



MIGRATION TO GOOGLE ANALYTICS 4 FOR MAGENTO

An e-book by BSS Commerce

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In October 2020, the eCommerce world was taken aback when Google announced they would retire the Universal Analytics solution on July 1, 2023. Thus, stores that kept track of their customers and traffic using Universal Analytics will now have to move to Google Analytics 4.

Therefore in this e-book by BSS Commerce, we would like to introduce you to what Google Analytics is, why it is so important, and how to migrate to this new property.

Overview of Google Analytics 4

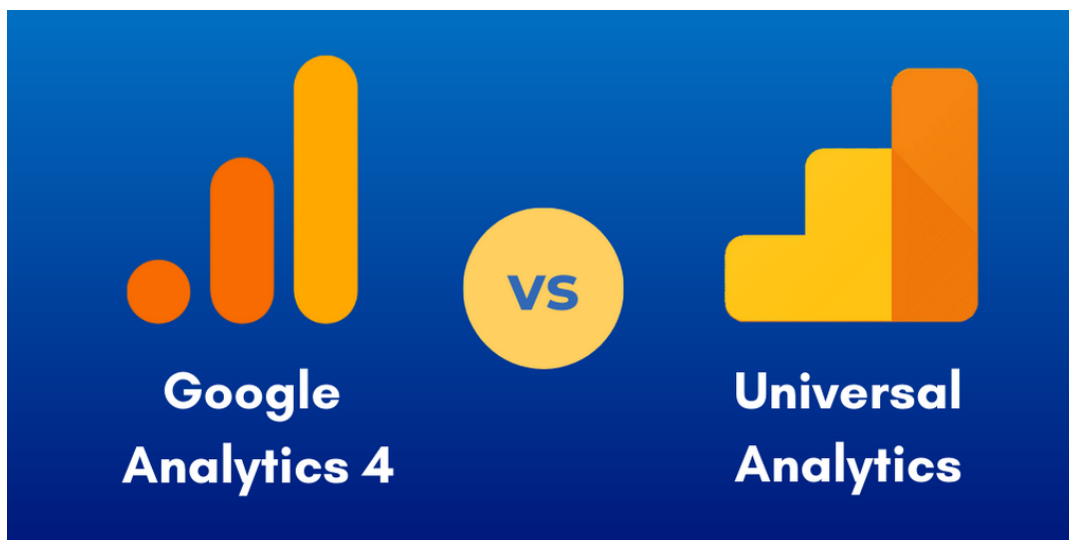
Definition

Officially introduced in October 2020, **Google Analytics 4 (GA4)** is the most advanced and the soon default version of GA, enabling cross-platform tracking and using machine learning as its core to provide unified web and app analytics, with a greater focus on customer experience and better insight-gaining.

It was implemented in response to businesses' need for a comprehensive view of their customers' journeys across different platforms, and to adapt to an increase in the privacy of data collecting and the competitive digital landscape.

Alert!: Google also emphasized the urgency of switching from Universal Analytics (UA), the current tracking property, to Google Analytics 4 as the former will cease functioning on July 1, 2023. Although tracked data will remain, businesses must migrate to GA4 to get the hang of it and continue benefiting from the tool.

Google Analytics 4 vs. Universal Analytics



You would question what is in GA4 that can outweigh UA. As the digital world evolves, rising user expectations on privacy, more global regulations, and decreases in browser support for cookies have made digital measurement more challenging, harder to gather a unified database, and therefore, difficult to understand customers. GA4 is launched to adapt to this circumstance. The differences between GA4 and UA lie primarily in the data model, reporting, identity spaces, and machine learning technology.

Data model

Universal Analytics uses a *session-based data model* to group user interactions taking place within a given time frame into sessions.

Meanwhile, Google Analytics 4 uses an *event-based data model* to count each interaction as an event, providing more specific and clear information about actions made by users. This method is more flexible as well as easier for faster custom calculations and generates richer, consistent insights.

Identity spaces

To understand and distinguish the users, Analytics has several user identifiers such as User-ID, Google Signals, and Device IDs. Universal Analytics uses these identity spaces separately and mostly device-ID, leading to differences in measurement and user duplication.

With GA4, all identity spaces are used to process the data. First Analytics look for the user ID, then it tries Google signals, and if there's no match for either, it will rely on the Device-ID. This can help you to de-duplicate users and have a more unified and single journey of them.

Reports

With the event-based data model and all user identifiers used, GA4 can handle various data streams, de-duplicate across different devices and gain insights across platforms (apps and websites together), which can only be experienced in GA4.

Advanced features of GA4

Explorations: created to give your more freedom in interpreting your data using a variety of techniques and metrics to combine to generate a suitable report for you.

BigQuery Export: safely store your data in the cloud with BigQuery, integrate it with data from other sources, and perform searches on all of your data sets by exporting your Analytics data there. You could even transfer your data to another system for more analytics.

Other differences

- In UA, there are 2 user metrics: Total Users, and New Users while in GA4, there are 3 metrics: Total Users, Active Users, and New Users.
- Page Views in UA are called Views in GA4.
- After a conversion is recorded, GA4 can update attributed conversions for up to 7 days, which could cause the figures in attribution reports to change.
- Bounce Rate: In UA, it is determined as the proportion of single-page sessions in which there was no interaction with the page. But Google Analytics 4 considers the session as a bounce when a user doesn't have an engaged session.

The key benefits of transitioning to Google Analytics 4

Full unified reporting across devices and platforms

Previously known as the Web + App properties of Google Analytics, GA4 is designed to collect all types of data from both web/desktop and app/mobile, then for the first time, combine them all in one place. This helps so much as users often switch their devices or profiles when interacting with your sites. It de-duplicates users from different devices, using the most proper user identifiers for each situation to measure a uniform user journey.

Therefore, business owners can now have full reports with key insights gained across many streams of data that is unique to their businesses.

More complete user journey

The ability to understand a customer's journey is important in anticipating their needs and providing exceptional experiences. However, customer journeys have become more complex due to the many ways they can interact with a business, from online to offline, desktop to smartphones. So it is critical to have measurement tools that can combine and analyze these fragmented journeys to provide valuable insights.

The new GA4 can track events and conversions, regardless of whether they occur in an app or on the web, and eliminate duplicated user interactions to measure the overall user journey. This is a significant advantage for marketers seeking to leverage GA4 fully to improve their understanding of customer behavior and optimize their marketing strategies.

More options for defining and segmenting audiences

In GA4, an audience refers to a group of users who share similar characteristics and behaviors that are relevant to your business. By using GA4 properties, it's simpler to generate new audiences, and you have greater flexibility to define and divide your audiences based on specific criteria.

There are certain ways to define and segment your audiences in GA4:

- Automatically created and predefined audiences
- Create a new audience by manually defining all the parameters yourself
- Define your audiences based on IDs sent to Analytics to create audiences based on signed-in users.
- Modify suggested audiences to fit your business
- Especially, get predictive audiences created by GA4's machine learning.

Explorations and advanced analysis

Google Analytics 4 offers a new feature called *Explorations* (previously *Analysis*), which provides various advanced techniques that extend beyond the standard reports. Explorations allows you to discover deeper insights into your customers' behavior by configuring and switching between these powerful techniques that help you understand your data more profoundly.

These techniques include Free Form for flexibility, Funnel and Path for understanding customer journeys, Segment Overlap to compare segments, and User Lifetime for wholly user interactions. These cannot be found in Universal Analytics and clearly, business owners and marketers can really take advantage of this useful tool.

More intelligent tracking using Machine Learning

Intelligent tracking

Given the limits in the number of signals available due to privacy regulations and restrictions, advanced automation and machine learning are used to maintain measurement continuity while still respecting user privacy and consent preferences. To compensate for the lack of signals, data modeling and conversion modeling are applied to utilize observable data, forming more intelligent tracking that does not rely on cookies. This approach is surely crucial in providing marketers with accurate measurement and delivering personalized ad experiences.

Predictive metrics

Also with the power of machine learning, Analytics can frictionlessly get the most value from your data and provide user behavior predictions based on their past behavior. This is called predictive metrics in GA4.

eCommerce tracking

Beyond standard tracking, Magento sites, like other eCommerce ones, need ways to track how businesses are performing. There goes eCommerce tracking.

eCommerce tracking in GA4 refers to the process of collecting and analyzing data related to online transactions and revenue generated by an eCommerce website. It involves setting up and configuring eCommerce tracking features in GA4 to track various metrics, such as product sales, revenue, conversion rates, and customer behavior. With eCommerce tracking in GA4, you can get insights into how customers interact with your online store and purchase products, allowing you to make data-driven decisions to optimize your eCommerce strategy.

Benefit Advertising

By linking Google Ads and GA4, Google Analytics can automatically create metrics and dimensions related to your campaigns, such as clicks, cost, and campaign names. This integration can provide reports that help you determine the return on investment of your media spend across channels, assess attribution models, and make informed decisions about Google Ads budget allocation.

Additionally, conversion events in GA4 can be imported into Google Ads to be used in ad reports and to help determine ad placement bids.

BigQuery Export

BigQuery is a cloud-based data warehouse that lets you analyze data with features like machine learning and geospatial analysis. From the integration with GA4, you can do without infrastructure management, and run SQL queries to answer complex business questions, even with large raw data sets. Also, businesses can add relevant data to combine with raw data in BigQuery to obtain insights for specific questions.

This integration is only available for the enterprise Analytics 360 properties with Universal Analytics. Therefore, to get full access, let's move to Google Analytics 4.

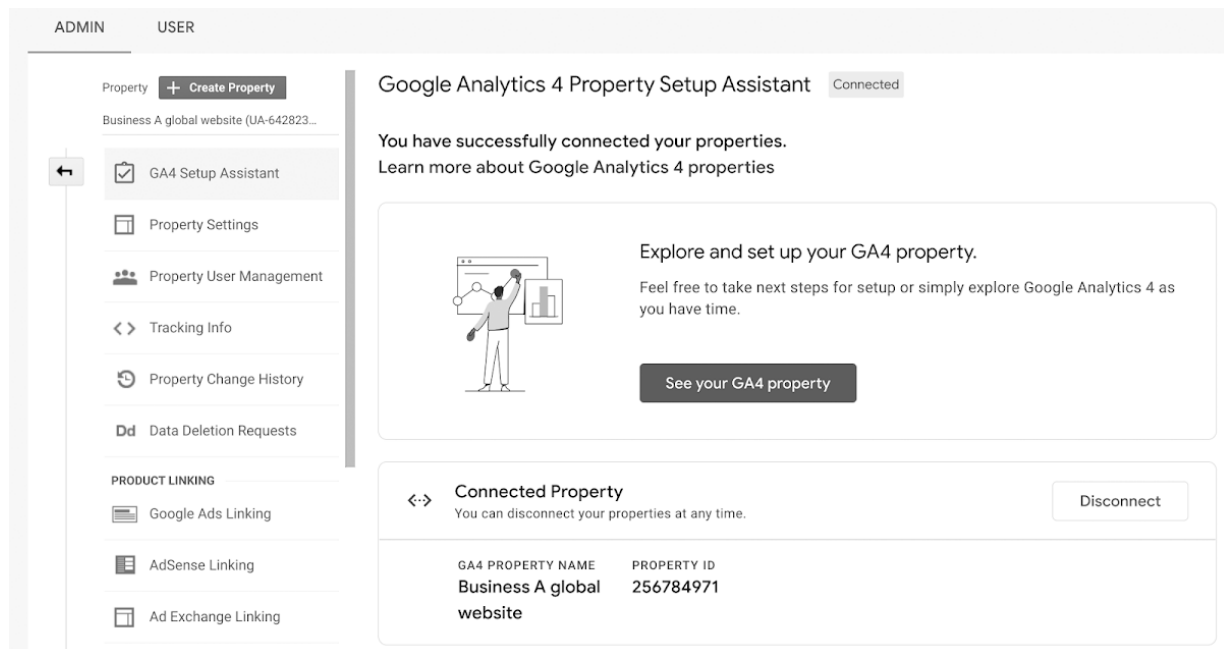
How to migrate to Google Analytics 4 for Magento sites

Please note that this e-book is for migration only, which means that we will make guidance for sites that already use Analytics.

Connect Google Analytics 4 to Magento sites

1. Create a Google Analytics 4 property

The first thing you need to do is create a new Google Analytics 4 property. See the detailed guide here: [Add a Google Analytics 4 property](#).



(Google Help)

2. Create a Data stream and get the Measurement ID

- To create a Data stream, see [this instruction](#) in Add a data stream section.
- To find the Measurement ID for the tagging step later, read the guide here: [Find your Google tag ID](#)

3. Tag your Magento sites using Google Tag Manager (GTM)

To connect your Magento stores to Google Analytics, besides using a Magento GA4 extension, you can deploy these two tagging solutions: Global Site Tag and Google Tag Manager. Here's a brief comparison between these two according to Google:

	Global site tag	Google Tag Manager
Works with all Google tags	×	×
Works with non-Google tags		×
Lets you manage tags in an interface		×
Lets you manage tags by coding Javascript directly on your website	×	

Opting for which is totally up to you. Yet, we still suggest using GTM as it is much easier to configure and especially, enables you to create *Google Analytics Enhanced eCommerce events* that can help you track the user journey.

For detailed instructions, see [Configure Google Analytics 4 tags in Google Tag Manager](#).

E-commerce Tracking

To set up, you need to enable relevant eCommerce features in your GA4 property, such as enabling enhanced eCommerce tracking, setting up product and promotion tracking, and configuring transaction and revenue tracking.

1. Enable eCommerce tracking:

Whether you've already used Analytics or you're new and starting with GA4, you only need to enable **Enhanced Measurement**. This will allow GA4 to track eCommerce events automatically, without the need for additional code.

2. Set up product and promotion, transaction, and revenue tracking: You must configure your eCommerce website to send these data to GA4.

- First, you have to determine which events you want to track. Then define the event parameters you want to collect for each event.
- Next, Add product and promotion IDs to your website's HTML code, as well as pieces of code to the checkout/order confirmation pages. This work is done either manually or using a plugin or extension.

Event	Trigger when
add_payment_info	a user submits their payment information
add_shipping_info	a user submits their shipping information
add_to_cart	a user adds items to cart
add_to_wishlist	a user adds items to a wishlist
begin_checkout	a user begins checkout
generate_lead	a user submits a form or a request for information
purchase	a user completes a purchase
refund	a user receives a refund
remove_from_cart	a user removes items from a cart
select_item	a user selects an item from a list
select_promotion	a user selects a promotion
view_cart	a user views their cart
view_item	a user views an item
view_item_list	a user sees a list of items/offerings
view_promotion	a user sees a promotion

Examples of events for eCommerce from Google.

3. Verify your setup:

Once you've set up eCommerce tracking in GA4, you should verify that it's working correctly. You can do this by navigating to the **Conversions** section of GA4 and checking that your eCommerce data is being tracked and reported correctly.

4. Migrate from a UA eCommerce tracking:

If you have already implemented eCommerce for Universal Analytics, you can do one of the following to migrate to Google Analytics 4:

- Use your UA eCommerce tracking to populate GA4 eCommerce events
- Replace your UA eCommerce tracking with GA4 eCommerce events

For more detailed information, see [Measure eCommerce](#).

GA4 Migration Module/Service

Note that it can be quite complicated to integrate Magento 2 stores with GA4 manually, as eCommerce setups require many importing steps and also some coding knowledge. Therefore we suggest you come to the *Magento GA4 module* by BSS Commerce to ensure the best practices.

This module is a great tool to help you quickly integrate GA4 with your Magento 2 store without technical knowledge, directly without the support of Google Tag Manager.



[BSS Commerce's Google Analytics 4 Extension](#)

Moreover, it also provides many advanced features, such as

- Support 5 default and most popular events with eCommerce tracking in real-time.
- No manual event creation is required.
- Allow the admin to identify a product through product ID/SKU.
- Make it easier to track performance by brand.
- Enable the product variant feature from the backend.

Setting up eCommerce tracking is a complicated configuration, and you have to manually custom events that contain lines of code and may vary depending on the scale and objectives of each business. Provided that, we always consult our customers to install the extension to save time, effort, and even budget.

Besides, BSS Commerce also offers a thorough **GA4 Migration service** in which you can be assured that your Magento stores are connected and tracking smoothly with this new property. You can [contact us here](#) for more information.

Migrate your goals, users, audiences, and ad links from UA to GA4

If you are already setting up your goals, user segments, audiences, and ad links in UA and don't want to configure new ones from scratch in GA4, you might need this migration guide. Google Support has made a detailed guide on this, check here: [Make the switch to Google Analytics 4](#).

How to use Google Analytics 4 to gain insights

Reporting

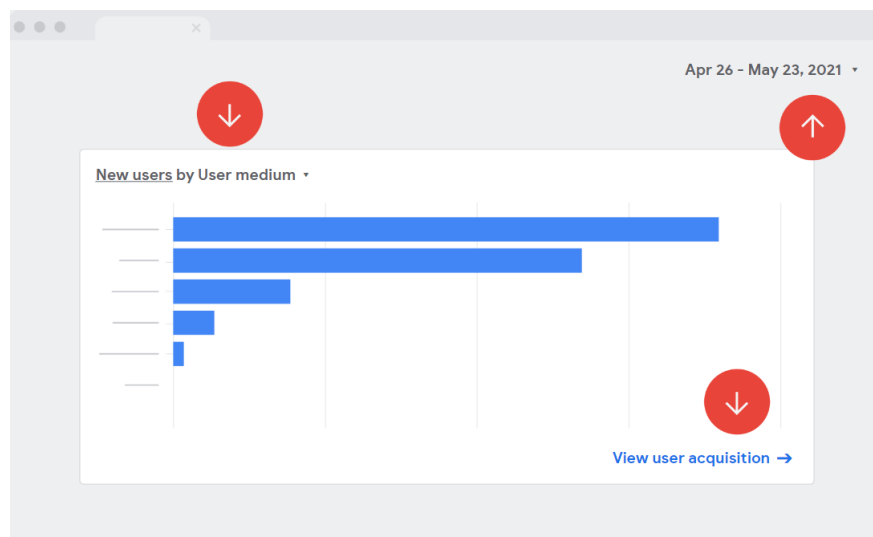
For the Reporting section, there're two modes: *Report snapshot and Real-time report*.

Report snapshot

The Reports snapshot page provides a brief overview of the most interesting aspects of your data. Each card on the page is a preview of a larger report, with most of them using data from Analytics reports such as conversions or events.

A card may have up to three controls: a dimension/metric picker, a date-range selector, and a link to the associated report.

- If the card has dimension or metric pickers at the top, you can use them to modify the data displayed on the card.
- The date-range selector in the upper right allows you to select the timeframe you want to analyze.
- Finally, you can click the link at the bottom right of the card to open the associated report and see a more detailed analysis of the card topic.



(Google Skillshop)

The Realtime Report

The Realtime report enables you to keep track of ongoing user activity. This report exhibits events that occurred in the past 30 minutes. The layout is organized in cards to provide answers swiftly to crucial queries about the current user engagement with your business.

This kind of report is useful if you'd like to see whether a flash sale drives traffics to your site, check on the traffic gained from newly posted social content, etc.

Default reports

The rest of the default reports all have the same basic format. To see these reports, click the links on the left side of the Analytics interface. Here are all the reporting categories along with a brief explanation of the questions they answer:

- Acquisition: Where are your customers coming from?
- Engagement: Which content are your customers engaging with?
- Monetization: What is your customers' shopping activity?
- Retention: Are your customers coming back?
- Demographics: Who are your customers?
- Tech: What technology are your customers using?

Data comparison

GA4 provides the *Add Comparison* tool, which lies at the top of each page, for you to compare your data. For instance, you can compare how users interact with your website or app on different devices by selecting Add Comparison and building a comparison for two device categories: desktop and mobile.

You can also add a comparison for any of your dimensions, both default and custom, and even combine multiple dimensions in a single comparison.

Explorations

Forms of Exploration:

Free-form exploration

Explore your data in a familiar crosstab layout. You can also apply several different visualization styles in free form, including bar charts, pie charts, line charts, scatter plots and geo maps. [Learn more](#)



Cohort exploration

Gain insights from the behavior and performance of groups of users related by common attributes. [Learn more](#)



Funnel exploration

Visualize the steps users take to complete tasks on your site or app, and see how you can optimize user experience and identify over- or under-performing audiences. [Learn more](#)



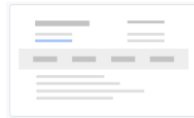
Segment overlap

See how different user segments relate to each other. Use this technique to identify new segments of users who meet complex criteria. [Learn more](#)



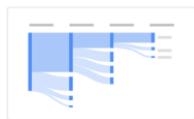
User exploration

Examine the users that make up the segments you create or import. You can also drill down into individual user activities. [Learn more](#)



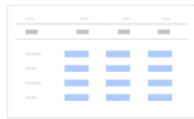
Path exploration

Visualize the paths your users take as they interact with your website and app. [Learn more](#)



User lifetime

Explore user behavior and value over their lifetime as a customer. [Learn more](#)



(Google Help)

Here you can create and edit an Exploration and get data from it on your own, add techniques to the exploration to control the way data is analyzed, and add dimensions, metrics, and segments for better data visualization and understanding. See the guide here: [Get started with Explorations.](#)

Analytics Insights

Analytics Intelligence is a collection of functionalities that employs machine learning and parameters you set to assist you in comprehending and making decisions based on your data.

Analytics Intelligence offers two categories of insights:

- *Automated insights:* Analytics Intelligence identifies unexpected shifts or emerging patterns in your data and sends you automated notifications on the Insights dashboard within the Analytics platform.
- *Custom insights:* You establish parameters that detect variations in your data that are significant to you. Once these parameters are met, you can view the insights on the Insights dashboard and also receive email notifications. You can create up to 50 custom insights per property.

To find insights in Analytics and create custom insights depending on your purpose, see step-by-step instructions [here](#).

Conclusion

Wrapping up

In conclusion, business owners should start planning and executing their migration to Google Analytics 4 with the upcoming discontinuation of UA, to continue receiving data and insights on website and app performance.

Additionally, GA4 offers more advanced features and capabilities that can help businesses gain a better understanding of their audience and improve their overall online strategy. Don't wait until it's too late - start moving and configuring to GA4 today.

Google Analytics 4 Module from BSS

Analytics aims to assist you in making data-driven decisions to promote business development and increase profits. However, the complicated and technical-demanding configuration of Google Analytics 4 as well as moving from UA to it can cause you some trouble. This may lead to incomplete or inaccurate data, and all of your efforts may go to waste and your business could be harmed.

If you are uncertain whether you are measuring all of the crucial metrics for your business objectives, or if the data feeding into your analytics reports is trustworthy, we can provide assistance with our [GA4 migration solutions](#).



[BSS Commerce's Google Analytics 4 Solutions](#)