DAP Code v7.0
Capabilities Summary
& Reference

GSA **analytics**.usa.gov

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Introduction

This document accompanies the Digital Analytics Program (DAP) Universal Analytics (UA) and Google Analytics 4 (GA4) code. Its intent is to showcase the capabilities of the DAP Code and provide a guide to the features needed for those capabilities. This must be used alongside the "Quick Guide" and the "Release notes".

For agencies who are updating to the latest version of DAP, we strongly recommend that you read the "Release Notes".

DAP Code Capabilities Summary

The DAP program offers the DAP Code as a means for agencies to participate in DAP while also providing more advanced measurement capabilities for Google Analytics, in an easy-to-install format. The below section lists out advanced features of the DAP Code and links to their reference section for details on how to install it.

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Note that items marked with an asterisk (*) are required. Items marked with two asterisks (**) already have features enabled by default, but may allow for additional configuration.

DAP Code Capabilities Reference

The following is a detailed reference of how to implement different DAP Code Capabilities. Note that these instructions must be used in conjunction with either the "Quick Guide" or "Google Tag Manager Quick Guide".

Set Agency

This value is required to be implemented for every agency. This enables the DAP team to understand differences in web trends across participating agencies and enables the DAP team to create a filtered view for the agency to use and analyze.

Query String Parameter	Data Type	Default Value	Description	Default Behavior
agency	String	unspecified:domain.com	Agency custom dimension value	Agency custom dimension appears as "unspecified:domain.com" in the reporting interface

Example:

```
    <script async type="text/javascript" id="_fed_an_ua_tag"
src="https://dap.digitalgov.gov/Universal-Federated-Analytics-
Min.js?agency=HHS"></script>
```

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Set Sub-Agency

This value is not required but is recommended to implement when applicable. This enables the DAP team to understand differences in web trends across participating sub–agencies.

Query String Parameter	Data Type	Default Value	Description	Default Behavior
subagency	String	unspecified:domain.com domain.com	Sub-agency custom dimension value	Sub Agency custom dimension appears as "unspecified:domain.com – domain.com" in the reporting interface

Example:

```
    <script async type="text/javascript" id="_fed_an_ua_tag"
src="https://dap.digitalgov.gov/Universal-Federated-Analytics-
Min.js?agency=HHS&subagency=FEMA"></script>
```

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Set Site Topic

This value is not required but is recommended to implement when applicable. This enables the DAP team to understand differences in web trends across different website topics, such as health or travel.

Query String Parameter	Data Type	Default Value	Description	Default Behavior
sitetopic	String	unspecified:domain.com	Site topic custom dimension value	Site Topic custom dimension appears as "unspecified:domain.com" in the reporting interface

Example:

```
    <script async type="text/javascript" id="_fed_an_ua_tag"
src="https://dap.digitalgov.gov/Universal-Federated-Analytics-
Min.js?agency=HHS&sitetopic=health"></script>
```

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Set Site Platform

This value is not required but is recommended to implement when applicable. This enables the DAP team to understand differences in web trends across different website platforms, such as Cloud.gov Pages.

Query String Parameter	Data Type	Default Value	Description	Default Behavior
siteplatform	String	unspecified:domain.com	Site platform custom dimension value	Site platform custom dimension appears as "unspecified:domain.com" in the reporting interface

Example:

```
    <script async type="text/javascript" id="_fed_an_ua_tag"
src="https://dap.digitalgov.gov/Universal-Federated-Analytics-
Min.js?agency=HHS&siteplatform=SitesUSA"></script>
```

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Site Search Tracking

If your website utilizes a site search engine, you may be able to track the queries your users type into their site searches in your DAP agency reporting. In the examples shown below, assume that the user did a search for "money" and the site search results page had a URL that looks like this: *www.website.com/search?term=money*

In that case, "term" would be the value you would set for the sp parameter in your DAP Code tracking. Note that by default, these search parameters are automatically tracked: q, query, nasaInclude, k, querytext, keys, qt, search_input, search, globalSearch, goog, s, gsearch, search_keywords, SearchableText, sp_q, qs, psnetsearch, locate, lookup, search_api_views_fulltext, keywords, request, _3_keywords, searchString

Query String Parameter	Data Type	Default Value	Description	Default Behavior
sp	Comma separated string	By default, these search parameters are automatically tracked: q, query, nasaInclude, k, querytext, keys, qt, search_input, search, globalSearch, goog, s, gsearch, search_keywords, SearchableText, sp_q, qs, psnetsearch, locate, lookup, search_api_views_fulltext, keywords, request, _3_keywords, searchString	Additional search parameter	By default, these search parameters are automatically tracked: q, query, nasaInclude, k, querytext, keys, qt, search_input, search, globalSearch, goog, s, gsearch, search_keywords, SearchableText, sp_q, qs, psnetsearch, locate, lookup, search_api_views_fulltext, keywords, request, _3_keywords, searchString

Note: If needed, you can set the sp parameter to multiple values by separating them with a comma. Like this: sp=term,keyword,kw.

Example:

```
    <script async type="text/javascript" id="_fed_an_ua_tag"
src="https://dap.digitalgov.gov/Universal-Federated-Analytics-
Min.js?agency=HHS&sp=term"></script>
```

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Extended Document Download Tracking

By default, the DAP Code automatically tracks downloads for these file types (when users click on a link that contains one of these document extensions in the target URL):

7z	dxf	mp4	tgz
avi	epub	msi	txt
csv	exe	pdf	wma
csv	gz	ppt	wmv
doc	jpg	pptx	xls
docx	js	rar	xlsm
dwfx	mobi	rfa	xlsx
dwg	mov	rvt	zip
dwgd	mp3	swf	

However, if you need another file type to be measured (such as psd, for example), you can add it using the exts parameter.

Query String Parameter	Data Type	Default Value	Description	Default Behavior
exts	Comma separated string		Additional download extensions	Only the pre-defined file extensions will be included as downloads. Note that if autotracking is disabled using the autotracker parameter, no file downloads will be recorded.

You can add multiple additional file types by setting the exts parameter to multiple values separated by a comma string, such as: exts=psd,png,json

```
    <script async type="text/javascript" id="_fed_an_ua_tag"
src="https://dap.digitalgov.gov/Universal-Federated-Analytics-
Min.js?agency=HHS&exts=psd"></script>
```

Example:

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Automatic YouTube Tracking

By default, the DAP Code does not automatically track YouTube video interactions. You can enable this by setting the default value of the yt parameter to "true". Possible YouTube interactions include play, pause, and finish, as well as tracking the % of the video completed on configured milestones defaulted to every 25% of the video duration.

Query String Parameter	Data Type	Default Value	Description	Default Behavior
yt	boolean	false	Enable/Disable YouTube Tracker	YouTube videos will not be tracked.

Example:

```
    <script async type="text/javascript" id="_fed_an_ua_tag"
src="https://dap.digitalgov.gov/Universal-Federated-Analytics-
Min.js?agency=HHS&yt=false"></script>
```

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Configure YouTube video milestones

If YouTube tracking is enabled, By default, the DAP Code will track YouTube video progress every 25% of the video duration. You can modify this setting to be every 10% or 20% instead. By setting the "ytm" parameter to the desired progression milestone from the acceptable values of 10, 20, or 25.

Query String Parameter	Data Type	Default Value	Description	Default Behavior
ytm	Number from preselected values 10,20, or 25	25	Controls the frequency of video progress event firing	YouTube videos progress event will be tracked based on selected milestone

Example:

```
    <script async type="text/javascript" id="_fed_an_ua_tag"
src="https://dap.digitalgov.gov/Universal-Federated-Analytics-
Min.js?agency=HHS&ytm=20"></script>
```

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Parallel Google Analytics (UA) Properties

If an agency wishes to use the DAP code to implement an additional Google Analytics property (such as one that the agency owns and operates), they may do so using the pua parameter. The pua parameter would be set to the UA tracking ID for their Google Analytics property, such as: pua=UA-1234567-1

Note: **The DAP code is preventing the use of the main tracking id as parallel trackers to avoid any potential duplication due to improper implementation.**

Query String Parameter	Data Type	Default Value	Description	Default Behavior
pua	Tracking ID		Parallel UA Trackers	No additional properties are tracked.

Example:

```
    <script async type="text/javascript" id="_fed_an_ua_tag"
src="https://dap.digitalgov.gov/Universal-Federated-Analytic
s-Min.js?agency=HHS&pua=UA-1234567-1"></script>
```

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Parallel Google Analytics (UA) Property Custom Dimensions

When using a Parallel Google Analytics Property via the pua parameter, the following custom dimension slot numbers are used by default:

1. Agency
2. Sub Agency
3. Code Version
4. Site Topic
5. Site Platform
6. Script Source
7. URL Protocol
8. Interaction Type

You may wish to pass these custom dimension values to a different CD slot for your property. To adjust these slot numbers, you can use the below parameters.

Query String Parameter	Data Type	Default Value	Description	Default Behavior
palagencydim	number (custom dimension slot number)	1	Agency Custom Dimension Slot # (Parallel Tracker)	1
palsubagencydim	number (custom dimension slot number)	2	Sub Agency Custom Dimension Slot # (Parallel Tracker)	2
palversiondim	number (custom dimension slot number)	3	Code Version Custom (Parallel Tracker) Dimension Slot #	3
paltopicdim	number (custom dimension slot number)	4	Site Topic Custom (Parallel Tracker) Dimension Slot #	4
palplatformdim	number (custom dimension slot number)	5	Site Platform Custom (Parallel Tracker) Dimension Slot #	5
palscriptsrcdim	number (custom dimension slot number)	6	Script Source Slot # (Parallel Tracker)	6

| palurlprotocoldim | number (custom dimension slot number) | 7 | URL Protocol Slot # (Parallel Tracker) | 7 |
| palinteractiontype dim | number (custom dimension slot number) | 8 | Interaction Type Slot # (Parallel Tracker) | 8 |

Example:

```
<script async type="text/javascript" id="_fed_an_ua_tag"
src="https://dap.digitalgov.gov/Universal-Federated-Analytics-M
in.js?agency=HHS&pua=UA-1234567-1&palagencydim=14"></script>
```

Note that a very common mistake (based on older versions of the DAP Quick Start Guide) was to implement the parameter value as: dimension14|14 (all one string). Only values of dimension14 (the word "dimension" followed by the index number) OR values of 14 (just the index number) are accepted by this parameter.

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Parallel Google Analytics (GA4) Properties

If an agency wishes to use the DAP code to implement an additional GA4 property (such as one that the agency owns and operates), they may do so by using the pga4 parameter. The pga4 parameter would be set to the GA4 measurement ID for their GA4 property, such as pga4=G-111111

Note: **The DAP code is preventing the use of the main measurement id as parallel measurement id to avoid any potential duplication due to improper implementation.**

Query String Parameter	Data Type	Default Value	Description	Default Behavior
pga4	Measurement ID		Parallel GA4 Trackers	No additional properties are tracked.

Example:

```
    <script async type="text/javascript" id="_fed_an_ua_tag"
src="https://dap.digitalgov.gov/Universal-Federated-Analytic
s-Min.js?agency=HHS&pga4=G-111111"></script>
```

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Parallel Google Analytics (GA4) Property Custom Dimensions

When using a Parallel Google Analytics Property via the pga4 parameter, the following event parameters are used by default:

1. agency
2. sub_agency
3. version
4. site_topic
5. site_platform
6. script_source
7. protocol
8. interaction_type
9. event_name_dimension (used to store the event name as an event parameter to facilitate custom reporting)

Automatic Document Download & Outbound Link Tracking

By default, the DAP Code automatically tracks downloads for these file types (when users click on a link that contains one of these document extensions in the target URL):

doc	pdf	wmv	avi
docx	js	jpg	mp3
xls	txt	msi	mp4
xlsx	dxf	7z	csv
xlsm	dwgd	gz	mobi
ppt	rfa	tgz	epub
pptx	rvt	wma	swf
exe	dwfx	mov	rar
zip	dwg		

Outbound link clicks are also tracked. Outbound links are determined by comparing the link's target URL with the current website domain and its sub-domains.

Additionally, this feature measures email link clicks. These are determined as links that contain "mailto:" in the target URL.

With all of these different link events, both mouse clicks and Enter key keystrokes are tracked. An "Interaction Type" custom dimension is included with these hits so that the method used to open the link can be analyzed.

If an agency would like to disable these features, they can do so by setting the autotracker parameter to false.

Query String Parameter	Data Type	Default Value	Description	Default Behavior
autotracker	boolean	true	Enable/Disable AutoTracker	Downloads and outbound links are automatically tracked.

Example:

```
    <script async type="text/javascript" id="_fed_an_ua_tag"
 src="https://dap.digitalgov.gov/Universal-Federated-Analytic
 s- Min.js?agency=HHS&autotracker=false"></script>
```

Set Cookie Expiration Date

By default, Google Analytics cookies for the user expire after 24 months (2 years). This means that if a user does not return to the website for 2 full years, they will be considered a new user when they return. If an agency would like to shorten this cookie window, so that a user is considered "new" again after 1 year's absence from the website (for example), they can set the cto parameter to the new desired expiration in months.
For example, cto=12 would set the cookie expiration date to 12 months from the date of the most recent hit.

Query String Parameter	Data Type	Default Value	Description	Default Behavior
cto	Integer (of months)	24	Ga cookie expiration in months	GA cookie expires from user's system after 2 of not being updated. **Note:** For Chrome it shouldn't be more than 400 days ~ 13 months.

Example:

```
    <script async type="text/javascript" id="_fed_an_ua_tag"
src="https://dap.digitalgov.gov/Universal-Federated-Analytics-
Min.js?agency=HHS&cto=12"></script>
```

Cookie Flags

By default, Google Analytics cookies have the following cookie settings:

–   **SameSite= Strict:**

Means that the browser sends the cookie only for same–site requests, that is, requests originating from the same site that set the cookie. If a request originates from a different domain or scheme (even with the same domain), no cookies with the SameSite=Strict attribute are sent.

–   **Secure:**

Indicates that the cookie is sent to the server only when a request is made with the https: scheme (except on localhost), and therefore, is more resistant to man–in–the–middle attacks.

Event Tracking

Event tracking is not controlled with a parameter, but rather with a function called gas().

All events must have this structure:

```
    gas('send', 'event', 'category', 'action', 'label',
value, noninteraction);
```

Here is the breakdown of these values:

- **event**: Required, must not be changed. Specifies that this is an event rather than a pageview.
- **category**: Required, should be customized. Must be a string in quotes. Example: 'social-icons'
- **action**: Optional, should be customized. Must be a string in quotes. Example: 'facebook'
- **label**: Optional, should be customized. Must be a string in quotes. Example: 'footer'
- **value**: Optional, should be customized. Sets a currency value for the event. Must be an integer without quotes. Example: 4

Example:

```
    <a href="/call-today.html" onclick="gas('send', 'event',
'header-slider-image-clicks', 'call-today', 'stock-photos-of-
people', 10, true);"><img src="stockphotosofpeople.png"></a>
```

```
    <a href="/call-today.html" onclick="gas('send', 'event',
'header-slider-image-clicks', 'call-today', '', 0,
true);"><img src="stockphotosofpeople.png"></a>
```

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Virtual Pageview Tracking

A "virtual" pageview is when you send a pageview hit to Google Analytics (UA/GA4), even though a full page load has not actually occurred. This is common to do in scenarios where new content is presented to the user without a new page being requested and rendered by the browser. Virtual pageview tracking is not controlled with a parameter, but rather with a function called gas().

All pageviews must have this structure:

```
gas('send', 'pageview', '/url', 'Page Title');
```

Here is the breakdown of these values:

- **pageview**: Required, must not be changed. Specifies that this is a pageview rather than an event.
- **/url**: Required, should be customized. Must be a string in quotes. Example: '/cart/step1.html'. Don't include the domain or protocol, just the page path.
- **Page Title**: Optional, should be customized. If not customized, will pull in the current page title. Must be a string in quotes. Example: 'Cart – Step 1'

Example:

```
    <a href="#" onclick="gas('send', 'pageview',
'/cart/step1.html', 'Cart - Step 1');"><img
src="nextbutton.png"></a>
```

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Report a custom page URL

By default, the DAP code will report the default browser page's URL to GA. If an agency wishes to use the DAP code to track a custom page pathname, they may do so using the custurl parameter. The custurl parameter would be set to true such as custurl=true **AND** set a variable containing the desired custom page path as shown below

Note:
- Please don't set custom_dap_data.url to the full URL, page path + search is expected for the DAP to work properly.
- don't change the variable the name of the variables(custom_dap_data, URL, title)
- The custom_dap_data must be added before the DAP code script tag

Query String Parameter	Data Type	Default Value	Description	Default Behavior
custurl	Boolean		Custom Page Path	No custom path is used

Example:

```
<script type="text/javascript">
var custom_dap_data = {url : '/customURL?q=text', title :
"custom --- title"};
</script>

<script async type="text/javascript" id="_fed_an_ua_tag"
src="https://dap.digitalgov.gov/Universal-Federated-Analytics-
Min.js?agency=HHS&custurl=true"></script>
```

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Report a custom page title

By default, the DAP code will report the default browser page's title to GA. If an agency wishes to use the DAP code to track a custom page title, they may do so by using the custitle parameter. The custitle parameter would be set to true such as custitle=true **AND** set a variable containing the desired custom page title as shown below

Note:
- don't change the variable the name of the variables(custom_dap_data, URL, title)
- The custom_dap_data must be added before the DAP code script tag

Query String Parameter	Data Type	Default Value	Description	Default Behavior
custitle	Boolean		Custom Page Title	No custom title is used

Example:

```
<script type="text/javascript">
var custom_dap_data = {url : '/customURL?q=text', title :
"custom --- title"};
</script>

<script async type="text/javascript" id="_fed_an_ua_tag"
src="https://dap.digitalgov.gov/Universal-Federated-Analytics-
Min.js?agency=HHS&custitle=true"></script>
```

PII Redaction

As of version 6.8, the DAP code included functionality to allow only whitelisted query-string parameters to be reported to Google Analytics and trim anything else from the page URL. Starting in version 7.0, this functionality was expanded to include all data points collected by Google Analytics, not just the page URL. This means if any other data point is using a parameter that is not whitelisted, it will be removed.

Additionally, a new functionality was added to check the hit payload against a list of potential PII parameters including email, name, telephone number, date of birth, address, and social security number.
Except for email addresses, which will be recognized without a key to identify it, all other PII data points are checked based on a key: value presence. If any of the aforementioned potential PII was presented without its key, it will not be redacted.

For example:
https://www.gsa.gov/page.html?q=**name=John**
will be redacted to:
https://www.gsa.gov/page.html?q=**[REDACTED_NAME]**

But if the word *John* was present in the URL without a key defining it as a name, it wouldn't be redacted. For example:
https://www.gsa.gov/**john/page.html** will be reported the same with no changes.

Unlike email, which will be redacted in the following examples
https://www.gsa.gov/**email@test.com**/page.html
will be reported as
https://www.gsa.gov/**[REDACTED_EMAIL]**/page.html

AND
https://www.gsa.gov/page.html?q=**email@test.com**
Will be reported as
https://www.gsa.gov/page.html?q=**[REDACTED_EMAIL]**

Whitelisting allows tracking of particular query-string parameters, by cross-referencing them with both the "**default" set** (containing Google's predefined and search terms query strings) and **specific agency Query String** such as "gsa", "dhs", "doc", "hhs", "hud", "nasa", "nsf", "va", **"dod"**, **"opm"**

If there is a new requirement to include additional custom query-string parameters, it is necessary to reach out to the GSA DAP team. Alternatively, agencies have the option to transmit these parameters using the query string **SP** key.
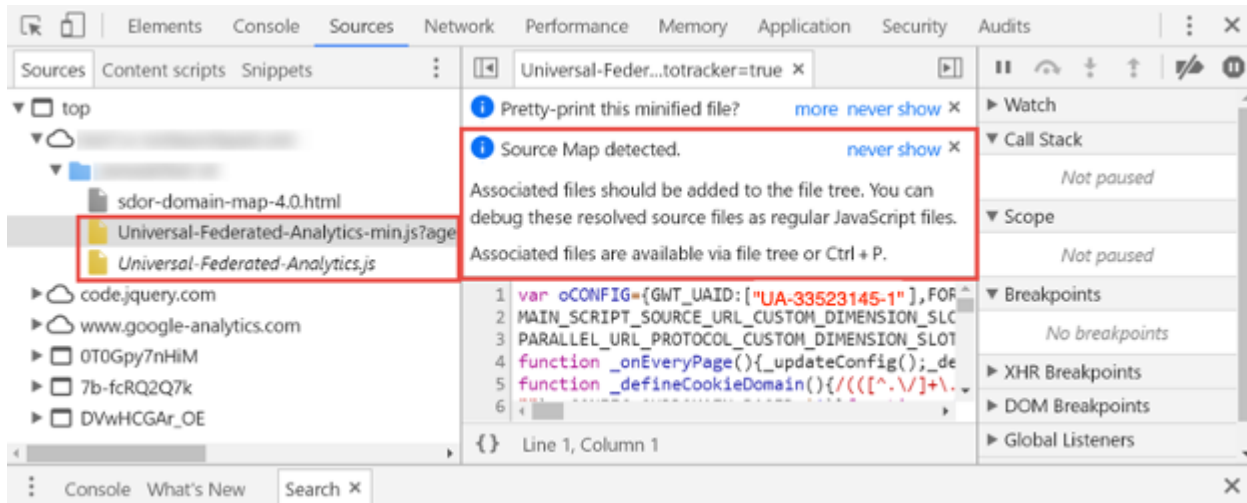
Agency	Query String Parameter
default	utm_id,utm_source,utm_medium,utm_campaign,utm_term,utm_content,_gl,gclid,dclid,gclsrc, affiliate, dap-dev-env, **v**, q, query,nasaInclude,k,querytext, keys, qt,search_input, search,globalSearch, goog,s,gsearch,search_keywords, SearchableText,sp_q, qs,psnetsearch,v locate, lookup,search_api_views_fulltext,k eywords,r equest,_3_keywords, **searchString**
gsa	challenge, state
dhs	appreceiptnum
doc	station,meas, start,atlc,epac,cpac, basin,fdays, cone,tswind120,gm_track,50wind120,hwind120,mltoa34, swath, radii,wsurge,key_messages, inundation,rainqpf,ero, gage,wfo,spanish_key_messages,key_messag es, sid,lan, office, pil
hhs	s_cid,selectedFacets
hud	PostID
nasa	feature, ProductID,selectedFacets
nps	gid,mapid, site, webcam, id
nsf	meas, start,atlc,epac,cpac, basin,fdays, cone,tswind120,gm_track,50wind120,hwind120,mltoa34, swath, radii,wsurge,key_messages, inundation,rainqpf,ero, gage,wfo,spanish_key_messages, key_messages, sid
va	id
dod	p
opm	**l, soc, jt, j, rmi, smin, hp, g, d, a**

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Source Mapping

As of version 4.0 of the DAP code, source mapping is supported. This allows the original file to be viewed and debugged within developer tools. There is nothing that agencies need to do to enable this.

Example:

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DAP in Dev Environments

Running DAP code in DEV mode will report the traffic to a testing property to avoid having DEV/Staging data flow into the production properties. To enable DEV mode, add the querystring parameter key "dap-dev-env" to the page URL, and give it any value, if this parameter is detected, traffic will be directed to a Testing Property (GA4).

For Example, https://www.example.com?dap-dev-env=true, https://www.example.com?dap-dev-env=1

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DAP's AutoTracker is supporting SPAs

AutoTracker was updated to support single-page applications with no need to recall the AutoTracker to track dynamically loaded content.

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