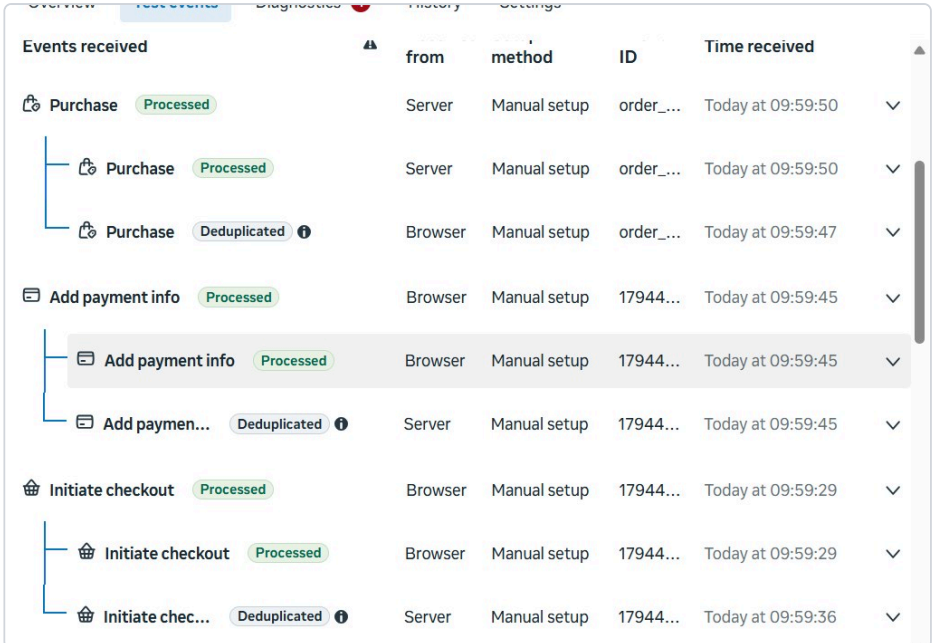
Tushar Jankhyan

Ad Tracking & Server-Side Measurement | Shopify, GA4, Meta CAPI, Google Ads

- **Server-side GTM** — GA4, Google Ads, Meta CAPI and Klaviyo all sent from one server container on a first-party domain.
- **Shopify custom pixel** — Full e-commerce funnel, one stable transaction ID across every platform, purchases backed by order webhooks.
- **Consent Mode v2** — Everything denied by default, then updated from Shopify Customer Privacy. Personal data only sent with marketing consent.
- **Privacy-safe matching** — Hashed user data and event_id go to Meta CAPI and Enhanced Conversions; personal data is stripped before GA4.
- **Debugging** — Found and fixed split visitor IDs, broken consent field mapping and personal data leaking into GA4.
- **Ads** — I also set up and run Meta and Google campaigns, so I know what the ad platforms need from tracking.

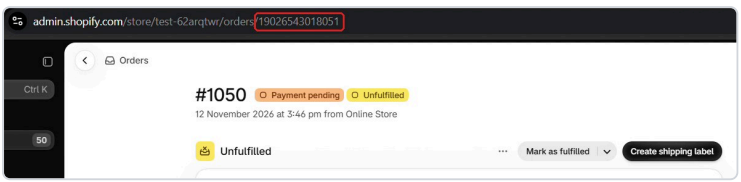
Every screenshot in this document is from my own live setup. A 60-second demo video of the same order is available on request.



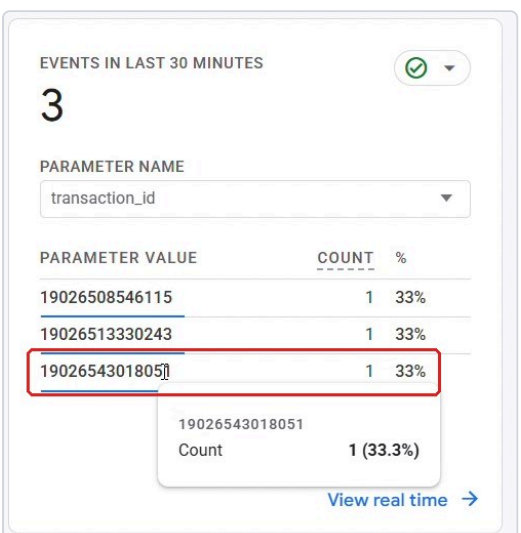
Result in Meta Events Manager. Purchase, Add payment info and Initiate checkout each arrive from the browser and from the server, and Meta marks the second copy **Deduplicated**.

Proof: one order, one ID, three systems

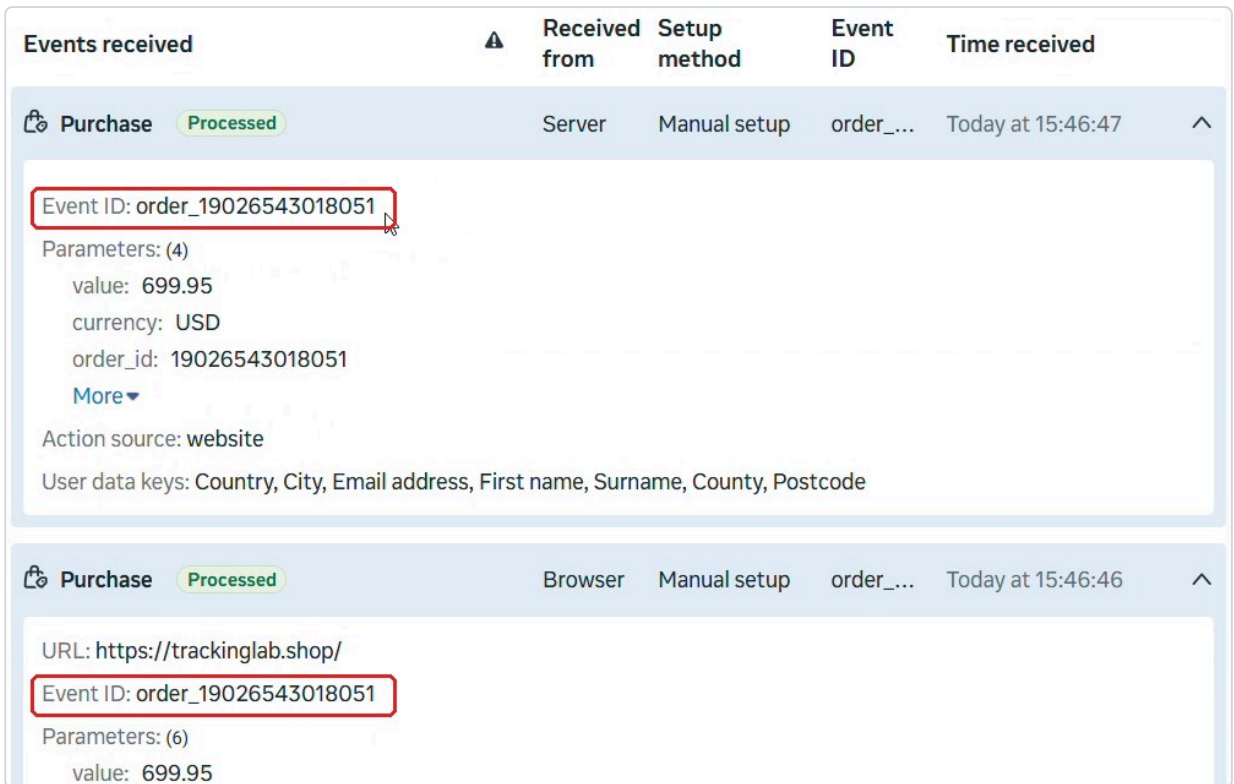
Test order #1050 on my Shopify development store. The purchase is sent by the browser pixel and by a Shopify order webhook straight to the server, both keyed on the Shopify order ID.



1 **Shopify.** The order ID in the admin URL.



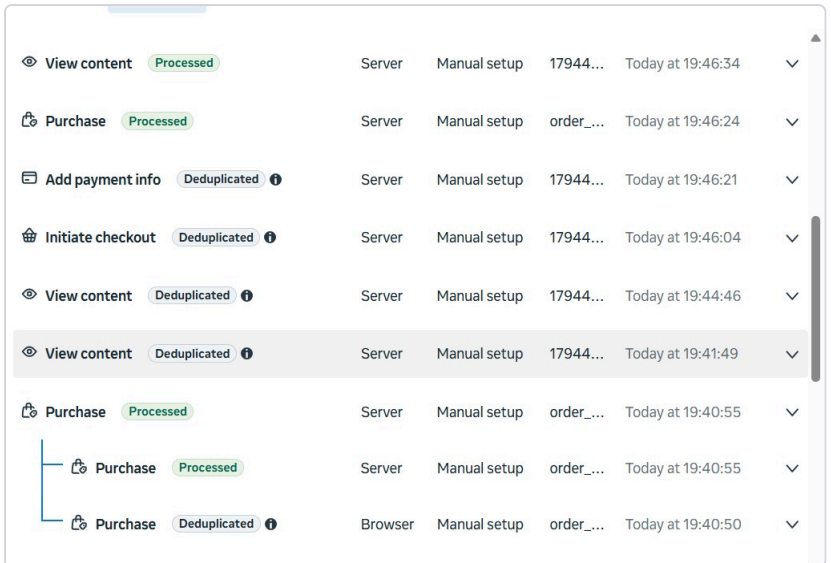
2 **GA4 Realtime.** The same ID arrives as transaction_id on the webhook purchase.



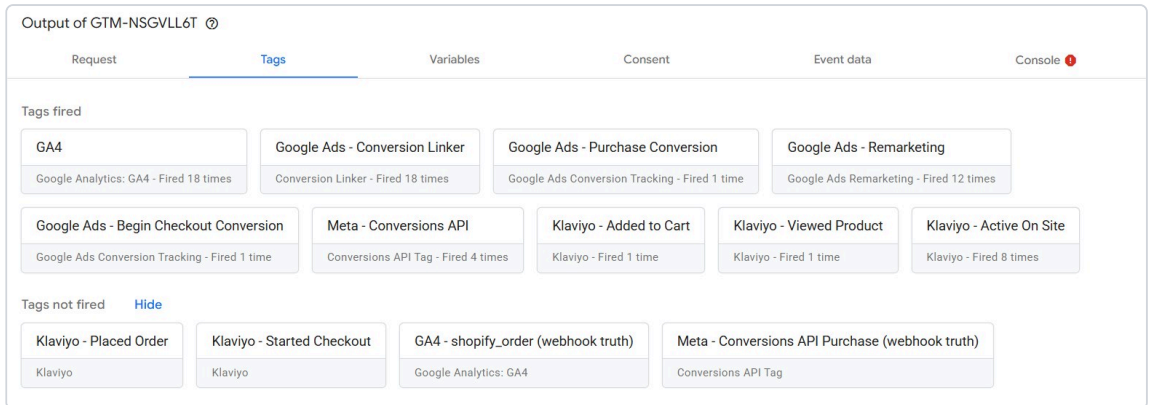
3 **Meta Events Manager.** The Server and Browser Purchase events carry the same Event ID, order_ plus the Shopify order ID, so Meta counts the purchase once.

Full funnel: browser and server on every step

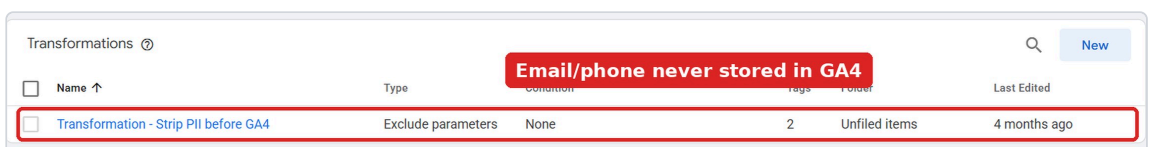
Each storefront and checkout event is sent twice with one shared event ID. The server copy still arrives when the browser pixel is blocked.



Meta test events. View content, Initiate checkout, Add payment info and Purchase, each deduplicated against its browser copy.



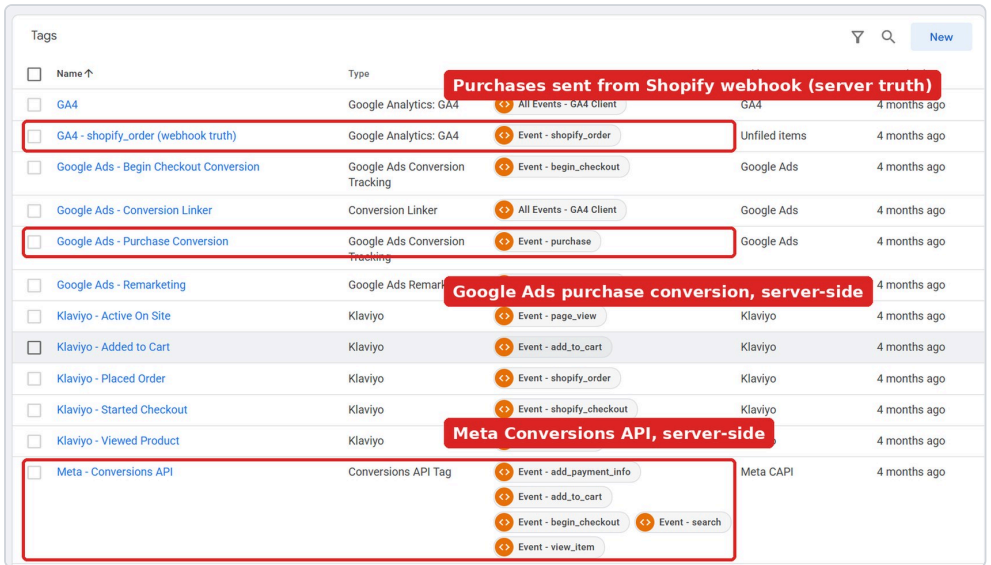
Server container preview. One incoming event stream fans out to GA4, Google Ads (conversion linker, purchase, begin checkout, remarketing), Meta Conversions API and Klaviyo.



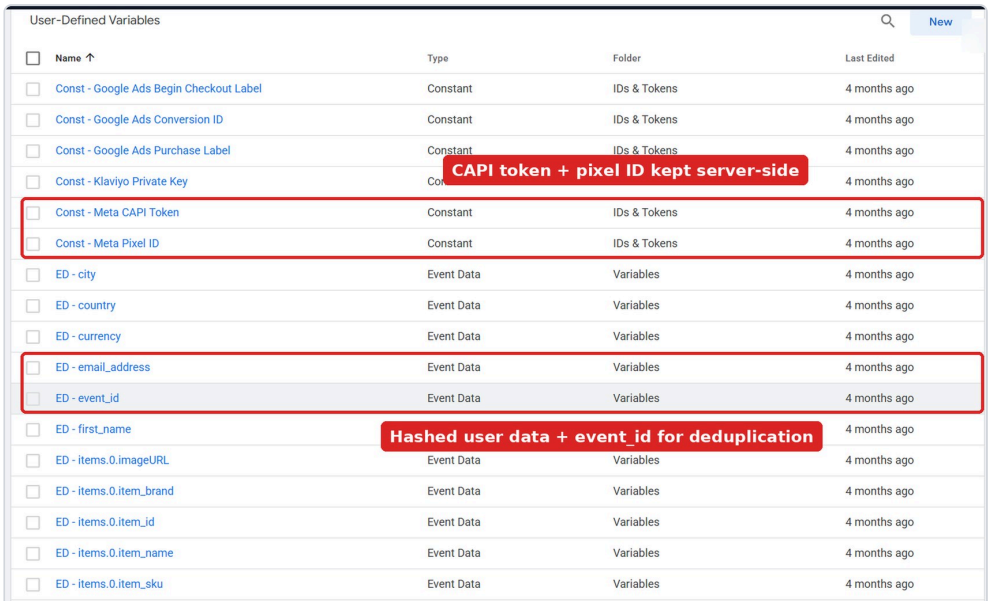
Privacy. A server-side transformation removes email, phone, name and address before anything is sent to GA4.

Inside the server container

Server GTM on a first-party subdomain of the store.



Tags. GA4, Google Ads, Meta CAPI and Klaviyo from one container. Purchases come from the Shopify order webhook.

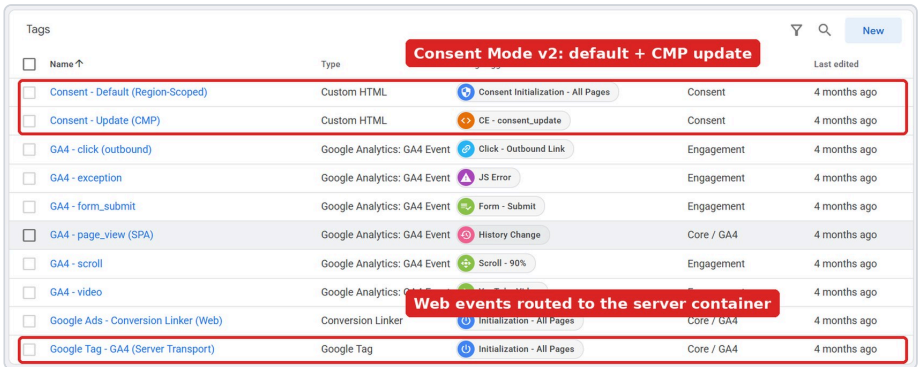


Variables. Meta CAPI token and pixel ID stay server-side; hashed user data and event_id feed deduplication and Enhanced Conversions.

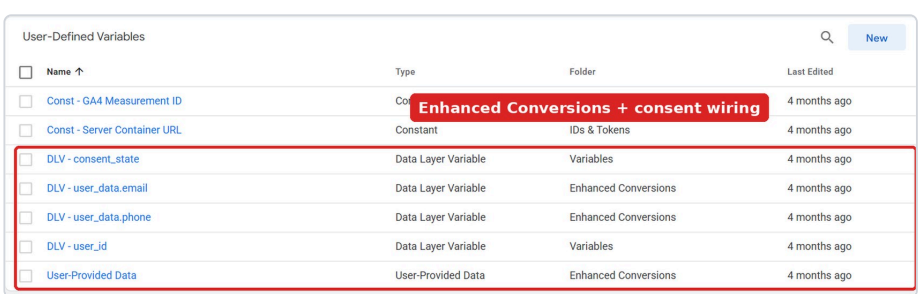
Shopify custom pixel and web container

The bugs I found in my own setup and how each one was fixed.

PROBLEM FOUND	FIX IN PIXEL V2.7 AND THE SERVER CONTAINER
One visitor counted as two GA4 users	Shopify runs the pixel in a sandbox that mints its own client ID. The pixel now reads the storefront GA4 cookies, so store and checkout stay one user and one session.
Consent always reported as denied	The pixel read the wrong Shopify field names. Consent Mode v2 is now mapped from the Customer Privacy API and re-checked on every server tag.
Personal data reaching GA4	Email, phone and address are stripped server-side before GA4 and only sent to Meta and Klaviyo with marketing consent.
Meta not deduplicating	gtag silently drops a parameter named event_id. The shared ID now travels under another name and is mapped on the server.
Checkout steps firing three times	Shipping and payment events fire once per checkout instead of once per attempt.
Purchases lost when the browser is blocked	A Shopify order webhook sends every order to the server. A refund webhook reduces GA4 revenue when an order is refunded.



Web GTM. Consent Mode v2 defaults and updates, GA4 events, all routed to the server container.

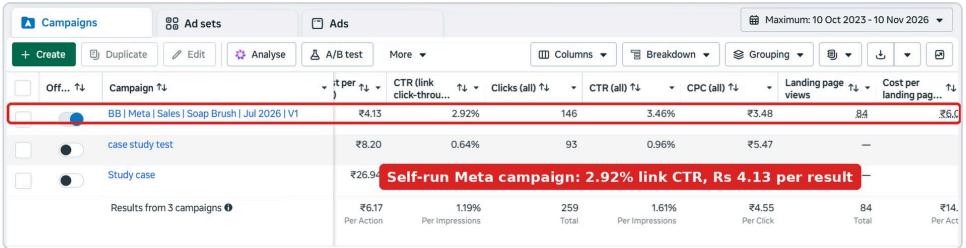


Web GTM variables. Consent state and Enhanced Conversions user data.

What I bring to a team

How I work, as shown by the setup in this document.

- **Root-cause debugging** — Traced each bug on page 5 to its cause, such as the Shopify pixel sandbox minting its own client ID and gtag dropping a parameter named event_id.
- **Verified, not assumed** — Each fix is checked end to end in Meta Events Manager, GTM preview / Tag Assistant and GA4 Realtime.
- **Privacy by default** — Consent Mode v2 denied by default; personal data stripped before GA4 and only sent to ad platforms with marketing consent.
- **Clear handover** — Short written notes for every change: what was broken, what I changed and how to check it.
- **Ad platform view** — I set up and run my own Meta and Google campaigns, so I know what the ad platforms need from tracking.



Meta Ads I set up and ran myself. Self-run campaign: 2.92% link CTR, Rs 4.13 per result.

LinkedIn: linkedin.com/in/tushar-jankhyan-1a8182312 · Email: hello@vextren.com