Drupal Camp Asheville 2026: **Google Analytics Reporting – It's Easier Than You Think!**

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BUILDING SMARTER WEBSITES

Overview

- Intro
- Google Analytics 4 Overview
- Google Analytics 4 Reporting
- Google analytics 4 Explorations
- Google Data Studio
- Conclusion

Intro

Stephen Pashby

- DesignHammer Director of Consulting
- Over fifteen years of experience in Google Analytics
- Oversee analytics implementations for most clients

Who are you?

- Role?
- Freelance, Agency, or In-house?
- How would you rate your comfort or experience with Google Analytics (1-5)?
- Have you ever said, “I know the data is in there, but…” when thinking about Google Analytics?

What we will cover:

- Google Analytics 4 Overview
- Google Analytics 4 Reporting
- Google analytics 4 Explorations
- Google Data Studio

Caveats & Disclaimers

- Not a developer, so I might make some mistakes with regex
- This is an overview focused on helping you orient between Google Analytics 4 reporting, Explorations, and Data Studio, not a deep dive into each one
- Won't cover Google Analytics Event creation in detail, though I'm happy to chat about those later
- Not going to touch on Google Ads, Looker, or Search Console in any depth

Google Analytics Overview

Google Analytics Overview

- Free web analytics service offered by Google
- Implemented through adding provided JavaScript to website pages
- Commonly added via module, tag manager, or directly to site theme code
- Last major update (Google Analytics 4) released in 2020
- Google Analytics is currently used by 82.1% of websites whose traffic analytics tool could be identified (w3techs)

Google Analytics 4

- Initially released in October 2020
- An entirely new model for tracking and analysis over Universal Analytics (GA3)
  - GA4 focused on “engagement” over page views and bounce rate
  - New model is incompatible with Universal Analytics (or earlier models)
  - No direct method for historic comparison of Google Analytics 4 data with Universal Analytics
  - Universal Analytics fully retired in 2023

GA4 Concepts: Users

Users are people who interact with a website or app.

GA4 uses 4 different identity methods to identify Users:

- User ID (assigned by GA4 or passed to GA4)
- Google Signals (data from signed in Google Accounts)
- Device ID (assigned by GA4)
- Modeling (using ML to fill in gaps due to denied tracking consent)

GA4 supports interpreting these signals different ways:

- Blended: Uses User ID, Google Signals, Device ID, and then modeling.
- Observed: Uses User ID, Google Signals, and Device ID. It ignores modeling.
- Device-based: Only uses the Device ID.

GA4 Concepts: Sessions

A Session is a single instances of a user interacting with a website.

GA4 bounds how it tracks a session using the following:

- Start: A session starts the when a user views a page or opens the app. GA4 fires a session_start event to mark this.
- Time: A session ends after 30 minutes* of inactivity, indicated by the user stopping clicking, scrolling, or viewing pages.
- Return: If a user returns to a site/app within 10 minutes, it is considered the same session.

Note: GA4 does not end a session at midnight or if a user arrives from a new marketing campaign.

* This can be adjusted on a per data stream basis.

GA4 Concepts: Events

Events measure specific interactions or occurrences on a website or app.

GA4 provides for 4 categories of events:

- Automatically collected events (E.g. page_view, session_start)
- Enhanced measurement events (E.g. view_search_results, file_download)
- Recommended events (E.g. login, sign_up)
- Custom events

Events require an Event Name (e.g. page_view) and may have Parameters attached to the event (E.g. item_name).

GA4 Concepts: Dimensions vs Metrics

- A dimension is an attribute of your data. It describes your data and it's usually text as opposed to numbers. Frequently dimensions are caused by Events and may be the corresponding Event Name (e.g. Views, Engaged Sessions, etc.).
- A metric is a quantitative measurement, such as an average, ratio, or percentage (i.e. always a number).
- Reports typically combine some number of dimensions and metrics.

GA4 Concepts: Engaged Sessions

GA4 reporting incorporates the concept of Engaged Sessions, which are sessions where one of the following occurs:

- Lasts longer than 10 seconds*
- Has a key event
- Has 2 or more screen or page views

Engagement related metrics: Engaged sessions, Engaged sessions per active user, Engagement rate, Low engagement sessions, Average engagement time, Average engagement time per session, User engagement, Lifetime engaged sessions, Lifetime engagement duration

* This can be adjusted on a per data stream basis.

Google Analytics 4 Reporting

Reports and Collections

Google Analytics 4 data is presented in **Reports** which are presented in **Collections**.

The **Business Objectives** that are configured when you set up a GA4 Property will configure the Property with a set of Collections.

You can add, remove, or edit Collections and Reports via the Library.

Default Reports

Google Analytics 4 provides 14 Predefined reports:

- Life cycle
  - User Acquisition
  - Traffic Acquisition
- Engagement
  - Events
  - Pages and screens
  - Landing page
- User attributes
  - Demographic details
  - Audiences
- Monetization
  - Ecommerce purchases
  - Purchase journey
  - Promotions
  - Checkout journey
  - Retention
- Advertising
  - Planning: All channels
- Tech
  - Tech details

Default Collections

- Life cycle Collection (Acquisition, Engagement, Monetization, Retention)
- User Collection (User Attributes, Tech)
- Business Objective Collections:
  - Drive online sales (Drive sales overview, Ecommerce purchases, Promotions, Purchase journey, Checkout journey, Transactions)
  - Generate leads (Generate leads overview, Audiences, User acquisition, Traffic acquisition: Session primary, Landing page, Lead acquisition, User acquisition cohorts, Lead disqualification and loss)
  - Understand web and/or app traffic (Understand web and/or app traffic overview, Demographic details, Pages and screens: Page path and screen class)
  - View user engagement & retention (View user engagement & retention overview, Events, Pages and screens: Page path and screen class)

Customizing Reports

Can edit via the Library:

- Add/remove dimensions
- Add/remove metrics
- Change audiences
- Change charts
- Add/update summary cards

Let’s customize a report!

Are these good enough?

- Do you (or the person who needs to access the reports) want to work in Google Analytics 4?
- Do they measure what you want to measure?
- If not, are they close and can they get there via customization?
- Can you drill down to the level of detail you need?

Google Analytics 4 Explorations

What Are Explorations?

Explorations are customizable reports that allow you to explore different combinations of dimensions and metrics.

Great for customized reports in GA4 or ad hoc questions.

Types of Explorations

Explorations offer several different formats:

- Free Form Exploration
- Funnel Exploration
- Path Exploration
- Segment Overlap
- User Explorer
- Cohort Exploration
- User Lifetime
- Acquisition
- Key Events

Let’s build an exploration!

Explorations Caveats and Limitations

- Limitations on what reports can display (User Explorer)
- Limited by dimension/metric combinations
- Limited date ranges (based on data retention and due to limits in raw data availability)
- Limited number of reports per user and per property (200 individual explorations per user per property and up to 500 shared explorations per property)
- Limited number of events per query (10M events per query)
- No modeling data in explorations

Google Data Studio

What is Google Data Studio

Google Data Studio (recently Google Looker Studio) is a free, web-based data visualization tool.

Supports data visualization of:

- Google Analytics 4
- Google Sheets
- Google Ads
- BigQuery
- Google Search Console
- Non-Google data sources

Google Data Studio, Data Studio Pro, & Looker

Google Data Studio was recently re-re-branded and currently provides 2 levels (expect more AI and differentiation in the future):

- Google Data Studio
  - No cost
  - Sharable reports
- Data Studio Pro
  - Email dashboards
  - More enterprise integrations with Google Workspace

What about Looker?

- Enterprise level analytics
- Enterprise cost

Data Sources

Google Data Studio needs to be configured for one or more data sources (that your Google Account has access to). Examples:

- Google Analytics
- Google Ads
- Looker
- Google Sheets
- CSV File Upload
- Microsoft Excel
- Search Console

Many more available from Partner Connector library!

Charts

Google Data Studio provides nearly 50 charts:

- Table (3 layouts)
- Scorecard (3 layouts)
- Time series (3 layouts)
- Bar (6 layouts)
- Histogram (1 layout)
- Pie (2 layouts)
- Google Maps (6 layouts)
- Geo chart (1 layout)
- Line (6 layouts)
- Area (3 layouts)
- Scatter (2 layouts)
- Pivot table (3 layouts)
- Bullet (1 layout)
- Treemap (1 layout)
- Sankey (1 layout
- Gauge (2 layouts)
- Waterfall (1 layout)
- Timeline (1 layout)
- Funnel (3 layouts)

Filters

Google Data Studio provides both Filter Properties and Filter Controls:

Filter Properties

- Include/Exclude, Metric/Dimension, and Conditional/Regex
- Can be applied to groups of charts, controls, or both

Filter Controls

- Control types include Drop-down list, Input box, Slider, and Checkbox
- Predefined filters include Date range control, Data control, and Dimension control

Calculated Fields

Google Data Studio supports configuring calculated fields which allow you to perform actions on your source data.

- Can be used for Dimensions (concatenation, etc.) and Metrics (sum, etc.)
- Available on a Data Source or Chart level
- Data Source Calculated Fields are available to all Editors on a Report
- Chart Level Calculated Fields are limited to the Chart they are configured on

Let’s build a dashboard!

Google Data Studio: Pros and Cons

Pros

- Free
- Flexible
- Can be styled to be shared with non-technical users

Cons

- Some limitations on how metrics and dimensions can be charted (not always documented)
- Email reporting requires Data Studio Pro

Conclusion

Conclusion

- Google Analytics 4 reporting out of the box might do what you need
- If not, you can customize, but you might need to use Explorations or Google Data Studio to achieve what you want
- Explorations are best for ad hoc questions and quick research
- Google Data Studio is best for frequently asked questions or sharing with non-technical users

Questions?

Thank you DCA 2026!