

The Future of Google Analytics



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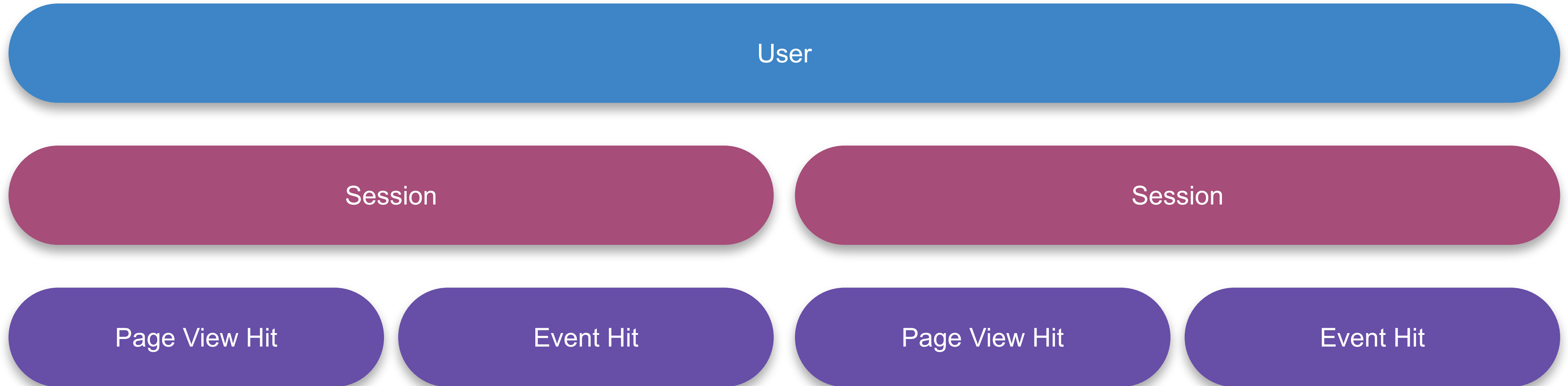
66 Days left till Universal Analytics Sunset date (July 1st)

The graphic shows a vertical timeline with a blue bar. At the top is a Wi-Fi icon. Below it, the text 'ics' and 'al' is partially visible. The main text reads 'Universal Analytics Sunset'. A blue dot is connected to this text by a vertical dotted line. Below this is a yellow circle containing a bar chart icon, with the year '2023' written below it. A red dot is connected to this circle by a vertical dotted line. At the bottom, the text reads 'Chrome to deprecate 3P Cookie'.

What Changed?

The Data Model

Universal Analytics



The Data Model

Google Analytics 4

User

session_start Event

first_vist event

page_view Event

scroll Event

session_start Event

page_view Event

scroll Event

click event

Event Structure

Universal Analytics

Category

Action

Label

Value

Google Analytics 4

Event Name

Parameter

Parameter

Parameter

Parameter

Parameter

Parameter

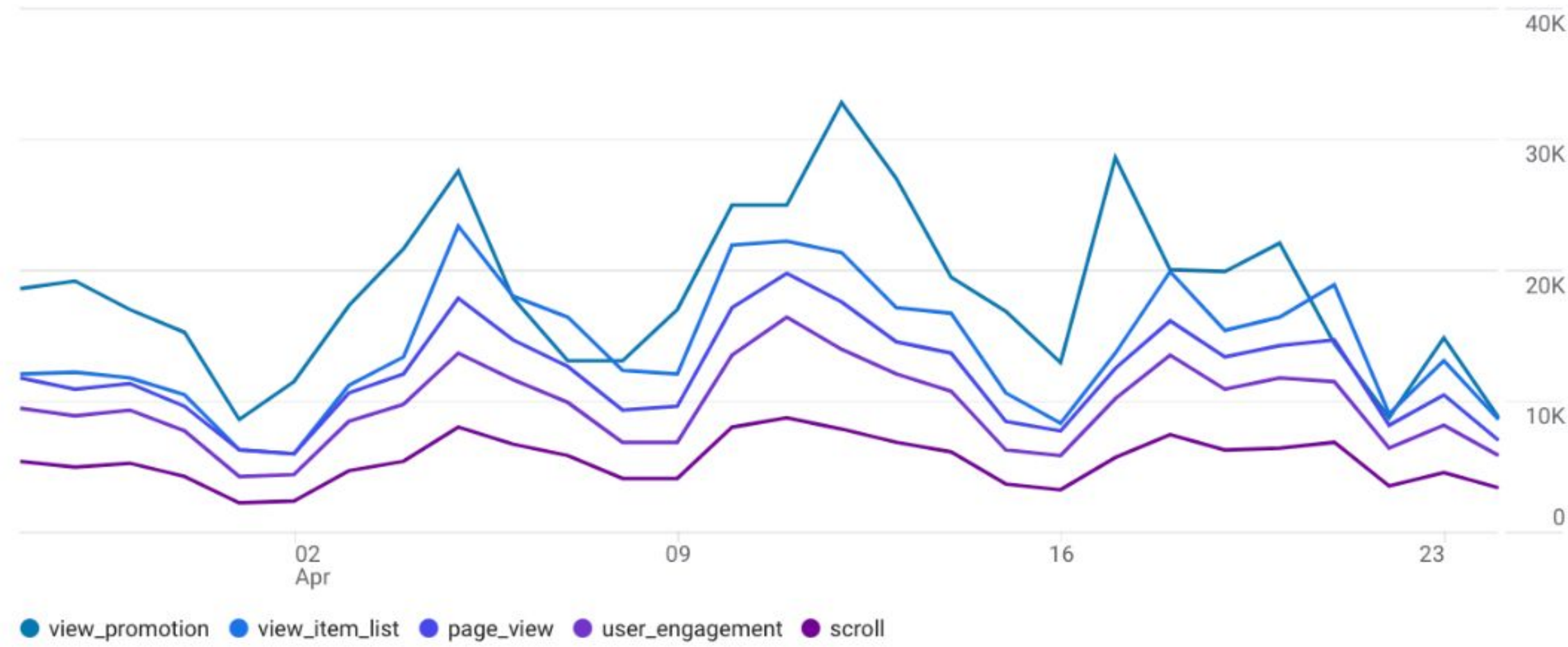
Parameter

Parameter

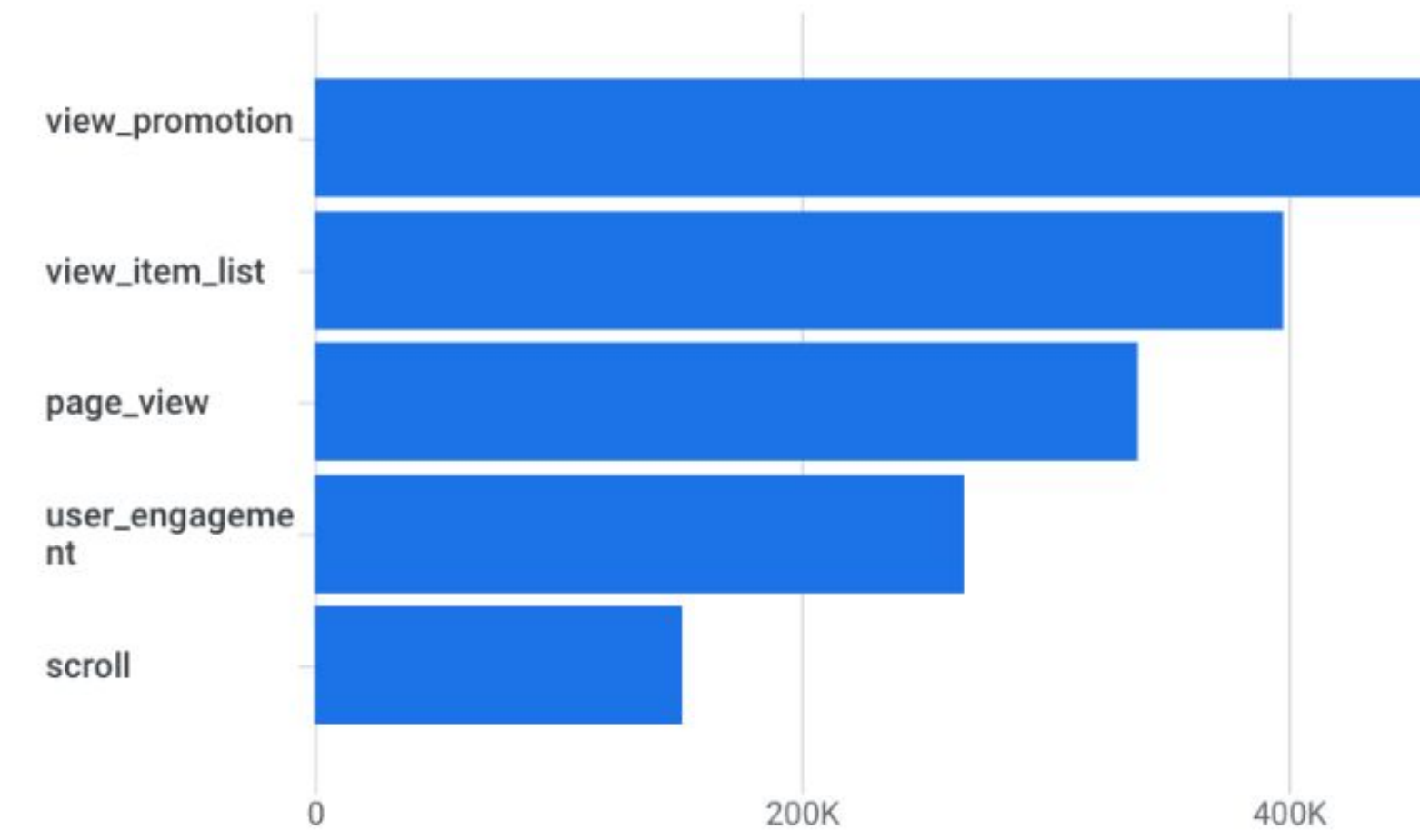
Parameter

UI Demo

Event count by Event name over time



Event count by Event name



Search...

Rows per page: 10 Go to: 1

Event name	Event count	Total users	Event count per user	Total revenue
	2,072,842 100% of total	73,346 100% of total	30.50 Avg 0%	\$110,236 100% of total
1 view_promotion	512,590	25,827	19.96	\$0
2 view_item_list	397,734	48,003	8.30	\$0
3 page_view	337,767	67,315	5.03	\$0
4 user_engagement	266,727	42,214	6.36	\$0
5 scroll	150,679	40,642	3.72	\$0
6 session_start	90,854	64,525	1.42	\$0
7 view_item	74,937	23,745	3.16	\$0
8 first_visit	59,442	58,420	1.02	\$0
9 new_recent_active_user	38,681	38,494	1.01	\$0
10 predicted_top_spenders	30,201	20,411	18.52	\$0

UI Demo

page_location

CUSTOM PARAMETER	EVENT COUNT	TOTAL USERS
(total) 3 items	509K	25K
https://shop.g...isestore.com/	480K	25K
https://shop.g...om/store.html	29K	1K
https://shop....a+Share+Promo	1K	121

payment_type

CUSTOM PARAMETER	EVENT COUNT	TOTAL USERS
(total) 2 items	513K	26K
(not set)	504K	25K
-	8.7K	652

shipping_tier

CUSTOM PARAMET...	EVENT COUNT	TOTAL USERS
(total) 2 items	513K	26K
(not set)	504K	25K
-	8.7K	652

promotion_name

CUSTOM PARAMETER	EVENT COUNT	TOTAL USERS
(total) 2 items	513K	26K
(not set)	504K	25K
-	8.7K	652

transaction_id

CUSTOM PARAMETER	EVENT COUNT	TOTAL USERS
(total) 2 items	513K	26K
(not set)	504K	25K
-	8.7K	652

page_url

CUSTOM PARAMET...	EVENT COUNT	TOTAL USERS
(total) 2 items	513K	26K
(not set)	504K	25K
-	8.7K	652

page_referrer

CUSTOM PARAMETER	EVENT COUNT	TOTAL USERS
(total) 40 items	464K	23K
-	218K	11K
https://www.google.com/	103K	7.9K

search_term

CUSTOM PARAMETER	EVENT COUNT	TOTAL USERS
(total) 2 items	513K	26K
(not set)	504K	25K
-	8.7K	652

Session content

CUSTOM PARAMET...	EVENT COUNT	TOTAL USERS
(total) 2 items	512K	26K
(not set)	503K	25K
-	8.7K	651

Machine Learning in GA4

Analytics Intelligence

- Automated insights
 - Analytics Intelligence detects unusual changes or emerging trends in your data and notifies the user automatically
- Custom insights:
 - Customized conditions that detect important changes in data. When the conditions are triggered, the Insights are seen on the dashboard, and optionally through an email alert.

Predictive Metrics

Metrics to predict User Behaviour

- Purchase Probability
- Churn Probability
- Revenue Prediction

Anomaly Detection

A statistical technique that Analytics Intelligence uses to identify anomalies in:

- Time-series data for a given metric
- Anomalies within a segment at the same point of time.

Measuring Core Web Vitals with GA4

What are Core Web Vitals

- Set of performance metrics that focus on measuring the user experience of a webpage.
- Developed by Google
- Essential for gauging the quality of a website and can impact search engine rankings.
- The three main Core Web Vitals are **CLS**, **LCP**, **FID**

Webvitals Github Repo



```
1 <script>
2   (function () {
3     var script = document.createElement('script');
4     script.src = 'https://unpkg.com/web-vitals@3/dist/web-vitals.iife.js';
5     script.onload = function () {
6       // When loading `web-vitals` using a classic script, all the public
7       // methods can be found on the `webVitals` global namespace.
8       webVitals.onCLS(console.log);
9       webVitals.onFID(console.log);
10      webVitals.onLCP(console.log);
11    };
12    document.head.appendChild(script);
13  })();
14 </script>
```

Cumulative Layout Shift (CLS)

- Quantifies the unexpected layout shifts that occur during the loading of a webpage
- This metric is essential because sudden shifts in layout can be frustrating and disorienting for users, leading to a negative user experience
- A good CLS score should be ***under 100***

CLS Value

Position Before and After Layout Shift

DOM element

```
{
  "name": "CLS",
  "value": 0.00006801418004778174,
  "rating": "good",
  "delta": 0.00006801418004778174,
  "entries": [
    {
      "name": "",
      "entryType": "layout-shift",
      "startTime": 869.3000000119209,
      "duration": 0,
      "value": 0.000027471093209543062,
      "hadRecentInput": false,
      "lastInputTime": 0,
      "sources": [
        {
          "previousRect": {
            "x": 787,
            "y": 53,
            "width": 165,
            "height": 130,
            "top": 53,
            "right": 952,
            "bottom": 183,
            "left": 787
          },
          "currentRect": {
            "x": 787,
            "y": 45,
            "width": 165,
            "height": 130,
            "top": 45,
            "right": 952,
            "bottom": 175,
            "left": 787
          }
        }
      ]
    }
  ]
},
  "node": "div.avatar-container"
},
  "id": "v3-1682441481724-1467150890912",
  "navigationType": "navigate"
}
```

Largest Contentful Paint (LCP)

- Measures the time it takes for the largest visible content element on the screen to be ***fully loaded and displayed***
- This metric is ***crucial*** because it gives an indication of the perceived loading speed of a webpage from a ***user's perspective***
- A good LCP score should be under ***2.5 seconds***

LCP Value



DOM element



Element URL*



```
{
  "name": "LCP",
  "value": 786.8000000119209,
  "rating": "good",
  "delta": 786.8000000119209,
  "entries": [
    {
      "element": "div.big-img.intro-header",
      "name": "",
      "entryType": "largest-contentful-paint",
      "startTime": 786.8000000119209,
      "duration": 0,
      "size": 343782,
      "renderTime": 786.8,
      "loadTime": 762.6,
      "firstAnimatedFrameTime": 0,
      "id": "",
      "url": "https://hmbaytam.github.io/assets/img/ds1.jpeg"
    }
  ],
  "id": "v3-1682441481723-7459175307382",
  "navigationType": "navigate"
}
```

First Input Delay (FID)

- Measures the time between a user's first interaction with a page and the browser's response to that interaction.
- This metric is ***reflects the responsiveness of a webpage*** and can significantly impact the user experience
- A good FID score should be under ***100 milliseconds***

FID Value



FID Type



```
{
  "name": "FID",
  "value": 3,
  "rating": "good",
  "delta": 3,
  "entries": [
    {
      "name": "keydown",
      "entryType": "first-input",
      "startTime": 5606.5999999940395,
      "duration": 8,
      "processingStart": 5609.5999999940395,
      "processingEnd": 5612.5999999940395,
      "cancelable": true
    }
  ],
  "id": "v3-1682441040871-5513642901515",
  "navigationType": "navigate"
}
```

Connecting the site to GA4

GTM Module

Download & Extend

[Drupal Core](#) [Distributions](#) [Modules](#) [Themes](#) [General projects](#)

GoogleTagManager

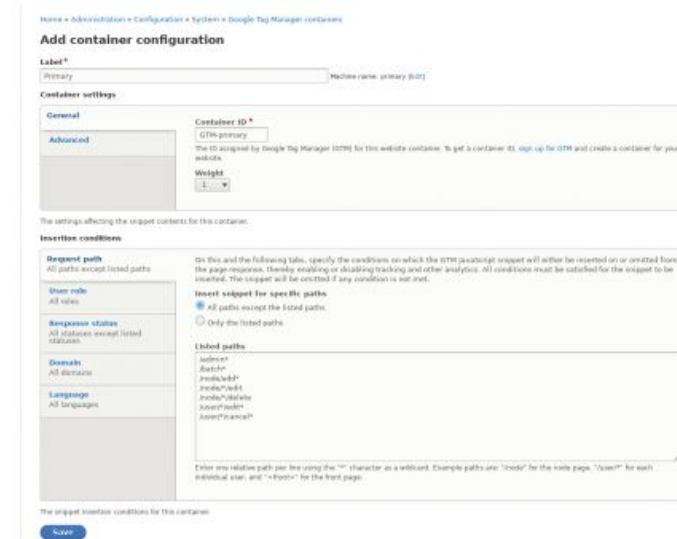
[View](#) [Version control](#) [Automated testing](#)



Google Tag

This module is becoming the **Google Tag** module. The 2.0.x branch supports [Google Tag](#) and [Google Tag Manager](#).

Currently the 2.0.x branch does not have a migration path from the 8.x-1.x branch for Google Tag Manager, but will by the release candidate phase.



This project integrates the site with the [Google Tag Manager](#) (GTM) application. GTM allows you to deploy analytics and measurement tag configurations from a web-based user interface (hosted by Google) instead of requiring administrative access to your website.

To use the module, sign up for GTM and obtain a "container ID" for your website. For development purposes, create a GTM environment for your website.

CRITICAL NOTES for releases 8.x-1.3+

If the site enables other modules that implement condition plugins (e.g. ctools, rules, webform), then it will most likely be necessary to apply the core patch from issue '3114467' (link intentionally omitted).

If Drush commands are run as a user other than the web user, then do NOT enable the **recreate snippets on cache rebuild** module setting unless the web user has permission to delete files created by the Drush user. This setting will be disabled by default beginning with release 8.x-1.6.

Drupal Module



Analyzing the Data



Core Web Vitals are the subset of Web Vitals that apply to all web pages, should be measured by all site owners, and will be surfaced across all Google tools. The metrics that make up Core Web Vitals will evolve over time. The current set focuses on three aspects of the user experience—loading, interactivity, and visual stability—and includes the following metrics (and their respective thresholds):

- **Largest Contentful Paint (LCP):** measures loading performance. To provide a good user experience, LCP should occur within 2.5 seconds of when the page first starts loading.
- **First Input Delay (FID):** measures interactivity. To provide a good user experience, pages should have a FID of less than 100 milliseconds.
- **Cumulative Layout Shift (CLS):** measures visual stability. To provide a good user experience, pages should maintain a CLS of less than 0.1.



Page Title	lcp	cls	fid
Homepage	4,047	159	76
Sign up	2,779	82	274
Blog Post 3	2,389	257	216
Blog Post 2	2,373	256	178
Blog Post 1	2,363	255	195

THANK YOU, QUESTIONS?



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<https://www.linkedin.com/in/hmbaytam>

PLEASE PROVIDE YOUR FEEDBACK!

mid.camp/6935

***Edit This* Content Slide with Large Text - You can duplicate this slide.**

Slide with large text. This will work up for up to four or five Lines or roughly 30 words, which can be a lot of words

Slide with title. Delete this title if you don't need it

- You can use this bulleted list. You can make the text bigger or smaller if you need to.**
- Chicago Native and shirtless motorcycle enthusiast Roland "Rollie" Free set the American motorcycle land speed record on the Bonneville Salt Flats in 1948 driving over 150 mph.**

Edit This Slide with Photo (<1/3 split).

**Slide with image/large text.
Copy can be long if it needs to
be.**



**Slide with
image/large text.
Copy can be long if it
needs to be.**



Edit This Thank you slide - purple.



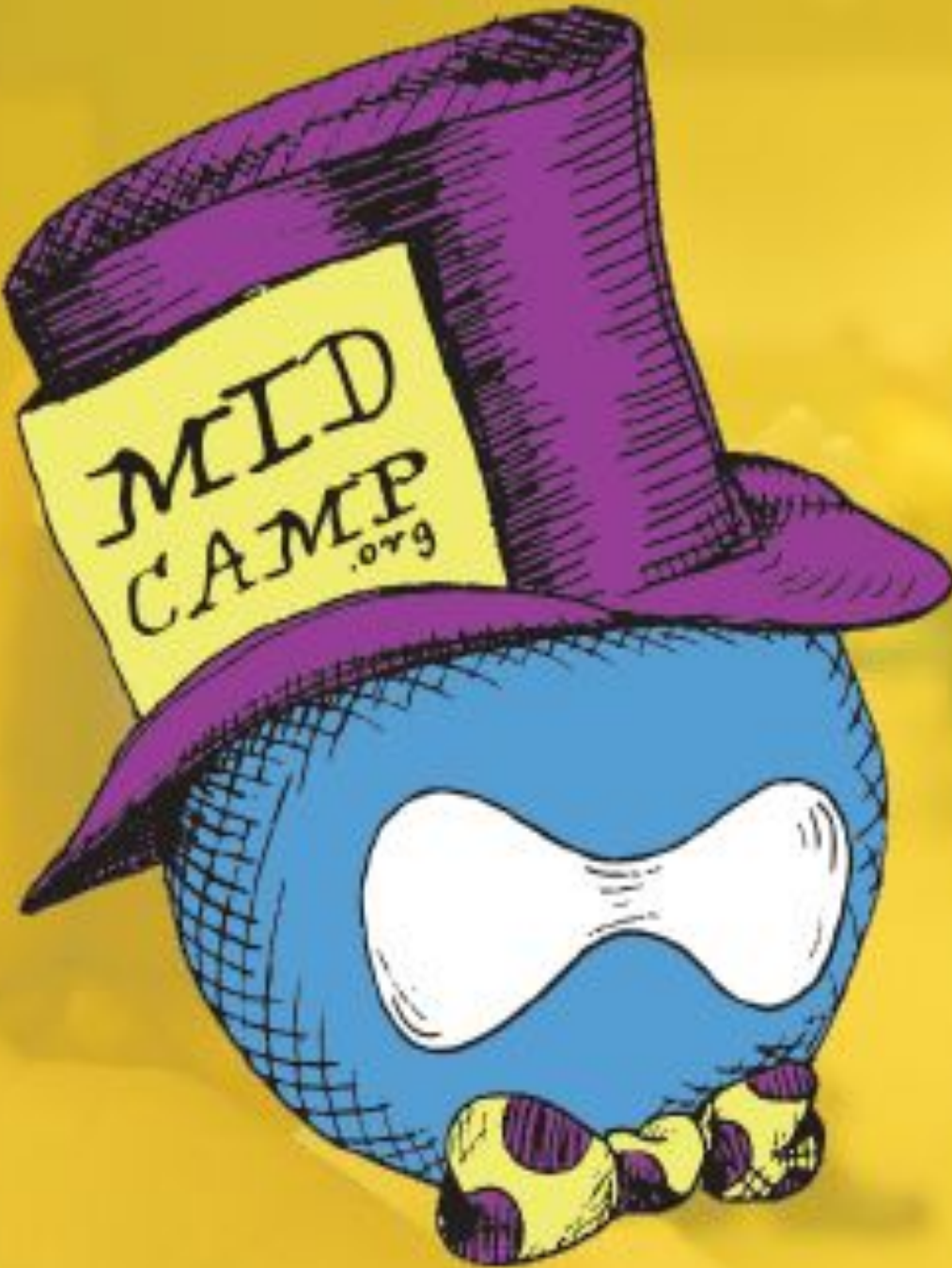
CONTRIBUTION DAY

Friday 10am to 4pm

You don't have to know code to give back!

New Contributor training 10am to Noon
with **AmyJune Hineline** of [Opensource.com](https://opensource.com)

TITLE SLIDE FOR MIDCAMP up to three lines



Full Name
Title
at Company Name
@social

***Edit This* Section Title Slide -
Yellow. You can duplicate this slide.**

HAVE I GONE MAD?

THANK YOU, QUESTIONS?

Each session node will have a feedback form on it, so <insert url here> is just the url to your session. We have a built-in url shortener if you want to use that: when you edit your session node and see the node ID, then mid.camp/nid is your url

PLEASE PROVIDE YOUR FEEDBACK!

mid.camp/your_node_id

***Edit This* Slide with background slide. Replace this image.**

Slide with large text. This will work up for up to four or five Lines or roughly 30 words, which can be a lot of words.



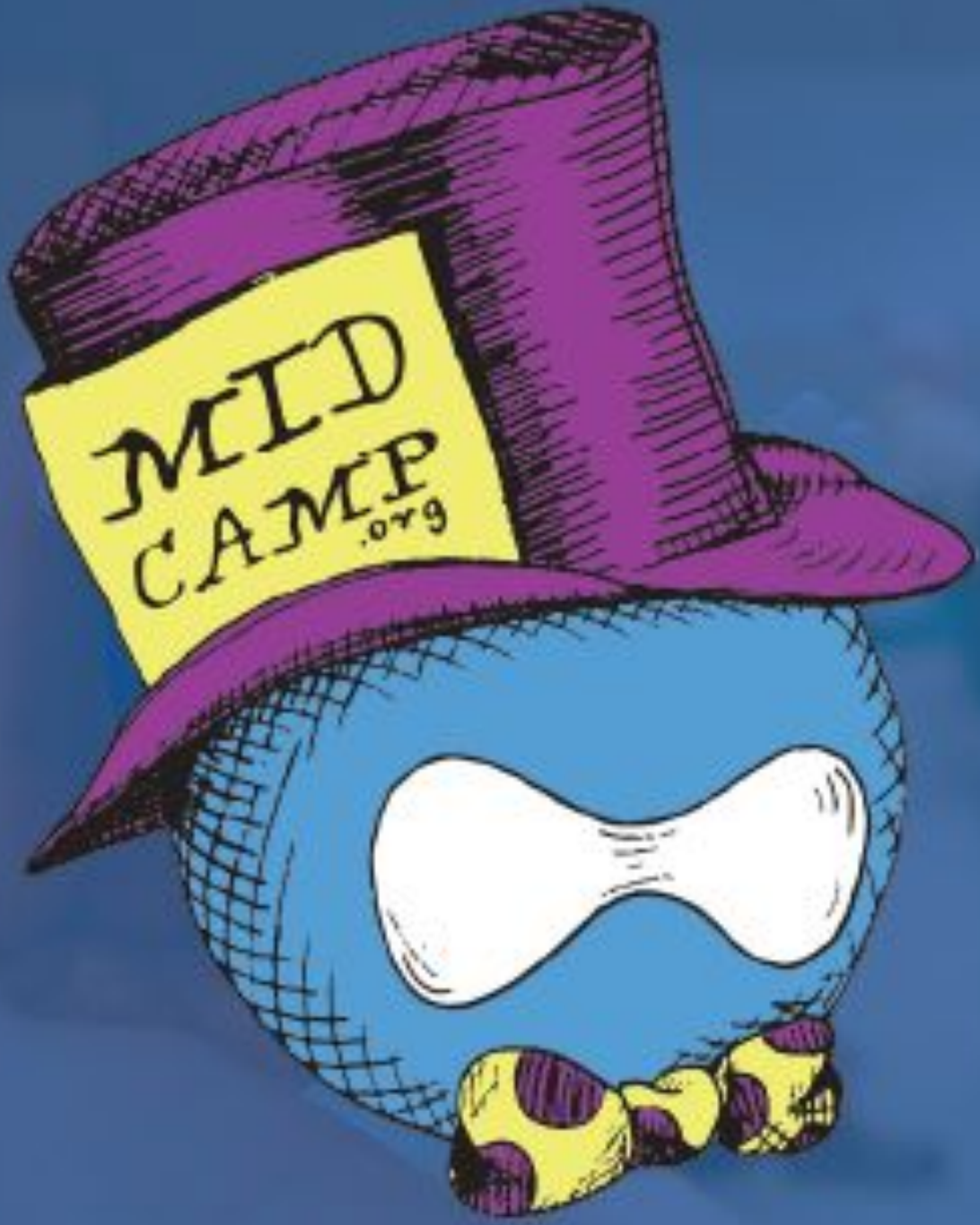
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***Edit This* Section Title Slide - Blue.**
You can duplicate this slide.

**SECTION TITLE. THIS CAN
BE AS LONG OR SHORT AS
IT NEEDS TO BE.**

THANK YOU, QUESTIONS?

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mid.camp/your_node_id

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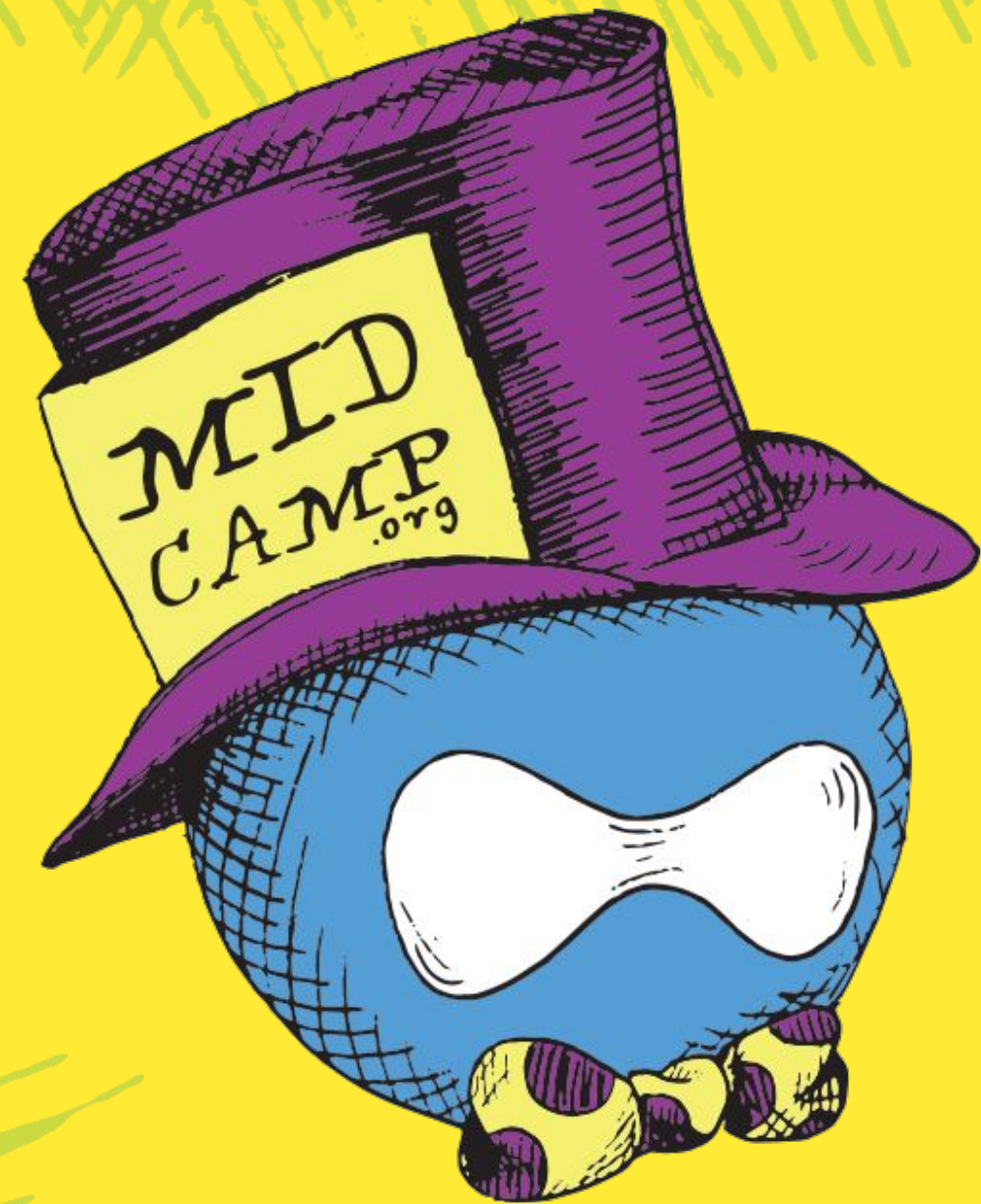


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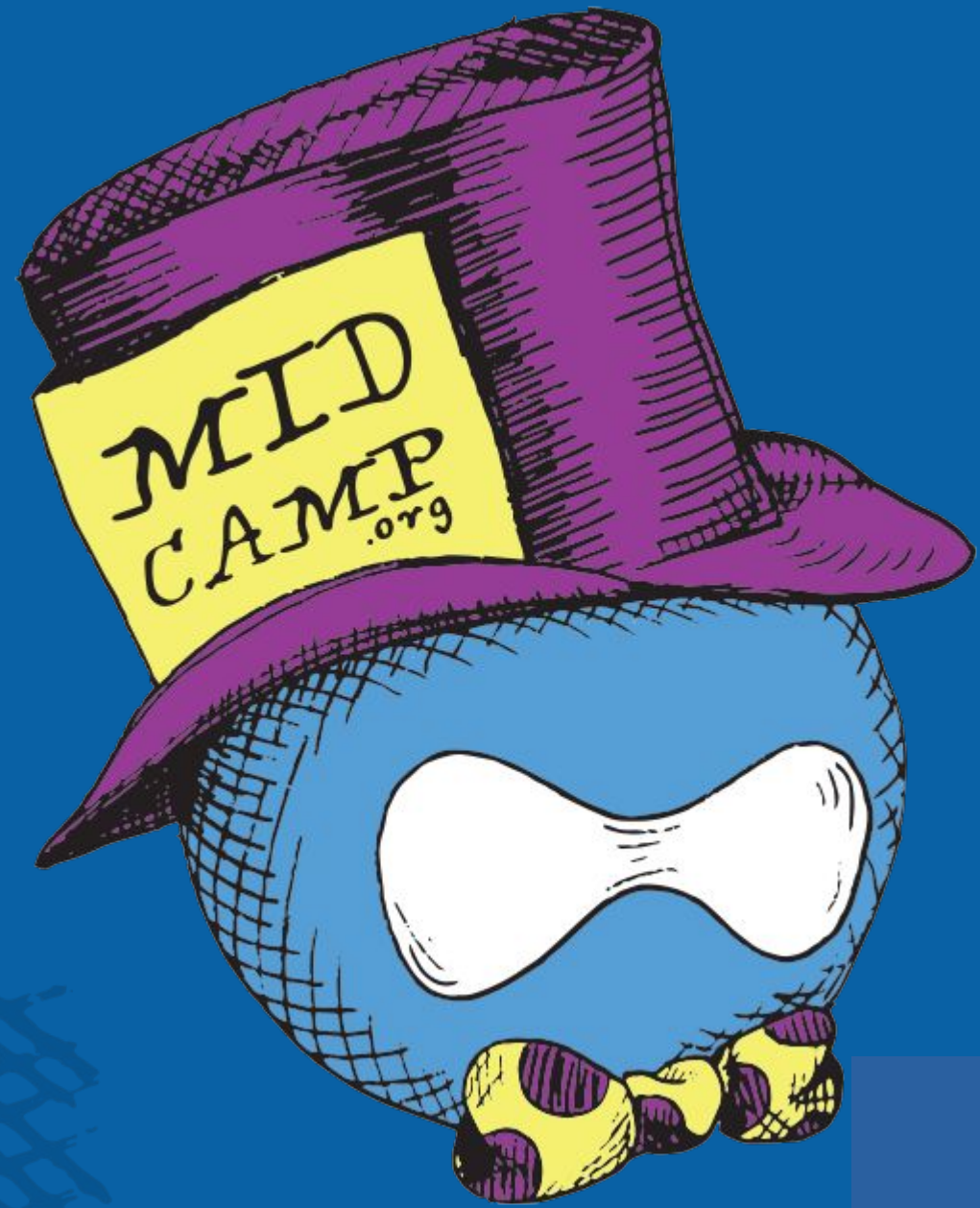
Drupal Coffee Exchange at MidCamp

Bring a bag of beans,
Leave with a bag of beans.



That's how it works.

MidCamp is in Chicago April 26–28



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