NightJarr

Sheldon Singh

- 12 years digital experience
- 6 years on Google Analytics
- Currently a Solutions Architect at FNB
- Been around before GTM
- You can call me Panda

Agenda

- Data Streams + Events
- Audience Segmentation
- Data Import - Offline Conversion Data
- Custom Reports

Our Reality

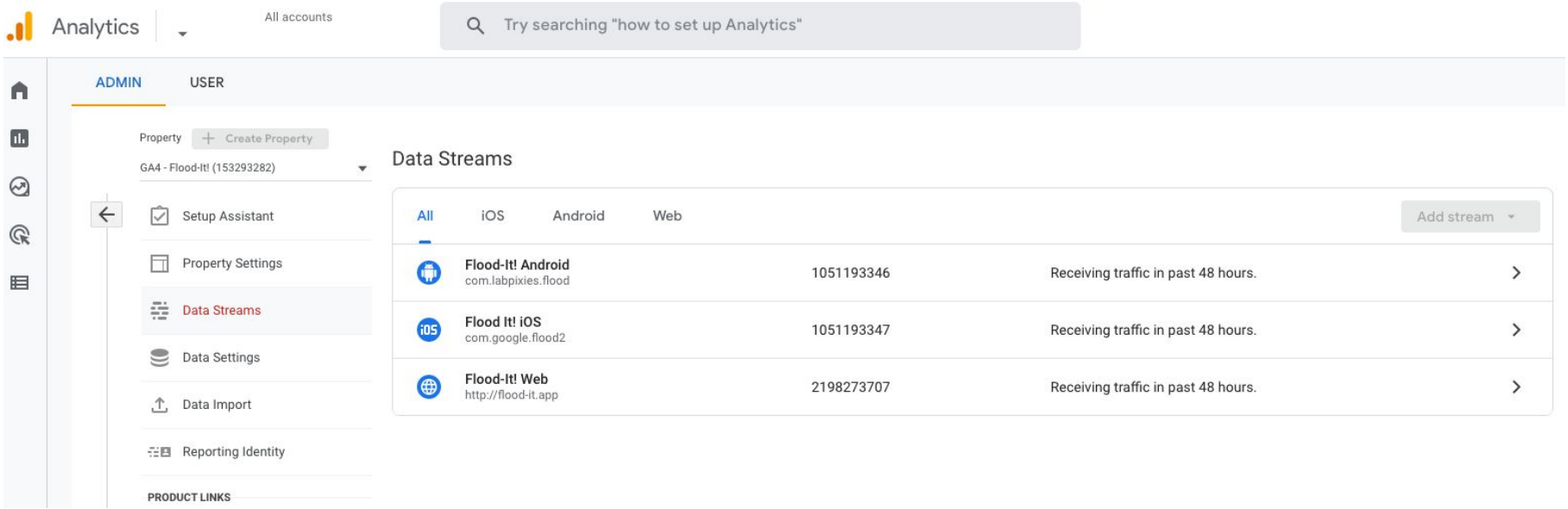
Demo Account

Click Here

GA4: Data Streams + Events

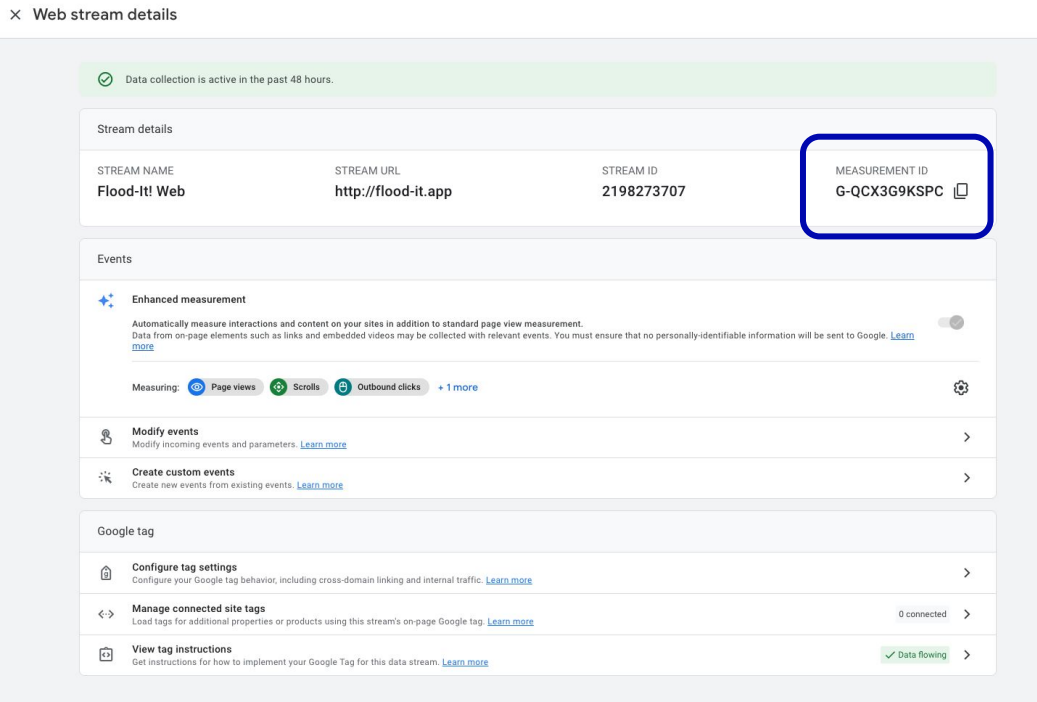
Data Streams

GA4 Property > Admin > Data Streams



Web - The “easy one”

Create account+property > Measurement ID > GTM Tag Installation



App - Firebase - Will Require Dev Work

APP NAME
Flood It! iOS

PLATFORM
iOS

BUNDLE ID
com.google.flood2

STREAM ID
1051193347

FIREBASE APP ID
1:300830567303:ios:09b1ab1d3ca29bda

APP NAME
Flood-It! Android

PLATFORM
Android

PACKAGE NAME
com.labpixies.flood

STREAM ID
1051193346

FIREBASE APP ID
1:300830567303:android:9b9ba2ce17104d0c

Firebase Events

Google Analytics for Firebase

Android

Java (Android) | Kotlin+KTX (Android)

```java
Bundle bundle = new Bundle();
bundle.putString(FirebaseAnalytics.Param.ITEM_ID, id);
bundle.putString(FirebaseAnalytics.Param.ITEM_NAME, name);
bundle.putString(FirebaseAnalytics.Param.CONTENT_TYPE, "image");
mFirebaseAnalytics.logEvent(FirebaseAnalytics.Event.SELECT_CONTENT, bundle);
```

MainActivity.java

iOS+

Swift | Objective-C

```swift
Analytics.logEvent(AnalyticsEventSelectContent, parameters: [
  AnalyticsParameterItemID: "id-\(title!)",
  AnalyticsParameterItemName: title!,
  AnalyticsParameterContentType: "cont",
])
```

ViewController.swift

Web

Web version 9 (modular) | Web version 8 (namespaced)

Learn more about the tree-shakeable Web v9 modular SDK and upgrade from version 8.

```javascript
import { getAnalytics, logEvent } from "firebase/analytics";

const analytics = getAnalytics();
logEvent(analytics, 'select_content', {
  content_type: 'image',
  content_id: 'P12453'
});
```

analytics_log_event_params.js

GA4 Events

Link Here

Types of events

The following types of events are collected automatically:

- **Automatically collected events** are events that Google Analytics collects by default when you set up the Google tag or the Tag Manager snippet on your website or the Google Analytics for Firebase SDK in your app. Learn more
- **Enhanced measurement events** are events that Google Analytics collects from websites when enhanced measurement is enabled within Google Analytics. Learn more

The following types of events require some implementation in order to see them in Analytics:

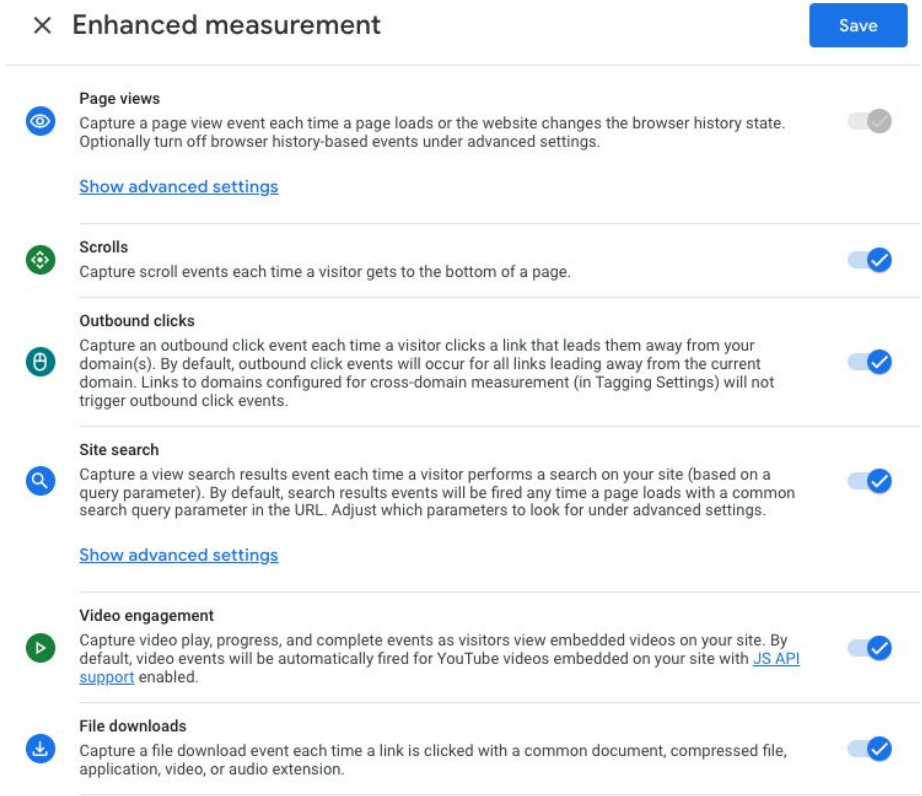
- **Recommended events** are events that you implement, but that have predefined names and parameters. These events unlock existing and future reporting capabilities. Learn more
- **Custom events** are events that you define. Make sure you only create custom events when no other events work for your use case. Custom events don't show up in most standard reports so you need to set up custom reports or explorations for meaningful analysis. Learn more

Automatic Events

[GA4] Automatically collected events - Analytics Help

Event	Automatically triggered...	Parameters
ad_click (app)	when a user clicks an ad Publisher events coming from AdMob via the Google Mobile Ads SDK 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 This event is not exported to BigQuery.	ad_event_id, value
ad_query	when an ad request is made by the Mobile	ad_event_id

Enhanced Measurement (Web)



Recommended Events

[GA4] Recommended events - Analytics Help

For online sales

We recommend these events when you want to measure sales on your site or app. They're useful for **retail**, **ecommerce**, **education**, **real estate**, and **travel**. Sending the events populates the *Ecommerce purchases* report. To learn more about these events, see Measure ecommerce.

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

For games

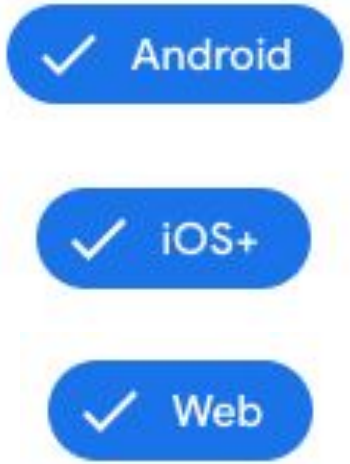
We recommend these events for games properties. Sending these events populates the games reports .

Event	Trigger when
earn_virtual_currency	a user earns virtual currency (coins, gems, tokens, etc.)
join_group	a user joins a group to measure the popularity of each group
level_end	a user completes a level in the game
level_start	a user starts a new level in the game
level_up	a user levels-up in the game
post_score	a user posts their score
select_content	a user selects content
spend_virtual_currency	a user spends virtual currency (coins, gems, tokens, etc.)
tutorial_begin	a user begins a tutorial
tutorial_complete	a user completes a tutorial
unlock_achievement	a user unlocks an achievement

Ecommerce

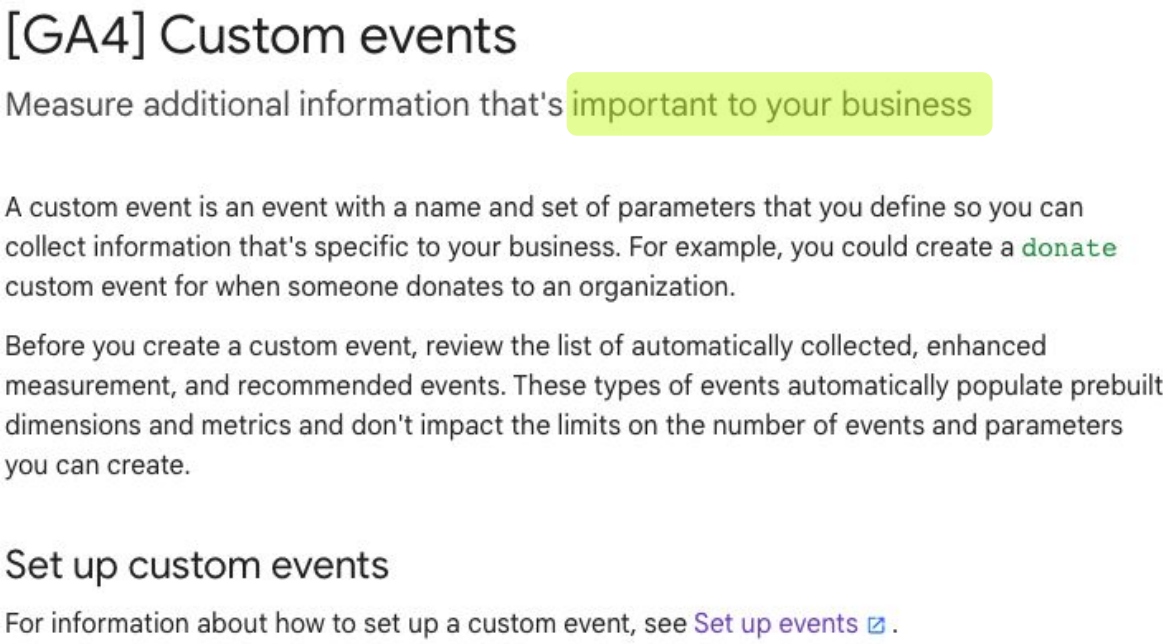
A typical ecommerce implementation measures any of the following actions:

- Select a product from a list
- View product details
- Add/remove a product from a shopping cart
- Initiate the checkout process
- Make purchases or refunds
- Apply promotions



Custom Events

[GA4] Custom events - Analytics Help



[GA4] Custom events

Measure additional information that's important to your business

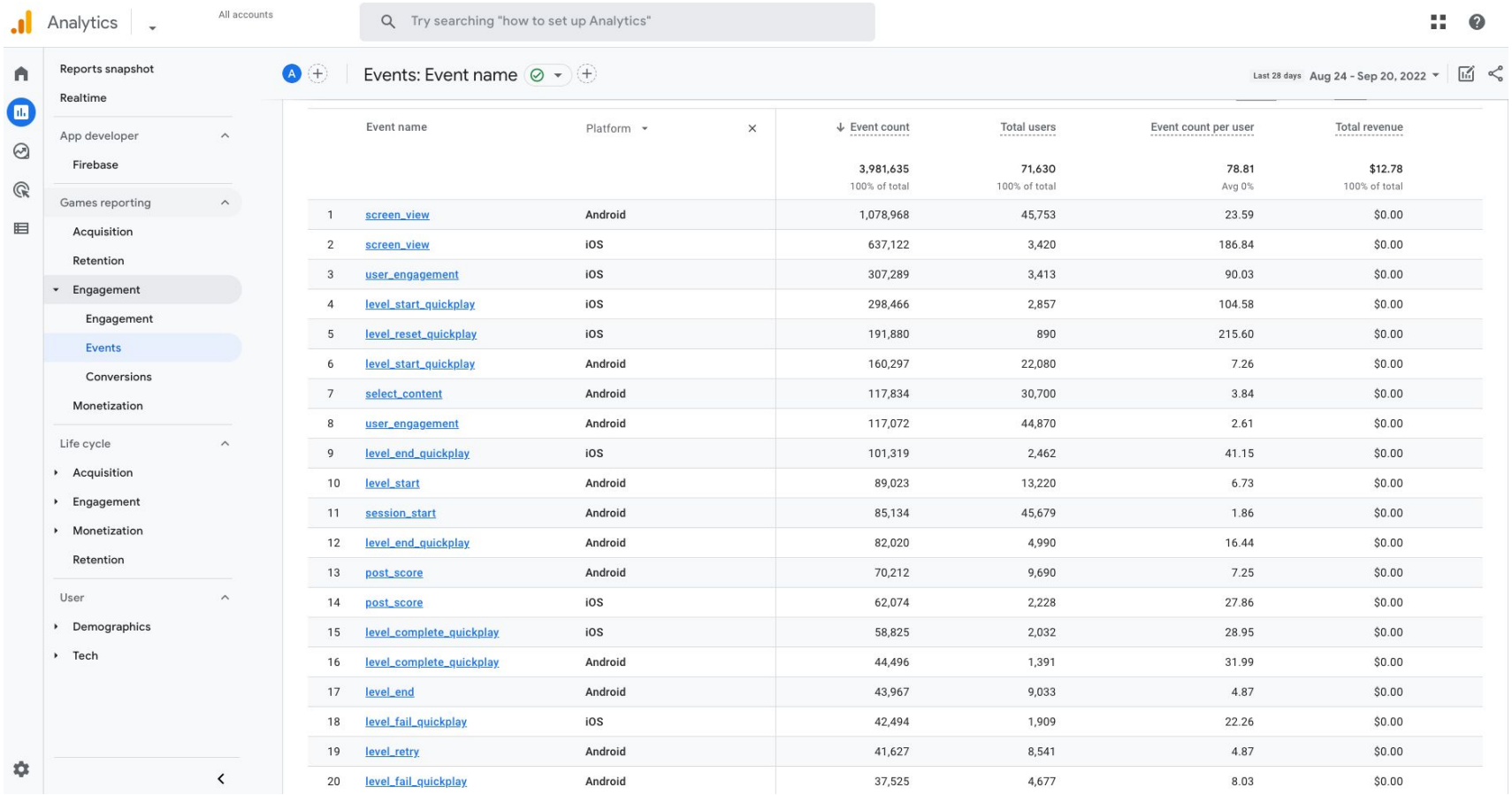
A custom event is an event with a name and set of parameters that you define so you can collect information that's specific to your business. For example, you could create a `donate` custom event for when someone donates to an organization.

Before you create a custom event, review the list of automatically collected, enhanced measurement, and recommended events. These types of events automatically populate prebuilt dimensions and metrics and don't impact the limits on the number of events and parameters you can create.

Set up custom events

For information about how to set up a custom event, see Set up events .

Event Reporting



	Event name	Platform	Event count	Total users	Event count per user	Total revenue
			3,981,635 100% of total	71,630 100% of total	78.81 Avg 0%	$12.78 100% of total
1	screen_view	Android	1,078,968	45,753	23.59	$0.00
2	screen_view	iOS	637,122	3,420	186.84	$0.00
3	user_engagement	iOS	307,289	3,413	90.03	$0.00
4	level_start_quickplay	iOS	298,466	2,857	104.58	$0.00
5	level_reset_quickplay	iOS	191,880	890	215.60	$0.00
6	level_start_quickplay	Android	160,297	22,080	7.26	$0.00
7	select_content	Android	117,834	30,700	3.84	$0.00
8	user_engagement	Android	117,072	44,870	2.61	$0.00
9	level_end_quickplay	iOS	101,319	2,462	41.15	$0.00
10	level_start	Android	89,023	13,220	6.73	$0.00
11	session_start	Android	85,134	45,679	1.86	$0.00
12	level_end_quickplay	Android	82,020	4,990	16.44	$0.00
13	post_score	Android	70,212	9,690	7.25	$0.00
14	post_score	iOS	62,074	2,228	27.86	$0.00
15	level_complete_quickplay	iOS	58,825	2,032	28.95	$0.00
16	level_complete_quickplay	Android	44,496	1,391	31.99	$0.00
17	level_end	Android	43,967	9,033	4.87	$0.00
18	level_fail_quickplay	iOS	42,494	1,909	22.26	$0.00
19	level_retry	Android	41,627	8,541	4.87	$0.00
20	level_fail_quickplay	Android	37,525	4,677	8.03	$0.00

EVERYONE'S GETTING AN EVENT

Enrich Events - Custom Definitions

[GA4] Custom Google Analytics dimensions and metrics

[GA4] Custom dimensions and metrics

Create new dimensions and metrics from event parameters

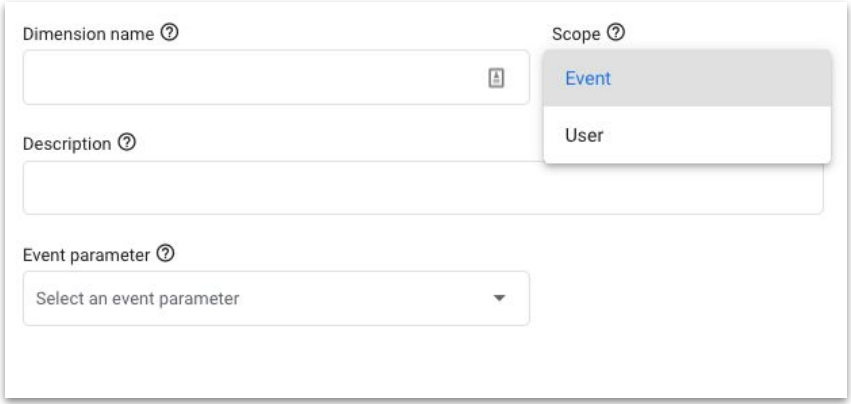
If you haven't customized your data collection code, you probably do not need to read this article or use custom dimensions and metrics.

Google Analytics automatically provides many dimensions and metrics. However, if you have customized your data collection code to collect non-standard event parameters, you'll need to create custom dimensions and/or custom metrics in order to make use of these event parameters. For example, let's say that you collect the author name, the article title, and the number of pages in the article each time a visitor to your website reads an article.

```
gtag('event','read_article', {
    "author":"Bill Q",
    "title":"How to Build a Backpack",
    "number_of_pages":2,
});
```

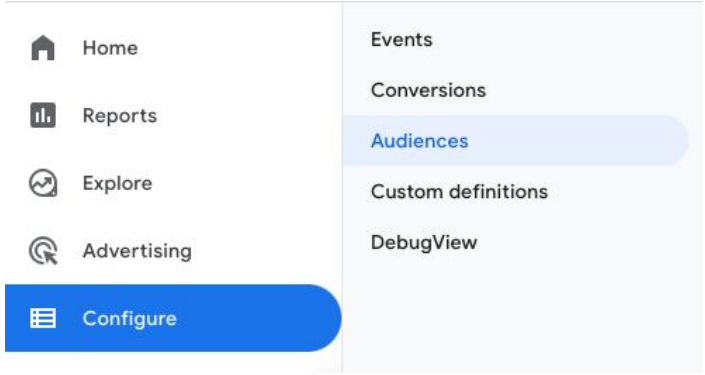
You can create an Author dimension that gets its values from the `author` parameter and an Article_Length metric that gets its value from the `number_of_pages` parameter.

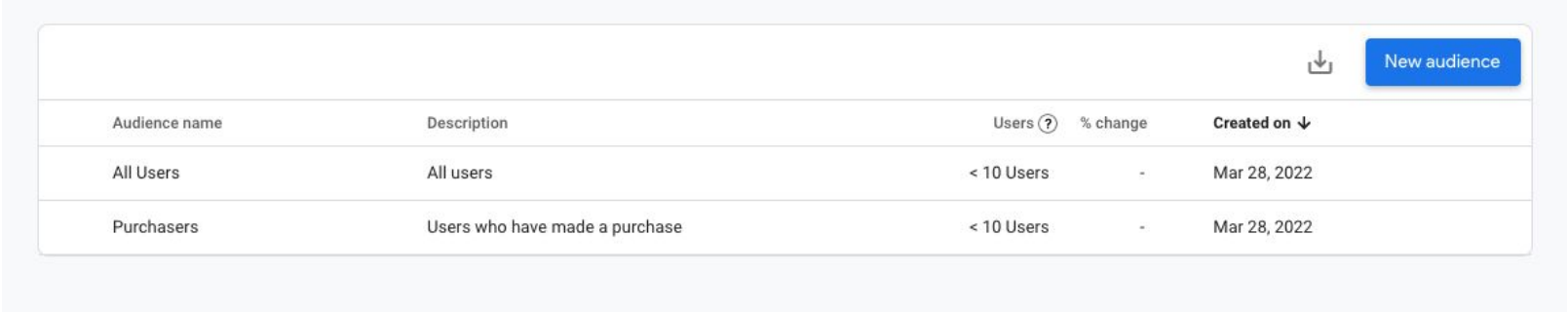
You don't need to set up custom dimensions and metrics for data collected through automatically collected events, enhanced measurement, and recommended events.



Audience Segmentation

Audience Segmentation



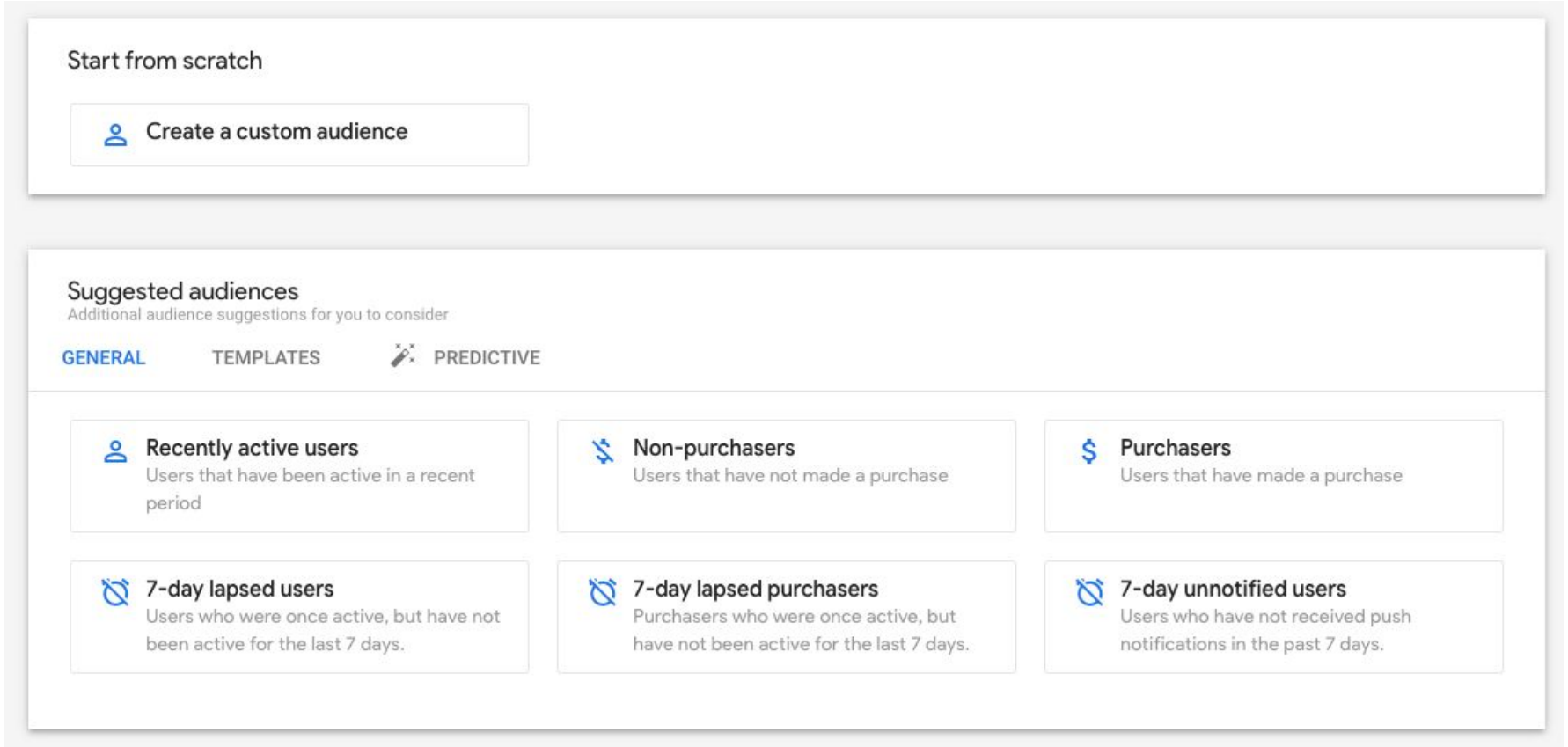


Audience name	Description	Users	% change	Created on
All Users	All users	< 10 Users	-	Mar 28, 2022
Purchasers	Users who have made a purchase	< 10 Users	-	Mar 28, 2022

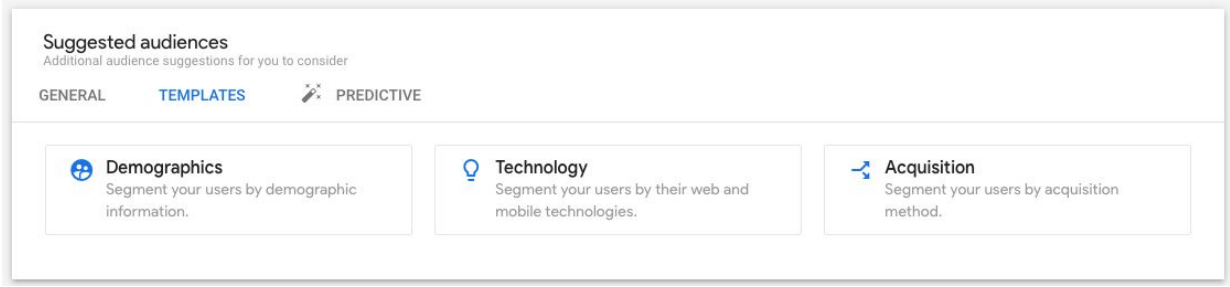
Audience Segmentation - Demo Account

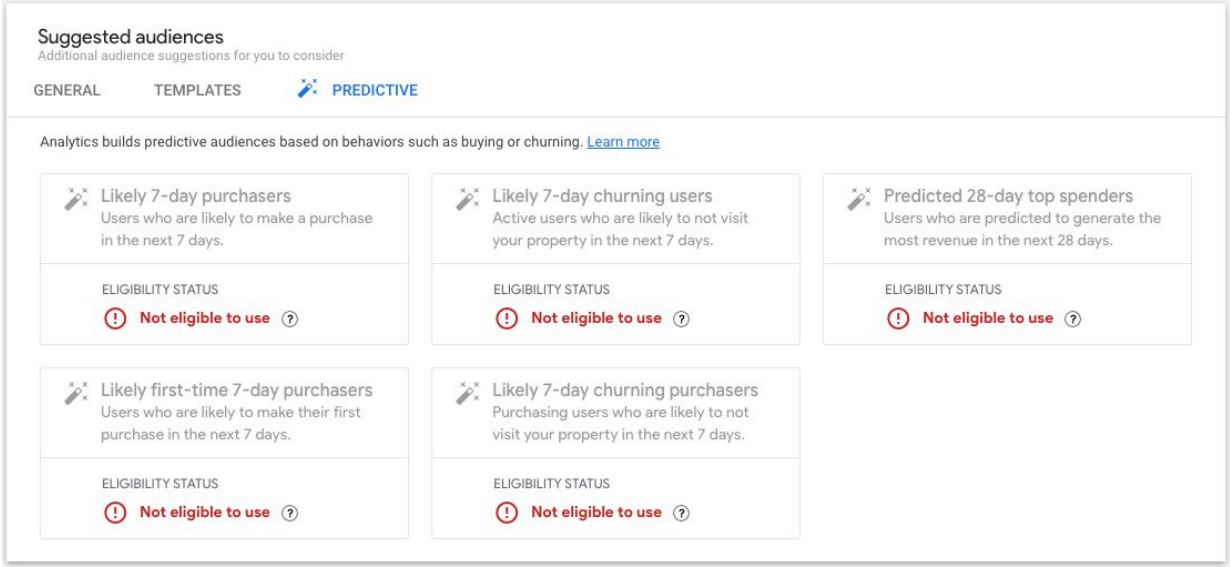
Audience name	Description	Users	% change	Created on
Crashing Users	Users who experience a fatal exception	651	↓ 6.7%	Nov 2, 2016
Level Beaters_v2	Users who have completed at least one progressive level	13,082	↑ 0.8%	May 14, 2016
Expert Users	Users who have beaten all progressive levels	249	↓ 8.5%	May 14, 2016
Intermediate Users	Users who have completed the first 10 progressive levels	1,116	↓ 5.3%	May 14, 2016
Level Beaters_v1	Users who have completed at least one progressive level	12,444	↑ 0.8%	May 14, 2016
Extra Steps Users	Users who have used extra steps	5,546	↓ 0.2%	May 14, 2016
All Users	All users	50,524	↓ 3.1%	May 11, 2016
Purchasers	Users who have made a purchase	31	↓ 8.8%	May 11, 2016

Audience Builder

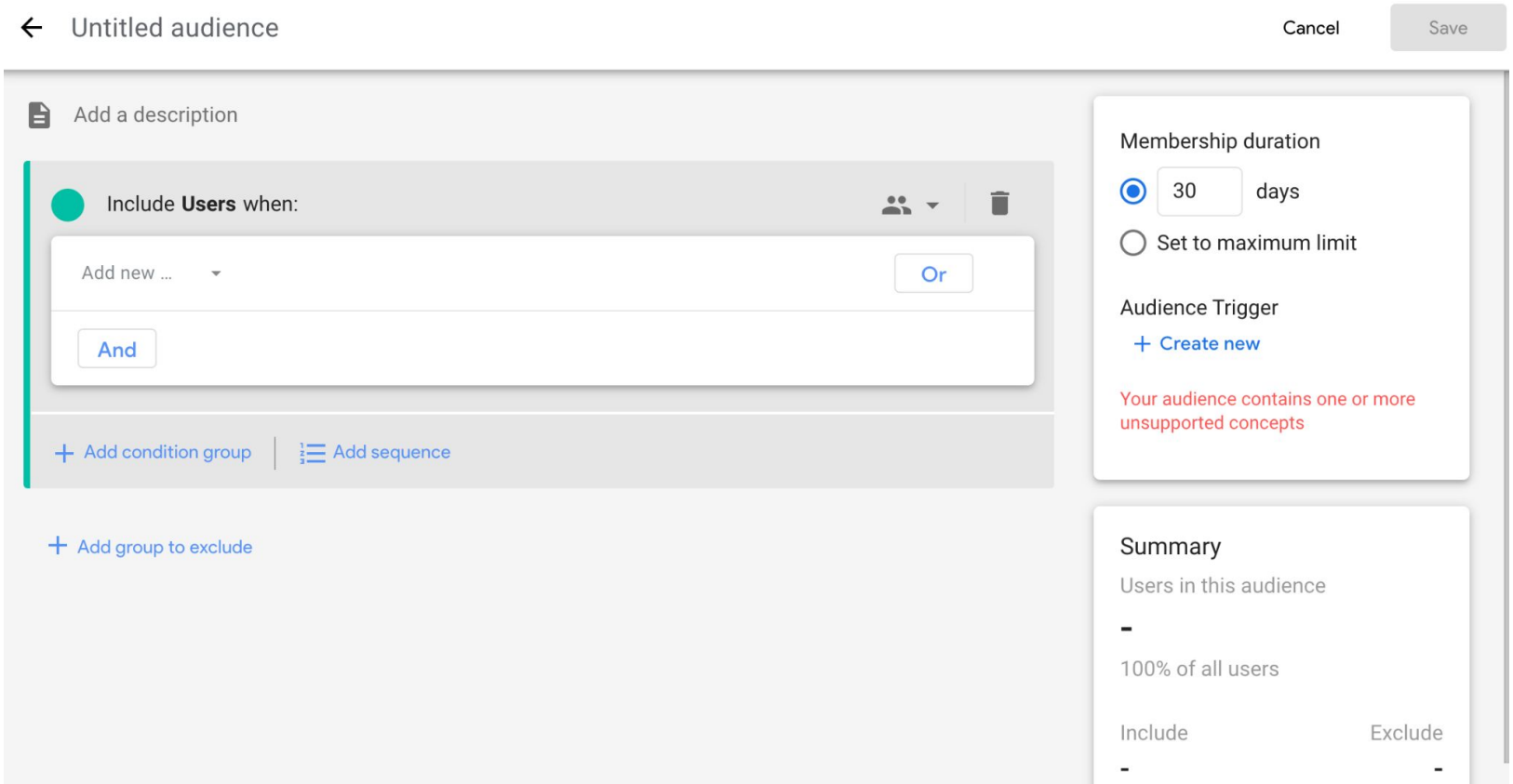


Audience Builder

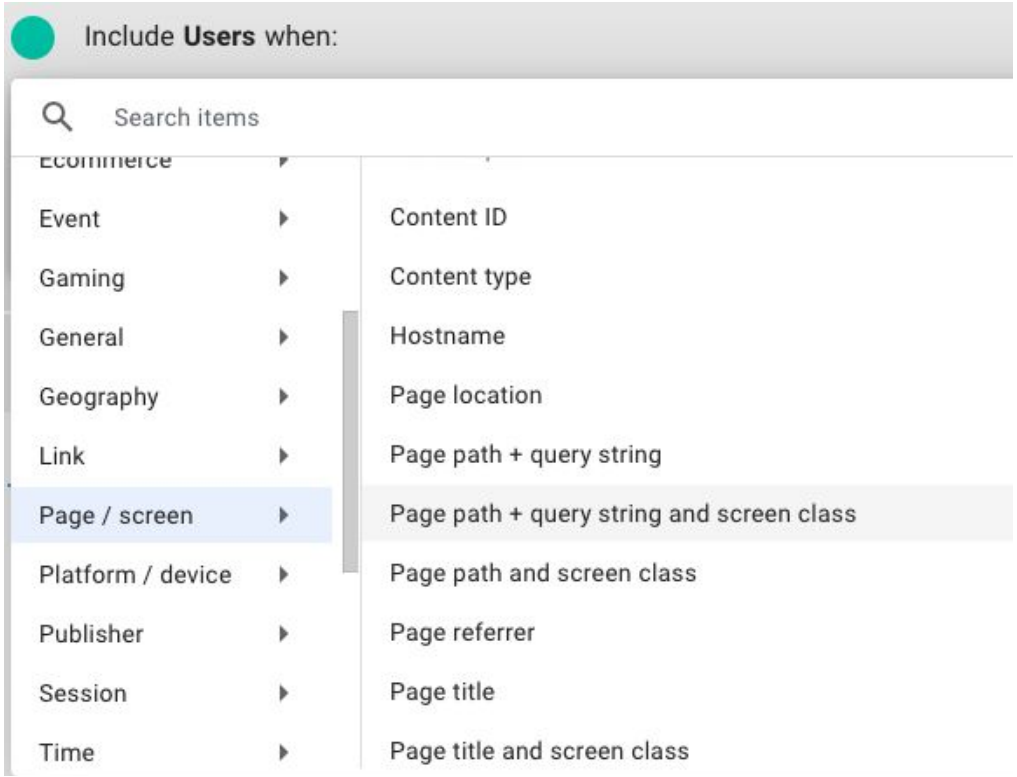


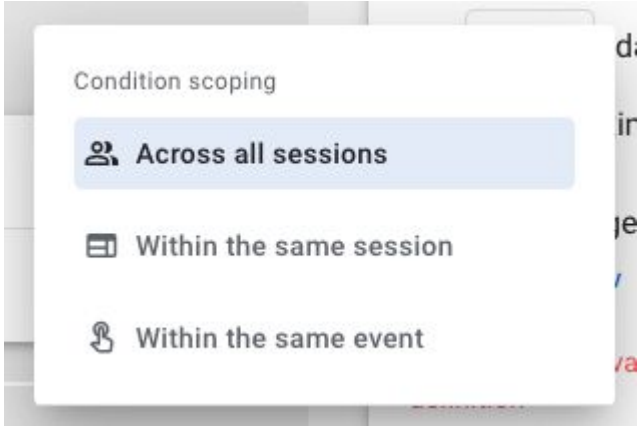


Audience Builder - Live Demo



“Old School” Audiences - URL Based



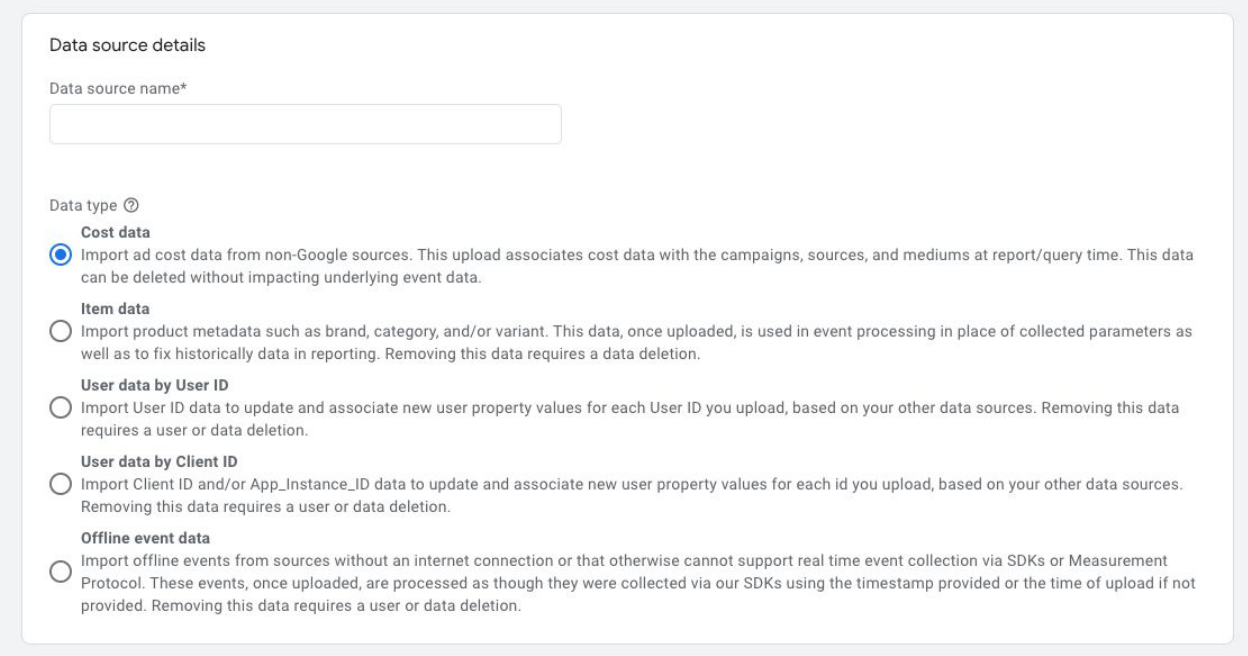


Data Import

Data Import

[GA4] About Data Import

Admin > Data Import



Offline Event Data

[GA4] Import offline events - Analytics Help

Notes:

- Upload Custom or Recommended Events
- Uses provided Timestamp OR time of upload
- CSV must be formatted correctly - use template
- Required Fields
  - Client Id or App Instance Id
  - Tag or Firebase Id
  - Event_name
  - Imported Field
    - Timestamp
    - User_id (optional)
    - Event parameters (Custom Definitions)

Offline Event Data

Template

Here is an example CSV template for event data. If you need to create your upload files by hand, use this example as a guide.

measurement_id	client_id	user_id	timestamp_micros	event_name
G-12345ABCDE	1234567890.0987654321	1000001	1609488000000000	page_view
G-12345ABCDE	1234567890.0987654321	1000001	1609488060000000	page_view
G-12345ABCDE	1234567890.0987654321	1000001	1609488120000000	video_play
G-67890ABCDE	2345678901.9876543210	1000002	1609574400000000	page_view
G-67890ABCDE	2345678901.9876543210	1000002	1609574460000000	page_view
G-67890ABCDE	2345678901.9876543210	1000002	1609574520000000	page_view
G-67890ABCDE	121212.3434	1000003	1609574520000000	page_view
G-67890ABCDE	121212.3434	1000003	1609660801000000	view_item_list
G-67890ABCDE	121212.3434	1000003	1609660860000000	select_item
G-67890ABCDE	121212.3434	1000003	1609660870000000	page_view
G-67890ABCDE	121212.3434	1000003	1609660930000000	view_item
G-67890ABCDE	121212.3434	1000003	1609660950000000	add_to_cart
G-67890ABCDE	121212.3434	1000003	1609660970000000	begin_checkout
G-67890ABCDE	121212.3434	1000003	1609660975000000	page_view
G-67890ABCDE	121212.3434	1000003	1609660980000000	purchase

Offline Event Limits

Limits

Events, parameters, and user properties that use reserved names will be rejected.

Item-event parameters (e.g., item_list_name) without values will be rejected. Item-event parameters are supported for recommended subset of events (e.g., Ecommerce, Jobs, Travel).

Event and parameter names need to observe the following rules:

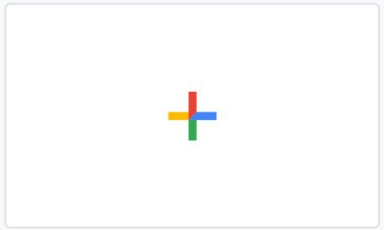
- Events can have a maximum of 25 parameters.
- Events can have a maximum of 25 user properties.
- User property names must be 24 characters or fewer.
- User property values must be 36 characters or fewer.
- Event names must be 40 characters or fewer, may only contain alpha-numeric characters and underscores, and must start with an alphabetic character.
- Parameter names (including item parameters) must be 40 characters or fewer, may only contain alpha-numeric characters and underscores, and must start with an alphabetic character.
- Parameter values (including item parameter values) must be 100 character or fewer.

Custom Reports

In Conjunction with Data Studio

Custom Reports - *Explore* - Live Demo

Techniques



Blank

Create a new exploration

Free form

What insights can you uncover with custom charts and tables?

Funnel exploration

What user journeys can you analyze, segment, and breakdown with multi-step funnels?

Path exploration

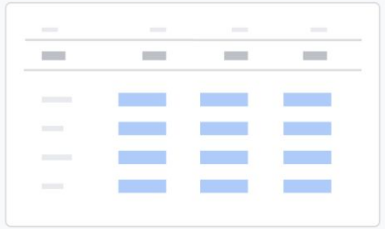
What user journeys can you uncover with tree graphs?

Segment overlap

What do intersections of your segments of users tell you about their behavior?

Cohort exploration

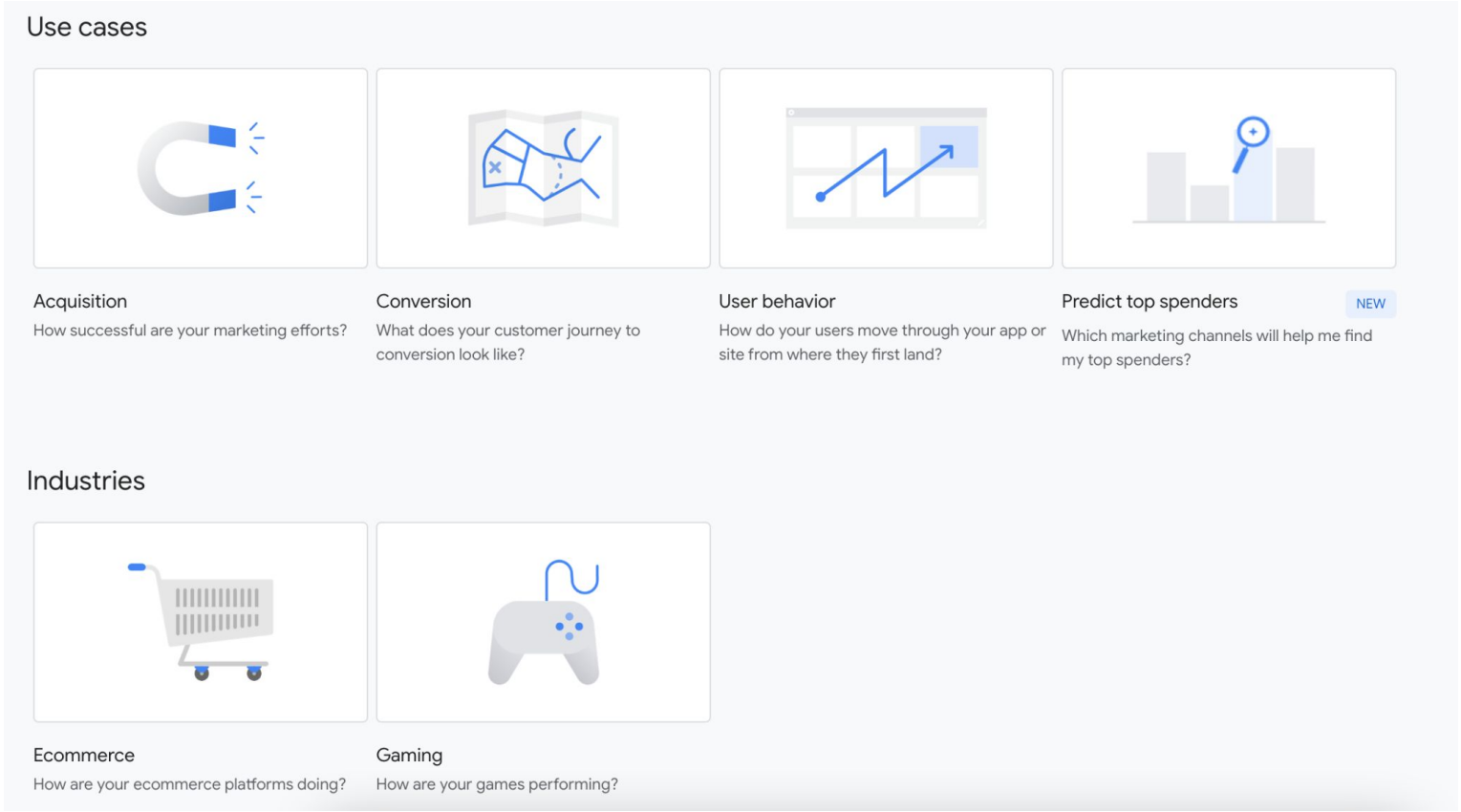
What insights can you get from your user cohorts behavior over time?



User lifetime

What can you learn by analyzing the entire lifetime of your users?

Custom Reports - *Explore* - Live Demo



Explore
PivotTable

Q&A

End

Our services

- Migration to GA4 & events | For attribution
- Setup audiences | For sales
- Real-time dashboards | For insight

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Book a timeslot