Monitoring and Reporting

This section goes more in depth on internal and external data sources for processing Adhese data.

- Measure
- BigQuery Reporting & Dataset Information

Measure

Once tags have been deployed (see Adhese Setup and Implementation), they start collecting data immediately.

What does Adhese record?

Actions and parameters divide the measurement process of Adhese into two categories:

- An **action** is 'something that happens';
- The **parameters** are 'all the information that is collected together with the action.'

Actions

Adhese measures **actions**. Actions are behaviours that a visitor can perform, such as visiting a web page, reading an article, viewing or clicking on a banner ad, watching a video, playing a game, submitting a form, purchasing a product, etc. Each time a user performs a pre-defined action, the client sends a request to the Adhese servers.

The most basic action of the ad-serving process is **impressions**. This means that a specific format (such as a leaderboard) was loaded onto a particular location (for example, the homepage or an article page) of a publication (for instance, a newspaper's website). It depends on the chosen implementation method when the counting of an impression takes place. Please refer to www.github.com/adhese/sdk for a complete description of the different implementation methods.

User actions: beyond impressions and clicks

Adhese allows for tracking of user actions beyond impressions and clicks. Additionally, Adhese enables tracking of multiple actions simultaneously.

The standard syntax for an action tracking call enables the insertion of three elements:

- A campaign identifier, for example, Volvo2015
- An identifier, like "info request" or "request for demo"
- A free value, such as the value of a purchase

> This tracking feature requires a custom setup of your account. Contact Support if you wish to implement this feature.

Let's look at some examples of user actions.

- **Within the ad environment** If Adhese serves a splash ad or interstitial, it is possible to track the visitor's behaviour. Does the visitor click outside the ad or the close button inside the ad to continue to the underlying webpage?
- **Outside the ad environment** Adhese can also track events that occur outside the online advertisement environment. For instance, if a user clicks on your ad, Adhese can track their visit and determine if they made a purchase as a result of your advertising. This allows for more accurate attribution models, as many events can contribute to an online purchase or lead.

Viewability

Adhese has a tracker that can measure viewability if (legacy) document.write is used (see Parameters for templates and Advar templates).

If you use JSON, your logic can be implemented to measure viewability and then report it to Adhese via the **viewableImpressionCounter** parameter, which is available in the JSON response (see List of JSON response structure object fields).

Parameters

A set of **parameters** accompanies every action or request. Parameters offer a greater insight into *who* is doing *what* and *where* and *how* these actions occur. The parameters consist of predefined

data, such as screen size, browser and operating system, URL and referrer, or custom user data, such as age and geographic location.

Custom parameters can be implemented based on your specific needs and possibilities. Refer to the Request Target Parameters appendix for a list of readily available parameters. The available target parameters and their prefixes are determined by the configuration of your Adhese account. Adhese will use this information to build your inventory and provide insights to match campaigns with your audience and vice versa.

> Remember that the unique identification of visitors and the storage of personal and other data are subject to national, European and international legislation. It is the exclusive responsibility of the publisher to comply with the law and adequately inform the user of his rights. Adhese can help and advise publishers here. More on user privacy is available in the GDPR section of the documentation.

Impression measurement

Impression measurement is an essential aspect of ad serving. Understanding how and when Adhese counts an impression is important. There are two scenarios:

1. An ad is requested and visualised.
2. An ad is requested and could be visualised, depending on rules like minimal screen size, device rotation, viewport, etc. The impression is counted later (i.e., deferred impression).

The second scenario results in two types of requests:

- An **ad** request
- A **track** request

An ad request is a request that returns an ad, the first scenario. The second scenario executes a tracking request after the initial ad request. Therefore, it acts as an impression request.

> If you are using track requests to measure impressions, these numbers will build up your inventory. The actual inventory is reported and used in forecasting.

The above explanation about impression measurement applies to any tag (See Implementation of the Adhese ad tags).

The Campaign actions report per position reports the number of requests, tracks, and other events.

> Third-party discrepancies may arise when the publisher's report does not match the advertiser's report. Adhese counts an impression the moment the ad request is made, while the advertiser may count an impression when the ad is delivered to the user. For more information about third-party discrepancies, refer to Troubleshooting.

Retention period of data

Historical summarised data, such as daily unique visitors, is available anytime and can be archived at the client's request. The data can be accessed through reporting, data mining, our API, or on-demand as a custom report.

However, there are some restrictions that you need to take into account:

- *Legislation*: certain information cannot be saved or must be deleted after a short period. The unique identification of users and personal and other data storage is subject to national, European and international legislation. Adhese can assist and advise publishers in the matter. However, it is the exclusive responsibility of the publisher to comply with the law and adequately inform users of their rights.
- *Common sense*: the amount of collected data can be huge for some (combinations of) parameters. You should consider whether storing such a large amount of data is necessary or desirable. The answer to this question will differ from client to client. Where there is a lot of data, it is often recommended that only aggregated data is maintained.

Predictions are usually based on historical data. The type of data saved, the frequency of saving (whether daily, hourly, or otherwise), and the duration of storage depend on the client's needs and strategy.

BigQuery Reporting & Dataset Information

Introduction

Adhese Gateway (GW) logs all actions taken while receiving a request from a device and returning a response milliseconds later. This data is made available to the Gateway users through BigQuery (BQ) tables that contain results per day and are updated at midnight.

The BQ tables are subject to change. Therefore, if you implement against them, you must be prepared to configure changes to the column structure. We will communicate planned changes prior to any deployments. However, we will not wait for every implementer to update.

Access your Adhese data

As a customer, you can access your data in three different ways, each suitable for a specific use case. These are briefly described below.

- **Through a predefined Google Data Studio report**

Standard Data Studio templates are available to connect to your data source. This gives you immediate insight without any additional development.

- **Access to the Data Studio data source(s)**

This allows you to create your own custom dashboards, which are useful for reporting on specific cases not covered by the standard dashboards.

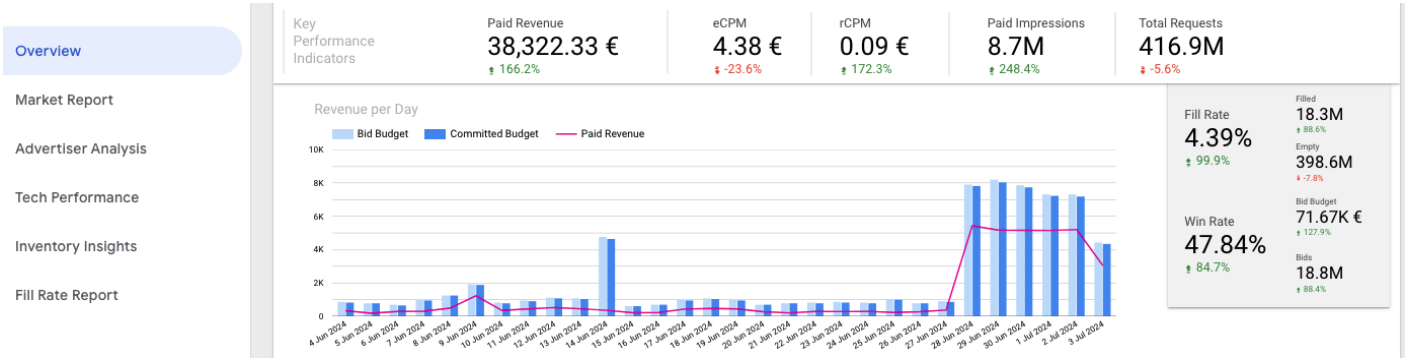
- **Direct access to the BigQuery table(s)**

The more advanced option is to query the dataset(s) or export them directly. This requires some technical knowledge.

If you would like to access your data in any of these ways, please contact Adhese support and provide a (Google) email address with which we can share access.

Through a Google Data Studio template

At Adhese, we offer a variety of predefined dashboards that provide immediate insights into your data. An example is shown below.



Access to the Data Studio data source(s)

Another option is to get direct access to the underlying data sources. This method makes it possible to create any custom report or dashboard. When working with the data, it is important to understand the different columns and how to interpret them.

Direct access to the BigQuery table(s)

This is the more advanced option for your data team. It allows them to query the data sources directly or export the data to their own data solution.

The following steps are required to access the BigQuery source:

1. Contact Adhese support and provide a Google email address connected to a Google Cloud account. We'll give the necessary permissions (BigQuery dataViewer, see role details here).
2. Once access is provided, you can query the different tables.

> Ensure you are **within your own Google Cloud project**; otherwise, errors will be returned.

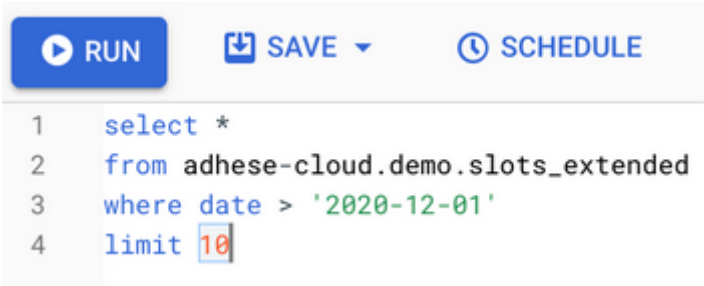
> Ensure you use the correct data location; by default, this is **europe-west2**.

The table names are structured as follows: `adhese-cloud.${customer}.${table_name}`

Where `${customer}` is your Adhese account name, and `${table_name}` is the table you are trying to query. See details about the different tables below.

You can find your Adhese account name in the URL used to log in to the Adhese platform (e.g. https://demo.adhese.org/)

A test query could look as follows:



If this works, you should be able to use any BigQuery functionality to further process your data.

If you still have any questions, please don't hesitate to contact us at Adhese support.

Overview of Collected Data

Two sets of data are collected during the lifetime of a single GW request/response: the **Media set** and the **Market set**.

The Media set contains all the information about the request, including the device it originated from, the content associated with it, the user associated with it (if any), and so on. The exact attributes of the media set differ for each GW account, depending on the available data and the context configured for that account.

The Market set contains the communication log between GW and the active markets for a given GW account. Market standards determine which attributes are available, though some are not available in all markets. The Market set contains all incoming bid responses from all active markets with advertiser and price information.

Basic table schema

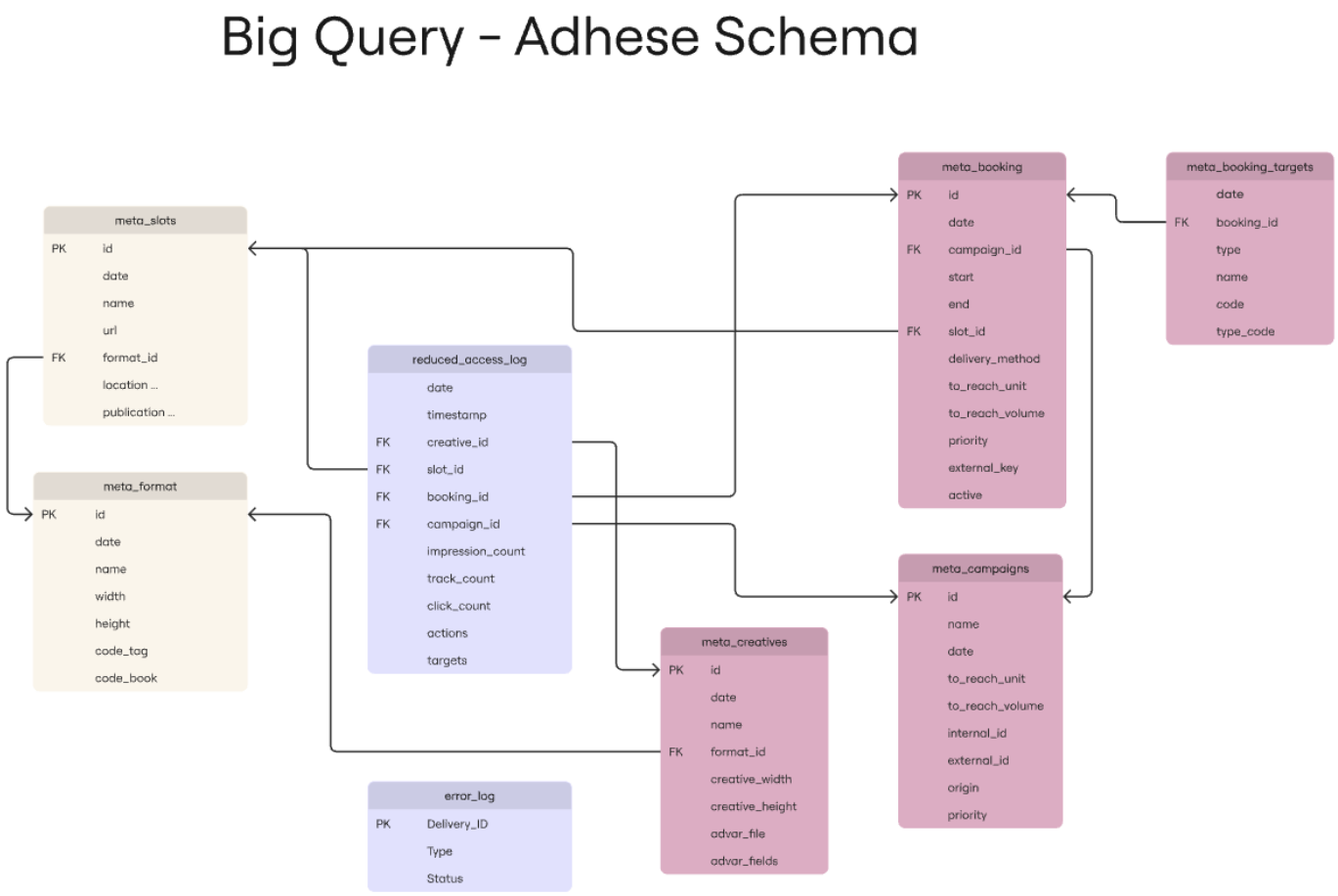


Table descriptions

slots_extended

`adhese-cloud.${customer}.slots_extended`

This table contains the Market data set. Each row contains the number of bid responses per day, aggregated in latency buckets of 10ms.

Show table

Field name	Type	Mode	Description
date	DATE	NULLABLE	The date on which these bid requests were received.
slot	RECORD	NULLABLE	
slot. id	INTEGER	NULLABLE	The ID of the slot the bid request was made from.
slot. code	STRING	NULLABLE	The code of the slot the bid request was made from.
publication	RECORD	NULLABLE	
publication. name	STRING	NULLABLE	The publication name in the Adhese dbase.
publication. url	STRING	NULLABLE	The publication URL in the Adhese dbase.
format	RECORD	NULLABLE	
format. name	STRING	NULLABLE	The format name in the Adhese database.
format. width	INTEGER	NULLABLE	The format width in pixels for this Bid Response.
format. height	INTEGER	NULLABLE	The format height in pixels for this Bid Response.
publisher	RECORD	NULLABLE	
publisher. name	STRING	NULLABLE	The name of this location in the Adhese dbase.
market	RECORD	NULLABLE	

market. name	STRING	NULLABLE	The market instance name as known in the Adhese configuration.
market. currency	STRING	NULLABLE	The currency this market uses for bid responses.
bid	RECORD	NULLABLE	
bid. count	INTEGER	NULLABLE	The number of bid responses for this record.
bid. amount	FLOAT	NULLABLE	The total value of the bid responses for this record in market.currency.
bid. winning	RECORD	NULLABLE	
bid.winning. count	INTEGER	NULLABLE	The number of winning bid responses for this record.
bid.winning. amount	FLOAT	NULLABLE	The total value of the winning bid responses for this record in market.currency.
bid. tracked	RECORD	NULLABLE	
bid.tracked. count	INTEGER	NULLABLE	The number of rendered bid responses for this record. (aka paid impressions)
bid.tracked. amount	FLOAT	NULLABLE	The total value of the rendered bid responses for this record in market.currency.
seatId	STRING	NULLABLE	The seat ID as known by this market.
domain	STRING	NULLABLE	The "OpenRTB domain" field, containing the domain of the advertising party or brand for this Bid Response.
dealId	STRING	NULLABLE	The deal ID as known by this market.
crId	STRING	NULLABLE	The creative ID as known by this market.

discountRate	FLOAT	NULLABLE	The value of the multiplier applied to this bid response.
exchangeRate	FLOAT	NULLABLE	The value of the exchange rate at the moment of the bid between market.currency and EUR.
latency	INTEGER	NULLABLE	The value of the latency bucket for these bids.
deviceType	STRING	NULLABLE	The label of the device that generated the bid request (phone, desktop, tablet, tv).
consent	BOOLEAN	NULLABLE	Indication of consent for the bid requests to this market.

reduced_access_log

`adhese-cloud.${customer}.reduced_access_log`

This table contains direct ad server and campaign data. It can be joined with the metadata tables below.

Show table

Field name	Type	Mode	Description
date	DATE	NULLABLE	The date the request was made
timestamp	TIMESTAMP	NULLABLE	Timestamp (grouped per hour) on which the request was made
creative_id	INTEGER	NULLABLE	The ID of the creative that was delivered
slot_id	INTEGER	NULLABLE	The ID of the slot for which the request was made
booking_id	INTEGER	NULLABLE	The ID of the booking that was delivered
campaign_id	INTEGER	NULLABLE	The ID of the campaign that was delivered

impression_count	INTEGER	NULLABLE	Each time an ad is requested, one impression is counted. This **does not** correspond to an IAB paid impression.
track_count	INTEGER	NULLABLE	When an ad is rendered on a page, 1 track is counted. This corresponds to an IAB paid impression.
raw_track_count	INTEGER	NULLABLE	Raw amount of tracked impressions that were made before filtering out the duplicates
click_count	INTEGER	NULLABLE	Each time a user clicks on an ad, 1 click is counted
raw_click_count	INTEGER	NULLABLE	Raw amount of clicks that were made before filtering out the duplicates
actions	STRING	REPEATED	A viewable impression is counted when a ‘Adhese_IABview’ or 'mrc_viewable' action is present.
targets	RECORD	REQUIRED	Contains the default and custom parameters that are set up. Contact the support team for more information about each field under targets.

Metadata tables

Updated daily with metadata for primary keys in the reduced_access_log table.

meta_slots

`adhese-cloud.${customer}.meta_slots`

> Extra information regarding slots (= positions) can be found here

Show table

Field name	Type	Mode	Description
date	DATE	NULLABLE	
id	INTEGER	NULLABLE	
name	STRING	NULLABLE	
url	STRING	NULLABLE	
position_type	STRING	NULLABLE	position type as defined when creating a slot

template_file	STRING	NULLABLE	
location_id	INTEGER	NULLABLE	
location_name	STRING	NULLABLE	
location_url	STRING	NULLABLE	
location_code	STRING	NULLABLE	
publication_id	INTEGER	NULLABLE	
publication_name	STRING	NULLABLE	
publication_url	STRING	NULLABLE	
publisher_id	INTEGER	NULLABLE	
publisher_name	STRING	NULLABLE	

meta_format

`adhese-cloud.${customer}.meta_format`

> Extra information regarding formats can be found here

Show table

Field name	Type	Mode	Description
date	DATE	NULLABLE	
id	INTEGER	NULLABLE	
name	STRING	NULLABLE	
width	INTEGER	NULLABLE	
height	INTEGER	NULLABLE	
code_tag	STRING	NULLABLE	Code used to request the format
code_book	STRING	NULLABLE	Code used to link formats (subformat setup)
code_import	STRING	NULLABLE	

meta_creatives

`adhese-cloud.${customer}.meta_creatives`

> Extra information regarding creatives can be found here

Show table

Field name	Type	Mode	Description
date	DATE	NULLABLE	
id	INTEGER	NULLABLE	
name	STRING	NULLABLE	
type	STRING	NULLABLE	
format_name	STRING	NULLABLE	
format_width	INTEGER	NULLABLE	
format_height	INTEGER	NULLABLE	
creative_width	INTEGER	NULLABLE	
creative_height	INTEGER	NULLABLE	
creative_url	STRING	NULLABLE	
size_kb	INTEGER	NULLABLE	size restriction if configured
advar_fields	RECORD	REPEATED	advar template fields
advar_file	STRING	NULLABLE	chosen advar template

> size_kb does not contain the actual size of the uploaded files within the creative.

meta_booking

`adhese-cloud.${customer}.meta_booking`

> Extra information regarding bookings can be found here

Show table

meta_booking			Description
Field name	**Type**	**Mode**	
date	DAT	NULLABLE	
id	INTEGER	NULLABLE	
campaign_id	INTEGER	NULLABLE	
slot_id	INTEGER	NULLABLE	
start	TIMESTAMP	NULLABLE	
end	TIMESTAMP	NULLABLE	
delivery_method	STRING	NULLABLE	
to_reach_unit	STRING	NULLABLE	e.g. impressions/clicks
to_reach_volume	INTEGER	NULLABLE	amount of units to reach
priority	STRING	NULLABLE	
capping	STRING	NULLABLE	
delivery_limit	STRING	NULLABLE	
pricing_type	STRING	NULLABLE	
unit_price	FLOAT	NULLABLE	
external_key	STRING	NULLABLE	
comment	STRING	NULLABLE	
daily_start	INTEGER	NULLABLE	
daily_end	INTEGER	NULLABLE	
exclusive	BOOLEAN	NULLABLE	
compete_with_rtb	BOOLEAN	NULLABLE	
together_with	INTEGER	REPEATED	
active	RECORD	NULLABLE	
active.monday	BOOLEAN	NULLABLE	
active.tuesday	BOOLEAN	NULLABLE	
active.wednesday	BOOLEAN	NULLABLE	
active.thursday	BOOLEAN	NULLABLE	

active.friday	BOOLEAN	NULLABLE	
active.saturday	BOOLEAN	NULLABLE	
active.sunday	BOOLEAN	NULLABLE	

meta_campaign

`adhese-cloud.${customer}.meta_campaign`

> Extra information regarding campaigns can be found here

Show table

Field name	Type	Mode	Description
date	DATE	NULLABLE	
id	INTEGER	NULLABLE	
name	STRING	NULLABLE	
priority	STRING	NULLABLE	
created_by	STRING	NULLABLE	
to_reach_unit	STRING	NULLABLE	e.g. impressions/clicks
to_reach_volume	INTEGER	NULLABLE	amount of units to reach
advertiser_company	STRING	NULLABLE	
invoice_company	STRING	NULLABLE	
media_company	STRING	NULLABLE	
intermediary_company	STRING	NULLABLE	
client_contacts	STRING	NULLABLE	
internal_id	STRING	NULLABLE	
external_id	STRING	NULLABLE	
account_managers	STRING	NULLABLE	
public_comment	STRING	NULLABLE	
internal_comment	STRING	NULLABLE	

meta_booking_targets

`adhese-cloud.${customer}.meta_booking_targets`

Contains for each booking the target group, target label and target code that is used in that booking.

> Extra information regarding targeting can be found here

Show table

Field name	Type	Mode	Description
date	DATE	NULLABLE	
booking_id	INTEGER	NULLABLE	
type	STRING	NULLABLE	target name
type_code	STRING	NULLABLE	target prefix
name	STRING	NULLABLE	target value name
code	STRING	NULLABLE	target value code

meta_dooh_player (not available)

`adhese-cloud.${customer}.meta_dooh_player`

Show table

Field name	Type	Mode	Description
id	INTEGER	NULLABLE	
date	DATE	NULLABLE	The date on which these bid requests were received.
store_city	STRING	NULLABLE	

store_id	STRING	NULLABLE	
store_formula	STRING	NULLABLE	Type of store.
store_channel	STRING	NULLABLE	
store_category	STRING	NULLABLE	
store_latlong	STRING	NULLABLE	Latitudinal and longitudinal coordinates of the store.
store_adress	STRING	NULLABLE	
store_postal_code	STRING	NULLABLE	

Other

error_log

`adhese-cloud.${customer}.error_log`

This is a generic table used to store errors. For instance, it can be employed to identify unmatched slot requests.

Show table

Field name	Type	Mode	Description
date	DATE	NULLABLE	
error_type	STRING	NULLABLE	
message	STRING	NULLABLE	
count	INTEGER	NULLABLE	

Possible error types

SLOT_ID_UNKNOWN	The code of the requested position in the ad request does not match a position in Adhese

CREATIVES_ID_TOO_LONG	The creative identifier in the click tracking URL is not a valid ID.
SLOT_ID_UNKNOWN	sl target could not be matched to a valid slot id
XANDR_SLOT_ID_UNKNOWN	sl target could not be matched to a valid slot id and starts with xandr_
BAD_CLICK_URL	An invalid value was found in the click url. Related to the click part, e.g. /ad695511-11419
BAD_TRACK_URL	An invalid value was found in the track url. Related to the track part, e.g. 581025-mrc_50_1s.track
REQUEST_PARAMETER_DUPLICATE	e.g more than one sl parameter was found
REQUEST_PARAMETER_MISSING	e.g no sl parameter was found