 1 to 10 employees

☐ Medium - 11 to 100 employees

☐ Large - 101 to 500 employees

☐ Very Large - 500+ employees

How do you intend to use Google Analytics with your business? (Check all that apply)

☐ Measure customer engagement with my site or app

☐ Optimize my site or app experience

☐ Measure data across multiple devices or platforms

☐ Optimize my advertising cost

☐ Increase my conversions

☐ Measure content monetization

☐ Analyze my online sales

☐ Measure app installs

☐ Measure lead generation

☐ Other

Create Previous

### 3. Add Data Streams

Once you accept the terms and conditions of using GA4, you will be redirected to the Data Streams page to select the data source. You can choose your website and Android and iOS app as the source.

ADMIN USER

Property

+ Create Property

Tommy's L Create new property

Setup Assistant

Property Settings

Property Access Management

Data Streams

Data Settings

Data Import

Reporting Identity

Attribution Settings

Property Change History

Data Deletion Requests

Next Step: Set up a data stream to start collecting data

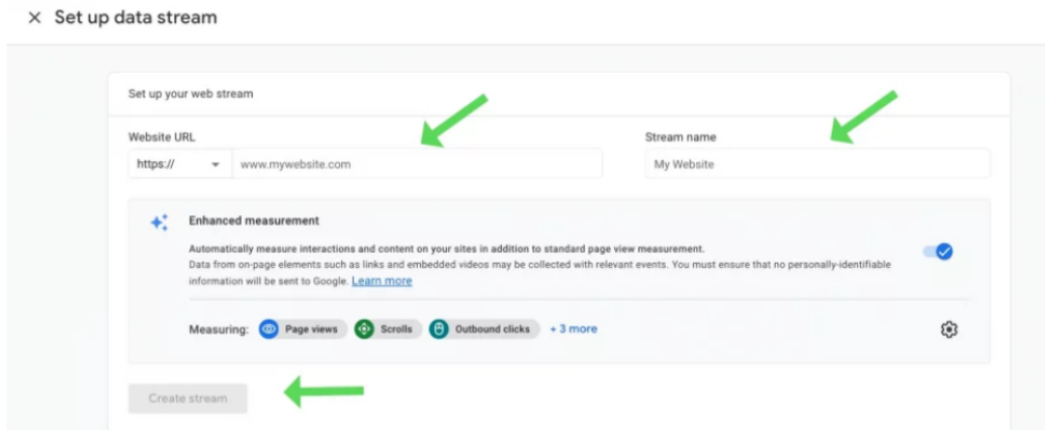
After creating a data stream, you'll get tagging information and a Measurement ID for web streams.

Learn more: Add a data stream and set up data collection

Choose a platform

Web Android app iOS app

To add your website as a data source, click on Web, add the website URL and name the stream. Next, click Create stream, and GA4 will attribute website traffic to this data stream.



Keep the "Enhanced Measurement" option checked, as it helps measure visitors' interactions with content on your website.

## 4. Link GA4 with Other Google Products

If you want to link GA4 with other Google products, such as Google Ads, BigQuery, or Google Search Console, you can do so in the "Product Linking" section of your GA4 property.

## 5. Set Up Views and Permissions

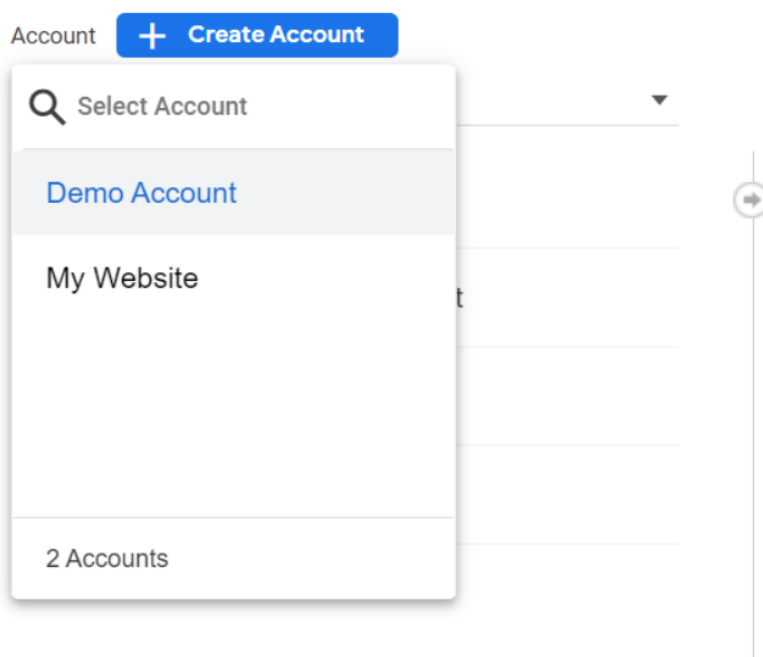
Finally, you must set up views and permissions for your GA4 property. This includes defining which users have access to your GA4 data and setting up filters to control which data is included in your reports. To do this, go to the "Admin" section of your GA4 property and click on "Views" and "User Management."

# Upgrade from Universal Analytics to Google Analytics 4

You can easily upgrade to GA4 in Admin settings if you already work with UA. To do this, follow the steps:

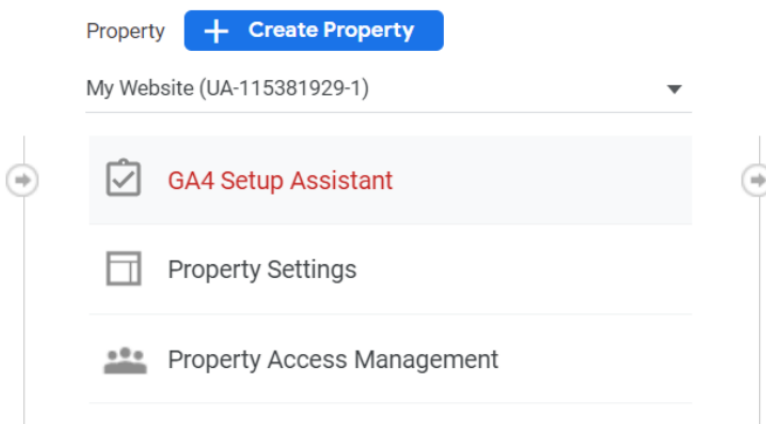
## 1. Select Account

Head to Admin settings, and select the existing account in the Account column.

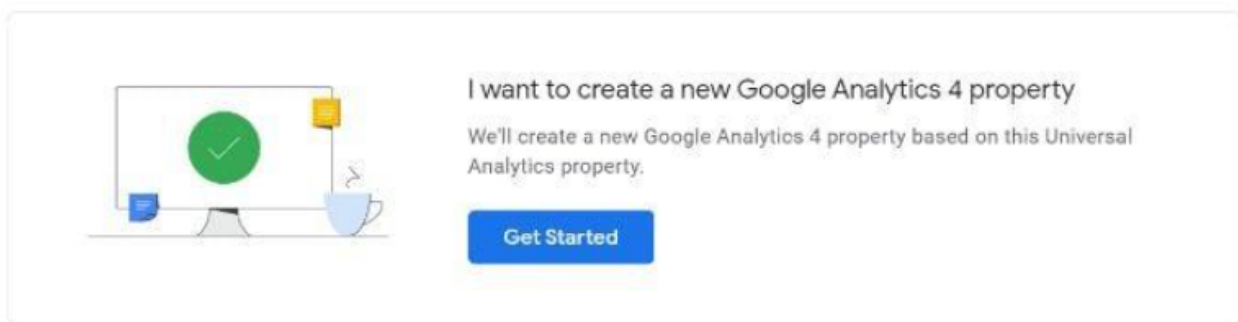


## 2. Select Property

Select the existing UA property and click "GA4 Setup Assistant" in the Property column.



Then click "Get Started" under the prompt "I want to create a new Google Analytics 4 property."



### 3. Configure Data Sources

Finally, add data sources by entering your website URL and stream name and clicking "Create Stream."



## 5. Integrate GA4 and property with your website

There are two ways you can integrate your website with GA4. Let us go over each process one by one.

### 1. Integrate GA4 without Google Tag Manager

If you use Global Site Tag (gtag.js) in UA, Google Analytics will let you enable data collection in GA4 using current tags. Just tick the checkbox for "Enable data collection using the existing tag."

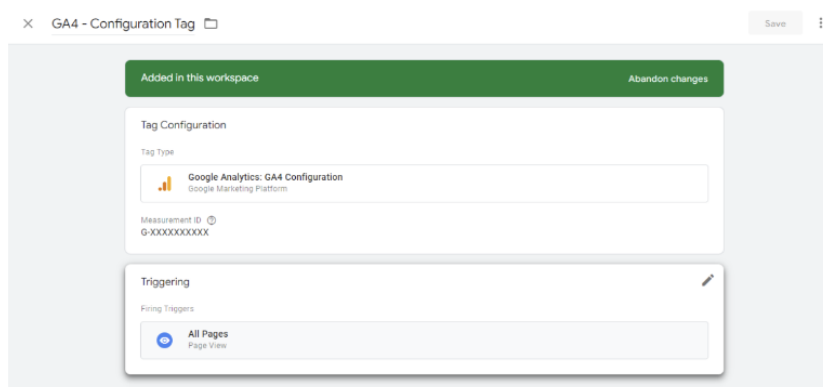
To find the GA4 tag, please follow the below steps:

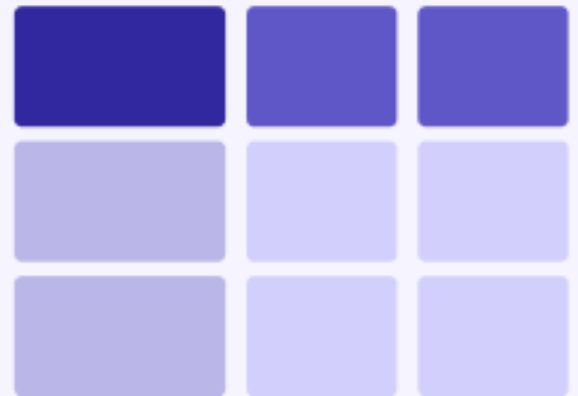
- Click Admin in Navigation bar on the left.
- In the Property column, check that your new GA4 property is selected, then click Data Streams, then Web. Click the data stream.
- Under Tagging Instructions, click Add new on-page tag > Global Site Tag (gtag.js).

## 2. Integrate GA4 with Google Tag Manager

If your website does not have a Global tag, you need to have a Google Tag Manager account set up for your website. If you already have the account setup, follow these steps to integrate GA4 with your website:

- Login to Google Tag Manager account
- Go to the Tag section and click New.
- Click Tag Configuration.
- Select Google Analytics > GA4 Configuration.
- Enter your Measurement ID.
- Tick the "Send a page view event when this configuration loads" option to send pageviews automatically.
- Click Triggering and select All pages as the trigger.
- Click Submit and Publish the GTM container.





## 6.

# Enable Additional GA4 Features

Once you have created a new GA4 property or upgraded from UA, you can enable some additional but important features for more accurate reporting data. Here are those features and steps to enable them in your GA4 property:

### 1. Internal Traffic

GA4 automatically creates a data filter that excludes internal traffic from reporting. However, users can also define internal traffic to exclude. Just follow these steps:

- Go to Data Streams, select a stream and click "More Tagging Settings."
- Next, click "Define Internal traffic," then click "Create."



- In the Configuration window, enter the rule name, set the traffic type as internal, and enter the IP address to exclude.

Configuration

Rule name <sup>?</sup>  
WT Office

traffic\_type value <sup>?</sup>  
internal

IP addresses <sup>?</sup>  
Match type: IP address equals  
IP address: Example: 192.168.1.20 or 192.0.2.0/24

[What's my IP address](#)

[Add condition](#)

## 2. Google Signals

To collect cross-device data and remarket to users, you must activate Google Signals. Follow these steps to activate it:

- Head to the Property column in Admin settings
- Click on Data Settings and select Data Collection.
- Toggle the option for Enable Google Signals data collection..

<sup>i</sup> Changes made in Firebase admin to the Google signals setting are not exposed in GA change history.

**Enable Google signals data collection** ☒

By activating Google signals, you enable Google Analytics to collect data about your traffic in addition to data collected through a standard Google Analytics implementation in order to provide additional features like cross-device audiences and insights.

When enabled, Google Analytics will collect visitation information and associate it with Google information from accounts of signed-in users who have consented to this association for the purpose of ads personalization. This Google information may include end user location, search history, YouTube history, and data from sites that partner with Google—and is used to provide aggregated and anonymized insights into your users' cross device behaviors. By enabling these features, you acknowledge you adhere to the [Google Advertising Features Policy](#), including rules around sensitive categories, have the necessary privacy disclosures and rights from your end users for such association, and that such data may be accessed and/or deleted by end users via [My Activity](#).

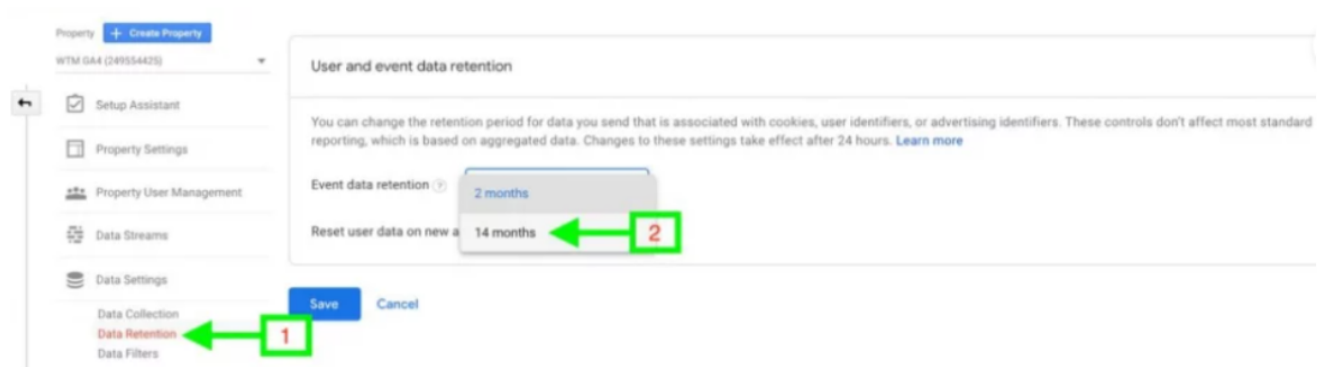
Note: Enabling the above toggle causes Google Analytics to automatically collect additional data about your traffic. If you don't want to collect data for Google signals, you should disable the toggle above as well as ensure that you have not [manually enabled](#) any Advertising Features data collection in your Google Analytics tags.

Advanced Settings to Allow for Ads Personalization <sup>▼</sup>

User Data Collection Acknowledgement ✓ Acknowledged <sup>▼</sup>

### 3. Data Retention

Google Analytics 4 automatically deletes events and user data at regular intervals. It is set to 2 months by default, but you can increase it to 14 months under the Properties column. Go to Data Settings, select Data Retention, set it to 14 months, and click Save.





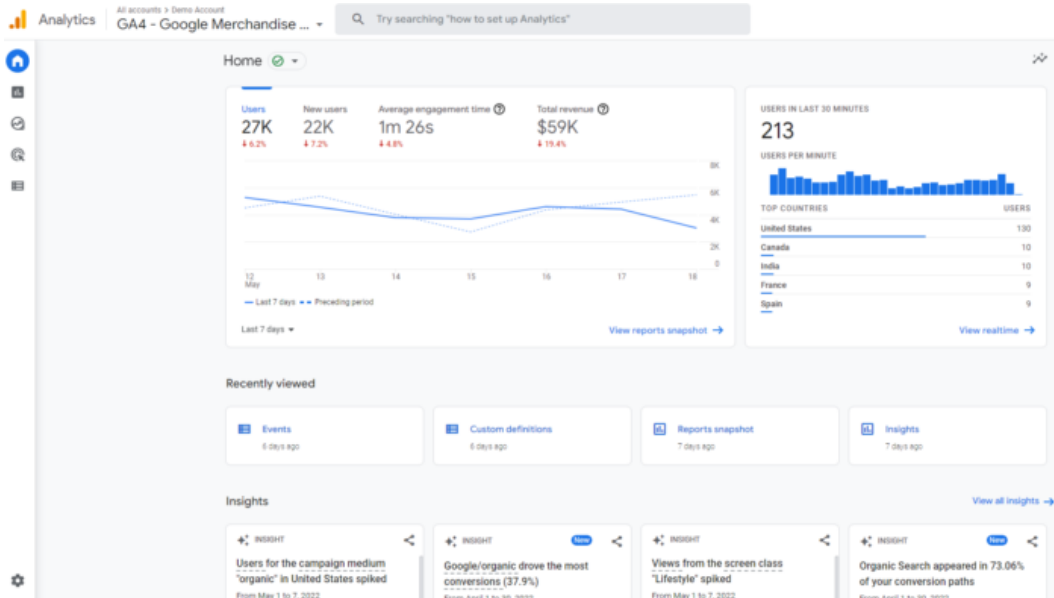
# 7.

## Navigating Google Analytics 4

### 1. Home Dashboard

For users who have worked with Universal Analytics, Google Analytics 4's dashboard looks familiar. However, Google has moved reports to different categories. Now, there is a navigation bar on the left side of the screen. Click on the navigation bar, and you will see the following options:

- **Home** : Overview with real-time stats, recent reports, and predictive insights.
- **Report** : Section to access custom reports.
- **Exploration** : Section to create visual reports.
- **Advertising** : Section for advertisement-related insights.
- **Configure** : Section to create events and custom dimensions.



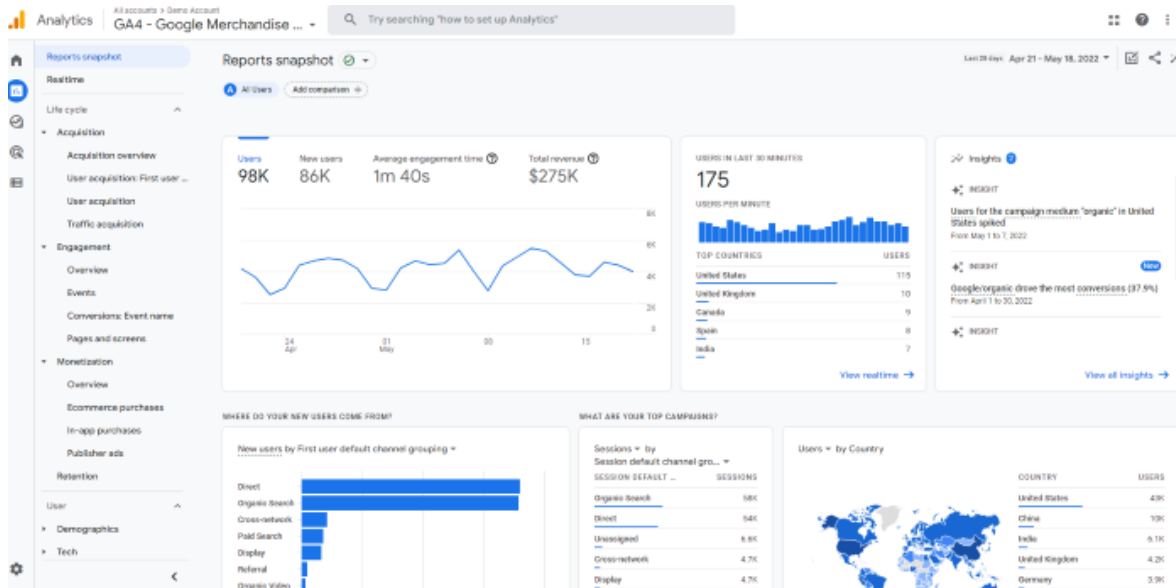
## 2. Search Bar

The next thing users will notice is the new search bar at the top of their screen. The search bar does what it is supposed to do and does it well. Users can enter queries they need answers to, reports they need, or search how-to articles and help guides.

For example, entering queries like "top users by country" will generate a report, while entering "how to visualize data" will return a link to an article. SS

## 3. Reports Snapshot

In the navigation bar, click on the Reports icon, which will bring up the detailed Reports snapshot. It is a collection of snapshots of different reports, which you can expand for deeper analysis. There are many metrics you can track, let it be life cycle metrics like acquisition, engagement, monetization or user metrics, demographics, and tech.



To see the total view and event count, click on the Overview option in the Engagement sub-section. And to compare different metrics, simply click "+" next to the metric overview and select any metric.

## 4. Customize Reports Snapshot

One of the best features in GA4 is the ability to customize the Reports Snapshot sections. As a result, you can choose which data and reports you want to access and access it at a glance. Here are the steps to customize Report Snapshot:

- First, go to the "Reports" section of your GA4 property.
- In the top menu, click on "Customization."
- Next, click "Custom Reports."
- Finally, click the "Create" button and create a new custom report.
- Give your custom report a name and description, and pick the type of report you want to create (e.g., Flat Table, Explorer, Map Overlay).

- Select the dimensions and metrics you want to include in your report. You can choose from the available options or create your own custom dimensions and metrics.
- Select any filters or segments you want to apply to your report.
- Click on the "Save" button and save your custom report.

Once you have your custom report, you can access it anytime by going to the "Custom Reports" section in GA4. You can also share your custom report with other users or schedule it to be emailed regularly.

## 5. Create New Events

GA4 tracks everything using events, and users with editor privileges can create events following these steps:

- First, go to Configure and click Events.
- Next, click Create Event, select the data stream and tap Create.
- Name your report.
- In the "Matching Conditions" field, enter the current event that the new event will be based on.
- Click Add condition to specify what will trigger the new event.

Create events North America & Canada Website  
G-PSW1M7H84

Create new events from existing events. [Learn more](#)

### Configuration

Custom event name  
Registration\_complete

---

Matching conditions  
Create a custom event when another event matches ALL of the following conditions

Parameter	Operator	Value
event_name	equals	page_view
page_location	equals	https://shop.googlemerchandisestore.com/Google+Redesign/Lifestyle/Drinkware

---

Parameter configuration

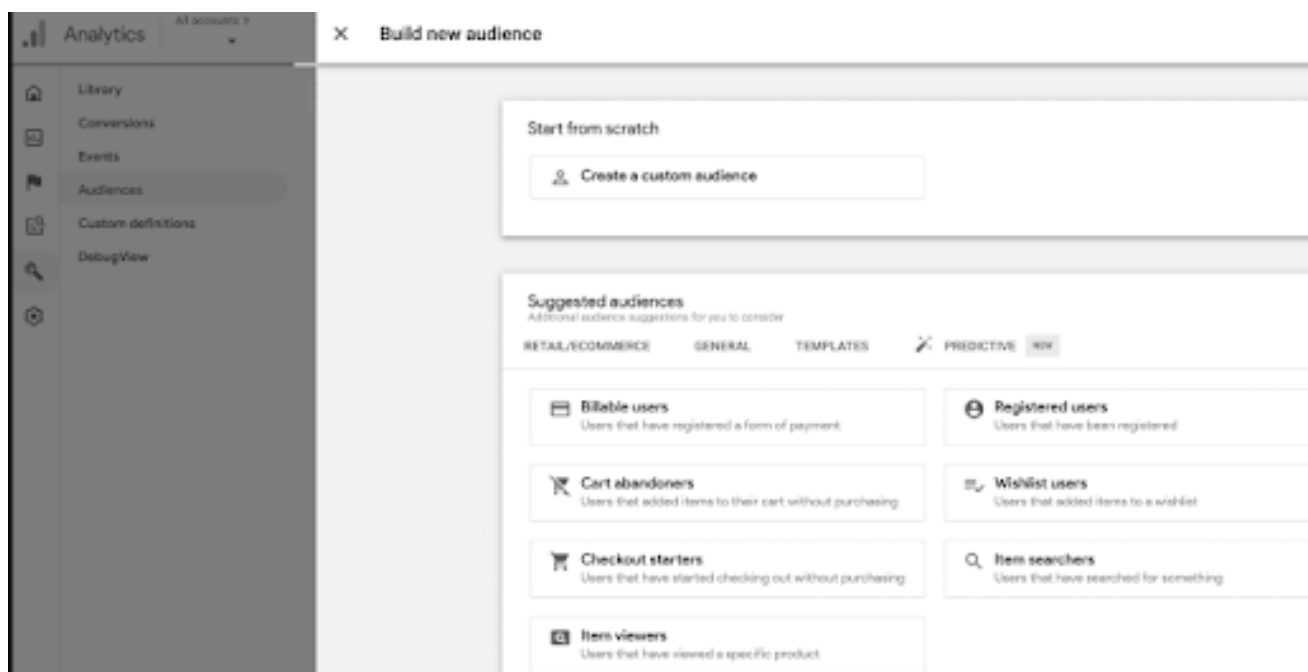
☒ Copy parameters from the source event

Modify parameters

## 6. Build New Audience

For marketers looking to expand their brand and acquire a new audience, Google Analytics 4 has a feature called "Build New Audience." When users set up their GA4 property, they provide their business details. Then, Google uses that information and generates data about your new possible audiences.

You can access "Build New Audience" data in the Audiences section under Library.





## 8. Conclusion

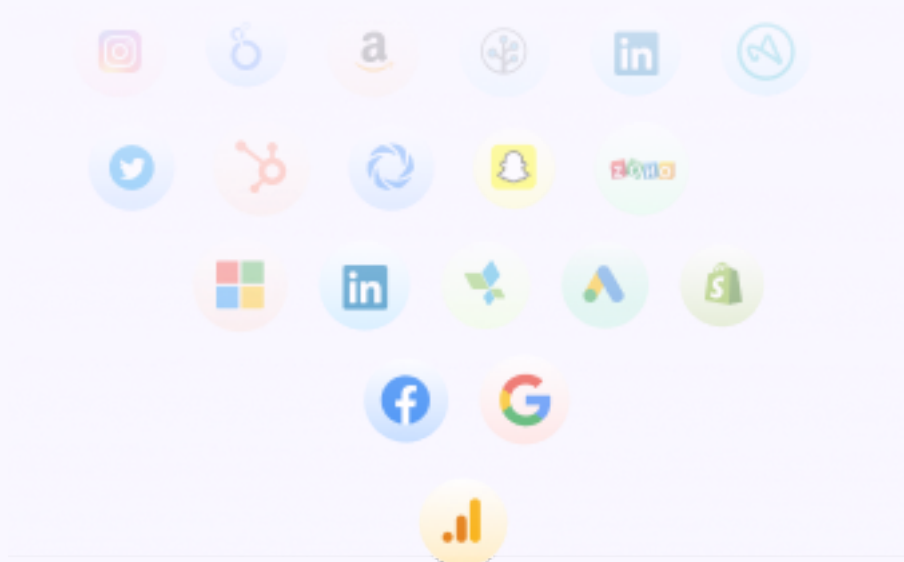
That is all you need to know about Google Analytics 4 before integrating it with your website. Google Analytics 4 (GA4) is a powerful tool to track and analyze website traffic and user behavior. In addition, it offers a range of features and capabilities that can help businesses and organizations understand their customers and optimize their online presence.





# Take control of your Google Analytics Data

Book a demo with one of our experts and see how EasyInsights can help your company unlock the potential of raw data



**BOOK A DEMO**

or

**SEE EASYINSIGHTS IN ACTION**