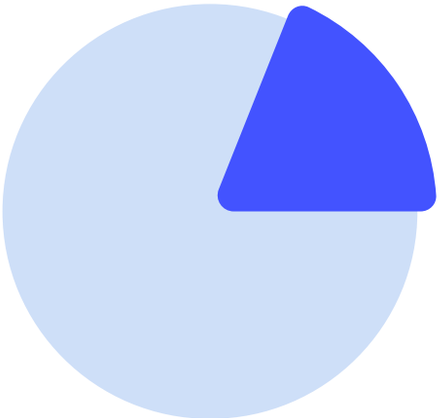
Up to 60% More Data through First-Party Collection

Server-Side Tagging: The Future of Web Data Collection

Server-side tagging marks a turning point in user tracking through regulatory restrictions and rising data privacy expectations. It shifts data collection to the server level, offering full data control and enhancing privacy and security.



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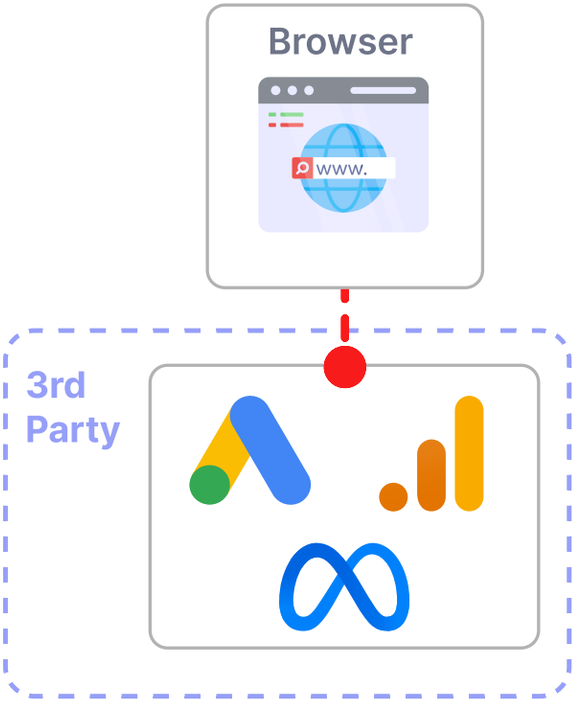
How can data be collected?

In data collection, there are two approaches: client-side tagging and server-side tagging. Although client-side tagging is widely used due to its ease of implementation and cost efficiency, it shows significant weaknesses compared to server-side tagging.



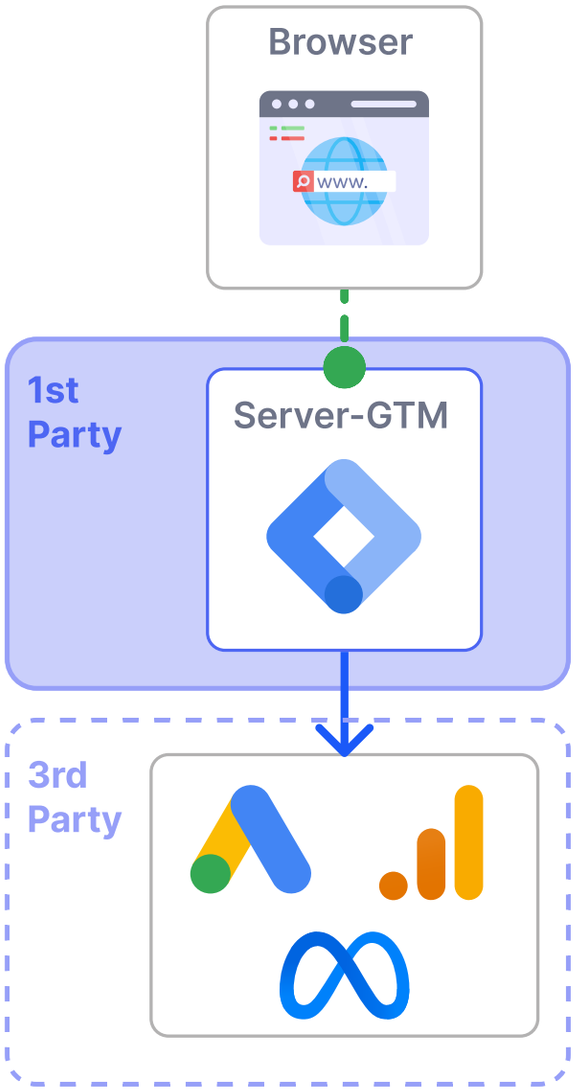
Classic Tracking (Client-Side)

Traditionally, many companies rely on the classic tracking method, also known as client-side tagging. In this approach, a script is loaded and executed directly in the user's browser, which records the user's activities such as page visits, clicks, and other interactions on the website. The information collected in this way is then transmitted to web analytics services, such as Google Analytics.
Since this often involves the use of third-party code, this context is also referred to as "third-party data." Simply put, all actions that a user performs on a website are captured and transmitted in real-time to the servers of the respective analytics services, such as Google Analytics.

Enhanced Tracking (Server-Side)

With server-side tagging, a dedicated server is placed between the user's browser and the external server, such as Google Analytics. In this example, Google Tag Manager for Server-Side Tagging (S-GTM) plays this role. The essential difference from client-side tagging is that the collected user data can be reviewed and processed before being forwarded to third parties.

This offers several advantages: Firstly, data can be checked on the intermediary server, and personal information can be removed before being forwarded to the target servers. Secondly, server-side solutions more effectively circumvent tracking prevention measures implemented by modern browsers, which usually restrict data sharing with third parties, as the intermediary server is often not considered a third party.



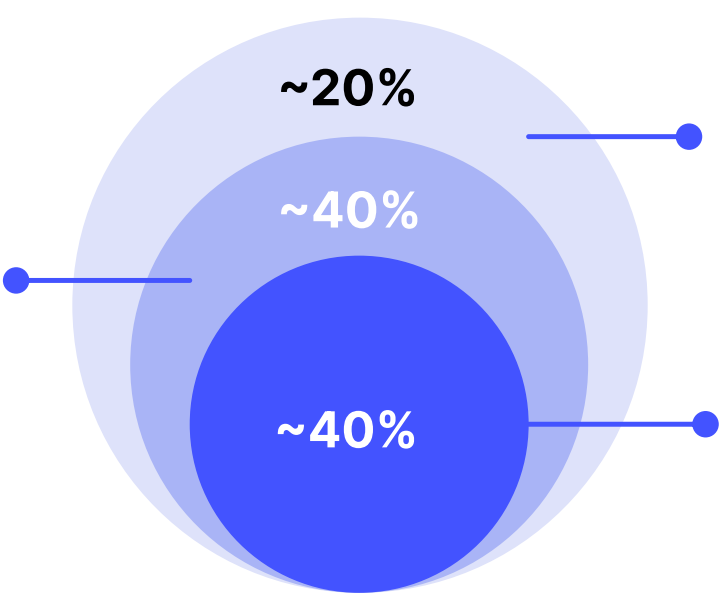
Feature comparison

Client-Side-Tagging vs. Server-Side-Tagging

	Client-Side-Tagging	Server-Side-Tagging
First-Party-Data	✗	✓
Implementation with Google-Tag-Manager	✓	✓
Bypass Browser-Tracking-Prevention & Ad-Blocker	✗	✓
Tracking without cookies	✗	✓
Tracking without consent	✗	✓
Tagging-server required	✗	✓
Reduction of the tags used is possible	✗	✓
Data enrichment of event and user data is possible	✗	✓
Data transfer to a third country	✓	Only if desired

The challenge: client-side tagging

Up to 60% data loss due to technical barriers and user rejection



No consent

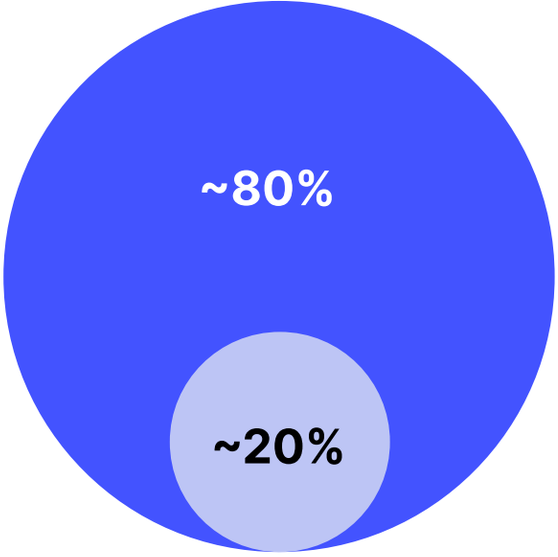
By rejecting the cookie banner, the data does not appear in Google Analytics.

Incomplete data

Users may consent to your cookie banner, but the transmission is prevented by browser tracking prevention and ad blockers (data arrives partially incorrect).

Available data

You have about 40% of data available for web analytics that are error-free and complete.



The solution: server-side tagging

Full data control and an up to 80% complete database

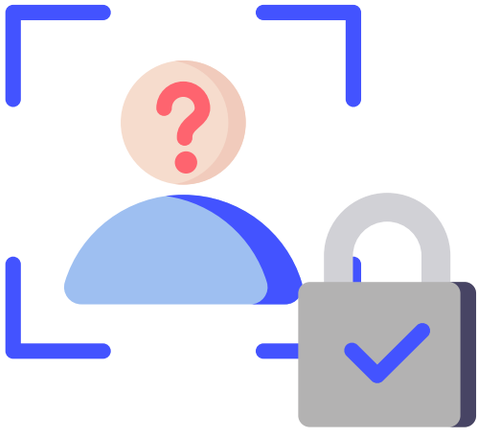
By using server-side tagging, you achieve up to an 80% complete data foundation, as you have full control over data collection and sharing. In doing so, you circumvent the latest browser tracking prevention and ad blockers, thus gaining valuable insights about your users. The remaining 20% are non-personal data, which can still be used for analytical purposes.

Server-Side-Tagging: The advantages

Tracking without consent

Privacy-compliant tracking without consent through anonymization

For web analytics, personal data is not necessarily required. By using server-side tagging, user data collection can be conducted in a privacy-compliant manner without the need for explicit consent via a cookie banner. This is made possible by removing personal data on the tagging server before forwarding it to third parties. In this way, you can still gain valuable insights into user behavior on your website while anonymizing the data of those who have not given consent.



Your advantages:

01

Server-Control

Complete control over data processing on the server, enabling the anonymization of user data before storage or analysis.

02

Compatibility with privacy laws

The server-tag-manager offers enough flexibility so you can adapt data collection to your specific legal situation.

03

Complete data

More data for analysis purposes, through the complete collection of user data.

Bypass Browser-Tracking-Prevention

Server-Side Tagging: The key to circumventing ad blockers and browser tracking prevention

Server-side-tagging enables the bypassing of both browser tracking prevention measures and ad blockers. This is particularly relevant as an increasing number of users are deploying ad blockers, and browsers are implementing stricter privacy settings to limit tracking of user activities. Since data collection and processing with server-side-tagging occur on the provider's server rather than directly in the end user's browser, it circumvents the usual detection mechanisms of ad blockers and the restrictions imposed by browser privacy settings.

Your advantages:

01

Ad blocker circumvention

Less susceptible to being blocked by ad blockers since data collection occurs server-side.

02

Tracking prevention circumvention

Can bypass restrictive browser tracking settings because data collection does not take place directly in the browser.

03

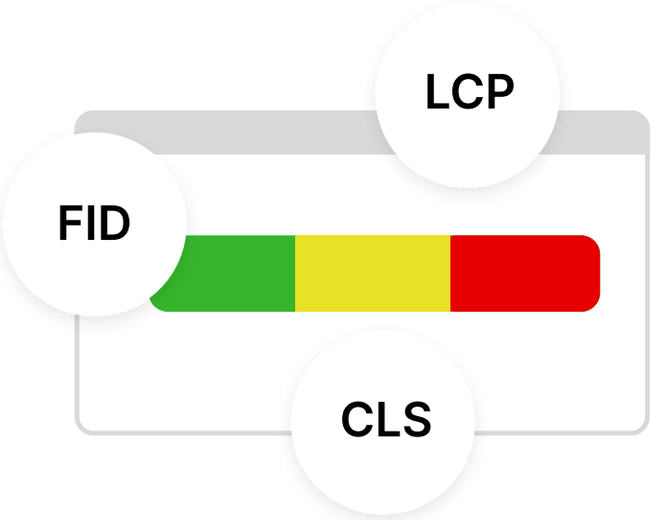
Improved data collection

Enables a more consistent and comprehensive collection of user data, independent of client-side restrictions.

Improved website performance

Optimizing Core Web Vitals: Less JavaScript for faster loading times and improved SEO

The excessive use of JavaScript is negatively evaluated in the Google Core Web Vitals (CWV). By shifting the burden of tag processing from the client (browser) to the server, not only can the speed of your website be improved, but the use of JavaScript can also be reduced. Less JavaScript and tags in the browser lead to faster loading times and better Core Web Vitals scores, which can improve the user experience and have positive effects on search engine optimization (SEO).



Your advantages:

01

Reduced loading times

02

Increased crawling efficiency

03

Improved page evaluation

Fewer client-side scripts speed up the loading of the webpage.

Faster pages are preferred by search engines and crawled more efficiently.

Fast loading times and optimized user experience contribute to better SEO rankings.

Full control and data security

CNIL confirms: Server-side tagging strengthens data protection and prevents data export

The French data protection authority, CNIL, confirms the effectiveness of server-side tagging as an effective method to prevent the unwanted transfer of personal data of users abroad. With your own server, you can precisely control which data and how it is transmitted to third-party servers such as Google Ads or Google Analytics. You retain full control and can ensure that only the desired information is shared, thereby protecting the privacy of your users as well as ensuring compliance with data protection regulations.

Your advantages:

01

Data centralization

Collection and processing of data on the server leads to better control and overview.

02

Improved compliance with data protection

Easier management of data protection requirements, as personal data can be filtered and protected on the server side.

03

Encryption and security protocols

Implementation of stronger encryption and security measures on the server.

Server-Side-Tagging: The implementation

02

Configuration

Setting up the server Tag Manager container in the Google Tag Manager user interface.

03

Migration

Migration of various tracking services from the client to the server Tag Manager container.

01

03

Setup

Setting up a Google Tag Manager server on Google Cloud, AWS, Azure, or a dedicated server.

Installation

Integration of the server Tag Manager into the website infrastructure.

Collaboration with DWC

Your partner for server-side tagging

At DWC, we possess extensive experience in server-side tagging, which we continuously expand through numerous successful projects worldwide. As a full-service partner, we not only handle the setup and configuration of your Server Tag Manager but also take care of the setup and maintenance of the infrastructure. Rely on our expertise for a seamless integration of server-side tagging into your digital strategy.

Our Services:

- Conceptualization & consulting
- Setup, optimization & maintenance of infrastructure (Google Cloud, AWS, Azure & On-Prem)
- Migration from client to server-side tagging
- Implementation and/or development of custom tags and clients for your Server Tag Manager
- Load and performance testing

Usercentrics partner

Unlock the full potential of server-side tagging with Usercentrics' CMP

As a long-standing partner of Usercentrics, we have had the opportunity to accompany a multitude of projects - including many setups where both the CMP and the server tag manager were used. The Usercentrics Consent Management Platform (CMP) or Preference Management Platform (PMP) are optimally compatible with the server tag manager. Consents can be captured, documented, and passed on server-side. Through the integration of Usercentrics software, data collection can be transparently explained, legitimized by consent, and documented in compliance with GDPR.

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Successfully implemented projects

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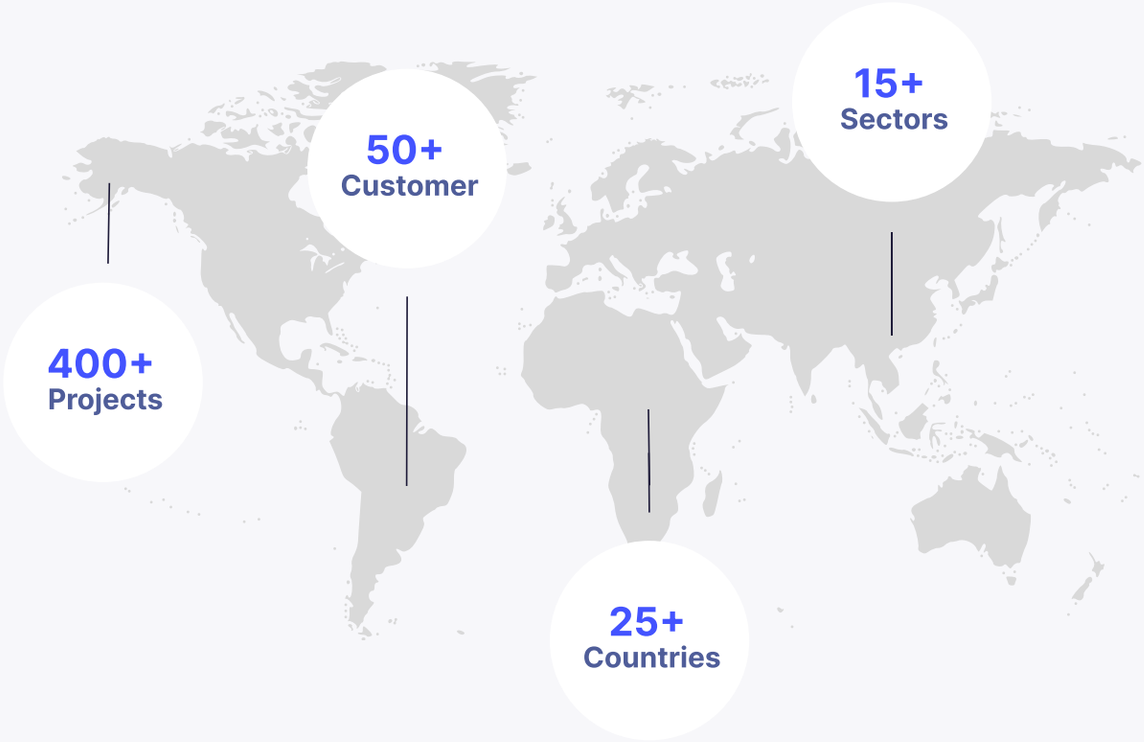

Your questions, our answers

Frequently asked Questions

What tools can I use to use server-side tagging?

We recommend using Google Server Tag Manager for the tagging server as well as Google Analytics 4 for data transmission from the browser to the server. However, there are also alternative solutions, such as Tealium, Matomo, Jentis, or custom developments. Please feel free to contact us, and we will help you find the right technology stack for your needs!

Is Google Server Tag Manager a replacement for Web Tag Manager?

No! The various Tag Manager products from Google differ fundamentally in their function:

Web/Client Tag Manager: Used for serving "tags" (individual tracking hits) based on defined triggers and rules.
Server Tag Manager: Acts as a data receiver on the tagging server and serves as a proxy, which receives data sent from the Web/Client Tag Manager and forwards it.

What impact does server-side tagging have on the end of third-party cookies?

The end of "third-party cookies" decided by Google hits many website operators and advertisers hard. However, server-side tagging can help to limit data loss. Advertising providers (such as Google Ads or Meta) now offer alternative solutions to measure advertising conversions across websites. A tagging server plays an essential role in this process, as the conversion data is transmitted via a first-party domain and thus cannot be captured by browser tracking prevention measures.

Is server-side tagging GDPR compliant?

Of course, much depends on the individual configuration. A server tag manager is not a panacea that allows for processing any data or setting cookies without consent. However, a correctly configured server tag manager can not only help to meet the requirements of the GDPR and other data protection laws but also enable the operator to capture additional data (even without consent) that could not be processed with client-side tagging.

What costs do I have to expect to run a server tag manager?

Fundamentally, the server tag manager offered by Google is available for free to all businesses, meaning there are no licensing fees. However, deploying a tagging server requires the provision of one's own server, which can incur charges depending on the hosting provider. The cost level is heavily dependent on the traffic volume as well as other factors such as location, redundancy, and scalability. As a benchmark for operation in the Google Cloud, about 45 euros per month can be estimated for computing capacity that can handle up to 50 simultaneous requests.
We are happy to assist you in budgeting and offer valuable insights on how you can reduce your costs – do not hesitate to contact us!

Do I have to use Google Cloud for hosting?

No. We recommend the Google Cloud Platform (GCP) because it provides three coordinated options with "Cloud Run," "App Engine," and "Kubernetes Engine" that can be quickly deployed and flexibly adapted to any requirement. The software of the Google Server Tag Manager runs in a Docker container and can therefore be operated anywhere Docker is supported. This includes AWS, Azure Cloud, or any other hosting provider that offers Virtual Private Servers (VPS).

How complicated is it to set up? Do I really need a service provider for this?

It depends. Fundamentally, configuring Google Analytics 4 on the server tag manager is relatively simple. And for the server deployment, Google provides good documentation that can help set up a tagging server in a very short time. However, please consider that the setup of the server tag manager not only affects the success of your web tracking/online marketing but also the data protection compliance of your website. A wrong configuration can quickly lead to fines or create significant gaps in your tracking data due to critical errors. Operating the server tag manager in the cloud can also result in very high bills if you do not know how to properly configure and secure the service in the cloud.
Therefore, our recommendation is to check if you can cover the following resources with your team:

- Cloud architect/cloud experts for operating container applications

- Cloud security expert
- Expert on the Google Marketing Platform and server tag manager software
- Expert for Google Analytics 4 and any other tracking/marketing services to be linked to the server tag manager
- JavaScript developer for creating custom tags and "clients" within the server tag manager container
- IT-savvy data protection expert with a good understanding of web tracking and server-side tagging

Our consulting team can support you in all these points cost-effectively and from a single source, should you need help!

Are the solutions from Stape.io or Taggrs.io good alternatives to your own server?

We advise against using SaaS providers for hosting the Google Server Tag Manager for several reasons:

- The data flow through a third party can diminish the data protection advantage. Data processing agreements with these providers are required, and there must be trust that they are familiar with and comply with all relevant data protection laws in your region.
- "Out-of-the-box" solutions are often more expensive and less efficient than operating your own server.
- The lower flexibility limits the customization options for your tagging server.
- Often, no "uptime guarantee" is provided, and there can be longer downtimes during which no data can be captured.
- Especially, operating through a SaaS provider offers no added value compared to running your own server tag manager.

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