[GA4] Automatically collected events

Automatically collected events are triggered by basic interactions with your app and/or site (as indicated under the event name in the table below). As long as you use the Google Analytics for Firebase SDK or gtag.js, you don't need to write any additional code to collect these events.

Analytics collects events for Android *and* iOS apps unless otherwise stated. The names and parameters of these events can be helpful when accessing your raw event data in BigQuery.

Note

The following parameters are collected by default with every event, including custom events. The automatically collected events that don't have parameters listed in the table below only receive the following parameters:

- *language*
- *page_location*
- *page_referrer*
- *page_title*
- *screen_resolution*

The value assigned to event parameters must be 100 characters or fewer. The *page_title* parameter must be 300 characters or fewer. The *page_referrer* parameter must be 420 characters or fewer. The *page_location* parameter must be 1,000 characters or fewer.

If you override the *page_location* parameter, make sure that the URL path is valid. If you assign an invalid URL path, the *Page location* dimension will be empty. You can use the Campaign URL Builder to check whether a URL path is valid.

Event	Automatically triggered...	Parameters
ad_click (app)	when a user clicks an ad Publisher events coming from AdMob via the Google Mobile Ads SDK or Ad Manager via the Ad Manager integration This event is not exported to BigQuery.	ad_event_id
ad_exposure (app)	when at least one ad served by the Mobile Ads SDK is on screen This event does not appear in reports and is not exported to BigQuery.	firebase_screen, firebase_screen_id, firebase_screen_class, exposure_time
ad_impression (app)	when a user sees an ad impression Publisher events coming from AdMob via the Google Mobile Ads SDK or Ad Manager via the Ad Manager integration This event is not exported to BigQuery.	ad_event_id, value*
ad_query (app)	when an ad request is made by the Mobile Ads SDK This event does not appear in reports and is not exported to BigQuery.	ad_event_id
ad_reward (app)	when a reward is granted by a rewarded ad served by the Mobile Ads SDK	ad_unit_code, reward_type, reward_value

adunit_exposure (app)	when an ad unit served by the Mobile Ads SDK is on screen This event does not appear in reports and is not exported to BigQuery.	firebase_screen, firebase_screen_id, firebase_screen_class, exposure_time
app_clear_data (app)	when the user resets/clears the app data, removing all settings and sign-in data Android only	
app_exception (app)	when the app crashes or throws an exception The event is sent when you integrate Firebase Crashlytics.	fatal, timestamp, engagement_time_msec
app_remove (app)	when an application package is removed (uninstalled) from an Android device Android only This event is different from the *Daily uninstalls by device* and *Daily uninstalls by user* metrics, which are both reported by Google Play Developer Console . The *app_remove* event counts the removal of application packages, regardless of the installation source, and the count changes depending on the date range you are using for the report. The *Daily uninstalls by device* and *Daily uninstalls by user* metrics count the removal of application packages only when they were installed from Google Play, and are reported on a daily basis.	
app_store_refund (app)	when an in-app purchase is refunded by Google Play Android only This event is not exported to BigQuery.	product_id, value, currency, quantity
app_store_ subscription_cancel (app)	when a paid subscription is cancelled in Google Play Android only Requires an initial subscription that was made on or after July 1, 2019. This event is not exported to BigQuery.	product_id, price, value, currency, cancellation_reason
app_store_ subscription_convert (app)	when a free-trial subscription is converted to a paid subscription This event is set as a default conversion. Requires an initial subscription that was made on or after July 1, 2019. An initial free-trial subscription is logged as an in_app_purchase with the subscription parameter set to true. This event is not exported to BigQuery.	product_id, price, value, currency, quantity
app_store_ subscription_renew	when a paid subscription is renewed This event is set as a default conversion.	product_id, price, value, currency, quantity, renewal_count

(app)	Requires an initial subscription that was made on or after July 1, 2019. This event is not exported to BigQuery.	
app_update (app)	when the app is updated to a new version and launched again The previous app version id is passed as a parameter. This event is conceptually different from the Daily upgrades by device metric, which is reported by Google Play Developer Console . An upgrade refers to the updating of the application binary, whereas an app_update event is triggered upon the subsequent launch of the upgraded app.	previous_app_version
click (web)	each time a user clicks a link that leads away from the current domain By default, outbound click events will occur for all links leading away from the current domain. Links to domains configured for cross-domain measurement will not trigger outbound click events. The parameters populate the following dimensions: • *Link classes* (from link_classes) • *Link domain* (from link_domain) • *Link ID* (from link_id) • *Link URL* (from link_url) • *Outbound* (from outbound) Collected by default via enhanced measurement.	link_classes, link_domain, link_id, link_url, outbound (boolean)
dynamic_link_app_open (app)	when a user re-opens the app via a dynamic link **Note**: This event is being phased out as Firebase Dynamic Links is currently deprecated. Learn more about these changes.	source, medium, campaign, link_id, accept_time
dynamic_link_ app_update (app)	when the app is updated to a new version and is opened via a dynamic link Android only **Note**: This event is being phased out as Firebase Dynamic Links is currently deprecated. Learn more about these changes.	source, medium, campaign, link_id, accept_time
dynamic_link_ first_open (app)	when a user opens the app for the first time via a dynamic link **Note**: This event is being phased out as Firebase Dynamic Links is currently deprecated. Learn more about these changes.	source, medium, campaign, link_id, accept_time
error (app)	logged in place of an event that can't be logged because it is invalid in some way _err (firebase_error), _ev (firebase_error_value), and _el (firebase_error_length) parameters have additional information.	firebase_error, firebase_error_value

	This event does not appear in reports and is not exported to BigQuery.	
file_download (web)	when a user clicks a link leading to a file (with a common file extension) of the following types: • document • text • executable • presentation • compressed file • video • audio This event is collected by default via enhanced measurement. See the file extensions that trigger the event	file_extension, file_name link_classes, link_id, link_text, link_url
firebase_campaign (app)	when the app is launched with campaign parameters This event does not appear in reports and is not exported to BigQuery.	source, medium, campaign, term, content, gclid, aclid, cp1, anid, click_timestamp, campaign_info_source
firebase_in_app_ message_action (app)	when a user takes action on a Firebase In-App Message	message_name, message_device_time, message_id
firebase_in_app_ message_dismiss (app)	when a user dismisses a Firebase In-App Message	message_name, message_device_time, message_id
firebase_in_app_ message_impression (app)	when a user sees a Firebase In-App Message	message_name, message_device_time, message_id
first_open (app)	the first time a user launches an app after installing or re-installing it This event is not triggered when a user downloads the app onto a device, but instead when he or she first uses it. To see raw download numbers, look in Google Play Developer Console or in iTunesConnect. Supports measuring first_open conversions for users who accept Apple's iOS 14 app-tracking prompt.	previous_gmp_app_id, updated_with_analytics, previous_first_open_count, system_app, system_app_update, deferred_analytics_collection, reset_analytics_cause, engagement_time_msec
first_visit (app, web)	the first time a user visits a website or launches an Android instant app with Analytics enabled	
form_start (web)	the first time a user interacts with a form in a session Note: You can only use the parameters in your reports if you create custom dimensions for them.	form_id, form_name, form_destination

	Collected by default via enhanced measurement.	
form_submit (web)	when the user submits a form Note: You can only use the parameters in your reports if you create custom dimensions for them. Collected by default via enhanced measurement.	form_id, form_name, form_destination, form_submit_text
in_app_purchase (app)	when a user completes an in-app purchase, including an initial subscription, that is processed by the Apple App Store or Google Play Store The product ID, product name, currency, and quantity are passed as parameters. This event is triggered only by versions of your app that include the Google Analytics for Firebase SDK. **Android:** To see in-app purchase data for Android apps, link Analytics to Google Play. Note that Analytics doesn't automatically measure paid-app purchase revenue. Also, your reported revenue in Google Analytics may differ from the values you see in the Google Play Developer Console. Analytics ignores events that are flagged as invalid or tests. Learn more about testing Google Play billing. **iOS:** Note that Analytics doesn't automatically measure paid-app purchase revenue and refunds. Analytics ignores events that are flagged as invalid or sandbox.	product_id, price, value, currency, quantity, subscription, free_trial, introductory_price
notification_dismiss (app)	when a user dismisses a notification sent by Firebase Cloud Messaging (FCM) Android only	message_name, message_time, message_device_time, message_id, topic, label, message_channel
notification_foreground (app)	when a notification sent by FCM is received while the app is in the foreground	message_name, message_time, message_device_time, message_id, topic, label, message_channel, message_type
notification_open (app)	when a user opens a notification sent by FCM	message_name, message_time, message_device_time, message_id, topic, label, message_channel
notification_receive (app)	when a notification sent by FCM is received by a device when the app is in the background Android only	message_name, message_time, message_device_time, message_id, topic, label, message_channel, message_type

os_update (app)	when the device operating system is updated to a new version. The previous operating system version id is passed as a parameter	previous_os_version
page_view (web)	each time the page loads or the browser history state is changed by the active site Collected by default via enhanced measurement.	page_location (page URL), page_referrer (previous page URL), engagement_time_msec
screen_view (app)	when a screen transition occurs and any of the following criteria are met: • No screen was previously set • The new screen name differs from the previous screen name • The new screen-class name differs from the previous screen-class name • The new screen id differs from the previous screen id	firebase_screen, firebase_screen_class, firebase_screen_id, firebase_previous_screen, firebase_previous_class, firebase_previous_id, engagement_time_msec
scroll (web)	the first time a user reaches the bottom of each page (i.e., when a 90% vertical depth becomes visible) Collected by default via enhanced measurement.	engagement_time_msec
session_start (app, web)	when a user engages the app or website A session ID and session number are generated automatically with each session and associated with each event in the session. Learn more	
user_engagement (app, web)	when the app is in the foreground or webpage is in focus for at least one second. Learn more	engagement_time_msec
video_complete (web)	when the video ends For embedded YouTube videos that have JS API support enabled. Collected by default via enhanced measurement.	video_current_time, video_duration, video_percent, video_provider, video_title, video_url, visible (boolean)
video_progress (web)	when the video progresses past 10%, 25%, 50%, and 75% duration time For embedded YouTube videos that have JS API support enabled. Collected by default via enhanced measurement.	video_current_time, video_duration, video_percent, video_provider, video_title, video_url, visible (boolean)
video_start (web)	when the video starts playing For embedded YouTube videos that have JS API support enabled. Collected by default via enhanced measurement.	video_current_time, video_duration, video_percent, video_provider, video_title, video_url, visible (boolean)
view_search_results (web)	each time a user performs a site search, indicated by the presence of a URL query parameter Collected by default via enhanced measurement.	search_term, optionally 'q_<additional key="">' (where <additional key=""> matches an additional query parameter you specify to be collected under advanced settings)

			Note: This event only sends the unique_search_term parameter when it has a value of 1 (i.e. when the string is unique to that session).

Note: File extensions that match the following regex will trigger the file_download event:

pdf|xlsx?|docx?|txt|rtf|csv|exe|key|pp(s|t|tx)|7z|pkg|rar|gz|zip|avi|mov|mp4|mpe?g|wmv|midi?|mp3|wav|wma

* no_ad_impression value or currency is passed with the default integration

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