

Google Analytics 4 vs Universal Analytics Comparing Metrics

Users

In Universal Analytics, there are two User metrics: *Total Users*, and *New Users*. In Google Analytics 4, there are three User metrics: *Total Users*, *Active Users*, and *New Users*.

Metric	UA	Ga4
<i>Total Users</i>	Primary user metric in UA: Total number of users	Total number of unique users who logged an event
<i>New Users</i>	Number of users who interacted with your site for the first time	Number of users who interacted with your site or launched your app for the first time The metric is measured by the number of new unique user IDs that logged the <code>first_open</code> or <code>first_visit</code> event.
<i>Active Users</i>	N/A	Primary user metric in GA4: Number of distinct users who visited your website or application. An active user is any user who has an engaged session or when Analytics collects: the <code>first_visit</code> event or <code>engagement_time_msec</code> parameter from a website the <code>first_open</code> event or <code>engagement_time_msec</code> parameter from an Android app the <code>first_open</code> or <code>user_engagement</code>

		event from an iOS app
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Pageviews

In general, *Pageviews* should be fairly close between UA and GA4, generally within a few percentage points, since the Google tag fires on each page and generates a pageview. However, the differences can vary based on any filters you may have set up in Universal Analytics or Google Analytics 4.

Metric	UA	Ga4
<i>Pageview</i>	Total number of pages viewed. Repeated views of a single page are counted.	aka Views: Total number of app screens and/or web pages your users saw. (The Views metric found in the reporting interface is the combination of pageviews and screenviews.) Repeated views of a single screen or page are counted.
<i>Unique Pageview</i>	Total number of pages viewed but duplicates are not counted	N/A

Purchases

Web purchase counts should match closely. We never expect all events to be collected perfectly, and purchase events are no exception to that rule, however these events are atomic and critical so event counts should match closely across UA/GA4.

Metric	UA	Ga4
<i>Purchases</i>	1. <code>purchase</code> events are fired within the	1. <code>purchase</code> events are recommended

	<p>Enhanced Ecommerce model</p> <p>2. Data is pulled from a <code>products</code> array via Google Analytics-provided JavaScript and collected in a <code>purchase</code> event when you choose to send that event</p>	<p>and collect data in a similar fashion to UA, but there are differences</p> <p>2. Does not provide additional JavaScript for array collection and expects you to provide the <code>items</code> array when collecting a <code>purchase</code> event on your own (though the same advice is given with regard to populating a data layer object)</p>
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Sessions

Metric	UA	Ga4
<i>Session</i>	<p>1. Period of time a user is actively engaged with your website or app</p> <p>2. 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.</p> <p>3. If a user comes back after a session timeout, it will start a new session</p> <p>4. If the user is on the website when midnight arrives, a new session will be started</p>	<p>aka Session Start</p> <p>1. To determine the session that each event comes from, the <code>session_start</code> event generates a <code>session ID</code> and Analytics associates the session ID with each subsequent event in the session</p> <p>2. A session will end when there has been more than a 30-minute period of inactivity (depending on the session timeout settings)</p> <p>3. Sessions are not restarted at midnight or when new campaign parameters are encountered</p> <p>4. If a user comes back after a session timeout, it will start a</p>

		new session
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Session/Traffic based Acquisition metrics

Metric	UA	Ga4
Session/Traffic based Acquisition metrics	<p>Found in the Acquisition section in a number of different reports, such as the Channels report or the Source/Medium report</p> <p>Channel or Source/Medium is the dimension being analyzed against metrics such as <i>Users</i> and <i>Sessions</i></p>	<p>Traffic acquisition metrics can be found in the Traffic Acquisition report</p> <p>The dimensions of Channel or Source/Medium are measured against metrics such as <i>Users</i> and <i>Sessions</i></p> <p><i>Note that the main differences you may see between UA and GA4 for acquisition metrics are aligned with the differences you will see for the metrics of Users or Sessions</i></p>

Conversions

If your conversions are based on destination URLs or on UA events (i.e., Category/Action/Label) for which you have set up equivalent GA4 conversion events, *Conversions* can be quite close. However, there are important differences between UA and GA4 that may make it difficult to compare conversion counts.

Metric	UA	Ga4
<i>Conversions</i>	<p>You define a <i>goal</i> 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.</p> <p>UA counts only one</p>	<p>You specify a <i>conversion event</i> 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.</p>

	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.	GA4 <i>usually</i> 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.
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In Google Analytics

These are the top drivers of differences between similar UA and GA4 conversions based on product, setup, or setting choices made in Google Analytics.

Description	Solution / Recommendation
<p>Conversion counting: UA counts one goal conversion per session, while GA4 often counts one conversion per event.</p> <p>For example, when a user completes a goal 5 times in a single session, UA will show one conversion and GA4 will usually show 5.</p> <p><i>Note: Once per event is the default counting method for most conversions, except those created in an automatically created GA4 property or using the Setup Assistant goals migration tool.</i></p> <p>The default settings can cause a higher conversion count in GA4.</p>	<p>Use conversion counting settings as described here. To align GA4 counting to UA goals counting, make sure the GA4 conversion counting method is set to Once per session.</p> <p>Notes:</p> <p>The GA4 UI will recognize that this isn't a recommended setting as it can lead to the under counting of conversions. For example, if you're a lead-generation business, you want to count every lead submission, not just one per user. Note that Google Tag Manager has controls over how and when tags can fire. Learn more.</p> <p>This recommendation isn't relevant when comparing UA ecommerce transactions because they're already counted as Once per event in UA.</p>
<p>Site coverage: If the UA tag is implemented across a different set of pages within a website than the GA4 tag, measurement gaps can emerge. Especially if a landing page from a Google Ads ad isn't accurately tagged, it could be that the information you need to accurately measure and attribute a</p>	<p>We recommend relying on a standardized method of implementation to make sure tags are implemented across your site (for example, the Google tag or Google Tag Manager). Also consider settings you may have configured in the past, such as cross-domain tracking.</p>

<p>conversion to that ad interaction isn't available.</p> <p>Depending on whether GA4 tags are implemented on more or fewer pages than UA, GA4 will respectively show more or fewer users, sessions, page views, and subsequent conversions.</p>	<p>Use the Tag coverage summary to confirm if the Google tag is implemented across your website. Learn more.</p> <p>To minimize discrepancies, rely on the same tag implementation methods for UA and GA4.</p>
<p>Implementation errors: When setting up data collection for GA4, it's possible a tag is implemented incorrectly. This can result in seeing no data at all in your GA4 property, but in some instances, you'll see partial data in your GA4 property. If so, you'll see discrepancies when comparing it to UA.</p> <p>It's likely that a broken implementation shows lower conversion counts for GA4 than UA.</p>	<p>We recommend you rely on standardized implementation methods outlined in the Developers Guide instead of non-standard implementations. A tag management system can help bring consistency in implementations.</p> <p>Using the Google tag is sufficient for many users as this allows the use of the same tag for both Google Ads and Google Analytics (Developer Guide).</p>
<p>Filters: UA filters work very differently from GA4 filters. It's common for UA filters to be in place and significantly alter the data inside a UA property (for example, "only show data from France"). GA4 has a very different set of possible filters.</p> <p>If UA filters reduce reported traffic, this can result in GA4 showing higher amounts of traffic.</p>	<p>Data filters: Create include/exclude filters for internal and developer traffic.</p> <p>Event modifications and custom events: Modify event names and parameters.</p> <p>Identify unwanted referrals: Include only the referrals you want.</p> <p>Create subproperties (360 only): Create fully-functional properties that are subsets of the data in your 360 properties.</p>
<p>Referral exclusions: Exclusions set in UA can affect conversions attributed to Google Ads. If these exclusions are not set up accordingly in GA4, the credit attributed to Google Ads can differ (for example, exclusions for payment providers like PayPal are often made in UA.)</p> <p>If referrers were excluded in UA but not in GA4, GA4 conversions can be misattributed in GA4, resulting in fewer conversions attributed to the <i>Google Paid channel</i> when compared to UA. Referral exclusions affect the amount of conversion credit that is exported to Google Ads.</p>	<p>Match referral exclusions settings between UA and GA4 to minimize incorrect attribution. Note that excluding referrals does not change the overall amount of conversions in the Google Analytics property; it only affects how conversions are attributed.</p> <p>Learn more about referral exclusions in UA</p> <p>Learn more about identifying unwanted referrals in GA4</p>

