# DAP UA Code v4.1

# DAP Code Capabilities Summary & Reference

Prepared for:

# Introduction

This document accompanies the Digital Analytics Program (DAP) Universal Analytics (UA) 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". For agencies who are updating to the latest version of DAP, we strongly recommend that you read the "Release Notes" as well.

# 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.

Set Agency*

Set Sub-Agency

Set Site Topic

Set Site Platform

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Automatic Document Download & Outbound Link Tracking**

Allow Users to Opt-Out of Tracking for Your Site

Set Cookie Expiration Date

Event Tracking

Virtual Pageview Tracking

Source Mapping

Set Transport Mechanism

*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 SitesUSA or Federalist.

| 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, querytext, nasaInclude, k, and qt.

| Query String Parameter | Data Type | Default Value | Description | Default Behavior |
|---|---|---|---|---|
| sp | Comma separated string | By default, these search parameters are automatically tracked: q, querytext, nasaInclude, k, and qt. | Additional search parameter | By default, these search parameters are automatically tracked: q, querytext, nasaInclude, k, and qt. |

*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):

| | | | |
|---|---|---|---|
| doc | pdf | wmv | avi |
| docx | js | jpg | mp3 |
| xls | txtcsv | msi | mp4 |

| xlsx | dxf  | 7z  | csv  |
|------|------|-----|------|
| xlsm | dwgd | gz  | mobi |
| ppt  | rfa  | tgz | epub |
| pptx | rvt  | wma | swf  |
| exe  | dwfx | mov | rar  |
| zip  | dwg  |     |      |

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*

Example:

```
<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>
```

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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 at pause.

| 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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# Cross Sub-Domain Tracking

By default, the DAP Code automatically treats website subdomains as separate websites. For example, www.mysite.com and other.mysite.com. This means that traffic between these subdomains is seen as referral traffic, and clicks to a subdomain link is seen as an outbound link click by the auto tracking capabilities of the DAP code.

If an agency would like to treat all subdomains as one site, so that traffic between them does not look like referral traffic and link clicks are not seen as outbound links, the sdor parameter can be set to the root domain. For example: sdor=mysite.com. If you want to treat all subdomains of example.mysite.com as the same, such as www.example.mysite.com and other.example.mysite.com, you would set the sdor parameter like this: sdor=example.mysite.com.

NOTE! Normally, with cross subdomain tracking for Universal Analytics, you would need to be sure to also add the root domain (i.e. site.com) to your referral exclusion list, in the "Ignored Referrer" area of the admin settings of the Universal Analytics user interface (at google.com/analytics). However, with the DAP Code, this capability is built straight into the tracking code, so no adjustments to the Ignored Referrer section of the Universal Analytics admin settings is required.

| Query String Parameter | Data Type | Default Value | Description | Default Behavior |
|---|---|---|---|---|
| sdor | String | auto | If "auto" cookie will be set as subdomain.domain.com<br><br>If set to custom value <i.e. sub.domain.com or site.com>, all sub-domains of the current domain will be linked and links between these portals will be considered internal links. | Sub-domains on the same domain will be treated as separate sites. |

Example:

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

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# Enable Demographic Data

Universal Analytics offers some demographic reporting on topics such as age, interest, and more. This requires you to enable a specific demographic setting in your tracking

code. In the DAP Code, this is not enabled by default, but an agency can enable this by setting the dclink parameter to true.

| Query String Parameter | Data Type | Default Value | Description | Default Behavior |
|---|---|---|---|---|
| dclink | boolean | false | Demographic Data (true/false) | Demographic data is not available |

Example:

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

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## Parallel Google Analytics 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

| 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-Analytics-
Min.js?agency=HHS&pua=UA-1234567-1"></script>
```

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## Parallel Google Analytics 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 |
| palsubagency dim | 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 |
| palinteractiontypedim | 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-
Min.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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# Improved In-Page Analytics Reporting (Enhanced Link Attribution)

Google Analytics offers a section of reporting called In-Page Analytics. These reports are meant to show the % navigation from the viewed page, to the page linked. To learn more about In-Page Analytics, read this article:
https://support.google.com/analytics/answer/2558811?hl=en

Despite the "% click" label shown in In-Page Analytics reports, In-Page Analytics does not show the % of *unique* clicks to a link on a page by default. For example, if you are looking at a report for the /home.html page that has two separate links to /about.html (perhaps one in the main navigation and one in the footer), the In-Page Analytics report will show the % click through for both of these links as the same. This is because the report is simply looking for the percent of pageviews of the /home.html page that viewed the /about.html page next.

This can be improved by setting Enhanced Link Attribution, so that Google Analytics understands that these in-page links are separate. This can be easily enabled for DAP by setting the enhlink parameter to true.

To learn more about Enhanced Link Attribution, read this article:
https://support.google.com/analytics/answer/2558867?hl=en&ref_topic=2558810

| Query String Parameter | Data Type | Default Value | Description | Default Behavior |
|---|---|---|---|---|
| enhlink | boolean | false | Enhanced Link Attribution (true/false) | Enhanced Link Attribution feature of GA is not used. |

Example:

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

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## 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 | txtcsv | 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-Analytics-
Min.js?agency=HHS&autotracker=false"></script>
```

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# Allow Users to Opt-Out of Tracking for Your Site

Although users can always install the Google Analytics opt-out browser add-on to block Google Analytics for all websites that they browse, you may wish to add the capability for users to opt out of Google Analytics for your website specifically.

You can implement this via the DAP Code by setting the optout parameter to true when a user wishes to opt-out. This must be implemented on all pages that would be impacted by the opt-out.

To learn more about Google Analytics' opt-out capabilities, read this article: https://developers.google.com/analytics/devguides/collection/analyticsjs/user-opt-out

| Query String Parameter | Data Type | Default Value | Description | Default Behavior |
|---|---|---|---|---|
| optout | boolean | false | Page Opt-Out (true/false) | This specific page will be tracked in GA |

Example:

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

*IMPORTANT NOTE! In order to track all visitors except those who wish to opt out, you must not set the opt-out parameter in your DAP parameters to true by default. You will need to set the optout DAP parameter to true only once a user has indicated that they wish to opt-out. For example, you can set an opt-out cookie for all of your users that has a*

*value of false by default. When the user clicks an "Opt Out of Google Analytics" button in your privacy policy, you can re-write the value of this cookie to true. You can have your DAP parameters always set the optout parameter to the value of this cookie.*

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## 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. |

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>
```

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## 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**: Required, 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
- **noninteraction**: Optional, should be customized. Determines whether the event will impact timestamps and bounce rate (this is the default, or when set to false). When set to true, events will have no impact on timestamps or bounce rate (sessions with an event can still be considered a bounce). Must be a Boolean, true or false, without quotes. Example: true

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>
```

Note that if you would like to set the event to non-interactive but do not wish to set a value, you must still set a placeholder for the value, or any prior parameters. Here is an example where an empty string is left for the label and the value has been set to zero as a placeholder:

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

## Virtual Pageview Tracking

A "virtual" pageview is when you send a pageview hit to Google Analytics, 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'
- **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>
```
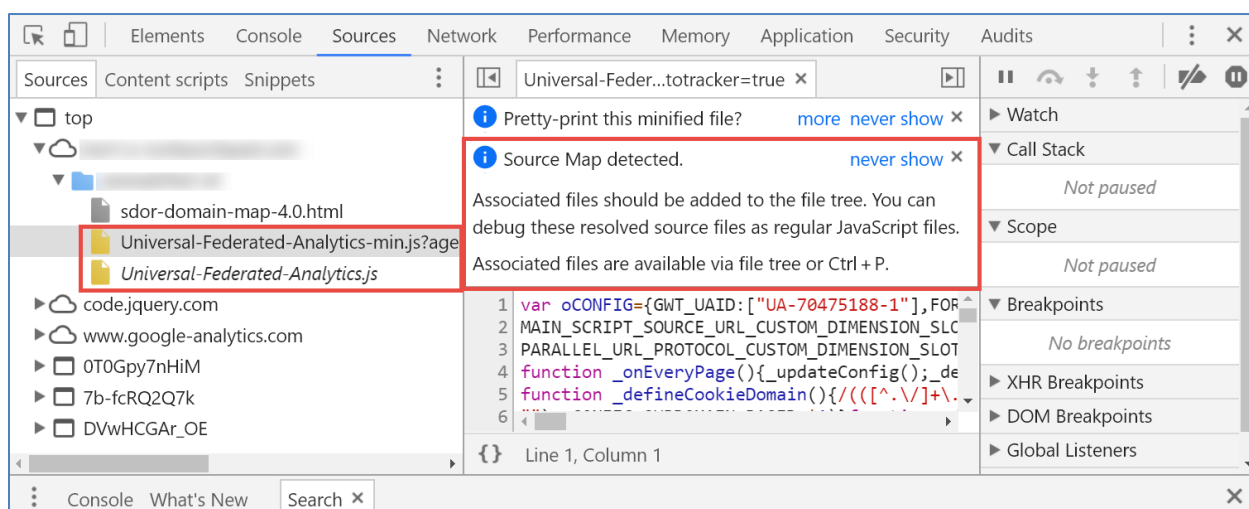
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# Source Mapping

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:

# Set Transport Mechanism

As of version 4.1 of the DAP code, the default transport mechanism for Google Analytics within the DAP code is XHR (previously, was image). You can read more about Google Analytics transport mechanisms here. If users would like to change the transport mechanism of DAP to image or beacon, they can do so using a new supported parameter called "transport," see below for an example.

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| Query String Parameter | Data Type | Default Value | Description | Default Behavior |
|---|---|---|---|---|
| transport | String | xhr | Sets the transport mechanism for Google Analytics. Other accepted values are "beacon" or "image". | Sets the transport mechanism of Google Analytics to XHR. |

Example:

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

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