DAP UA/GA4 Code v6.8 Release Notes

Prepared for:

Introduction

These Release Notes cover changes to the GSA Digital Analytics Program (DAP) Federated JavaScript code file (i.e. Universal-Federated-Analytics.js) in this 6.8 release.

Features Summary

Features Now Incorporated into the DAP GA Code

1. **New**: Dual Tracking (UA/GA4) Functionality

2. **New**: Parallel GA4 Tracking (Pga4 Parameter)

3. **New**:_setAllowedQS() function, allows reporting specific query-string Parameters.

4. **New**: _scrubbedURL() function, cleans up the URL from any not allowed query-string parameters.

5. **New**: _mapGA4toUA() function, maps GA4 naming convention to UA existing naming convention.

6. **New**: _sendViewSearchResult() function, sends a view_search_results event with associated data points (search_term, page_location)

7. **New**: adding Cookie Flags for UA and GA4 **SameSite=Strict; Secure**

8. **New**: _isValidGA4Num() function has been created to validate the GA4 measurement ID pattern.

9. **Update**: added multiple new query string keys for **oGONFIG.SEARCH_PARAMS**

10. **Update**: _onEveryPage() function, to support the new code release.

11. **Update**: _sendEvent() function has been updated to support the new GA4 data schema.

12. **Update**: _sendPageview() function has been changed to support dual tracking

13. **Update**: gas() function, updated to support dual tracking of GA4 and UA

14. **Update**: createTracker() function, updated to support dual tracking, allows

whitelisted query-string parameters, includes 404 pages tracking for GA4, enables cookie expiration for GA4, enables exclude referral functionality for GA4, and enables parallel custom dimensions tracking for GA4

15. **Update**: _initAutoTracker() function has been updated to support tracking of GA4 events schema.

16. **Update**: YouTube Tracker function has been updated to support tracking of GA4 events schema.

17. **Update**: _tagClicks() function has been updated to allow dual tracking of GA4 and UA

Features Enhanced

1. **Boolean Values**: Uses of Boolean values false and true have been updated to !1 and !0 respectively.

2. **Ternary Operators**: Uses of ? : operators to replace some if/else statements.

3. **Variable Names**: Uses of a b c d e f g h variable names instead of lengthy ones.

Features Removed / Deprecated

- Demographic Data
- Enhanced Link Attribution
- Opt out of Tracking
- Transport Mechanism

Features Newly Implemented

1. **DUAL Tracking (UA/GA4) Functionality**: Universal Analytics (UA) is the older version of Google Analytics and will stop processing data on July 1, 2023 **(July 1, 2024, for Analytics 360 properties)**. The major release of this (6.8) version is the addition of Dual Tracking.
   With dual-tracking functionality, website owners can get the benefits of tracking both codes. They can monitor their existing analytics data with the traditional UA tracking plus capture additional data points with the new Google Analytics 4 (GA4) tracking. This will make it easier to transition to GA4 over time.

2. **Pga4 Parameter**: Just like the pua parameter, if an agency wishes to use the DAP code to implement additional GA4 properties, they may do so using the pga4 parameter. If an agency implements GA4 via the DAP code, the pga4 parameter will be set to the GA4 measurement ID for their Google Analytics property, such as pag4=G-1111111

3. **URL modification_scrubbedURL() function**: This helps remove undesired or potentially harmful elements from the URL. The role of this function is to maintain the website's data integrity by permitting only the designated query string parameters that have been outlined within the **_setAllowedQS()** function.

4. **Querystring Parameter Allowed _setAllowedQS function**: This functionality 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,", and "va."

> 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,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,k eywords,r equest,_3_keywords
gsa	challenge, affiliate, 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
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

5. **GA4 Naming convention:** The dap code uses GA4 Google's recommended naming convention for the events.

The table below shows how the Universal Analytics events are reporting in GA4:

Event	UA Naming Convention	GA4 Naming Convention
Download	– **Event Category:** Download | Outbound Downloads – **Event Action:** file_extension – **Event Label:** file_url – **Event Value:** 0	– **Event Name:** file_download – **Parameters:** outbound: true if outbound file_extension file_name link_text link_id link_url link_domain
Email Click	– **Event Category:** Mailto | Outbound MailTo – **Event Action:** link_url – **Event Label:** – **Event Value:** 0	– **Event Name:** email_click – **Parameters:** link_text link_id link_url link_domain link_classes outbound
Telephone Click	– **Event Category:** Telephone Clicks – **Event Action:** link_url – **Event Label:** – **Event Value:** 0	– **Event Name:** telephone_click – **Parameters:** link_text link_id link_url link_classes
Outbound Click	– **Event Category:** Outbound – **Event Action:** link_domain – **Event Label:** link_url – **Event Value:** 0	– **Event Name:** click – **Parameters:** link_text link_id link_url link_domain link_classes outbound

Video Interaction	– **Event Category:** YouTube Video – **Event Action:** play | pause | 33% | 66% | 90% | finish – **Event Label:** video_url – **Event Value:** 0	– **Event Name:** video_start | video_play | video_pause | video_progress | video_complete – **Parameters:** video_current_time video_duration video_percent video_provider video_title video_url
Custom Events (GAS)	– **Event Category:** event_category – **Event Action:** event_action – **Event Label:** event_label – **Event Value:** event_value	– **Event Name:** dap_event – **Parameters:** event_category event_action event_label event_value non_interaction

Known Limitations

1. The Federated DAP code is designed to work on all government sites, whether they already have inline, site-specific/independent GA tracking or not. Specific supported scenarios include:

   - UA/GA4 Site Specific before the Federated code (Default Tracking Object)
   - UA/GA4 Site Specific after the Federated code (Default Tracking Object)
   - UA/GA4 Site Specific before the Federated code (Custom Tracking Object)
   - GA4 Site Specific after the Federated code (Custom Tracking Object)
   - Classic GA Site Specific before the Federated code
   - Classic GA Site Specific after the Federated code

   There is one known limitation with a scenario where the Gov-wide Federated Analytics code fails: when an agency Universal Analytics tracking code (not DAP) uses a custom/non-default tracking object and it is added right after the Federated code. In this specific scenario, the Federated code will fail in reporting the first page hit and will be able to track normally all the consecutive hits. Example:

2. **Browser Limitation**: The Federated code doesn't fully support older versions of Microsoft Internet Explorer. While the Federated DAP code works with all known browsers, some features (e.g. the YouTube tracker) may not work properly on Internet Explorer 8 and earlier versions due to limitations in the YouTube API.