Package 'cjar'

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| Description Connect and pull data from the 'CJA' API, which powers 'CJA Workspace' https://github.com/AdobeDocs/cja-apis . The package was developed with the analyst in mind and will continue to be developed with the guiding principles of iterative, repeatable, timely analysis. New features are actively being developed and we value your feedback and contribution to the process. |
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Description

cjar-package

Connect to the 'CJA' API https://developer.adobe.com/cja-apis/docs which powers 'CJA Workspace'. The package was developed with the analyst in mind, and it will continue to be developed with the guiding principles of iterative, repeatable, timely analysis.

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cjar *Package*

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| cja_auth Generate an access | s token for the Customer Journey Analytics API |
|-----------------------------|--|
|-----------------------------|--|

Description

Note: cja_auth() is the primary function used for authorization. auth_s2s() and auth_jwt() should typically not be called directly.

Usage

```
cja_auth(type = "s2s", ...)

auth_jwt(
   file = Sys.getenv("CJA_AUTH_FILE"),
   private_key = Sys.getenv("CJA_PRIVATE_KEY"),
   jwt_token = NULL,
   ...
)

auth_s2s(file = Sys.getenv("CJA_AUTH_FILE"), s2s_token = NULL, ...)

auth_oauth(
   client_id = Sys.getenv("CJA_CLIENT_ID"),
   client_secret = Sys.getenv("CJA_CLIENT_SECRET"),
   use_oob = TRUE
)
```

Arguments

| type | Either 'jwt' or 's2s' (default). This can be set explicitly, but a best practice is to run cja_auth_with() to set the authorization type as an environment variable before running cja_auth() |
|---------------|--|
| | Additional arguments passed to auth functions. |
| file | A JSON file containing service account credentials required for JWT authentication. This file can be downloaded directly from the Adobe Console, and should minimally have the fields API_KEY or CLIENT_ID, CLIENT_SECRET, ORG_ID, and TECHNICAL_ACCOUNT_ID. |
| private_key | Filename of the private key for JWT authentication. |
| jwt_token | (Optional) A custom, encoded, signed JWT claim. If used, client_id and client_secret are still required. |
| s2s_token | (Optional) A custom, encoded, signed JWT claim. If used, client_id and client_secret are still required. |
| client_id | The client ID, defined by a global variable or manually defined |
| client_secret | The client secret, defined by a global variable or manually defined |

cja_auth_with

use_oob

if FALSE, use a local webserver for the OAuth dance. Otherwise, provide a URL to the user and prompt for a validation code. Defaults to the value of the httr_oob_default default, or TRUE if httpuv is not installed.

Value

The path of the cached token. This is returned invisibly.

Functions

auth_jwt(): Authenticate with JWT tokenauth_s2s(): Authenticate with S2S token

• auth_oauth(): Authorize via OAuth 2.0

See Also

```
cja_auth_with()
```

cja_auth_with

Set authorization options

Description

Get or **set** various authorization options. If called without an argument, then these functions return the current setting for the requested option (which can be NULL if the option has not been set). To clear the setting, pass NULL as an argument.

cja_auth_with sets the type of authorization for the session. This is used as the default by cja_auth() when no specific option is given.

cja_auth_path sets the file path for the cached authorization token. It should be a directory, rather than a filename. If this option is not set, the current working directory is used instead.

cja_auth_name sets the file name for the cached authorization token. If this option is not set, the default filename is cja_auth.rds

```
cja_auth_with(type = "s2s")
cja_auth_path(path)
cja_auth_name(name)
```

Arguments

type The authorization type: 's2s'

path The location for the cached authorization token. It should be a directory, rather

than a filename. If this option is not set, the current working directory is used instead. If the location does not exist, it will be created the first time a token is

cached.

name The filename, such as cja_auth.rds for the cached authorization token file.

The file is stored as an RDS file, but there is no requirement for the .rds file

extension. .rds is not appended automatically.

Value

The option value, invisibly

See Also

```
cja_auth()
```

cja_freeform_table

Get a freeform table

Description

Get a report analogous to a **Freeform Table** visualization in CJA Workspace. The function uses the arguments to construct and execute a JSON-based query to the CJA API and then returns the results as a data frame.

```
cja_freeform_table(
  dataviewId = Sys.getenv("CJA_DATAVIEW_ID"),
  date_range = c(Sys.Date() - 30, Sys.Date() - 1),
  dimensions = c("daterangeday"),
  metrics = c("visits", "visitors"),
  top = c(0),
  page = 0,
  filterType = "breakdown",
  segmentId = NA,
  metricSort = "desc",
  include_unspecified = TRUE,
  search = NA,
  prettynames = FALSE,
  allowRemoteLoad = "default",
  useCache = TRUE,
  useResultsCache = FALSE,
  includeOberonXml = FALSE,
```

```
includePlatformPredictiveObjects = FALSE,
  debug = FALSE,
  check_components = FALSE
)
```

Arguments

dataviewId CJA Data View ID (dv). If an environment variable called CJA_DATAVIEW_ID

exists in .Renviron or elsewhere and no dataviewId argument is provided, then the CJA_DATAVIEW_ID value will be used. Use $cja_get_dataviews()$ to

get a list of available dataviewId. Required

date_range A length-2 vector with a start date and an end date. POSIXt objects are sent as is,

for fine control over the date range. Numeric values are automatically converted

to dates.

dimensions A character vector of dimensions. There is currently a limit of 20 dimension

breakdowns. Each dimension value that gets broken down by another dimension requires an additional API call, so the more dimensions that are included, the longer the function will take to return results. This is how the CJA API works.

Use cja_get_dimensions() to get a list of available dimensions IDs.

metrics A character vector of metrics. Use cja_get_metrics() and cja_get_calculatedmetrics()

to get a list of available metrics IDs.

top The number of values to be pulled for each dimension. The default is 5 and

the "top" is based on the first metric value (along with metricSort). If there are multiple dimensions, then this argument can either be a vector that includes the number of values to include at each level (each breakdown) or, if a single value is used, then that will be the maximum number of values to return at each level. See the **Details** for information on the unique handling of daterange...

values.

page Used in combination with top to return the next page of results. Uses 0-based

numbering (e.g., top = 50000 and page = 1 will return the top 50,000 items

starting at 50,001).

filterType This is a placeholder argument for use as additional functionality is added to

the package. Currently, it defaults to breakdown, and that is the only supported

value.

segmentId A single segment ID or a vector of multiple segment IDs to apply to the overall

report. If multiple segmentId values are included, the segments will be effectived ANDed together, just as if multiple segments were added to the header of an Analysis Workspace panel. Use cja_get_filters() to get a list of available

segmentId values.

metricSort Pre-sorts the table by metrics. Values are either asc (ascending) or desc (de-

scending).

include_unspecified

Whether or not to include **Unspecified** values in the results. This is the equivalent of the **Include Unspecified** (**None**) checkbox in freeform tables in Analysis Workspace. This defaults to TRUE, which includes **Unspecified** values in the

results.

search Criteria to filter the results by one or more dimensions. Searches are case-

insenstive. Refer to the **Details** for more information on constructing values

for this argument.

prettynames A logical that determines whether the column names in the results use the API

field name (e.g., "mobiledevicetype", "pageviews") or the "pretty name" for the field (e.g., "Mobile Device Type", "Page Views"). This applies to both dimensions and metrics. The default value is FALSE, which returns the API field names. For custom eVars, props, and events, the non-pretty values are simply the variable number (e.g., "evar2", "prop3", "event15"). If TRUE, undoes any efficiency

gains from setting check_components to FALSE.

allowRemoteLoad

Controls if Oberon should remote load data. Default behavior is true with fall-back to false if remote data does not exist. The default is "default" but options

include: "true", "false", or "default".

useCache Use caching for faster requests (Use cached dimensions to speed up permission

checks - This does not do any report caching). TRUE (default) or FALSE

useResultsCache

Use results caching for faster reporting times (This is a pass through to Oberon

which manages the Cache) FALSE (default) or TRUE

includeOberonXml

Controls if Oberon XML should be returned in the response - DEBUG ONLY.

FALSE (default) or TRUE

includePlatformPredictiveObjects

Controls if platform Predictive Objects should be returned in the response. Only available when using Anomaly Detection or Forecasting- DEBUG ONLY. FALSE

(default) or TRUE

debug Set to TRUE to publish the full JSON request(s) being sent to the API to the

console when the function is called. The default is FALSE.

check_components

Logical, whether to check the validity of metrics and dimensions before running the query. Defaults to TRUE, but causes cja_freeform_report to request all dimensions and metrics from the API, which may be inefficient if you're running many queries. If you have many queries, it's more efficient to implement validity

checking yourself on either side of your queries.

Details

This function is based on the **Freeform Table** visualization in Analysis Workspace. It is accessing the same API call type that is used to generate those visualizations.

Dimension Ordering:

CJA only queries one dimension at a time, even though the results get returned in a single data frame (or table in the case of Analysis Workspace). The more dimensions are included in the report—the more breakdowns of the data—the more queries are required. As a result, the *order* of the dimensions *can* have a dramatic impact on the total query time, even if the resulting data is essentially identical.

One way to understand this is to consider how much dragging and dropping would be required to return the data in Analysis Workspace if you were not able to "Shift"-"click" to highlight multiple values before dragging a new dimension to break down existing values.

Consider a scenario where you are pulling metrics for the last 30 days (daterangeday) for **Mobile Device Type** (mobiledevicetype), which has 7 unique values. Setting dimensions = c("daterangeday", "mobiledevicetype") would make one query to get the values of the 30 days included. The query would then run a separate query for *each of those 30 days* to get the mobiledevicetype results for each day. So, this would be **31 API calls**.

If, instead, the function was called with the dimension values reversed (dimensions = c("mobiledevicetype", "daterangeday")), then the first query would return the 7 mobiledevicetype values, and then would run an additional query for each of those 7 mobile device type values to return the results for the 30 days within each device type. This would be only 7 API calls.

Strategically ordering dimensions—and then wrangling the resulting data set as needed—is one of the best ways to improve query performance.

Date Handling:

Date handling has several special characteristics that are worth getting familiar with:

- The API names for day, week, month, etc. are prepended with daterange, so daily data uses daterangeday, weekly data uses daterangeweek, monthly data uses daterangementh, etc.
- When setting the argument for top, if the first (or only) dimension value is a daterange... object, then, if this argument is not explicitly specified *or* if it uses only a single value (e.g., top = 10), the function will still return all of the values that fall in that date range. For instance, if the date_range was set for a 30-day period and the first dimension value was daterangeday, *and* no value is specified for top, rather than simply returning the first 5 dates in the range, all 30 days will be returned. In the same scenario, if top = 10 was set, then all 30 days would still be returned, and the 10 would simply be applied to the additional dimensions.
- If you want to return all of the date/time values but then have specific control over the number of values returned for each of the drilldown dimensions, then set 0 as the first value in the top argument and then specify different numbers for each breakdown (e.g., top = c(0, 3, 10) would return all of the date/time values for the specified date_range, the top 3 values for the second specified dimension, and then the top 10 values for each of the next dimension's results).
- If you are using a daterange... value *not* as the first dimension, then simply using 0 at the same level in the top argument specification will return all of the values for that date/time value.

Search/Filtering:

There are powerful filtering abilities within the function. However, to support that power requires a syntax that can feel a bit cumbersome for simple queries. *Note:* search filters are case-insensitive. This is CJA API functionality and can not be specified otherwise in queries.

The search argument takes a vector of search strings, with each value in the vector corresponding to the dimension value that is at the same position. These search strings support a range of operators, including AND, OR, NOT, MATCH, CONTAINS, BEGINS-WITH, and ENDS-WITH.

The default for any search string is to use CONTAINS. Consider a query where dimensions = c("mobiledevicetype", "lasttouchchannel"):

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• search = "CONTAINS 'mobile'" will return results where mobiledevicetype contains "mobile", so would return all rows for **Mobile Phone**.

- This could be shortened to search = "'mobile'" and would behave exactly the same, since CONTAINS is the default operator
- search = c("CONTAINS 'mobile'", "CONTAINS 'search'") will return results where mobiledevicetype contains "mobile" and, within those results, results where lasttouchchannel contains "search".
- search = c("(CONTAINS 'mobile') OR (CONTAINS 'tablet')", "(MATCH 'paid search')") will return results where mobiledevicetype contains "mobile" or "tablet" and, within those results, will only include results where lasttouchchannel exactly matches "paid search" (but is case-insensitive, so would return "Paid Search" values).

Value

A data frame with dimensions and metrics.

See Also

```
cja_get_me(), cja_get_dataviews(), cja_get_filters(), cja_get_dimensions(), cja_get_metrics()
Use cja_get_me() to get started.
```

Description

This function will pull a list of audit logs defined by the different defined parameters.

```
cja_get_audit_logs(
    startDate = NULL,
    endDate = NULL,
    action = NULL,
    component = NULL,
    componentId = NULL,
    userType = NULL,
    userId = NULL,
    userEmail = NULL,
    description = NULL,
    pageSize = 100,
    pageNumber = 0,
    debug = FALSE
)
```

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Arguments

startDate Date is not required, but if you filter by date, both start & end date must be set.

endDate Date is not required, but if you filter by date, both start & end date must be set.

action The action you want to filter by. See details section for options

component The type of component you want to filter by. See details section for options

componentId The ID of the component.

userType The type of user.

userId The ID of the user.

userEmail The email address of the user.

description The log description you want to filter by.

pageSize Number of results per page. If left null, the default size will be set to 100.

pageNumber Page number (base 0 - first page is "0")

debug Used to help troubleshoot api call issues. Shows the call and result in the console

Details

startDate/endDate format

Action available values are: 'CREATE', 'EDIT', 'DELETE', 'LOGIN_FAILED', 'LOGIN_SUCCESSFUL', 'API_REQUEST', 'LOGOUT', 'APPROVE', 'UNAPPROVE', 'SHARE', 'UNSHARE', 'TRANSFER', 'ORG_CHANGE'

Component available values are: 'ANNOTATION', 'CALCULATED_METRIC', 'CONNECTION', 'DATA_GROUP', 'DATA_VIEW', 'DATE_RANGE', 'FILTER', 'MOBILE', 'PROJECT', 'RE-PORT', 'SCHEDULED_PROJECT', 'USER', 'USER_GROUP', 'IMS_ORG', 'FEATURE_ACCESS'

Value

A data frame of audit logs and corresponding metadata

Examples

```
## Not run:
cja_get_audit_logs()
## End(Not run)
```

```
cja_get_audit_logs_search
```

Get audit logs search

Description

This function will pull a list of audit logs.

Usage

```
cja_get_audit_logs_search(body = NULL, debug = FALSE)
```

Arguments

body The json string with the search functions included

debug Set to TRUE if needed to help troubleshoot api call errors

Value

A data frame of audit logs and corresponding metadata

Examples

```
## Not run:
cja_get_audit_logs_search(body = jsonrequest)
## End(Not run)
```

```
\verb|cja_get_calculated| metrics|
```

Get a list of calculated metrics.

Description

Retrieve a list of available calculated metrics. The results will always include these default items: id, name, description, owner, polarity, precision, type. Other attributes can be optionally requested through the expansion field.

Usage

```
cja_get_calculatedmetrics(
  expansion = NULL,
  includeType = "all",
  dataviewIds = NULL,
  ownerId = NULL,
  filterByIds = NULL,
  toBeUsedInRsid = NULL,
  locale = "en_US",
  favorite = NULL,
  approved = NULL,
  pagination = TRUE,
  limit = 10,
  page = 0,
  sortDirection = "DESC",
  sortProperty = NULL,
  debug = FALSE
)
```

Arguments

locale

favorite

available.

favorites.

| expansion | Additional calculated metric metadata fields to include in the results: "dataName" |
|----------------|--|
| • | "approved" "favorite" "shares" "tags" "sharesFullName" "usageSummary" "us- |
| | ageSummaryWithRelevancyScore" "reportSuiteName" "siteTitle" "ownerFull- |
| | Name" "modified" "migratedIds" "isDeleted" "definition" "authorization" "compatibility" "legacyId" "internal" "dataGroup" "categories". |
| includeType | Include additional calculated metrics not owned by user. Available values are |
| | all (default), shared, templates, unauthorized, deleted, internal, and curatedItem. The all option takes precedence over shared |
| dataviewIds | Filter the list to only include calculated metrics tied to a specified dataviewId or |
| | list of dataviewIds. Specify multiple dataviewIds as a vector (i.e., "dataviewIds = c("dataviewid_1" Use cja_get_dataviews to get a list of available dataviewId values. |
| ownerId | Filter the list to only include calculated metrics owned by the specified loginId. |
| filterByIds | Filter the list to only include calculated metrics in the specified list as specified by a single string or as a vector of strings. |
| toBeUsedInRsid | The data view where the calculated metric intended to be used. This data view will be used to determine things like compatibility and permissions. If it is not |
| | specified then the permissions will be calculated based on the union of all met- |
| | rics authorized in all groups the user belongs to. If the compatibility expansion |
| | |

is specified and toBeUsedInRsid is not then the compatibility returned is based off the compatibility from the last time the calculated metric was saved.

The locale that system-named metrics should be returned in. Non-localized values will be returned for title, name, description, etc. if a localized value is not

Set to TRUE to only include calculated metrics that are favorites in the results.

A value of FALSE will return all calculated metrics, including those that are

approved Set to TRUE to only include calculated metrics that are approved in the results.

A value of FALSE will return all calculated metrics, including those that are

approved and those that are not.

pagination return paginated results. Set to 'TRUE' by default

limit Number of results per page. Default is 10

page The "page" of results to display. This works in conjunction with the limit

argument and is zero-based. For instance, if limit = 10 and page = 1, the results

returned would be 11 through 20.

sortDirection The sort direction for the results: ASC (default) for ascending or DESC for de-

scending. (This is case insensitive, so asc and desc work as well.)

sortProperty The property to sort the results by. Currently available values are id (default),

name, and modified_date. Note that setting expansion = modified returns results with a column added called modified, which is the last date the calculated metric was modified. When using this value for sortProperty, though, the

name of the argument is modified_date.

debug Include the output and input of the api call in the console for debugging. Default

is FALSE

Details

This function is useful/needed to identify the specific ID of a calculated metric for use in other functions like cja_freeform_report.

The expansion argument accepts the following values, which will then include additional columns in the results:

- ownerFullName: adds owner.name and owner.login columns to the results (owner.id is already included by default).
- **modified**: adds a modified column to the output with the date (ISO 8601 format) each calculated metric was last modified.
- **definition**: adds *multiple* columns (the number will vary based on the number and complexity of calculated metrics returns) that provide the actual formula for each of the calculated metrics. This is returned from the API as a JSON object and converted into columns by the function, which means it is pretty messy, so, really, it's not recommended that you use this value.
- **compatability**: should add a column with the products that the metric is compatible with, but this behavior has not actually been shown to be true, so this may actually do nothing if included.
- reportSuiteName: adds a reportSuiteName and a siteTitle column with the friendly report suite name for the RSID.
- tags: adds a column with an embedded data frame with all of the existing tags that are associated with the calculated metric. This can be a bit messy to work with, but the information is, at least, there.

Other Expansion options that are available: "dataName", "approved", "favorite", "shares", "shares-FullName", "usageSummary", "usageSummaryWithRelevancyScore", "siteTitle", "migratedIds", "isDeleted", "authorization", "legacyId", "internal", "dataGroup", "categories"

Multiple values for expansion can be included in the argument as a vector. For instance, expansion = c("tags", "modified") will add both a tags column and a modified column to the output.

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Value

A data frame of calculated metrics and their metadata.

See Also

```
cja_get_metrics
```

cja_get_dataviews

Get data view ids

Description

This function will pull a list of data views ids that you have access to. These are similar to report suites in Adobe Analytics.

Usage

```
cja_get_dataviews(
  expansion = c("name"),
  parentDataGroupId = NULL,
  externalIds = NULL,
  externalParentIds = NULL,
  dataviewIds = NULL,
  includeType = NULL,
  cached = TRUE,
  limit = 1000,
  page = 0,
  sortDirection = "ASC",
  sortProperty = "id",
  debug = FALSE
)
```

Arguments

expansion

Comma-delimited list of additional fields to include on response. Options include: "name" "description" "owner" "isDeleted" "parentDataGroupId" "segmentList" "currentTimezoneOffset" "timezoneDesignator" "modified" "createdDate" "organization" "curationEnabled" "recentRecordedAccess" "sessionDefinition" "externalData" "containerNames"

parentDataGroupId

Filters data views by a single parentDataGroupId

externalIds Comma-delimited list of external ids to limit the response with externalParentIds

Comma-delimited list of external parent ids to limit the response with.

dataviewIds Comma-delimited list of data view ids to limit the response with.

includeType Include additional DataViews not owned by user. Options: "deleted"

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cached results. TRUE (default) or FALSE

limit number of results per page. 10 is default

page Page number (base 0 - first page is 0). 0 is default

sortProperty property to sort by (only modifiedDate and id are currently allowed). 'id' is

default

debug Used to help troubleshoot api call issues. Shows the call and result in the console

Details

Expansion available items: "name" "description" "owner" "isDeleted" "parentDataGroupId" "segmentList" "currentTimezoneOffset" "timezoneDesignator" "modified" "createdDate" "organization" "curationEnabled" "recentRecordedAccess" "sessionDefinition" "externalData" "containerNames"

Value

A data frame of dataview ids and their corresponding metadata

Examples

```
## Not run:
cja_get_dataviews()
## End(Not run)
```

cja_get_dateranges

Get a paginated list of dateranges in CJA

Description

This function allows users to pull a list of stored date ranges so that they can be reused in an analysis.

```
cja_get_dateranges(
  locale = "en_US",
  filterByIds = NULL,
  limit = 10,
  page = 0,
  expansion = "definition",
  includeType = "all",
  debug = FALSE
)
```

cja_get_dimensions

Arguments

locale Locale - Default: "en_US"

filterByIds Filter list to only include date ranges in the specified list (comma-delimited list

of IDs). This has filtered Ids from tags, approved, favorites and user specified

Ids list.

limit Number of results per page. default is 10 page Page number (base 0 - first page is "0")

expansion Comma-delimited list of additional date range metadata fields to include on re-

sponse.

includeType Include additional filters not owned by user. Default is "all". Options include:

"all" (default), "shared", "templates"

debug Used to help troubleshoot api call issues. Shows the call and result in the console

Details

expansion options can include any of the following: "definition" "modified" "ownerFullName" "sharesFullName" "tags"

includeType options can include any of the following: "all", "shared", "templates"

Value

A data frame of dateranges and their corresponding metadata

Examples

```
## Not run:
cja_get_dateranges()
## End(Not run)
```

cja_get_dimensions

Get a list of dimensions in CJA

Description

Retrieves a list of dimensions available in a specified dataviewId

```
cja_get_dimensions(
  dataviewId = Sys.getenv("CJA_DATAVIEW_ID"),
  expansion = "description",
  includeType = NULL,
  locale = "en_US",
  debug = FALSE
)
```

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Arguments

dataviewId Required The id of the dataview for which to retrieve dimensions. If an environ-

ment variable called CJA_DATAVIEW_ID exists in .Renviron or elsewhere and no dataviewId argument is provided, then the CJA_DATAVIEW_ID value will be

used. Use cja_get_dataviews() to get a list of available dataviewId.

expansion Comma-delimited list of additional segment metadata fields to include on re-

sponse. See Details for all options available.

includeType Include additional segments not owned by user. Options include: "shared" "tem-

plates" "deleted" "internal"

locale Locale - Default: "en_US"

debug Used to help troubleshoot api call issues. Shows the call and result in the console

Details

Expansion options can include the following: "approved" "favorite" "tags" "usageSummary" "usageSummaryWithRelevancyScore" "description" "sourceFieldId" "segmentable" "required" "hide-FromReporting" "hidden" "includeExcludeSetting" "fieldDefinition" "bucketingSetting" "noValueOptionsSetting" "defaultDimensionSort" "persistenceSetting" "storageId" "tableName" "dataSetIds" "dataSetType" "type" "schemaPath" "hasData" "sourceFieldName" "schemaType" "sourceField-Type" "fromGlobalLookup" "multiValued" "precision"

Value

A data frame of dimensions in a specified dataview

Examples

```
## Not run:
cja_get_dimensions(dataviewId = "dv_5f4f1e2572ea0000003ce262")
## End(Not run)
```

cja_get_filter

Get a filter in CJA

Description

Retrieves a specific filter, also known as a segment in Adobe Analytics.

```
cja_get_filter(
  id = NULL,
  toBeUsedInRsid = NULL,
  locale = "en_US",
  expansion = "definition",
  debug = FALSE
)
```

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Arguments

id The filter id to retrieve

toBeUsedInRsid The data view where the filter is intended to be used. This data view will be

used to determine things like compatibility and permissions.

locale - Default: "en_US"

expansion Comma-delimited list of additional filter metadata fields to include on response.

See Details for all options available

debug Used to help troubleshoot api call issues. Shows the call and result in the console

Details

Expansion options can include the following: "compatibility", "definition", "internal", "modified", "isDeleted", "definitionLastModified", "createdDate", "recentRecordedAccess", "performanceScore", "owner", "dataId", "ownerFullName", "dataName", "sharesFullName", "approved", "favorite", "shares", "tags", "usageSummary", "usageSummaryWithRelevancyScore"

Value

A filter list

Examples

```
## Not run:
cja_get_filter()
## End(Not run)
```

cja_get_filters

Get a paginated list of filters in CJA

Description

Retrieves a paginated list of filters, also known as segments in Adobe Analytics.

```
cja_get_filters(
  expansion = NULL,
  includeType = "all",
  dataviewIds = NULL,
  ownerId = NULL,
  filterByIds = NULL,
  toBeUsedInRsid = NULL,
  locale = "en_US",
  name = NULL,
  filterByModifiedAfter = NULL,
```

cja_get_filters 19

```
cached = TRUE,
pagination = TRUE,
limit = 10,
page = 0,
sortDirection = "ASC",
sortProperty = "id",
debug = FALSE
)
```

Arguments

expansion Comma-delimited list of additional segment metadata fields to include on re-

sponse. See Details for all options available

include Type Include additional filters not owned by user. Default is "all". Options include:

"shared" "templates" "deleted" "internal"

dataviewIds Filter list to only include filters tied to the specified data group ID list (comma-

delimited)

ownerId Filter list to only include filters owned by the specified imsUserId

filterByIds Filter list to only include filters in the specified list (comma-delimited list of

IDs). This has filtered Ids from tags, approved, favorites and user specified Ids

list.

toBeUsedInRsid The report suite where the segment is intended to be used. This report suite will

be used to determine things like compatibility and permissions.

locale Locale - Default: "en US"

name Filter list to only include filters that contains the Name. Can only be a string

value.

filterByModifiedAfter

Filter list to only include filters modified since this date. 'yyyy-mm-dd' format

cached Return cached results. TRUE by default.

pagination Return paginated results

limit Number of results per page

page Page number (base 0 - first page is "0")

sortDirection Sort direction ('ASC' or 'DESC'). 'ASC' is default.

sortProperty Property to sort by (name, modified_date, performanceScore, id is currently

allowed). 'id' is default

debug Used to help troubleshoot api call issues. Shows the call and result in the console

Details

Expansion options can include the following: "compatibility", "definition", "internal", "modified", "isDeleted", "definitionLastModified", "createdDate", "recentRecordedAccess", "performanceScore", "owner", "dataId", "ownerFullName", "dataName", "sharesFullName", "approved", "favorite", "shares", "tags", "usageSummary", "usageSummaryWithRelevancyScore"

cja_get_me

Value

A data frame of company ids and company names

Examples

```
## Not run:
cja_get_filters()
## End(Not run)
```

cja_get_me

Get my information

Description

This function will quickly pull the list of company ids that you have access to

Usage

```
cja_get_me(expansion = NULL, debug = FALSE)
```

Arguments

expansion Comma-delimited list of additional metadata fields to include in the response.

Options are 'admin'

debug Used to help troubleshoot api call issues. Shows the call and result in the console

Value

A list of the current user metadata

Examples

```
## Not run:
cja_get_me()
## End(Not run)
```

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cja_get_metrics

Get a list of metrics in CJA

Description

Retrieves a list of metrics available in a specified dataview

Usage

```
cja_get_metrics(
  dataviewId = Sys.getenv("CJA_DATAVIEW_ID"),
  expansion = "description",
  includeType = NULL,
  locale = "en_US",
  debug = FALSE
)
```

Arguments

| dataviewId | Required The id of the dataview for which to retrieve metrics. If an environment variable called CJA_DATAVIEW_ID exists in .Renviron or elsewhere and no dataviewId argument is provided, then the CJA_DATAVIEW_ID value will be used. Use cja_get_dataviews() to get a list of available dataviewId. |
|-------------|---|
| expansion | Comma-delimited list of additional segment metadata fields to include on response. See Details for all options available. |
| includeType | Include additional segments not owned by user. Options include: "shared" "templates" "deleted" "internal" |
| locale | Locale - Default: "en_US" |
| debug | Used to help troubleshoot api call issues. Shows the call and result in the console |

Details

Expansion options can include the following: "approved" "favorite" "tags" "usageSummary" "usageSummaryWithRelevancyScore" "description" "sourceFieldId" "segmentable" "required" "hide-FromReporting" "hidden" "includeExcludeSetting" "fieldDefinition" "bucketingSetting" "noValueOptionsSetting" "defaultmetricsort" "persistenceSetting" "storageId" "tableName" "dataSetIds" "dataSetType" "type" "schemaPath" "hasData" "sourceFieldName" "schemaType" "sourceFieldType" "from-GlobalLookup" "multiValued" "precision"

Value

A data frame of metrics in a specified dataview

cja_get_projects

Examples

```
## Not run:
cja_get_metrics(dataviewId = "dv_5f4f1e2572ea0000003ce262")
## End(Not run)
```

cja_get_projects

Get a paginated list of projects in CJA

Description

Retrieves a paginated list of projects, also known as Workspace Projects.

Usage

```
cja_get_projects(
  includeType = "all",
  expansion = "definition",
  locale = "en_US",
  filterByIds = NULL,
  pagination = "true",
  ownerId = NULL,
  limit = 10,
  page = 0,
  debug = FALSE
)
```

Arguments

| includeType | Include additional | filters not own | ned by user. | Default is ' | "all". Optic | ons include: |
|-------------|--------------------|-----------------|--------------|--------------|--------------|--------------|
| | | | | | | |

"all" (default) "shared"

expansion Comma-delimited list of additional segment metadata fields to include on re-

sponse. See Details for all options available

locale Locale - Default: "en_US"

filterByIds Filter list to only include filters in the specified list (comma-delimited list of

IDs). This has filtered Ids from tags, approved, favorites and user specified Ids

list.

pagination Return paginated results

ownerId Filter list to only include filters owned by the specified imsUserId

limit Number of results per page

page Page number (base 0 - first page is "0")

debug Used to help troubleshoot api call issues. Shows the call and result in the console

cja_get_project_config 23

Details

expansion options can include any of the following: "shares" "tags" "accessLevel" "modified" "externalReferences" "definition"

includeType options can include any of the following: "all", "shared"

Value

A data frame of projects and corresponding metadata

Examples

```
## Not run:
cja_get_projects()
## End(Not run)
```

```
cja_get_project_config
```

Get a project configuration in CJA

Description

Retrieves a project configuration JSON string.

Usage

```
cja_get_project_config(
  id = NULL,
  expansion = "definition",
  locale = "en_US",
  debug = FALSE
)
```

Arguments

id (Required) The Project id for which to retrieve information

expansion Comma-delimited list of additional segment metadata fields to include on re-

sponse. See Details for all options available

locale Locale - Default: "en_US"

debug Used to help troubleshoot api call issues. Shows the call and result in the console

Details

expansion options can include any of the following: "shares" "tags" "accessLevel" "modified" "externalReferences" "definition"

24 filter_build

Value

A project configuration list

Examples

```
## Not run:
cja_get_project_config(id = '6047e0a3de6aaaaac7c3accb')
## End(Not run)
```

filter_build

Build the filter in CJA

Description

This function combines rules and/or containers and then makes the post call to create the filter in CJA.

Usage

```
filter_build(
  dataviewId = Sys.getenv("CJA_DATAVIEW_ID"),
  name = NULL,
  description = NULL,
  containers = NULL,
  rules = NULL,
  sequences = NULL,
  context = "hits",
  conjunction = "and",
  sequence = "in_order",
  sequence_context = "hits",
  exclude = FALSE,
  create_filter = FALSE,
  debug = FALSE,
  locale = "en_US",
  expansion = NULL
)
```

Arguments

dataviewId CJA data view id. If an environment variable called CJA_DATAVIEW_ID exists

in .Renviron or elsewhere and no dataviewId argument is provided, then the CJA_DATAVIEW_ID value will be used. Use cja_get_dataviews() to get a list

of available dataviewId. Required

name This is the name of the new filter (required)
description This is the description of the filter (required)

filter_build 25

containers List of the container(s) that make up the filter. Containers are list objects created

using the filter_con() function.

rules List of the rules to create a filter. Rules are list objects created using the filter_rule()

function.

sequences List of the predicate(s) and sequence container(s) that are combined to make

a filter. Sequence containers are list objects created using the filter_seq()

function.

context Defines the level that the filter logic should operate on. Valid values are visitors,

visits, and hits. See Details

conjunction This will tell how the different containers and rules should be compared. Use

either 'and' or 'or'.

sequence Used to define if the filter should be 'in_order' (default), 'after', or 'before' the

sequence of events

sequence_context

Used to define the sequential items context which should be below the container

context. ex. if container context is visitors then the sequence_context should be

visits or hits

exclude Excludes the main container which will include all rules. Only used when the

rule arguments are used.

create_filter Used to determine if the filter should be created in the UI or if the definition

should be returned to be used in a freeform table API call as a global filter. Default is FALSE, which means the segment json string will be returned and the

segment will not be created in the UI.

debug This enables the api call information to show in the console for help with de-

bugging issues. default is FALSE

locale Locale. Default "en_US"

expansion Comma-delimited list of additional filter metadata fields to include on response.

See Detail section for available options

Details

Context The rules in a filter have a context that specify the level of operation. The context can be visitors, visits or hits. As an example, let's build a filter rule where revenue is greater than 0 (meaning a purchase took place) and change the context to see how things change. If the context is set to visitors, the filter includes all hits from visitors that have a purchase of some kind during a visit. This is useful in analyzing customer behavior in visits leading up to a purchase and possibly behavior after a purchase. the context is set to visits, the filter includes all hits from visits where a purchase occurred. This is useful for seeing the behavior of a visitor in immediate page views leading up to the purchase. If the context is set to hit, the filter only includes hits where a purchase occurred, and no other hits. This is useful in seeing which products were most popular. In the above example, the context for the container listed is hits. This means that the container only evaluates data at the hit level, (in contrast to visit or visitor level). The rows in the container are also at the hit level.

Expansion Available option include the following: "compatibility" "definition" "internal" "modified" "isDeleted" "definitionLastModified" "createdDate" "recentRecordedAccess" "performanceScore" "owner" "dataId" "ownerFullName" "dataName" "sharesFullName" "approved" "favorite" "shares" "tags" "usageSummary" "usageSummaryWithRelevancyScore"

26 filter_con

Value

If the filter validates it will return a data frame of the newly created filter id along with some other basic meta data. If it returns and error then the error response will be returned to help understand what needs to be corrected. If the argument create_filter is set to FALSE, the json string will be returned in list format.

filter_con

Create the filter container

Description

This function combines rules into a container

Usage

```
filter_con(
  context = "hits",
  conjunction = "and",
  rules = NULL,
  exclude = FALSE
)
```

Arguments

context Defines the level that the filter logic should operate on. Valid values are visitors,

visits, and hits. See Details

conjunction This defines the relationship of the rules. The two options are "and" (default)

and "or".

rules List of rules and/or containers. Must be wrapped in a list() function. Adding a

container list item will nest it within a containers.

exclude Exclude the entire container

Details

Context The rules in a filter have a context that specify the level of operation. The context can be visitors, visits or hits. As an example, let's build a filter rule where revenue is greater than 0 (meaning a purchase took place) and change the context to see how things change. If the context is set to 'visitors', the filter includes all hits from visitors that have a purchase of some kind during a visit. This is useful in analyzing customer behavior in visits leading up to a purchase and possibly behavior after a purchase. If the context is set to 'visits', the filter includes all hits from visits where a purchase occurred. This is useful for seeing the behavior of a visitor in immediate page views leading up to the purchase. If the context is set to hit, the filter only includes hits where a purchase occurred, and no other 'hits.' This is useful in seeing which products were most popular. In the above example, the context for the container listed is hits. This means that the container only evaluates data at the hit level, (in contrast to visit or visitor level). The rows in the container are also at the hit level.

filter_rule 27

Value

a structured list of containers to be used to build the filter

filter_rule Create the filter rule

Description

This function creates the simple rule of a filter

Usage

```
filter_rule(
   dimension = NULL,
   metric = NULL,
   verb = NULL,
   object = NULL,
   description = NULL,
   is_distinct = FALSE,
   attribution = "repeating",
   attribution_context = "visitors",
   validate = FALSE,
   dataviewId = Sys.getenv("CJA_DATAVIEW_ID")
)
```

Arguments

| dimension | This is the subject of the rule. The value should be the dimension id. Only the dimension or metric can be used at a time. | |
|---------------------|--|--|
| metric | This is the subject of the rule. The value should be the metric id. Only the dimension or metric can be used at a time. | |
| verb | Choose from any of the 30 different verbs. Use the filter_verbs() package data to see all available verbs along with the descriptions. | |
| object | This is the object of the rule and answers the question what or how many | |
| description | The internal description for the rule. (optional) This will not show in the UI but could be very helpful when using the API. | |
| is_distinct | This will filter on a distinct count of items within a dimension. Examples: "Visitors who viewed more than 5 distinct products," or "Visits where more than 5 distinct pages were seen." | |
| attribution | Define the type of attribution. Either repeating (default), instance, or nonrepeating. See Details for more information. | |
| attribution_context | | |

When applying a non-repeating instance attribution model to a rule the context for the attribution must be visitors (default) or visits

28 filter_seq

validate Set to TRUE when metric or dimension validation is preferred. Default is

FALSE. Validation will slow down the function response time but ensure a valid

rule result.

dataviewId CJA data view id. Required if the argument validate is set to TRUE. If an en-

vironment variable called CJA_DATAVIEW_ID exists in .Renviron or elsewhere and no dataviewId argument is provided, then the CJA_DATAVIEW_ID value will be used. Use cja_get_dataviews() to get a list of available dataviewId.

Details

Attribution Models Available for dimensions only, these models determine what values in a dimension to filter for. Dimension models are particularly useful in sequential filter.

- repeating (default): Includes instances and persisted values for the dimension.
- instance: Includes instances for the dimension.
- *nonrepeating* instance: Includes unique instances (non-repeating) for the dimension. This is the model applied in Flow when repeat instances are excluded.

Value

A structured list defining the rule for a filter

filter_seq

Create the filter sequence container

Description

This function combines rules into a sequence container

Usage

```
filter_seq(
  context = "visits",
  rules = NULL,
  sequence = "in_order",
  exclude = FALSE,
  exclude_checkpoint = NULL
)
```

Arguments

context Defines the level that the filter logic should operate on. Valid values for sequen-

tial filters is visitors and visits. See Details

rules List of rules created using filter_rule() function. Must wrapped in a list()

function.

sequence How should the sequence of items be considered. Options: in_order (default),

before, after, and, or

filter_then 29

```
exclude Excludes the entire sequence container which will include all rules. exclude_checkpoint
```

Which checkpoints (rules) should be excluded. Example c(1, 4). See Details

Details

Context

The rules in a filter have a context that specify the level of operation. The context can be visitors, visits or hits. As an example, let's build a filter rule where revenue is greater than 0 (meaning a purchase took place) and change the context to see how things change. If the context is set to visitors, the filter includes all hits from visitors that have a purchase of some kind during a visit. This is useful in analyzing customer behavior in visits leading up to a purchase and possibly behavior after a purchase. the context is set to visits, the filter includes all hits from visits where a purchase occurred. This is useful for seeing the behavior of a visitor in immediate page views leading up to the purchase. If the context is set to hit, the filter only includes hits where a purchase occurred, and no other hits. This is useful in seeing which products were most popular. In the above example, the context for the container listed is hits. This means that the container only evaluates data at the hit level, (in contrast to visit or visitor level). The rows in the container are also at the hit level.

Exclude checkpoint

Ensures the next checkpoint doesn't happen between the preceding checkpoint and the subsequent checkpoint. If there is no subsequent checkpoint then the excluded checkpoint must not occur at any point after the preceding checkpoint. If there is no preceding checkpoint then the excluded checkpoint must not have occurred at any point preceding the subsequent checkpoint.

More Information

Sequential filters can be difficult to get right. Referencing this article can help: https://experienceleague.adobe.com/docs/analyplatform/using/cja-components/cja-filters/filters-overview.html?lang=en

Value

a structured list of containers to be used to build the filter

Examples

```
## Not run:
filter_seq(context = 'visits', rules = list(rule1, rule2),
sequence = 'in_order', exclude = FALSE)
## End(Not run)
```

filter_then

Create the filter sequence then object

Description

This function creates a 'then' list object which restricts the time constraint of a filter to be added to a sequence filter.

30 filter_val

Usage

```
filter_then(limit = "within", count = 1, unit = "year")
```

Arguments

limit The limitation of the restriction. Either within (default) or after

count How many of the units should be used. 1 is set as default.

unit A unit of time. Valid values are hit, visit, minute, hour, day, week (default),

month, quarter, or year. Always use the singular form.

Details

Combining filter_then **arguments**:

In the UI you can add 'after' and 'within' statements to create a more complex time restriction. The same can be accomplished using this function by listing the limits, counts, and units in a c() function. This would look like: limit = c('within', 'after'), count = c(5, 1), unit = c('hit', 'visit')

Using within and after in the same time filter_then function call:

Time restrictions can only be combined using 'within' first before 'after'. The function will automatically align these to be in the correct list item order.

A word about unit values:

Currently pageviews and dimensions are not supported unit values.

Value

a structured list of time restrictions to be used to build the sequential filter

filter_val Validate a filter in CJA

Description

Returns a filter validation for a filter contained in a json string object.

Usage

```
filter_val(filter_body = NULL, debug = FALSE)
```

Arguments

filter_body The json string of the filter that is being validated (required)

debug This enables the api call information to show in the console for help with de-

bugging issues. default is FALSE

Value

A validation True or False response

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filter_verbs

Verbs available to be used in filter rules.

Description

A dataset containing the list of available verbs which can be used in filters.

Usage

filter_verbs

Format

A data frame with 34 rows and 5 variables:

type one of number, string, or exists

class gives the context of the type of value is expected, either string, list, glob, number, or exists

verb the actual verb id to be used in the segment defition

description a simple description of the verb

arg specifies what argument to use when building the segment verb function ...

Source

https://experienceleague.adobe.com/en/docs/analytics-platform/using/cja-components/cja-filters/operators

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