Package ‘factset.analyticsapi.engines’

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AccountDirectories

Description

AccountDirectories Class

Format

An R6Class generator object

Public fields

accounts list( character ) [optional]
directories list( character ) [optional]

Methods

Public methods:
• AccountDirectories$new()
• AccountDirectories$toJSON()
• AccountDirectories$fromJSON()
• AccountDirectories$toJSONString()
• AccountDirectories$fromJSONString()
• AccountDirectories$clone()

Method new():

Usage:
AccountDirectories$new(accounts = NULL, directories = NULL, ...)

Method toJSON():

Usage:
AccountDirectories$toJSON()

Method fromJSON():

Usage:
AccountDirectories$fromJSON(AccountDirectoriesJson)

Method toJSONString():

Usage:
AccountDirectories$toJSONString()

Method fromJSONString():

Usage:
AccountDirectories$fromJSONString(AccountDirectoriesJson)
**Method** `clone()`: The objects of this class are cloneable with this method.

**Usage:**

`AccountDirectories$clone(deep = FALSE)`

**Arguments:**

- `deep` Whether to make a deep clone.

---

**Description**

`factset.analyticsapi.engines.Accounts`

**Format**

An `R6Class` generator object

**Methods**

**GetAccounts** *Get accounts and sub-directories in a directory* This endpoint looks up all ACCT and ACTM files and sub-directories in a given directory.

- **@param** `path` character
- **@returnType** `AccountDirectories`

- On encountering errors, an error of subclass `ApiException` will be thrown.
- status code: 200 | Expected response, returns a list of accounts and directories
- return type: `AccountDirectories`
- response headers:
  - `X-RateLimit-Remaining` Number of requests left for the time window.
  - `X-FactSet-Api-Request-Key` Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - `X-RateLimit-Reset` Number of seconds remaining till rate limit resets.
  - `X-RateLimit-Limit` Number of allowed requests for the time window.
  - `X-DataDirect-Request-Key` FactSet’s request key header.

- status code: 400 | Invalid query parameter or value provided
- response headers:
  - `X-RateLimit-Remaining` Number of requests left for the time window.
  - `X-FactSet-Api-Request-Key` Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - `X-RateLimit-Reset` Number of seconds remaining till rate limit resets.
  - `X-RateLimit-Limit` Number of allowed requests for the time window.
  - `X-DataDirect-Request-Key` FactSet’s request key header.
AccountsApi

• status code: 401 | Missing or invalid authentication
  • response headers:
    X-RateLimit-Remaining Number of requests left for the time window.
    X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
    X-RateLimit-Reset Number of seconds remaining till rate limit resets.
    X-RateLimit-Limit Number of allowed requests for the time window.
    X-DataDirect-Request-Key FactSet's request key header.

• status code: 403 | User is forbidden with current credentials
  • response headers:
    X-RateLimit-Remaining Number of requests left for the time window.
    X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
    X-RateLimit-Reset Number of seconds remaining till rate limit resets.
    X-RateLimit-Limit Number of allowed requests for the time window.
    X-DataDirect-Request-Key FactSet's request key header.

• status code: 404 | Path not found
  • response headers:
    X-RateLimit-Remaining Number of requests left for the time window.
    X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
    X-RateLimit-Reset Number of seconds remaining till rate limit resets.
    X-RateLimit-Limit Number of allowed requests for the time window.
    X-DataDirect-Request-Key FactSet's request key header.

• status code: 406 | Unsupported Accept header. Header needs to be set to application/json
  • response headers:
    X-RateLimit-Remaining Number of requests left for the time window.
    X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
    X-RateLimit-Reset Number of seconds remaining till rate limit resets.
    X-RateLimit-Limit Number of allowed requests for the time window.
    X-DataDirect-Request-Key FactSet's request key header.

• status code: 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting
  • response headers:
    X-RateLimit-Remaining Number of requests left for the time window.
    X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
    X-RateLimit-Reset Number of seconds remaining till rate limit resets.
    X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet’s request key header.

- status code : 503 Request timed out. Retry the request in some time
- response headers :

X-RateLimit-Remaining Number of requests left for the time window.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet’s request key header.

Public fields

apiClient Handles the client-server communication.

Methods

Public methods:

- AccountsApi$new()
- AccountsApi$GetAccounts()
- AccountsApi$GetAccountsWithHttpInfo()
- AccountsApi$clone()

Method new():

Usage:
AccountsApi$new(apiClient)

Method GetAccounts():

Usage:
AccountsApi$GetAccounts(path, ...)

Method GetAccountsWithHttpInfo():

Usage:
AccountsApi$GetAccountsWithHttpInfo(path, ...)

Method clone(): The objects of this class are cloneable with this method.

Usage:
AccountsApi$clone(deep = FALSE)

Arguments:
depth Whether to make a deep clone.
## Not run:

```r
library(factset.analyticsapi.engines)
var.path <- 'path_example' # character | The directory to get the accounts and sub-directories in

#Get accounts and sub-directories in a directory
api.instance <- AccountsApi$new()

#Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>);
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>'

result <- tryCatch(
    api.instance$GetAccounts(var.path),
    ApiException = function(ex) ex
)
# In case of error, print the error object
if(!is.null(result$ApiException)) {
    cat(result$ApiException$toString())
} else {
    # deserialized response object
    response.object <- result$content
    # response headers
    response.headers <- result$response$headers
    # response status code
    response.status.code <- result$response$status_code
}

## End(Not run)

---

### Description

ApiClient Class

### Format

An `R6Class` generator object
ApiClient

Details

ApiClient Class

Generic API client for OpenAPI client library builds. OpenAPI generic API client. This client
handles the client-server communication, and is invariant across implementations. Specifics of the
methods and models for each application are generated from the OpenAPI Generator templates.
NOTE: This class is auto generated by OpenAPI Generator ([https://openapi-generator.tech](https://openapi-generator.tech)). Ref:
https://openapi-generator.tech Do not edit the class manually.

Public fields

basePath  Base url
userAgent  Default user agent
username  Username for HTTP basic authentication
password  Password for HTTP basic authentication
timeout  Default timeout in seconds

Methods

Public methods:

• ApiClient$new()
• ApiClient$CallApi()
• ApiClient$deserialize()
• ApiClient$deserializeObj()
• ApiClient$clone()

Method new():

Usage:
ApiClient$new(
  basePath = NULL,
  userAgent = NULL,
  defaultHeaders = NULL,
  username = NULL,
  password = NULL,
  apiKeys = NULL,
  accessToken = NULL,
  timeout = NULL
)

Method CallApi():

Usage:
ApiClient$CallApi(url, method, queryParams, headerParams, body, ...)

Method deserialize():

Usage:
ApiClient$deserialize(resp, returnType, pkgEnv)
Method deseralizeObj():
Usage:
ApiClient$deseralizeObj(obj, returnType, pkgEnv)

Method clone(): The objects of this class are cloneable with this method.
Usage:
ApiClient$clone(deep = FALSE)
Arguments:
dee Whether to make a deep clone.

---

Description
ApiException Class

Format
An R6Class generator object

Public fields
status Status of the ApiException
reason Reason of the ApiException
body Body of the http response
headers Headers of the http response

Methods
Public methods:
• ApiException$new()
• ApiException$toString()
• ApiException$clone()

Method new():
Usage:
ApiException$new(status = NULL, reason = NULL, http_response = NULL)

Method toString():
Usage:
ApiException$toString()

Method clone(): The objects of this class are cloneable with this method.
ApiResponse

Usage:
ApiException$clone(deep = FALSE)

Arguments:
depth Whether to make a deep clone.

ApiResponse

Description
ApiResponse Class

Format
An R6Class generator object

Public fields
content The deserialized response body.
response The raw response from the endpoint.

Methods
Public methods:
• ApiResponse$new()
• ApiResponse$clone()

Method new():
Usage:
ApiResponse$new(content, response)

Method clone(): The objects of this class are cloneable with this method.
Usage:
ApiResponse$clone(deep = FALSE)

Arguments:
depth Whether to make a deep clone.
**Description**

Calculation Class

**Format**

An R6Class generator object

**Public fields**

- pa named list( PACalculationParameters ) [optional]
- spar named list( SPARCcalculationParameters ) [optional]
- vault named list( VaultCalculationParameters ) [optional]

**Methods**

**Public methods:**

- Calculation$new()
- Calculation$toJSON()
- Calculation$fromJSON()
- Calculation$toJSONString()
- Calculation$fromJSONString()
- Calculation$clone()

**Method new():**

*Usage:*

Calculation$new(pa = NULL, spar = NULL, vault = NULL, ...)

**Method toJSON():**

*Usage:*

Calculation$toJSON()

**Method fromJSON():**

*Usage:*

Calculation$fromJSON(CalculationJson)

**Method toJSONString():**

*Usage:*

Calculation$toJSONString()

**Method fromJSONString():**
CalculationsApi

Usage:
Calculation$fromJsonString(CalculationJson)

Method clone(): The objects of this class are cloneable with this method.
Usage:
Calculation$clone(deep = FALSE)

Arguments:
depth Whether to make a deep clone.

Description
factset.analyticsapi.engines.Calculations

Format
An R6Class generator object

Methods

CancelCalculationById  Cancel calculation by id  This is the endpoint to cancel a previously submitted calculation request. Instead of doing a GET on the getCalculationById URL, cancel the calculation by doing a DELETE. All individual calculation units within the calculation will be canceled if they have not already finished.

@param id character

- On encountering errors, an error of subclass ApiException will be thrown.
- status code : 204 | Expected response, request was cancelled successfully.
- response headers :
  X-RateLimit-Remaining Number of requests left for the time window.
  X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit Number of allowed requests for the time window.
  X-DataDirect-Request-Key FactSet’s request key header.

- status code : 400 | Invalid identifier provided.
- response headers :
  X-RateLimit-Remaining Number of requests left for the time window.
  X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit Number of allowed requests for the time window.
  X-DataDirect-Request-Key FactSet’s request key header.
• status code : 401 | Missing or invalid authentication.
  • response headers :
    X-RateLimit-Remaining       Number of requests left for the time window.
    X-FactSet_Api-Request-Key   Key to uniquely identify an Analytics API request. Only available after successful authentication.
    X-RateLimit-Reset          Number of seconds remaining till rate limit resets.
    X-RateLimit-Limit          Number of allowed requests for the time window.
    X-DataDirect-Request-Key   FactSet’s request key header.

• status code : 403 | User is forbidden with current credentials.
  • response headers :

• status code : 404 | There was no request for the identifier provided, or the request was already canceled for the provided identifier.
  • response headers :

• status code : 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
  • response headers :

• status code : 503 | Request timed out. Retry the request in sometime.
  • response headers :

  X-RateLimit-Remaining       Number of requests left for the time window.
GetCalculationStatusById  

Get calculation status by id  
This is the endpoint to check on the progress of a previous calculation request. Response body contains status information of the entire request and each individual calculation unit.

@param id character

@returnType CalculationStatus

• On encountering errors, an error of subclass ApiException will be thrown.
• status code : 200 | Expected response, returns status information of the entire calculation and each individual calculation unit.
• return type : CalculationStatus
• response headers :

X-RateLimit-Remaining  Number of requests left for the time window.
Cache-Control  Standard HTTP header. Header will specify max-age in seconds. Polling can be adjusted based on the max-age value.
X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
X-DataDirect-Request-Key  FactSet's request key header.

• status code : 400 | Invalid identifier provided.
• response headers :

X-RateLimit-Remaining  Number of requests left for the time window.
Cache-Control  Standard HTTP header. Header will specify max-age in seconds. Polling can be adjusted based on the max-age value.
X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
X-DataDirect-Request-Key  FactSet's request key header.

• status code : 401 | Missing or invalid authentication.
• response headers :
• status code: 403 | User is forbidden with current credentials.
  • response headers:
    - X-RateLimit-Remaining: Number of requests left for the time window.
    - Cache-Control: Standard HTTP header. Header will specify max-age in seconds. Polling can be adjusted based on the max-age value.
    - X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
    - X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
    - X-RateLimit-Limit: Number of allowed requests for the time window.
    - X-DataDirect-Request-Key: FactSet’s request key header.

• status code: 404 | Provided identifier was not a request, or the request was cancelled.
  • response headers:
    - X-RateLimit-Remaining: Number of requests left for the time window.
    - Cache-Control: Standard HTTP header. Header will specify max-age in seconds. Polling can be adjusted based on the max-age value.
    - X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
    - X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
    - X-RateLimit-Limit: Number of allowed requests for the time window.
    - X-DataDirect-Request-Key: FactSet’s request key header.

• status code: 406 | Unsupported Accept header. Header needs to be set to application/json.
  • response headers:
    - X-RateLimit-Remaining: Number of requests left for the time window.
    - Cache-Control: Standard HTTP header. Header will specify max-age in seconds. Polling can be adjusted based on the max-age value.
    - X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
    - X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
    - X-RateLimit-Limit: Number of allowed requests for the time window.
    - X-DataDirect-Request-Key: FactSet’s request key header.

• status code: 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
  • response headers:
    - X-RateLimit-Remaining: Number of requests left for the time window.
    - Cache-Control: Standard HTTP header. Header will specify max-age in seconds. Polling can be adjusted based on the max-age value.
    - X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
    - X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
    - X-RateLimit-Limit: Number of allowed requests for the time window.
    - X-DataDirect-Request-Key: FactSet’s request key header.

• status code: 503 | Request timed out. Retry the request in sometime.
  • response headers:
GetCalculationStatusSummaries  *Get all calculation statuses*  This endpoint returns all active calculation requests.

@returnType named list( CalculationStatusSummary )

- On encountering errors, an error of subclass ApiException will be thrown.
- status code : 200 | List of active calculation requests.
- return type : map(CalculationStatusSummary)
- response headers :

```plaintext
X-RateLimit-Remaining Number of requests left for the time window.
Cache-Control Standard HTTP header. Header will specify max-age in seconds. Polling can be adjusted based on the max-age value.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet’s request key header.
```

- status code : 401 | Missing or invalid authentication.
- response headers :

```plaintext
X-RateLimit-Remaining Number of requests left for the time window.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet’s request key header.
```

- status code : 403 | User is forbidden with current credentials.
- response headers :

```plaintext
X-RateLimit-Remaining Number of requests left for the time window.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet’s request key header.
```

- status code : 406 | Unsupported Accept header. Header needs to be set to application/json.
- response headers :

```plaintext
X-RateLimit-Remaining Number of requests left for the time window.
```

```plaintext
```
CalculationsApi

X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
X-DataDirect-Request-Key  FactSet’s request key header.

• status code : 500  |  Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
• response headers :

X-RateLimit-Remaining  Number of requests left for the time window.
X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
X-DataDirect-Request-Key  FactSet’s request key header.

• status code : 503  |  Request timed out. Retry the request in sometime.
• response headers :

RunCalculation  Run calculation  This endpoint creates a new calculation and runs the set of calculation units specified in the POST body. This must be used first before get status or cancelling endpoints with a calculation id. A successful response will contain the URL to check the status of the calculation request. Remarks: * Maximum 25 points allowed per calculation and maximum 500 points allowed across all simultaneous calculations. (Refer API documentation for more information) * Any settings in POST body will act as a one-time override over the settings saved in the PA/SPAR/Vault template.

@param  calculation Calculation
• On encountering errors, an error of subclass ApiException will be thrown.
• status code : 202  |  Expected response, contains the URL in the Location header to check the status of the calculation.
• response headers :

X-FactSet-Api-Points-Limit  Maximum points limit across all batches.
X-RateLimit-Remaining  Number of requests left for the time window.
X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-FactSet-Api-Points-Remaining  Number of points remaining till points limit reached.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
Location  URL to check status of the request.
X-DataDirect-Request-Key  FactSet’s request key header.
### CalculationsApi

- **status code**: 400 | Invalid POST body.
- **response headers**:

<table>
<thead>
<tr>
<th>Header</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-FactSet_Api-Points-Limit</td>
<td>Maximum points limit across all batches.</td>
</tr>
<tr>
<td>X-RateLimit-Remaining</td>
<td>Number of requests left for the time window.</td>
</tr>
<tr>
<td>X-FactSet_Api-Request-Key</td>
<td>Key to uniquely identify an Analytics API request. Only available after successful authentication.</td>
</tr>
<tr>
<td>X-FactSet_Api-Points-Remaining</td>
<td>Number of points remaining till points limit reached.</td>
</tr>
<tr>
<td>X-RateLimit-Reset</td>
<td>Number of seconds remaining till rate limit resets.</td>
</tr>
<tr>
<td>X-RateLimit-Limit</td>
<td>Number of allowed requests for the time window.</td>
</tr>
<tr>
<td>Location</td>
<td>URL to check status of the request.</td>
</tr>
<tr>
<td>X-DataDirect-Request-Key</td>
<td>FactSet's request key header.</td>
</tr>
</tbody>
</table>

- **status code**: 401 | Missing or invalid authentication.
- **response headers**:

<table>
<thead>
<tr>
<th>Header</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-FactSet_Api-Points-Limit</td>
<td>Maximum points limit across all batches.</td>
</tr>
<tr>
<td>X-RateLimit-Remaining</td>
<td>Number of requests left for the time window.</td>
</tr>
<tr>
<td>X-FactSet_Api-Request-Key</td>
<td>Key to uniquely identify an Analytics API request. Only available after successful authentication.</td>
</tr>
<tr>
<td>X-FactSet_Api-Points-Remaining</td>
<td>Number of points remaining till points limit reached.</td>
</tr>
<tr>
<td>X-RateLimit-Reset</td>
<td>Number of seconds remaining till rate limit resets.</td>
</tr>
<tr>
<td>X-RateLimit-Limit</td>
<td>Number of allowed requests for the time window.</td>
</tr>
<tr>
<td>Location</td>
<td>URL to check status of the request.</td>
</tr>
<tr>
<td>X-DataDirect-Request-Key</td>
<td>FactSet's request key header.</td>
</tr>
</tbody>
</table>

- **status code**: 403 | User is forbidden with current credentials.
- **response headers**:

<table>
<thead>
<tr>
<th>Header</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-FactSet_Api-Points-Limit</td>
<td>Maximum points limit across all batches.</td>
</tr>
<tr>
<td>X-RateLimit-Remaining</td>
<td>Number of requests left for the time window.</td>
</tr>
<tr>
<td>X-FactSet_Api-Request-Key</td>
<td>Key to uniquely identify an Analytics API request. Only available after successful authentication.</td>
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<tr>
<td>X-FactSet_Api-Points-Remaining</td>
<td>Number of points remaining till points limit reached.</td>
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<td>X-RateLimit-Reset</td>
<td>Number of seconds remaining till rate limit resets.</td>
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<td>X-RateLimit-Limit</td>
<td>Number of allowed requests for the time window.</td>
</tr>
<tr>
<td>Location</td>
<td>URL to check status of the request.</td>
</tr>
<tr>
<td>X-DataDirect-Request-Key</td>
<td>FactSet's request key header.</td>
</tr>
</tbody>
</table>

- **status code**: 415 | Missing/Invalid Content-Type header. Header needs to be set to application/json.
- **response headers**:

<table>
<thead>
<tr>
<th>Header</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-FactSet_Api-Points-Limit</td>
<td>Maximum points limit across all batches.</td>
</tr>
<tr>
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<td>X-FactSet_Api-Request-Key</td>
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<td>X-FactSet_Api-Points-Remaining</td>
<td>Number of points remaining till points limit reached.</td>
</tr>
<tr>
<td>X-RateLimit-Reset</td>
<td>Number of seconds remaining till rate limit resets.</td>
</tr>
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<td>X-RateLimit-Limit</td>
<td>Number of allowed requests for the time window.</td>
</tr>
<tr>
<td>Location</td>
<td>URL to check status of the request.</td>
</tr>
</tbody>
</table>
### CalculationsApi

<table>
<thead>
<tr>
<th>Header</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-FactSet-Api-Points-Remaining</td>
<td>Number of points remaining till points limit reached.</td>
</tr>
<tr>
<td>X-RateLimit-Reset</td>
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<td>Number of allowed requests for the time window.</td>
</tr>
<tr>
<td>Location</td>
<td>URL to check status of the request.</td>
</tr>
<tr>
<td>X-DataDirect-Request-Key</td>
<td>FactSet's request key header.</td>
</tr>
</tbody>
</table>

**status code : 429 | Rate limit reached.** Cancel older requests using Cancel Calculation endpoint or wait for older requests to finish / expire.

**response headers :**

<table>
<thead>
<tr>
<th>Header</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-FactSet-Api-Points-Limit</td>
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</tr>
<tr>
<td>X-DataDirect-Request-Key</td>
<td>FactSet's request key header.</td>
</tr>
</tbody>
</table>

**status code : 500 | Server error.** Log the X-DataDirect-Request-Key header to assist in troubleshooting.

**response headers :**

<table>
<thead>
<tr>
<th>Header</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-FactSet-Api-Points-Limit</td>
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</tr>
<tr>
<td>X-DataDirect-Request-Key</td>
<td>FactSet's request key header.</td>
</tr>
</tbody>
</table>

**status code : 503 | Request timed out.** Retry the request in sometime.

**response headers :**

<table>
<thead>
<tr>
<th>Header</th>
<th>Description</th>
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<tbody>
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<td>X-FactSet-Api-Points-Limit</td>
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</tr>
<tr>
<td>X-DataDirect-Request-Key</td>
<td>FactSet's request key header.</td>
</tr>
</tbody>
</table>
Public fields

apiClient  Handles the client-server communication.

Methods

Public methods:

- CalculationsApi$new()
- CalculationsApi$CancelCalculationById()
- CalculationsApi$CancelCalculationByIdWithHttpInfo()
- CalculationsApi$GetCalculationStatusById()
- CalculationsApi$GetCalculationStatusByIdWithHttpInfo()
- CalculationsApi$GetCalculationStatusSummaries()
- CalculationsApi$GetCalculationStatusSummariesWithHttpInfo()
- CalculationsApi$RunCalculation()
- CalculationsApi$RunCalculationWithHttpInfo()
- CalculationsApi$clone()

Method new():

Usage:
CalculationsApi$new(apiClient)

Method CancelCalculationById():

Usage:
CalculationsApi$CancelCalculationById(id, ...)

Method CancelCalculationByIdWithHttpInfo():

Usage:
CalculationsApi$CancelCalculationByIdWithHttpInfo(id, ...)

Method GetCalculationStatusById():

Usage:
CalculationsApi$GetCalculationStatusById(id, ...)

Method GetCalculationStatusByIdWithHttpInfo():

Usage:
CalculationsApi$GetCalculationStatusByIdWithHttpInfo(id, ...)

Method GetCalculationStatusSummaries():

Usage:
CalculationsApi$GetCalculationStatusSummaries(...)

Method GetCalculationStatusSummariesWithHttpInfo():

Usage:
CalculationsApi$GetCalculationStatusSummariesWithHttpInfo(...)
Method `RunCalculation()`:  
Usage:  
CalculationsApi$RunCalculation(calculation = NULL, ...)

Method `RunCalculationWithHttpInfo()`:  
Usage:  
CalculationsApi$RunCalculationWithHttpInfo(calculation = NULL, ...)

Method `clone()`: The objects of this class are cloneable with this method.  
Usage:  
CalculationsApi$clone(deep = FALSE)
Arguments:  
deep Whether to make a deep clone.

Examples

```r
## Not run:  
########################## CancelCalculationById ##########################
library(factset.analyticsapi.engines)
var.id <- 'id_example' # character | From url, provided from the location  
# header in the Run Multiple Calculations endpoint.

#Cancel calculation by id
api.instance <- CalculationsApi$new()

#Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>';
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>';

result <- tryCatch(  
  api.instance$CancelCalculationById(var.id),  
  ApiException = function(ex) ex  
)
# In case of error, print the error object
if(!is.null(result$ApiException)) {  
  cat(result$ApiException$toString())
} else {  
  # response headers
  response.headers <- result$response$headers  
  # response status code
  response.status.code <- result$response$status_code
}

########################## GetCalculationStatusById ##########################
library(factset.analyticsapi.engines)
```
CalculationsApi

var.id <- 'id_example' # character | From url, provided from the location # header in the Run Multiple Calculations endpoint.

# Get calculation status by id api.instance <- CalculationsApi$new()

# Configure HTTP basic authorization: Basic # provide your username in the user-serial format api.instance$apiClient$username <- '<user-serial>'; # provide your api key generated using the developer portal api.instance$apiClient$password <- '<api_key>';

result <- tryCatch(
  api.instance$GetCalculationStatusById(var.id),
  ApiException = function(ex) ex
) # In case of error, print the error object
if(!is.null(result$ApiException)) {
  cat(result$ApiException$toString())
} else {
  # deserialized response object
  response.object <- result$content
  # response headers
  response.headers <- result$response$headers
  # response status code
  response.status.code <- result$response$status_code
}

library(factset.analyticsapi.engines)

# Get all calculation statuses api.instance <- CalculationsApi$new()

# Configure HTTP basic authorization: Basic # provide your username in the user-serial format api.instance$apiClient$username <- '<user-serial>'; # provide your api key generated using the developer portal api.instance$apiClient$password <- '<api_key>';

result <- tryCatch(
  api.instance$GetCalculationStatusSummaries(),
  ApiException = function(ex) ex
) # In case of error, print the error object
if(!is.null(result$ApiException)) {
  cat(result$ApiException$toString())
} else {
  # deserialized response object
  response.object <- result$content
  # response headers
  # response status code
  # response headers
  # response status code
  # response headers
```r
response.headers <- result$response$headers
# response status code
response.status.code <- result$response$status_code
}

#################################################### RunCalculation ####################################################
library(factset.analyticsapi.engines)
var.calculation <- Calculation$new() # Calculation |

#Run calculation
api.instance <- CalculationsApi$new()

#Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>';
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>';

result <- tryCatch(
  api.instance$RunCalculation(calculation=var.calculation),
  ApiException = function(ex) ex
)
# In case of error, print the error object
if(!is.null(result$ApiException)) {
  cat(result$ApiException$toString())
} else {
  # response headers
  response.headers <- result$response$headers
  # response status code
  response.status.code <- result$response$status_code
}

## End(Not run)
```

---

**CalculationStatus**

<table>
<thead>
<tr>
<th>CalculationStatus</th>
<th>CalculationStatus</th>
</tr>
</thead>
</table>

**Description**

CalculationStatus Class

**Format**

An R6Class generator object
**Public fields**

- status: character [optional]
- points: integer [optional]
- pa: named list( CalculationUnitStatus ) [optional]
- spar: named list( CalculationUnitStatus ) [optional]
- vault: named list( CalculationUnitStatus ) [optional]

**Methods**

**Public methods:**

- CalculationStatus$new()
- CalculationStatus$toJSON()
- CalculationStatus$fromJSON()
- CalculationStatus$toJSONString()
- CalculationStatus$fromJSONString()
- CalculationStatus$clone()

**Method new():**

*Usage:*
CalculationStatus$new(
  status = NULL,
  points = NULL,
  pa = NULL,
  spar = NULL,
  vault = NULL,
  ...
)

**Method toJSON():**

*Usage:*
CalculationStatus$toJSON()

**Method fromJSON():**

*Usage:*
CalculationStatus$fromJSON(CalculationStatusJson)

**Method toJSONString():**

*Usage:*
CalculationStatus$toJSONString()

**Method fromJSONString():**

*Usage:*
CalculationStatus$fromJSONString(CalculationStatusJson)

**Method clone():** The objects of this class are cloneable with this method.
Usage:
CalculationStatus$clone(deep = FALSE)

Arguments:
deep Whether to make a deep clone.

Description
CalculationStatusSummary Class

Format
An R6Class generator object

Public fields
status character [optional]
points integer [optional]
requestTime character [optional]
lastPollTime character [optional]

Methods
Public methods:
• CalculationStatusSummary$new()
• CalculationStatusSummary$toJSON()
• CalculationStatusSummary$fromJSON()
• CalculationStatusSummary$toJSONString()
• CalculationStatusSummary$fromJSONString()
• CalculationStatusSummary$clone()

Method new():
Usage:
CalculationStatusSummary$new(
  status = NULL,
  points = NULL,
  requestTime = NULL,
  lastPollTime = NULL,
  ...
)
Method toJSON():
Usage:
CalculationStatusSummary$toJSON()

Method fromJSON():
Usage:
CalculationStatusSummary$fromJSON(CalculationStatusSummaryJson)

Method toJSONString():
Usage:
CalculationStatusSummary$toJSONString()

Method fromJSONString():
Usage:
CalculationStatusSummary$fromJSONString(CalculationStatusSummaryJson)

Method clone(): The objects of this class are cloneable with this method.
Usage:
CalculationStatusSummary$clone(deep = FALSE)
Arguments:
depth Whether to make a deep clone.

CalculationUnitStatus  CalculationUnitStatus

Description
CalculationUnitStatus Class

Format
An R6Class generator object

Public fields
status character [optional]
points integer [optional]
error character [optional]
result character [optional]
CalculationUnitStatus

Methods

Public methods:

• `CalculationUnitStatus$new()`
• `CalculationUnitStatus$toJSON()`
• `CalculationUnitStatus$fromJSON()`
• `CalculationUnitStatus$toJSONString()`
• `CalculationUnitStatus$fromJSONString()`
• `CalculationUnitStatus$clone()`

Method `new()`:

Usage:
`CalculationUnitStatus$new(
    status = NULL,
    points = NULL,
    error = NULL,
    result = NULL,
    ...
)`

Method `toJSON()`:

Usage:
`CalculationUnitStatus$toJSON()`

Method `fromJSON()`:

Usage:
`CalculationUnitStatus$fromJSON(CalculationUnitStatusJson)`

Method `toJSONString()`:

Usage:
`CalculationUnitStatus$toJSONString()`

Method `fromJSONString()`:

Usage:
`CalculationUnitStatus$fromJSONString(CalculationUnitStatusJson)`

Method `clone()`: The objects of this class are cloneable with this method.

Usage:
`CalculationUnitStatus$clone(deep = FALSE)`

Arguments:

deep  Whether to make a deep clone.
Column Class

An R6Class generator object

Public fields

- defaultstatisticsids list(character) [optional]
- name character [optional]
- directory character [optional]
- category character [optional]

Methods

Public methods:

- Column$new()
- Column$toJSON()
- Column$fromJSON()
- Column$toJSONString()
- Column$fromJSONString()
- Column$clone()

Method new():

Usage:
Column$new(
  defaultstatisticsids = NULL,
  name = NULL,
  directory = NULL,
  category = NULL,
  ...
)

Method toJSON():

Usage:
Column$toJSON()

Method fromJSON():

Usage:
ColumnsApi

Methods

Column$fromJSON(ColumnJson)

**Method** toJSONString():

**Usage:**
Column$toJSONString()

**Method** fromJSONString():

**Usage:**
Column$fromJSONString(ColumnJson)

**Method** clone(): The objects of this class are cloneable with this method.

**Usage:**
Column$clone(deep = FALSE)

**Arguments:**

depth Whether to make a deep clone.

---

ColumnsApi

**Columns operations**

Description

factset.analyticsapi.engines.Columns

Format

An R6Class generator object

Methods

**GetPAColumnById**  *Get PA column settings*  This endpoint returns the default settings of a PA column.

- **@param** id character
- **@returnType** Column

- On encountering errors, an error of subclass ApiException will be thrown.
- **status code**: 200 | Expected response, returns settings of a PA column.
- **return type**: Column
- **response headers**:

  - X-RateLimit-Remaining Number of requests left for the time window.
  - X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit Number of allowed requests for the time window.
  - Age Standard HTTP header. Header will specify the age of columns list cached response.
  - X-DataDirect-Request-Key FactSet’s request key header.
• status code : 400 | Invalid column Id.
  • response headers :

  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet_Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.

• status code : 401 | Missing or invalid authentication.
  • response headers :

  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet_Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.

• status code : 403 | User is forbidden with current credentials
  • response headers :

  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet_Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.

• status code : 404 | Column not found.
  • response headers :

  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet_Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.

• status code : 406 | Unsupported Accept header. Header needs to be set to application/json.
  • response headers :

  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet_Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.
ColumnsApi

- status code: 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
- response headers:
  - X-RateLimit-Remaining
  - X-FactSet-Api-Request-Key
  - X-RateLimit-Reset
  - X-RateLimit-Limit
  - X-DataDirect-Request-Key

- status code: 503 | Request timed out. Retry the request in sometime.
- response headers:
  - X-RateLimit-Remaining
  - X-FactSet-Api-Request-Key
  - X-RateLimit-Reset
  - X-RateLimit-Limit
  - X-DataDirect-Request-Key

GetPAColumns  Get PA columns  This endpoint lists all the PA columns that can be applied to a calculation.

- @param  name character
- @param  category character
- @param  directory character
- @returnType  named list( ColumnSummary )

- On encountering errors, an error of subclass ApiException will be thrown.
- status code: 200 | Expected response, returns a list of PA columns
- return type: map(ColumnSummary)
- response headers:
  - X-RateLimit-Remaining
  - X-FactSet-Api-Request-Key
  - X-RateLimit-Reset
  - X-RateLimit-Limit
  - Age
  - X-DataDirect-Request-Key

- status code: 401 | Missing or invalid authentication.
- response headers:
  - X-RateLimit-Remaining
X-FactSet-Api-Request-Key    Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset   Number of seconds remaining till rate limit resets.
X-RateLimit-Limit   Number of allowed requests for the time window.
X-DataDirect-Request-Key   FactSet’s request key header.

• status code : 403 | User is forbidden with current credentials
• response headers :

X-RateLimit-Remaining   Number of requests left for the time window.
X-FactSet-Api-Request-Key    Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset   Number of seconds remaining till rate limit resets.
X-RateLimit-Limit   Number of allowed requests for the time window.
X-DataDirect-Request-Key   FactSet’s request key header.

• status code : 406 | Unsupported Accept header. Header needs to be set to application/json.
• response headers :

X-RateLimit-Remaining   Number of requests left for the time window.
X-FactSet-Api-Request-Key    Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset   Number of seconds remaining till rate limit resets.
X-RateLimit-Limit   Number of allowed requests for the time window.
X-DataDirect-Request-Key   FactSet’s request key header.

• status code : 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting
• response headers :

X-RateLimit-Remaining   Number of requests left for the time window.
X-FactSet-Api-Request-Key    Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset   Number of seconds remaining till rate limit resets.
X-RateLimit-Limit   Number of allowed requests for the time window.
X-DataDirect-Request-Key   FactSet’s request key header.

• status code : 503 | Request timed out. Retry the request in sometime.
• response headers :

X-RateLimit-Remaining   Number of requests left for the time window.
X-FactSet-Api-Request-Key    Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset   Number of seconds remaining till rate limit resets.
X-RateLimit-Limit   Number of allowed requests for the time window.
X-DataDirect-Request-Key   FactSet’s request key header.
Public fields

apiClient  Handles the client-server communication.

Methods

Public methods:

- `ColumnsApi$new()`
- `ColumnsApi$GetPAColumnById()`
- `ColumnsApi$GetPAColumnByIdWithHttpInfo()`
- `ColumnsApi$GetPAColumns()`
- `ColumnsApi$GetPAColumnsWithHttpInfo()`
- `ColumnsApi$clone()`

Method `new()`:

Usage:

```r
ColumnsApi$new(apiClient)
```

Method `GetPAColumnById()`:

Usage:

```r
ColumnsApi$GetPAColumnById(id, ...)
```

Method `GetPAColumnByIdWithHttpInfo()`:

Usage:

```r
ColumnsApi$GetPAColumnByIdWithHttpInfo(id, ...)
```

Method `GetPAColumns()`:

Usage:

```r
ColumnsApi$GetPAColumns(name = NULL, category = NULL, directory = NULL, ...)
```

Method `GetPAColumnsWithHttpInfo()`:

Usage:

```r
ColumnsApi$GetPAColumnsWithHttpInfo(
  name = NULL,
  category = NULL,
  directory = NULL,
  ...
)
```

Method `clone()`: The objects of this class are cloneable with this method.

Usage:

```r
ColumnsApi$clone(deep = FALSE)
```

Arguments:

- `deep`  Whether to make a deep clone.
## Not run:

### GetPAColumnById

```r
library(factset.analyticsapi.engines)
var.id <- 'id_example' # character | Unique identifier for a column

# Get PA column settings
api.instance <- ColumnsApi$new()

# Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>';
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>';

result <- tryCatch(
    api.instance$GetPAColumnById(var.id),
    ApiException = function(ex) ex
)

# In case of error, print the error object
if(!is.null(result$ApiException)) {
    cat(result$ApiException$toString())
} else {
    res <- tryCatch(
        api.instance$GetPAColumns(name=var.name, category=var.category, 
        directory=var.directory),
        ApiException = function(ex) ex
    )
```

### GetPAColumns

```r
library(factset.analyticsapi.engines)
var.name <- 'name_example' # character |
var.category <- 'category_example' # character |
var.directory <- 'directory_example' # character |

# Get PA columns
api.instance <- ColumnsApi$new()

# Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>';
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>';

result <- tryCatch(
    api.instance$GetPAColumns(name=var.name, category=var.category, 
    directory=var.directory),
    ApiException = function(ex) ex
)```
```
ApiException = function(ex) ex
)
# In case of error, print the error object
if(!is.null(result$ApiException)) {
    cat(result$ApiException$toString())
} else {
    # deserialized response object
    response.object <- result$content
    # response headers
    response.headers <- result$response$headers
    # response status code
    response.status.code <- result$response$status_code
}

## End(Not run)
```

### Description

**ColumnStatistic Class**

### Format

An R6Class generator object

### Public fields

- **name**: character [optional]

### Methods

**Public methods:**

- `ColumnStatistic$new()`
- `ColumnStatistic$toJSON()`
- `ColumnStatistic$fromJSON()`
- `ColumnStatistic$toJSONString()`
- `ColumnStatistic$fromJSONString()`
- `ColumnStatistic$clone()`

**Method new():**

**Usage:**

`ColumnStatistic$new(name = NULL, ...)`

**Method toJSON():**
ColumnStatisticsApi

Description

factset.analyticsapi.engines.ColumnStatistics

Format

An R6Class generator object

Methods

GetPAColumnStatistics  Get PA column statistics  This endpoint lists all the column statistics that can be applied to a PA column.

@returnType  named list( ColumnStatistic )

- On encountering errors, an error of subclass ApiException will be thrown.
- status code : 200  |  Expected response, returns a list of PA column statistics
- return type : map(ColumnStatistic)
- response headers :

X-RateLimit-Remaining  Number of requests left for the time window.
X-FactSet_Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
X-DataDirect-Request-Key  FactSet's request key header.
### ColumnStatisticsApi

- **status code**: 401 | Missing or invalid authentication.
- **response headers**:
  - `X-RateLimit-Remaining`: Number of requests left for the time window.
  - `X-FactSet-API-Request-Key`: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - `X-RateLimit-Reset`: Number of seconds remaining till rate limit resets.
  - `X-RateLimit-Limit`: Number of allowed requests for the time window.
  - `X-DataDirect-Request-Key`: FactSet's request key header.

- **status code**: 403 | User is forbidden with current credentials
- **response headers**:
  - `X-RateLimit-Remaining`: Number of requests left for the time window.
  - `X-FactSet-API-Request-Key`: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - `X-RateLimit-Reset`: Number of seconds remaining till rate limit resets.
  - `X-RateLimit-Limit`: Number of allowed requests for the time window.
  - `X-DataDirect-Request-Key`: FactSet's request key header.

- **status code**: 406 | Unsupported Accept header. Header needs to be set to application/json.
- **response headers**:
  - `X-RateLimit-Remaining`: Number of requests left for the time window.
  - `X-FactSet-API-Request-Key`: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - `X-RateLimit-Reset`: Number of seconds remaining till rate limit resets.
  - `X-RateLimit-Limit`: Number of allowed requests for the time window.
  - `X-DataDirect-Request-Key`: FactSet's request key header.

- **status code**: 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting
- **response headers**:
  - `X-RateLimit-Remaining`: Number of requests left for the time window.
  - `X-FactSet-API-Request-Key`: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - `X-RateLimit-Reset`: Number of seconds remaining till rate limit resets.
  - `X-RateLimit-Limit`: Number of allowed requests for the time window.
  - `X-DataDirect-Request-Key`: FactSet's request key header.

- **status code**: 503 | Request timed out. Retry the request in sometime.
- **response headers**:
  - `X-RateLimit-Remaining`: Number of requests left for the time window.
  - `X-FactSet-API-Request-Key`: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - `X-RateLimit-Reset`: Number of seconds remaining till rate limit resets.
  - `X-RateLimit-Limit`: Number of allowed requests for the time window.
  - `X-DataDirect-Request-Key`: FactSet's request key header.
X-DataDirect-Request-Key  FactSet’s request key header.

Public fields

apiClient  Handles the client-server communication.

Methods

Public methods:

- ColumnStatisticsApi$new()
- ColumnStatisticsApi$GetPAColumnStatistics()
- ColumnStatisticsApi$GetPAColumnStatisticsWithHttpInfo()
- ColumnStatisticsApi$clone()

Method new():

Usage:
ColumnStatisticsApi$new(apiClient)

Method GetPAColumnStatistics():

Usage:
ColumnStatisticsApi$GetPAColumnStatistics(...)

Method GetPAColumnStatisticsWithHttpInfo():

Usage:
ColumnStatisticsApi$GetPAColumnStatisticsWithHttpInfo(...)

Method clone(): The objects of this class are cloneable with this method.

Usage:
ColumnStatisticsApi$clone(deep = FALSE)

Arguments:

deep  Whether to make a deep clone.

Examples

## Not run:
################################################################################ GetPAColumnStatistics ################################################################################

library(factset.analyticsapi.engines)

#Get PA column statistics
api.instance <- ColumnStatisticsApi$new()

#Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>,'
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>';
result <- tryCatch(
  api.instance$GetPAColumnStatistics(),
  ApiException = function(ex) ex
)
# In case of error, print the error object
if(!is.null(result$ApiException)) {
  cat(result$ApiException$toString())
} else {
  # deserialized response object
  response.object <- result$content
  # response headers
  response.headers <- result$response$headers
  # response status code
  response.status.code <- result$response$status_code
}

## End(Not run)

---

**Description**

ColumnSummary Class

**Format**

An R6Class generator object

**Public fields**

- name character [optional]
- directory character [optional]
- category character [optional]

**Methods**

Public methods:

- ColumnSummary$new()
- ColumnSummary$toJSON()
- ColumnSummary$fromJSON()
- ColumnSummary$toJSONString()
- ColumnSummary$fromJSONString()
- ColumnSummary$clone()
**Method** new():

*Usage:*

```
ColumnSummary$new(name = NULL, directory = NULL, category = NULL, ...)
```

**Method** toJSON():

*Usage:*

```
ColumnSummary$toJSON()
```

**Method** fromJSON():

*Usage:*

```
ColumnSummary$fromJSON(ColumnSummaryJson)
```

**Method** toJSONString():

*Usage:*

```
ColumnSummary$toJSONString()
```

**Method** fromJSONString():

*Usage:*

```
ColumnSummary$fromJSONString(ColumnSummaryJson)
```

**Method** clone(): The objects of this class are cloneable with this method.

*Usage:*

```
ColumnSummary$clone(deep = FALSE)
```

*Arguments:*

deep  Whether to make a deep clone.

---

**Description**

ComponentAccount Class

**Format**

An R6Class generator object

**Public fields**

- id  character [optional]
- name character [optional]
- holdingsmode character [optional]
Methods

Public methods:

• `ComponentAccount$new()`
• `ComponentAccount$toJSON()`
• `ComponentAccount$fromJSON()`
• `ComponentAccount$toJSONString()`
• `ComponentAccount$fromJSONString()`
• `ComponentAccount$clone()`

Method `new()`:

Usage:
`ComponentAccount$new(id = NULL, name = NULL, holdingsmode = NULL, ...)`

Method `toJSON()`:

Usage:
`ComponentAccount$toJSON()`

Method `fromJSON()`:

Usage:
`ComponentAccount$fromJSON(ComponentAccountJson)`

Method `toJSONString()`:

Usage:
`ComponentAccount$toJSONString()`

Method `fromJSONString()`:

Usage:
`ComponentAccount$fromJSONString(ComponentAccountJson)`

Method `clone()`: The objects of this class are cloneable with this method.

Usage:
`ComponentAccount$clone(deep = FALSE)`

Arguments:
deepl Whether to make a deep clone.
Description
ComponentBenchmark Class

Format
An R6Class generator object

Public fields
id character [optional]
name character [optional]
holdingsmode character [optional]

Methods
Public methods:
• ComponentBenchmark$new()
• ComponentBenchmark$toJSON()
• ComponentBenchmark$fromJSON()
• ComponentBenchmark$toJSONString()
• ComponentBenchmark$fromJSONString()
• ComponentBenchmark$clone()

Method new():
Usage:
ComponentBenchmark$new(id = NULL, name = NULL, holdingsmode = NULL, ...)

Method toJSON():
Usage:
ComponentBenchmark$toJSON()

Method fromJSON():
Usage:
ComponentBenchmark$fromJSON(ComponentBenchmarkJson)

Method toJSONString():
Usage:
ComponentBenchmark$toJSONString()

Method fromJSONString():
**Usage:**
ComponentBenchmark$fromJSONString(ComponentBenchmarkJson)

**Method clone():** The objects of this class are cloneable with this method.

**Usage:**
ComponentBenchmark$clone(deep = FALSE)

**Arguments:**
- `deep` Whether to make a deep clone.

---

**Components operations**

**Description**
factset.analyticsapi.engines.Components

**Format**
An R6Class generator object

**Methods**

**GetPAComponentById**  *Get PA component by id*  This endpoint returns the default settings of a PA component.

- **@param**  `id` character
- **@returnType**  PAComponent

- On encountering errors, an error of subclass ApiException will be thrown.
- **status code**: 200 | Expected response, returns the default settings of a PA component.
- **response headers**:
  - X-RateLimit-Remaining  Number of requests left for the time window.
  - X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit  Number of allowed requests for the time window.
  - X-DataDirect-Request-Key  FactSet's request key header.

- **status code**: 400 | Invalid PA component id.
- **response headers**:
  - X-RateLimit-Remaining  Number of requests left for the time window.
  - X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
<table>
<thead>
<tr>
<th>Header</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-RateLimit-Limit</td>
<td>Number of allowed requests for the time window.</td>
</tr>
<tr>
<td>X-DataDirect-Request-Key</td>
<td>FactSet's request key header.</td>
</tr>
<tr>
<td>X-RateLimit-Remaining</td>
<td>Number of requests left for the time window.</td>
</tr>
<tr>
<td>X-FactSet-Api-Request-Key</td>
<td>Key to uniquely identify an Analytics API request. Only available after successful authentication.</td>
</tr>
<tr>
<td>X-RateLimit-Reset</td>
<td>Number of seconds remaining till rate limit resets.</td>
</tr>
<tr>
<td>X-RateLimit-Limit</td>
<td>Number of allowed requests for the time window.</td>
</tr>
<tr>
<td>X-DataDirect-Request-Key</td>
<td>FactSet's request key header.</td>
</tr>
</tbody>
</table>

- **status code**: 401 | Missing or invalid authentication.
- **response headers**:

- **status code**: 403 | User is forbidden with current credentials.
- **response headers**:

- **status code**: 404 | Component not found.
- **response headers**:

- **status code**: 406 | Unsupported Accept header. Header needs to be set to application/json.
- **response headers**:

- **status code**: 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
- **response headers**:
ComponentsApi

- status code: 503 | Request timed out. Retry the request in sometime.
- response headers:

X-RateLimit-Remaining  Number of requests left for the time window.
X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
X-DataDirect-Request-Key  FactSet’s request key header.

GetPAComponents  Get PA components  This endpoint returns the list of PA components in a given PA document.

@param  document character

@returnType  named list( ComponentSummary )

- On encountering errors, an error of subclass ApiException will be thrown.
- status code: 200 | Expected response, returns a list of PA components.
- return type: map(ComponentSummary)
- response headers:

X-RateLimit-Remaining  Number of requests left for the time window.
X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
X-DataDirect-Request-Key  FactSet’s request key header.

- status code: 400 | Invalid query parameter provided or Invalid PA document name.
- response headers:

X-RateLimit-Remaining  Number of requests left for the time window.
X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
X-DataDirect-Request-Key  FactSet’s request key header.

- status code: 401 | Missing or invalid authentication.
- response headers:

X-RateLimit-Remaining  Number of requests left for the time window.
ComponentsApi

X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
X-DataDirect-Request-Key  FactSet’s request key header.

• status code : 403 | User is forbidden with current credentials
• response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet’s request key header.

• status code : 404 | Document not found.
• response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet’s request key header.

• status code : 406 | Unsupported Accept header. Header needs to be set to application/json.
• response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet’s request key header.

• status code : 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
• response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet’s request key header.

• status code : 503 | Request timed out. Retry the request in sometime.
ComponentsApi

- response headers:

  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.

GetSPARComponents  Get SPAR components  This endpoint returns the list of SPAR components in a given SPAR document.

  @param document character
  @returnType named list( ComponentSummary )

- On encountering errors, an error of subclass ApiException will be thrown.
- status code: 200 | Expected response, returns a list of SPAR components.
- return type: map(ComponentSummary)
- response headers:

  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.

- status code: 400 | Invalid query parameter provided or Invalid SPAR document name.
- response headers:

  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.

- status code: 401 | Missing or invalid authentication.
- response headers:

  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.

- status code: 403 | User is forbidden with current credentials
• response headers:

X-RateLimit-Remaining        Number of requests left for the time window.
X-FactSet-Api-Request-Key    Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset           Number of seconds remaining till rate limit resets.
X-RateLimit-Limit           Number of allowed requests for the time window.
X-DataDirect-Request-Key    FactSet's request key header.

• status code: 404 | SPAR Document not found.
• response headers:

X-RateLimit-Remaining        Number of requests left for the time window.
X-FactSet-Api-Request-Key    Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset           Number of seconds remaining till rate limit resets.
X-RateLimit-Limit           Number of allowed requests for the time window.
X-DataDirect-Request-Key    FactSet's request key header.

• status code: 406 | Unsupported Accept header. Header needs to be set to application/json.
• response headers:

X-RateLimit-Remaining        Number of requests left for the time window.
X-FactSet-Api-Request-Key    Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset           Number of seconds remaining till rate limit resets.
X-RateLimit-Limit           Number of allowed requests for the time window.
X-DataDirect-Request-Key    FactSet's request key header.

• status code: 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
• response headers:

X-RateLimit-Remaining        Number of requests left for the time window.
X-FactSet-Api-Request-Key    Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset           Number of seconds remaining till rate limit resets.
X-RateLimit-Limit           Number of allowed requests for the time window.
X-DataDirect-Request-Key    FactSet's request key header.

• status code: 503 | Request timed out. Retry the request in sometime.
• response headers:

X-RateLimit-Remaining        Number of requests left for the time window.
X-FactSet-Api-Request-Key    Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset           Number of seconds remaining till rate limit resets.
X-RateLimit-Limit           Number of allowed requests for the time window.
X-DataDirect-Request-Key    FactSet's request key header.
**GetVaultComponentById**  
*Get Vault component by id*  
This endpoint returns the default settings of a Vault component.

- **@param** id character
- **@returnType** VaultComponent

- On encountering errors, an error of subclass ApiException will be thrown.
- **status code** : 200 | Expected response, returns the default settings of a Vault component.
- **return type** : VaultComponent
- **response headers** :
  - X-RateLimit-Remaining Number of requests left for the time window.
  - X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit Number of allowed requests for the time window.
  - X-DataDirect-Request-Key FactSet's request key header.

- **status code** : 400 | Invalid Vault component id.
- **response headers** :
  - X-RateLimit-Remaining Number of requests left for the time window.
  - X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit Number of allowed requests for the time window.
  - X-DataDirect-Request-Key FactSet's request key header.

- **status code** : 401 | Missing or invalid authentication.
- **response headers** :
  - X-RateLimit-Remaining Number of requests left for the time window.
  - X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit Number of allowed requests for the time window.
  - X-DataDirect-Request-Key FactSet's request key header.

- **status code** : 403 | User is forbidden with current credentials
- **response headers** :
  - X-RateLimit-Remaining Number of requests left for the time window.
  - X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit Number of allowed requests for the time window.
  - X-DataDirect-Request-Key FactSet's request key header.
ComponentsApi

- status code: 404 | Vault Component not found.
- response headers:
  - X-RateLimit-Remaining: Number of requests left for the time window.
  - X-FactSet_Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit: Number of allowed requests for the time window.
  - X-DataDirect-Request-Key: FactSet's request key header.

- status code: 406 | Unsupported Accept header. Header needs to be set to application/json.
- response headers:
  - X-RateLimit-Remaining: Number of requests left for the time window.
  - X-FactSet_Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit: Number of allowed requests for the time window.
  - X-DataDirect-Request-Key: FactSet's request key header.

- status code: 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
- response headers:
  - X-RateLimit-Remaining: Number of requests left for the time window.
  - X-FactSet_Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit: Number of allowed requests for the time window.
  - X-DataDirect-Request-Key: FactSet's request key header.

- status code: 503 | Request timed out. Retry the request in sometime.
- response headers:
  - X-RateLimit-Remaining: Number of requests left for the time window.
  - X-FactSet_Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit: Number of allowed requests for the time window.
  - X-DataDirect-Request-Key: FactSet's request key header.

GetVaultComponents  Get Vault components  This endpoint returns the list of Vault components in a given Vault document.

- **@param**  document character
- **@returnType**  named list( ComponentSummary )

- On encountering errors, an error of subclass ApiException will be thrown.
- status code: 200 | Expected response, returns a list of Vault components.
ComponentsApi

- return type: map(ComponentSummary)
- response headers:

  X-RateLimit-Remaining Number of requests left for the time window.
  X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit Number of allowed requests for the time window.
  X-DataDirect-Request-Key FactSet's request key header.

- status code: 400 | Invalid query parameter provided or invalid Vault document name.
- response headers:

  X-RateLimit-Remaining Number of requests left for the time window.
  X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit Number of allowed requests for the time window.
  X-DataDirect-Request-Key FactSet's request key header.

- status code: 401 | Missing or invalid authentication.
- response headers:

  X-RateLimit-Remaining Number of requests left for the time window.
  X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit Number of allowed requests for the time window.
  X-DataDirect-Request-Key FactSet's request key header.

- status code: 403 | User is forbidden with current credentials
- response headers:

  X-RateLimit-Remaining Number of requests left for the time window.
  X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit Number of allowed requests for the time window.
  X-DataDirect-Request-Key FactSet's request key header.

- status code: 404 | Vault Document not found.
- response headers:

  X-RateLimit-Remaining Number of requests left for the time window.
  X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit Number of allowed requests for the time window.
  X-DataDirect-Request-Key FactSet's request key header.
ComponentsApi

- status code: 406 | Unsupported Accept header. Header needs to be set to application/json.
- response headers:

  - X-RateLimit-Remaining: Number of requests left for the time window.
  - X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit: Number of allowed requests for the time window.
  - X-DataDirect-Request-Key: FactSet's request key header.

- status code: 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
- response headers:

  - X-RateLimit-Remaining: Number of requests left for the time window.
  - X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit: Number of allowed requests for the time window.
  - X-DataDirect-Request-Key: FactSet's request key header.

- status code: 503 | Request timed out. Retry the request in sometime.
- response headers:

  - X-RateLimit-Remaining: Number of requests left for the time window.
  - X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit: Number of allowed requests for the time window.
  - X-DataDirect-Request-Key: FactSet's request key header.

Public fields

  apiClient: Handles the client-server communication.

Methods

Public methods:

- ComponentsApi$new()
- ComponentsApi$GetPAComponentById()
- ComponentsApi$GetPAComponentByIdWithHttpInfo()
- ComponentsApi$GetPAComponents()
- ComponentsApi$GetPAComponentsWithHttpInfo()
- ComponentsApi$GetSPARComponents()
- ComponentsApi$GetSPARComponentsWithHttpInfo()
ComponentsApi

- ComponentsApi$GetVaultComponentById()
- ComponentsApi$GetVaultComponentByIdWithHttpInfo()
- ComponentsApi$GetVaultComponents()
- ComponentsApi$GetVaultComponentsWithHttpInfo()
- ComponentsApi$clone()

**Method** new():

*Usage:*
ComponentsApi$new(apiClient)

**Method** GetPAComponentById():

*Usage:*
ComponentsApi$GetPAComponentById(id, ...)

**Method** GetPAComponentByIdWithHttpInfo():

*Usage:*
ComponentsApi$GetPAComponentByIdWithHttpInfo(id, ...)

**Method** GetPAComponents():

*Usage:*
ComponentsApi$GetPAComponents(document, ...)

**Method** GetPAComponentsWithHttpInfo():

*Usage:*
ComponentsApi$GetPAComponentsWithHttpInfo(document, ...)

**Method** GetSPARComponents():

*Usage:*
ComponentsApi$GetSPARComponents(document, ...)

**Method** GetSPARComponentsWithHttpInfo():

*Usage:*
ComponentsApi$GetSPARComponentsWithHttpInfo(document, ...)

**Method** GetVaultComponentById():

*Usage:*
ComponentsApi$GetVaultComponentById(id, ...)

**Method** GetVaultComponentByIdWithHttpInfo():

*Usage:*
ComponentsApi$GetVaultComponentByIdWithHttpInfo(id, ...)

**Method** GetVaultComponents():

*Usage:*
ComponentsApi$GetVaultComponents(document, ...)
Method `GetVaultComponentsWithHttpInfo()`:

Usage:

`ComponentsApi$GetVaultComponentsWithHttpInfo(document, ...)`

Method `clone()`: The objects of this class are cloneable with this method.

Usage:

`ComponentsApi$clone(deep = FALSE)`

Arguments:

deep Whether to make a deep clone.

Examples

```r
## Not run:

### GetPAComponentById

```{r}
library(factset.analyticsapi.engines)
var.id <- 'id_example' # character | Unique identifier for a PA component

# Get PA component by id
api.instance <- ComponentsApi$new()

# Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>'
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>'

result <- tryCatch(
  api.instance$GetPAComponentById(var.id),
  ApiException = function(ex) ex
)

# In case of error, print the error object
if(!is.null(result$ApiException)) {
  cat(result$ApiException$toString())
} else {
  # deserialized response object
  response.object <- result$content
  # response headers
  response.headers <- result$response$headers
  # response status code
  response.status.code <- result$response$status_code
}
```

### GetPAComponents

```r
library(factset.analyticsapi.engines)
var.document <- 'document_example' # character | Document Name

# Get PA components
api.instance <- ComponentsApi$new()
```
#Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- 'user-serial';
# provide your api key generated using the developer portal
api.instance$apiClient$password <- 'api_key';

result <- tryCatch(
    api.instance$GetPAComponents(var.document),
    ApiException = function(ex) ex
)
# In case of error, print the error object
if(!is.null(result$ApiException)) {
    cat(result$ApiException$toString())
} else {
    # deserialized response object
    response.object <- result$content
    # response headers
    response.headers <- result$response$headers
    # response status code
    response.status.code <- result$response$status_code
}

### GetSPARComponents ###

library(factset.analyticsapi.engines)
var.document <- 'document_example' # character | Document Name

#Get SPAR components
api.instance <- ComponentsApi$new()

#Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- 'user-serial';
# provide your api key generated using the developer portal
api.instance$apiClient$password <- 'api_key';

result <- tryCatch(
    api.instance$GetSPARComponents(var.document),
    ApiException = function(ex) ex
)
# In case of error, print the error object
if(!is.null(result$ApiException)) {
    cat(result$ApiException$toString())
} else {
    # deserialized response object
    response.object <- result$content
    # response headers
    response.headers <- result$response$headers
    # response status code
    response.status.code <- result$response$status_code
}
### GetVaultComponentById

```r
library(factset.analyticsapi.engines)
var.id <- 'id_example' # character | Unique identifier for a vault component

# Get Vault component by id
api.instance <- ComponentsApi$new()

# Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>'
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>'

result <- tryCatch(
  api.instance$GetVaultComponentById(var.id),
  ApiException = function(ex) ex
)
# In case of error, print the error object
if(!is.null(result$ApiException)){
  cat(result$ApiException$toString())
} else {
  # deserialized response object
  response.object <- result$content
  # response headers
  response.headers <- result$response$headers
  # response status code
  response.status.code <- result$response$status_code
}
```

### GetVaultComponents

```r
library(factset.analyticsapi.engines)
var.document <- 'document_example' # character | Document Name

# Get Vault components
api.instance <- ComponentsApi$new()

# Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>'
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>'

result <- tryCatch(
  api.instance$GetVaultComponents(var.document),
  ApiException = function(ex) ex
)
# In case of error, print the error object
if(!is.null(result$ApiException)){
  cat(result$ApiException$toString())
} else {
```

ComponentSummary

```r
cat(result$ApiException$toString())
else {
  # deserialized response object
  response.object <- result$content
  # response headers
  response.headers <- result$response$headers
  # response status code
  response.status.code <- result$response$status_code
}

## End(Not run)
```

### Description

ComponentSummary Class

### Format

An R6Class generator object

### Public fields

- name character [optional]
- category character [optional]

### Methods

#### Public methods:

- `ComponentSummary$new()`
- `ComponentSummary$toJSON()`
- `ComponentSummary$fromJson()`
- `ComponentSummary$toJSONString()`
- `ComponentSummary$fromJsonString()`
- `ComponentSummary$clone()`

#### Method `new()`:

**Usage:**

`ComponentSummary$new(name = NULL, category = NULL, ...)`

#### Method `toJSON()`:

**Usage:**

...
ComponentSummary$toJSON()

Method fromJSON():
   Usage:
   ComponentSummary$fromJSON(ComponentSummaryJson)

Method toJSONString():
   Usage:
   ComponentSummary$toJSONString()

Method fromJSONString():
   Usage:
   ComponentSummary$fromJSONString(ComponentSummaryJson)

Method clone(): The objects of this class are cloneable with this method.
   Usage:
   ComponentSummary$clone(deep = FALSE)
   Arguments:
   deep  Whether to make a deep clone.

---

ConfigurationAccount  ConfigurationAccount

Description

ConfigurationAccount Class

Format

An R6Class generator object

Public fields

   benchmarkCode  character [optional]
   benchmarkName  character [optional]
   maxEndDate     character [optional]
   minStartDate   character [optional]
   lockingDate    character [optional]
   name           character [optional]
Methods

Public methods:

• ConfigurationAccount$\texttt{new}()  
• ConfigurationAccount$\texttt{toJSON}()  
• ConfigurationAccount$\texttt{fromJSON}()  
• ConfigurationAccount$\texttt{toJSONString}()  
• ConfigurationAccount$\texttt{fromJSONString}()  
• ConfigurationAccount$\texttt{clone}()  

Method \texttt{new}():

Usage:
ConfigurationAccount$\texttt{new}(  
  benchmarkCode = NULL,  
  benchmarkName = NULL,  
  maxEndDate = NULL,  
  minStartDate = NULL,  
  lockingDate = NULL,  
  name = NULL,  
  ...  
)

Method \texttt{toJSON}():

Usage:
ConfigurationAccount$\texttt{toJSON}()

Method \texttt{fromJSON}():

Usage:
ConfigurationAccount$\texttt{fromJSON}(ConfigurationAccountJson)

Method \texttt{toJSONString}():

Usage:
ConfigurationAccount$\texttt{toJSONString}()

Method \texttt{fromJSONString}():

Usage:
ConfigurationAccount$\texttt{fromJSONString}(ConfigurationAccountJson)

Method \texttt{clone}(): The objects of this class are cloneable with this method.

Usage:
ConfigurationAccount$\texttt{clone}(deep = FALSE)

Arguments:

depth Whether to make a deep clone.
ConfigurationsApi

Configurations operations

Description

factset.analyticsapi.engines.Configurations

Format

An R6Class generator object

Methods

GetVaultConfigurationById  Get Vault configuration by id  This endpoint returns details for a Vault configuration as well as a list of accounts it is used in.
  @param id character
  • @returnType VaultConfiguration

  • On encountering errors, an error of subclass ApiException will be thrown.
  • status code : 200 | Expected response, returns details for a Vault configuration.
  • return type : VaultConfiguration
  • response headers :

    X-RateLimit-Remaining Number of requests left for the time window.
    X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
    X-RateLimit-Reset Number of seconds remaining till rate limit resets.
    X-RateLimit-Limit Number of allowed requests for the time window.
    X-DataDirect-Request-Key FactSet's request key header.

    • status code : 400 | Invalid vault configuration code.
    • response headers :

    X-RateLimit-Remaining Number of requests left for the time window.
    X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
    X-RateLimit-Reset Number of seconds remaining till rate limit resets.
    X-RateLimit-Limit Number of allowed requests for the time window.
    X-DataDirect-Request-Key FactSet's request key header.

    • status code : 401 | Missing or invalid authentication.
    • response headers :

    X-RateLimit-Remaining Number of requests left for the time window.
    X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
    X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet's request key header.

• status code: 403 | User is forbidden with current credentials
• response headers:

X-RateLimit-Remaining Number of requests left for the time window.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet's request key header.

• status code: 404 | Vault configuration id not found.
• response headers:

X-RateLimit-Remaining Number of requests left for the time window.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet's request key header.

• status code: 406 | Unsupported Accept header. Header needs to be set to application/json.
• response headers:

X-RateLimit-Remaining Number of requests left for the time window.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet's request key header.

• status code: 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
• response headers:

X-RateLimit-Remaining Number of requests left for the time window.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet's request key header.

• status code: 503 | Request timed out. Retry the request in sometime.
• response headers:
Get Vault Configurations

This endpoint returns all the Vault configurations saved in the provided account.

@param account character

@returnType named list( VaultConfigurationSummary )

- On encountering errors, an error of subclass ApiException will be thrown.
- status code: 200 | Expected response, returns a dictionary of Vault configurations.
- return type: map(VaultConfigurationSummary)
- response headers:

X-RateLimit-Remaining Number of requests left for the time window.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet’s request key header.

- status code: 400 | Invalid account.
- response headers:

X-RateLimit-Remaining Number of requests left for the time window.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet’s request key header.

- status code: 401 | Missing or invalid authentication.
- response headers:

X-RateLimit-Remaining Number of requests left for the time window.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet’s request key header.

- status code: 403 | User is forbidden with current credentials
- response headers:

X-RateLimit-Remaining Number of requests left for the time window.
ConfigurationsApi

- status code: 404 | Account not found.
- response headers:
  - X-RateLimit-Remaining Number of requests left for the time window.
  - X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit Number of allowed requests for the time window.
  - X-DataDirect-Request-Key FactSet's request key header.

- status code: 406 | Unsupported Accept header. Header needs to be set to application/json.
- response headers:
  - X-RateLimit-Remaining Number of requests left for the time window.
  - X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit Number of allowed requests for the time window.
  - X-DataDirect-Request-Key FactSet's request key header.

- status code: 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
- response headers:
  - X-RateLimit-Remaining Number of requests left for the time window.
  - X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit Number of allowed requests for the time window.
  - X-DataDirect-Request-Key FactSet's request key header.

- status code: 503 | Request timed out. Retry the request in sometime.
- response headers:
  - X-RateLimit-Remaining Number of requests left for the time window.
  - X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit Number of allowed requests for the time window.
  - X-DataDirect-Request-Key FactSet's request key header.
Public fields

apiClient  Handles the client-server communication.

Methods

Public methods:

• ConfigurationsApi$new()
• ConfigurationsApi$GetVaultConfigurationById()
• ConfigurationsApi$GetVaultConfigurationByIdWithHttpInfo()
• ConfigurationsApi$GetVaultConfigurations()
• ConfigurationsApi$GetVaultConfigurationsWithHttpInfo()
• ConfigurationsApi$clone()

Method new():

Usage:
ConfigurationsApi$new(apiClient)

Method GetVaultConfigurationById():

Usage:
ConfigurationsApi$GetVaultConfigurationById(id, ...)

Method GetVaultConfigurationByIdWithHttpInfo():

Usage:
ConfigurationsApi$GetVaultConfigurationByIdWithHttpInfo(id, ...)

Method GetVaultConfigurations():

Usage:
ConfigurationsApi$GetVaultConfigurations(account, ...)

Method GetVaultConfigurationsWithHttpInfo():

Usage:
ConfigurationsApi$GetVaultConfigurationsWithHttpInfo(account, ...)

Method clone(): The objects of this class are cloneable with this method.

Usage:
ConfigurationsApi$clone(deep = FALSE)

Arguments:

deep  Whether to make a deep clone.
Examples

```r
## Not run:
########################################################################
library(factset.analyticsapi.engines)
var.id <- 'id_example'  # character | Vault configuration id to get the details of

#Get Vault configuration by id
api.instance <- ConfigurationsApi$new()

#Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>';
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>);

result <- tryCatch(
    api.instance$GetVaultConfigurationById(var.id),
    ApiException = function(ex) ex
)

# In case of error, print the error object
if(!is.null(result$ApiException)) {
    cat(result$ApiException$toString())
} else {
    # deserialized response object
    response.object <- result$content
    # response headers
    response.headers <- result$response$headers
    # response status code
    response.status.code <- result$response$status_code
}

########################################################################
library(factset.analyticsapi.engines)
var.account <- 'account_example'  # character | Required account query parameter to
                                    # filter configurations for a specific account

#Get Vault configurations
api.instance <- ConfigurationsApi$new()

#Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>,'
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>);

result <- tryCatch(
    api.instance$GetVaultConfigurations(var.account),
    ApiException = function(ex) ex
)
```
# In case of error, print the error object
if(!is.null(result$ApiException)) {
    cat(result$ApiException$toString())
} else {
  # deserialized response object
  response.object <- result$content
  # response headers
  response.headers <- result$response$headers
  # response status code
  response.status.code <- result$response$status_code
}

## End(Not run)

## Currencies operations

### Description

factset.analyticsapi.engines.Currencies

### Format

An R6Class generator object

### Methods

**GetPA Currencies**  
*Get PA currencies*  This endpoint lists all the PA currencies that can be applied to a calculation.

- **@returnType** named list( Currency )

- On encountering errors, an error of subclass ApiException will be thrown.
- **status code** : 200  |  Expected response, returns a list of PA currencies.
- **return type** : map(Currency)
- **response headers** :
  - X-RateLimit-Remaining  Number of requests left for the time window.
  - X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit  Number of allowed requests for the time window.
  - X-DataDirect-Request-Key  FactSet’s request key header.

- **status code** : 401  |  Missing or invalid authentication.
- **response headers** :
X-RateLimit-Remaining: Number of requests left for the time window.
X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
X-RateLimit-Limit: Number of allowed requests for the time window.
X-DataDirect-Request-Key: FactSet's request key header.

- status code: 403 | User is forbidden with current credentials
- response headers:
  X-RateLimit-Remaining: Number of requests left for the time window.
  X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit: Number of allowed requests for the time window.
  X-DataDirect-Request-Key: FactSet's request key header.

- status code: 406 | Unsupported Accept header. Header needs to be set to application/json.
- response headers:
  X-RateLimit-Remaining: Number of requests left for the time window.
  X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit: Number of allowed requests for the time window.
  X-DataDirect-Request-Key: FactSet's request key header.

- status code: 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
- response headers:
  X-RateLimit-Remaining: Number of requests left for the time window.
  X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit: Number of allowed requests for the time window.
  X-DataDirect-Request-Key: FactSet's request key header.

- status code: 503 | Request timed out. Retry the request in sometime.
- response headers:
  X-RateLimit-Remaining: Number of requests left for the time window.
  X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit: Number of allowed requests for the time window.
  X-DataDirect-Request-Key: FactSet's request key header.
Public fields

apiClient  Handles the client-server communication.

Methods

Public methods:

• CurrenciesApi$new()
• CurrenciesApi$GetPACurrencies()
• CurrenciesApi$GetPACurrenciesWithHttpInfo()
• CurrenciesApi$clone()

Method new():

Usage:
CurrenciesApi$new(apiClient)

Method GetPACurrencies():

Usage:
CurrenciesApi$GetPACurrencies(...)

Method GetPACurrenciesWithHttpInfo():

Usage:
CurrenciesApi$GetPACurrenciesWithHttpInfo(...)

Method clone(): The objects of this class are cloneable with this method.

Usage:
CurrenciesApi$clone(deep = FALSE)

Arguments:
deep  Whether to make a deep clone.

Examples

## Not run:

library(factset.analyticsapi.engines)

#Get PA currencies
api.instance <- CurrenciesApi$new()

#Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>';
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>';

result <- tryCatch(
    api.instance$GetPACurrencies(),
Currency

 ApiException = function(ex) ex
)
# In case of error, print the error object
if(!is.null(result$ApiException)) {
  cat(result$ApiException$toString())
} else {
  # deserialized response object
  response.object <- result$content
  # response headers
  response.headers <- result$response$headers
  # response status code
  response.status.code <- result$response$status_code
}

## End(Not run)

<table>
<thead>
<tr>
<th>Currency</th>
<th>Currency</th>
</tr>
</thead>
</table>

**Description**

Currency Class

**Format**

An R6Class generator object

**Public fields**

name character [optional]

**Methods**

**Public methods:**

- Currency$new()
- Currency$toJSON()
- Currency$fromJSON()
- Currency$toJSONString()
- Currency$fromJSONString()
- Currency$clone()

**Method** new():

*Usage:*

Currency$new(name = NULL, ...)

**Method** toJSON():


Usage:
Currency$toJSON()

Method fromJSON():
Usage:
Currency$fromJSON(CurrencyJson)

Method toJSONString():
Usage:
Currency$toJSONString()

Method fromJSONString():
Usage:
Currency$fromJSONString(CurrencyJson)

Method clone(): The objects of this class are cloneable with this method.
Usage:
Currency$clone(deep = FALSE)

Arguments:
deept  Whether to make a deep clone.

Description
DateParametersSummary Class

Format
An R6Class generator object

Public fields
startdate character [optional]
enddate character [optional]
Methods

Public methods:

- `DateParametersSummary$new`
- `DateParametersSummary$toJSON`
- `DateParametersSummary$fromJSON`
- `DateParametersSummary$toJSONString`
- `DateParametersSummary$fromJSONString`
- `DateParametersSummary$clone`

Method `new`:

Usage:

`DateParametersSummary$new(startdate = NULL, enddate = NULL, ...)`

Method `toJSON`:

Usage:

`DateParametersSummary$toJSON()`

Method `fromJSON`:

Usage:

`DateParametersSummary$fromJSON(DateParametersSummaryJson)`

Method `toJSONString`:

Usage:

`DateParametersSummary$toJSONString()`

Method `fromJSONString`:

Usage:

`DateParametersSummary$fromJSONString(DateParametersSummaryJson)`

Method `clone`:

The objects of this class are cloneable with this method.

Usage:

`DateParametersSummary$clone(deep = FALSE)`

Arguments:

- `deep` Whether to make a deep clone.
DatesApi

Dates operations

Description

factset.analyticsapi.engines.Dates

Format

An R6Class generator object

Methods

**ConvertPADatesToAbsoluteFormat**  
*Convert PA dates to absolute format*  
This endpoint converts the given start and end dates to yyyymmdd format for a PA calculation.

- **@param** enddate character
- **@param** componentid character
- **@param** account character
- **@param** startdate character

- **@returnType** DateParametersSummary

- On encountering errors, an error of subclass ApiException will be thrown.
- **status code**: 200 | Expected response, returns the converted dates in yyyymmdd format.
- **return type**: DateParametersSummary
- response headers:
  - X-RateLimit-Remaining Number of requests left for the time window.
  - X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit Number of allowed requests for the time window.
  - X-DataDirect-Request-Key FactSet's request key header.

- **status code**: 400 | Invalid query parameter or value is provided.
- response headers:
  - X-RateLimit-Remaining Number of requests left for the time window.
  - X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit Number of allowed requests for the time window.
  - X-DataDirect-Request-Key FactSet's request key header.

- **status code**: 401 | Missing or invalid authentication.
- response headers:
DatesApi

X-RateLimit-Remaining Number of requests left for the time window.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet’s request key header.

• status code : 403 | User is forbidden with current credentials
  • response headers :

X-RateLimit-Remaining Number of requests left for the time window.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet’s request key header.

• status code : 404 | Document or account not found.
  • response headers :

X-RateLimit-Remaining Number of requests left for the time window.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet’s request key header.

• status code : 406 | Unsupported Accept header. Header needs to be set to application/json.
  • response headers :

X-RateLimit-Remaining Number of requests left for the time window.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet’s request key header.

• status code : 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
  • response headers :

X-RateLimit-Remaining Number of requests left for the time window.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet’s request key header.
• status code : 503 | Request timed out. Retry the request in sometime.
• response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet’s request key header.

ConvertVaultDatesToAbsoluteFormat  *Convert Vault dates to absolute format*  This endpoint converts the given start and end dates to yyyymmd format for a Vault calculation.

@param enndate character
• @param componentid character
• @param account character
• @param startdate character
• @returnType DateParametersSummary

• On encountering errors, an error of subclass ApiException will be thrown.
• status code : 200 | Expected response, returns the converted dates in yyyymmd format.
• return type : DateParametersSummary
• response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet’s request key header.

• status code : 400 | Invalid query parameter or value is provided.
• response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet’s request key header.

• status code : 401 | Missing or invalid authentication.
• response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
DatesApi

X-DataDirect-Request-Key  FactSet's request key header.

- status code : 403 | User is forbidden with current credentials
- response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining until rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.

- status code : 404 | Document or account not found.
- response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining until rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.

- status code : 406 | Unsupported Accept header. Header needs to be set to application/json.
- response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining until rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.

- status code : 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
- response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining until rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.

- status code : 503 | Request timed out. Retry the request in sometime.
- response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
DatesApi

X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet's request key header.

Public fields

apiClient Handles the client-server communication.

Methods

Public methods:

- `DatesApi$new()`
- `DatesApi$ConvertPADatesToAbsoluteFormat()`
- `DatesApi$ConvertPADatesToAbsoluteFormatWithHttpInfo()`
- `DatesApi$ConvertVaultDatesToAbsoluteFormat()`
- `DatesApi$ConvertVaultDatesToAbsoluteFormatWithHttpInfo()`
- `DatesApi$clone()`

Method new():

Usage:
`DatesApi$new(apiClient)`

Method ConvertPADatesToAbsoluteFormat():

Usage:
`DatesApi$ConvertPADatesToAbsoluteFormat(enddate, componentid, account, startdate = NULL, ...)`

Method ConvertPADatesToAbsoluteFormatWithHttpInfo():

Usage:
`DatesApi$ConvertPADatesToAbsoluteFormatWithHttpInfo(enddate, componentid, account, startdate = NULL, ...)`

Method ConvertVaultDatesToAbsoluteFormat():

Usage:
DatesApi

DatesApi$ConvertVaultDatesToAbsoluteFormat(
    enddate,
    componentid,
    account,
    startdate = NULL,
    ...
)

**Method** ConvertVaultDatesToAbsoluteFormatWithHttpInfo():

**Usage:**
DatesApi$ConvertVaultDatesToAbsoluteFormatWithHttpInfo(
    enddate,
    componentid,
    account,
    startdate = NULL,
    ...
)

**Method** clone(): The objects of this class are cloneable with this method.

**Usage:**
DatesApi$clone(deep = FALSE)

**Arguments:**
deep  Whether to make a deep clone.

**Examples**

```r
## Not run:

library(factset.analyticsapi_engines)
var.enddate <- `enddate_example` # character | End Date
var.componentid <- `componentid_example` # character | Component Id
var.account <- `account_example` # character | Account
var.startdate <- `startdate_example` # character | Start Date

#Convert PA dates to absolute format
api.instance <- DatesApi$new()

#Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>';
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>';

result <- tryCatch(
    api.instance$ConvertPADatesToAbsoluteFormat(var.enddate, var.componentid,
        var.account, startdate=var.startdate),
    ApiException = function(ex) ex
)

# In case of error, print the error object
```
if(!is.null(result$ApiException)) {
    cat(result$ApiException$toString())
} else {
    # deserialized response object
    response.object <- result$content
    # response headers
    response.headers <- result$response$headers
    # response status code
    response.status.code <- result$response$status_code
}

################################################ ConvertVaultDatesToAbsoluteFormat ################################################

library(factset.analyticsapi.engines)
var.enddate <- 'enddate_example' # character | End Date
var.componentid <- 'componentid_example' # character | Vault Component Id
var.account <- 'account_example' # character | Account
var.startdate <- 'startdate_example' # character | Start Date

#Convert Vault dates to absolute format
api.instance <- DatesApi$new()

#Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>'
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>'

result <- tryCatch(
    api.instance$ConvertVaultDatesToAbsoluteFormat(var.enddate, var.componentid,
        var.account, startdate=var.startdate),
    ApiException = function(ex) ex
)

# In case of error, print the error object
if(!is.null(result$ApiException)) {
    cat(result$ApiException$toString())
} else {
    # deserialized response object
    response.object <- result$content
    # response headers
    response.headers <- result$response$headers
    # response status code
    response.status.code <- result$response$status_code
}

## End(Not run)
**Description**

DocumentDirectories Class

**Format**

An R6Class generator object

**Public fields**

- documents list( character ) [optional]
- directories list( character ) [optional]

**Methods**

**Public methods:**

- DocumentDirectories$new()
- DocumentDirectories$toJSON()
- DocumentDirectories$fromJSON()
- DocumentDirectories$toJSONString()
- DocumentDirectories$fromJSONString()
- DocumentDirectories$clone()

**Method new():**

*Usage:*

DocumentDirectories$new(documents = NULL, directories = NULL, ...)

**Method toJSON():**

*Usage:*

DocumentDirectories$toJSON()

**Method fromJSON():**

*Usage:*

DocumentDirectories$fromJSON(DocumentDirectoriesJson)

**Method toJSONString():**

*Usage:*

DocumentDirectories$toJSONString()

**Method fromJSONString():**

*Usage:*

DocumentDirectories$fromJSONString(DocumentDirectoriesJson)

**Method clone():** The objects of this class are cloneable with this method.

*Usage:*

DocumentDirectories$clone(deep = FALSE)

*Arguments:*

- deep Whether to make a deep clone.
DocumentsApi

Documents operations

Description

factset.analyticsapi.engines.Documents

Format

An R6Class generator object

Methods

GetPA3Documents  Get PA3 documents and sub-directories in a directory  This endpoint looks up all PA3 documents and sub-directories in a given directory.

  @param path character
  @returnType DocumentDirectories

  • On encountering errors, an error of subclass ApiException will be thrown.
  • status code : 200 | Expected response, returns a list of PA3 documents and directories
  • return type : DocumentDirectories
  • response headers :

X-RateLimit-Remaining  Number of requests left for the time window.
X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
X-DataDirect-Request-Key  FactSet's request key header.

  • status code : 400 | Invalid query parameter or value provided
  • response headers :

X-RateLimit-Remaining  Number of requests left for the time window.
X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
X-DataDirect-Request-Key  FactSet's request key header.

  • status code : 401 | Missing or invalid authentication
  • response headers :

X-RateLimit-Remaining  Number of requests left for the time window.
X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit: Number of allowed requests for the time window.
X-DataDirect-Request-Key: FactSet’s request key header.

- status code: 403 | User is forbidden with current credentials
- response headers:

X-RateLimit-Remaining: Number of requests left for the time window.
X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
X-RateLimit-Limit: Number of allowed requests for the time window.
X-DataDirect-Request-Key: FactSet’s request key header.

- status code: 404 | Path not found
- response headers:

X-RateLimit-Remaining: Number of requests left for the time window.
X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
X-RateLimit-Limit: Number of allowed requests for the time window.
X-DataDirect-Request-Key: FactSet’s request key header.

- status code: 406 | Unsupported Accept header. Header needs to be set to application/json
- response headers:

X-RateLimit-Remaining: Number of requests left for the time window.
X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
X-RateLimit-Limit: Number of allowed requests for the time window.
X-DataDirect-Request-Key: FactSet’s request key header.

- status code: 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting
- response headers:

X-RateLimit-Remaining: Number of requests left for the time window.
X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
X-RateLimit-Limit: Number of allowed requests for the time window.
X-DataDirect-Request-Key: FactSet’s request key header.

- status code: 503 | Request timed out. Retry the request in some time
- response headers:
GetSPAR3Documents  Gets SPAR3 documents and sub-directories in a directory  This end-point looks up all SPAR3 documents and directories in a given directory.

@ param path character

@ returnType  DocumentDirectories

- On encountering errors, an error of subclass ApiException will be thrown.
- status code : 200 | Expected response, returns a list of SPAR3 documents and directories
- return type : DocumentDirectories
- response headers :

- status code : 400 | Invalid query parameter or value provided
- response headers :

- status code : 401 | Missing or invalid authentication
- response headers :

- status code : 403 | User is forbidden with current credentials
- response headers :

X-RateLimit-Remaining Number of requests left for the time window.
X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset Number of seconds remaining till rate limit resets.
X-RateLimit-Limit Number of allowed requests for the time window.
X-DataDirect-Request-Key FactSet’s request key header.
GetVaultDocuments  Get Vault documents and sub-directories in a directory  This endpoint
looks up all Vault documents and sub-directories in a given directory.

@param path character

@returnType DocumentDirectories

On encountering errors, an error of subclass ApiException will be thrown.

status code : 200 | Expected response, returns a list of Vault documents and directories

return type : DocumentDirectories

response headers :

status code : 400 | Invalid query parameter or value provided

response headers :

status code : 401 | Missing or invalid authentication

response headers :

status code : 403 | User is forbidden with current credentials

response headers :

status code : 404 | Path not found
DocumentsApi

- response headers:
  - X-RateLimit-Remaining: Number of requests left for the time window.
  - X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit: Number of allowed requests for the time window.
  - X-DataDirect-Request-Key: FactSet's request key header.

- status code: 406 | Unsupported Accept header. Header needs to be set to application/json
  - response headers:
  - X-RateLimit-Remaining: Number of requests left for the time window.
  - X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit: Number of allowed requests for the time window.
  - X-DataDirect-Request-Key: FactSet's request key header.

- status code: 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting
  - response headers:
  - X-RateLimit-Remaining: Number of requests left for the time window.
  - X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit: Number of allowed requests for the time window.
  - X-DataDirect-Request-Key: FactSet's request key header.

- status code: 503 | Request timed out. Retry the request in some time
  - response headers:
  - X-RateLimit-Remaining: Number of requests left for the time window.
  - X-FactSet-Api-Request-Key: Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset: Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit: Number of allowed requests for the time window.
  - X-DataDirect-Request-Key: FactSet's request key header.

Public fields

  apiClient: Handles the client-server communication.

Methods

  Public methods:
  - DocumentsApi$new()
- DocumentsApi$GetPA3Documents()
- DocumentsApi$GetPA3DocumentsWithHttpInfo()
- DocumentsApi$GetSPAR3Documents()
- DocumentsApi$GetSPAR3DocumentsWithHttpInfo()
- DocumentsApi$GetVaultDocuments()
- DocumentsApi$GetVaultDocumentsWithHttpInfo()
- DocumentsApi$clone()

**Method new():**

*Usage:*
DocumentsApi$new(apiClient)

**Method GetPA3Documents():**

*Usage:*
DocumentsApi$GetPA3Documents(path, ...)

**Method GetPA3DocumentsWithHttpInfo():**

*Usage:*
DocumentsApi$GetPA3DocumentsWithHttpInfo(path, ...)

**Method GetSPAR3Documents():**

*Usage:*
DocumentsApi$GetSPAR3Documents(path, ...)

**Method GetSPAR3DocumentsWithHttpInfo():**

*Usage:*
DocumentsApi$GetSPAR3DocumentsWithHttpInfo(path, ...)

**Method GetVaultDocuments():**

*Usage:*
DocumentsApi$GetVaultDocuments(path, ...)

**Method GetVaultDocumentsWithHttpInfo():**

*Usage:*
DocumentsApi$GetVaultDocumentsWithHttpInfo(path, ...)

**Method clone():** The objects of this class are cloneable with this method.

*Usage:*
DocumentsApi$clone(deep = FALSE)

*Arguments:*
dee p  Whether to make a deep clone.
Examples

## Not run:

### GetPA3Documents

```r
library(factset.analyticsapi.engines)
var.path <- 'path_example'  # character | The directory to get the documents and sub-directories in

# Get PA3 documents and sub-directories in a directory
api.instance <- DocumentsApi$new()

# Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>'
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>'

result <- tryCatch(
  api.instance$GetPA3Documents(var.path),
  ApiException = function(ex) ex
)

# In case of error, print the error object
if(!is.null(result$ApiException)) {
  cat(result$ApiException$toString())
} else {
  # deserialized response object
  response.object <- result$content
  # response headers
  response.headers <- result$response$headers
  # response status code
  response.status.code <- result$response$status_code
}
```

### GetSPAR3Documents

```r
library(factset.analyticsapi.engines)
var.path <- 'path_example'  # character | The directory to get the documents in

# Gets SPAR3 documents and sub-directories in a directory
api.instance <- DocumentsApi$new()

# Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>'
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>'

result <- tryCatch(
  api.instance$GetSPAR3Documents(var.path),
  ApiException = function(ex) ex
)

# In case of error, print the error object
```
if(!is.null(result$ApiException)) {
    cat(result$ApiException$toString())
} else {
    # deserialized response object
    response.object <- result$content
    # response headers
    response.headers <- result$response$headers
    # response status code
    response.status.code <- result$response$status_code
}

# Get Vault Documents
library(factset.analyticsapi.engines)
var.path <- 'path_example' # character | The directory to get the documents in

# Get Vault documents and sub-directories in a directory
api.instance <- DocumentsApi$new()

# Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>'
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>'

result <- tryCatch(
    api.instance$GetVaultDocuments(var.path),
    ApiException = function(ex) ex
)

# In case of error, print the error object
if(!is.null(result$ApiException)) {
    cat(result$ApiException$toString())
} else {
    # deserialized response object
    response.object <- result$content
    # response headers
    response.headers <- result$response$headers
    # response status code
    response.status.code <- result$response$status_code
}

## End(Not run)

<table>
<thead>
<tr>
<th>FrequenciesApi</th>
<th>Frequencies operations</th>
</tr>
</thead>
</table>

**Description**

factset.analyticsapi.engines.Frequencies
**Format**

An R6Class generator object

**Methods**

**GetPAFrequencies**  *Get PA frequencies*  This endpoint lists all the frequencies that can be applied to a PA calculation.

@returnType named list( Frequency )

- On encountering errors, an error of subclass ApiException will be thrown.
- status code : 200 | Expected response, returns a list of PA frequencies.
- return type : map(Frequency)
- response headers :
  - X-RateLimit-Remaining Number of requests left for the time window.
  - X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit Number of allowed requests for the time window.
  - X-DataDirect-Request-Key FactSet's request key header.

- status code : 401 | Missing or invalid authentication.
- response headers :
  - X-RateLimit-Remaining Number of requests left for the time window.
  - X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit Number of allowed requests for the time window.
  - X-DataDirect-Request-Key FactSet's request key header.

- status code : 403 | User is forbidden with current credentials
- response headers :
  - X-RateLimit-Remaining Number of requests left for the time window.
  - X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  - X-RateLimit-Limit Number of allowed requests for the time window.
  - X-DataDirect-Request-Key FactSet's request key header.

- status code : 406 | Unsupported Accept header. Header needs to be set to application/json.
- response headers :
  - X-RateLimit-Remaining Number of requests left for the time window.
  - X-FactSet-Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  - X-RateLimit-Reset Number of seconds remaining till rate limit resets.
FrequenciesApi

X-RateLimit-Limit  Number of allowed requests for the time window.
X-DataDirect-Request-Key  FactSet’s request key header.

- status code : 500  | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
- response headers :

X-RateLimit-Remaining  Number of requests left for the time window.
X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
X-DataDirect-Request-Key  FactSet’s request key header.

• status code : 503  | Request timed out. Retry the request in sometime.
• response headers :

X-RateLimit-Remaining  Number of requests left for the time window.
X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
X-DataDirect-Request-Key  FactSet’s request key header.

GetSPARFrequencies  Get SPAR frequencies  This endpoint lists all the frequencies that can be applied to a SPAR calculation.

@returnType  named list( Frequency )

• On encountering errors, an error of subclass ApiException will be thrown.
• status code : 200  | Expected response, returns a list of SPAR frequencies.
• return type : map(Frequency)
• response headers :

X-RateLimit-Remaining  Number of requests left for the time window.
X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
X-DataDirect-Request-Key  FactSet’s request key header.

• status code : 401  | Missing or invalid authentication.
• response headers :

X-RateLimit-Remaining  Number of requests left for the time window.
X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
FrequenciesApi

X-DataDirect-Request-Key  FactSet’s request key header.

- status code : 403 | User is forbidden with current credentials
- response headers :

  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet’s request key header.

- status code : 406 | Unsupported Accept header. Header needs to be set to application/json.
- response headers :

  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet’s request key header.

- status code : 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
- response headers :

  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet’s request key header.

- status code : 503 | Request timed out. Retry the request in sometime.
- response headers :

  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet’s request key header.

GetVaultFrequencies  Get Vault frequencies  This endpoint lists all the frequencies that can be applied to a Vault calculation.

@returnType named list( Frequency )
On encountering errors, an error of subclass ApiException will be thrown.

- status code : 200 | Expected response, returns a list of Vault frequencies.
- return type : map(Frequency)
- response headers :

  X-RateLimit-Remaining Number of requests left for the time window.
  X-FactSet_Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit Number of allowed requests for the time window.
  X-DataDirect-Request-Key FactSet’s request key header.

- status code : 401 | Missing or invalid authentication.
- response headers :

  X-RateLimit-Remaining Number of requests left for the time window.
  X-FactSet_Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit Number of allowed requests for the time window.
  X-DataDirect-Request-Key FactSet’s request key header.

- status code : 403 | User is forbidden with current credentials
- response headers :

  X-RateLimit-Remaining Number of requests left for the time window.
  X-FactSet_Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit Number of allowed requests for the time window.
  X-DataDirect-Request-Key FactSet’s request key header.

- status code : 406 | Unsupported Accept header. Header needs to be set to application/json.
- response headers :

  X-RateLimit-Remaining Number of requests left for the time window.
  X-FactSet_Api-Request-Key Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit Number of allowed requests for the time window.
  X-DataDirect-Request-Key FactSet’s request key header.

- status code : 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting.
- response headers :
FrequenciesApi

X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
X-DataDirect-Request-Key  FactSet's request key header.

- status code : 503 | Request timed out. Retry the request in sometime.
- response headers :

  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.

Public fields

apiClient  Handles the client-server communication.

Methods

Public methods:

- FrequenciesApi$new()
- FrequenciesApi$GetPAFrequencies()
- FrequenciesApi$GetPAFrequenciesWithHttpInfo()
- FrequenciesApi$GetSPARFrequencies()
- FrequenciesApi$GetSPARFrequenciesWithHttpInfo()
- FrequenciesApi$GetVaultFrequencies()
- FrequenciesApi$GetVaultFrequenciesWithHttpInfo()
- FrequenciesApi$clone()

Method new():

Usage:
FrequenciesApi$new(apiClient)

Method GetPAFrequencies():

Usage:
FrequenciesApi$GetPAFrequencies(...)

Method GetPAFrequenciesWithHttpInfo():

Usage:
FrequenciesApi$GetPAFrequenciesWithHttpInfo(...)

Method GetSPARFrequencies():

Usage:
FrequenciesApi$GetSPARFrequencies(...)

Method GetSPARFrequenciesWithHttpInfo():
Usage:
FrequenciesApi$GetSPARFrequenciesWithHttpInfo(...)

Method GetVaultFrequencies():
Usage:
FrequenciesApi$GetVaultFrequencies(...)

Method GetVaultFrequenciesWithHttpInfo():
Usage:
FrequenciesApi$GetVaultFrequenciesWithHttpInfo(...)

Method clone(): The objects of this class are cloneable with this method.
Usage:
FrequenciesApi$clone(deep = FALSE)
Arguments:
deep Whether to make a deep clone.

Examples
## Not run:
#----------------------------- GetPAFrequencies -----------------------------

library(factset.analyticsapi.engines)

#Get PA frequencies
api.instance <- FrequenciesApi$new()

#Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>'
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>'

result <- tryCatch(
    api.instance$GetPAFrequencies(),
    ApiException = function(ex) ex
)
# In case of error, print the error object
if(!is.null(result$ApiException)) {
    cat(result$ApiException$toString())
} else {
    # deserialized response object
    response.object <- result$Content
    # response headers
    response.headers <- result$Response.Headers
    # response status code
    response.status.code <- result$Response$Status_Code
}
library(factset.analyticsapi.engines)

# Get SPAR frequencies
api.instance <- FrequenciesApi$new()

# Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>';
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>';

result <- tryCatch(
    api.instance$GetSPARFrequencies(),
    ApiException = function(ex) ex
)

# In case of error, print the error object
if(!is.null(result$ApiException)) {
    cat(result$ApiException$toString())
} else {
    # deserialized response object
    response.object <- result$content
    # response headers
    response.headers <- result$response$headers
    # response status code
    response.status.code <- result$response$status_code
}

library(factset.analyticsapi.engines)

# Get Vault frequencies
api.instance <- FrequenciesApi$new()

# Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>'; 
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>'; 

result <- tryCatch(
    api.instance$GetVaultFrequencies(),
    ApiException = function(ex) ex
)

# In case of error, print the error object
if(!is.null(result$ApiException)) {
    cat(result$ApiException$toString())
} else {

Frequency

```
# deserialized response object
response.object <- result$content
# response headers
response.headers <- result$response$headers
# response status code
response.status.code <- result$response$status_code
}
```

## End(Not run)

### Frequency

**Description**
Frequency Class

**Format**
An R6Class generator object

**Public fields**
name character [optional]

**Methods**

**Public methods:**
- Frequency$new()
- Frequency$toJSON()
- Frequency$fromJSON()
- Frequency$toJSONString()
- Frequency$fromJSONString()
- Frequency$clone()

**Method** `new()`:
*Usage:*
Frequency$new(name = NULL, ...)

**Method** `toJSON()`:
*Usage:*
Frequency$toJSON()

**Method** `fromJSON()`:
*Usage:*
Frequency$fromJSON()
Frequency$fromJSON(FrequencyJson)

**Method** toJSONString():

*Usage:*
Frequency$toJSONString()

**Method** fromJSONString():

*Usage:*
Frequency$fromJSONString(FrequencyJson)

**Method** clone(): The objects of this class are cloneable with this method.

*Usage:*
Frequency$clone(deep = FALSE)

*Arguments:*
depth Whether to make a deep clone.

---

**Description**

Group Class

**Format**

An R6Class generator object

**Public fields**

- name character [optional]
- directory character [optional]
- category character [optional]

**Methods**

**Public methods:**

- Group$new()
- Group$toJSON()
- Group$fromJSON()
- Group$toJSONString()
- Group$fromJSONString()
- Group$clone()

**Method** new():

GroupsApi

Usage:
Group$new(name = NULL, directory = NULL, category = NULL, ...)

Method toJSON():
Usage:
Group$toJSON()

Method fromJSON():
Usage:
Group$fromJSON(GroupJson)

Method toJSONString():
Usage:
Group$toJSONString()

Method fromJSONArray():
Usage:
Group$fromJSONArray(GroupJson)

Method clone(): The objects of this class are cloneable with this method.
Usage:
Group$clone(deep = FALSE)
Arguments:
deep Whether to make a deep clone.

Description
factset.analyticsapi.engines.Groups

Format
An R6Class generator object

Methods
GetPAGroups Get PA groups This endpoint lists all the PA groups that can be applied to a PA calculation.

@returnType named list( Group )

- On encountering errors, an error of subclass ApiException will be thrown.
- status code : 200 | Expected response, returns a list of PA groups
- return type : map( Group )
- response headers :
GroupsApi

X-RateLimit-Remaining  Number of requests left for the time window.
X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
X-RateLimit-Limit  Number of allowed requests for the time window.
Age  Standard HTTP header. Header will specify the age of groupings list cached response.
X-DataDirect-Request-Key  FactSet's request key header.

- status code : 401 | Missing or invalid authentication.
  response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.

- status code : 403 | User is forbidden with current credentials
  response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.

- status code : 406 | Unsupported Accept header. Header needs to be set to application/json.
  response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.

- status code : 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting
  response headers :
  X-RateLimit-Remaining  Number of requests left for the time window.
  X-FactSet-Api-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
  X-RateLimit-Reset  Number of seconds remaining till rate limit resets.
  X-RateLimit-Limit  Number of allowed requests for the time window.
  X-DataDirect-Request-Key  FactSet's request key header.
• status code: 503 | Request timed out. Retry the request in sometime.
• response headers:

<table>
<thead>
<tr>
<th>Header</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-RateLimit-Remaining</td>
<td>Number of requests left for the time window.</td>
</tr>
<tr>
<td>X-FactSet-Api-Request-Key</td>
<td>Key to uniquely identify an Analytics API request. Only available after successful authentication.</td>
</tr>
<tr>
<td>X-RateLimit-Reset</td>
<td>Number of seconds remaining till rate limit resets.</td>
</tr>
<tr>
<td>X-RateLimit-Limit</td>
<td>Number of allowed requests for the time window.</td>
</tr>
<tr>
<td>X-DataDirect-Request-Key</td>
<td>FactSet’s request key header.</td>
</tr>
</tbody>
</table>

Public fields

api_client  Handles the client-server communication.

Methods

Public methods:

• GroupsApi$new()
• GroupsApi$GetPAGroups()
• GroupsApi$GetPAGroupsWithHttpInfo()
• GroupsApi$clone()

Method new():

Usage:
GroupsApi$new(apiClient)

Method GetPAGroups():

Usage:
GroupsApi$GetPAGroups(…)

Method GetPAGroupsWithHttpInfo():

Usage:
GroupsApi$GetPAGroupsWithHttpInfo(…)

Method clone(): The objects of this class are cloneable with this method.

Usage:
GroupsApi$clone(deep = FALSE)

Arguments:

deep  Whether to make a deep clone.

Examples

## Not run:

```
library(factset.analyticsapi.engines)
```
# Get PA groups
api.instance <- GroupsApi$new()

# Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '\<user-serial>\';
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '\<api_key>\';

result <- tryCatch(
    api.instance$GetPAGroups(),
    ApiException = function(ex) ex
)
# In case of error, print the error object
if(!is.null(result$ApiException)) {
    cat(result$ApiException$toString())
} else {
    # deserialized response object
    response.object <- result$content
    # response headers
    response.headers <- result$response$headers
    # response status code
    response.status.code <- result$response$status_code
}

## End(Not run)

---

**PACalculationColumn Class**

**Description**

PACalculationColumn Class

**Format**

An R6Class generator object

**Public fields**

- id character [optional]
- statistics list(character) [optional]

**Methods**

**Public methods:**

- PACalculationColumn$new()
Method `new()`:

Usage:
```
PACalculationColumn$new(id = NULL, statistics = NULL, ...)
```

Method `toJSON()`:

Usage:
```
PACalculationColumn$toJSON()
```

Method `fromJson()`:

Usage:
```
PACalculationColumn$fromJson(PACalculationColumnJson)
```

Method `toJSONString()`:

Usage:
```
PACalculationColumn$toJSONString()
```

Method `fromJSONString()`:

Usage:
```
PACalculationColumn$fromJSONString(PACalculationColumnJson)
```

Method `clone()`: The objects of this class are cloneable with this method.

Usage:
```
PACalculationColumn$clone(deep = FALSE)
```

Arguments:
- `deep` Whether to make a deep clone.

Description

PACalculationGroup Class

Format

An R6Class generator object
**Public fields**

id character [optional]

**Methods**

Public methods:

- PACalculationGroup$new()
- PACalculationGroup$toJSON()
- PACalculationGroup$fromJSON()
- PACalculationGroup$toJSONString()
- PACalculationGroup$fromJSONString()
- PACalculationGroup$clone()

**Method** new():

*Usage:*
PACalculationGroup$new(id = NULL, ...)

**Method** toJSON():

*Usage:*
PACalculationGroup$toJSON()

**Method** fromJSON():

*Usage:*
PACalculationGroup$fromJSON(PACalculationGroupJson)

**Method** toJSONString():

*Usage:*
PACalculationGroup$toJSONString()

**Method** fromJSONString():

*Usage:*
PACalculationGroup$fromJSONString(PACalculationGroupJson)

**Method** clone(): The objects of this class are cloneable with this method.

*Usage:*
PACalculationGroup$clone(deep = FALSE)

*Arguments:*

- deep Whether to make a deep clone.
**Description**

PACalculationParameters Class

**Format**

An R6Class generator object

**Public fields**

- `componentid` character
- `accounts` list( PAIdentifier ) [optional]
- `benchmarks` list( PAIdentifier ) [optional]
- `dates` PADateParameters [optional]
- `groups` list( PACalculationGroup ) [optional]
- `currencyisocode` character [optional]
- `columns` list( PACalculationColumn ) [optional]

**Methods**

**Public methods:**

- PACalculationParameters$new()
- PACalculationParameters$toJSON()
- PACalculationParameters$fromJSON()
- PACalculationParameters$toJSONString()
- PACalculationParameters$fromJSONString()
- PACalculationParameters$clone()

**Method** new():

**Usage:**

```r
PACalculationParameters$new(
  componentid,
  accounts = NULL,
  benchmarks = NULL,
  dates = NULL,
  groups = NULL,
  currencyisocode = NULL,
  columns = NULL,
  ...
)
```
Method toJSON():
Usage:
PACalculationParameters$toJSON()

Method fromJSON():
Usage:
PACalculationParameters$fromJSON(PACalculationParametersJson)

Method toJSONString():
Usage:
PACalculationParameters$toJSONString()

Method fromJSONString():
Usage:
PACalculationParameters$fromJSONString(PACalculationParametersJson)

Method clone(): The objects of this class are cloneable with this method.
Usage:
PACalculationParameters$clone(deep = FALSE)
Arguments:
deeplWhether to make a deep clone.

---

PAComponent

Description
PAComponent Class

Format
An R6Class generator object

Public fields
id character [optional]
accounts list( PAIdentifier ) [optional]
benchmarks list( PAIdentifier ) [optional]
currencyisocode character [optional]
dates PADateParameters [optional]
snapshot character [optional]
name character [optional]
category character [optional]
Methods

**Public methods:**
- `PAComponent$new()`
- `PAComponent$toJSON()`
- `PAComponent$fromJSON()`
- `PAComponent$toJSONString()`
- `PAComponent$fromJSONString()`
- `PAComponent$clone()`

**Method new():**

*Usage:*

```r
PAComponent$new(
  id = NULL,
  accounts = NULL,
  benchmarks = NULL,
  currencyisocode = NULL,
  dates = NULL,
  snapshot = NULL,
  name = NULL,
  category = NULL,
  ...
)
```

**Method toJSON():**

*Usage:*

```r
PAComponent$toJSON()
```

**Method fromJSON():**

*Usage:*

```r
PAComponent$fromJSON(PAComponentJson)
```

**Method toJSONString():**

*Usage:*

```r
PAComponent$toJSONString()
```

**Method fromJSONString():**

*Usage:*

```r
PAComponent$fromJSONString(PAComponentJson)
```

**Method clone():** The objects of this class are cloneable with this method.

*Usage:*

```r
PAComponent$clone(deep = FALSE)
```

*Arguments:*

depth Whether to make a deep clone.
Description

PADateParameters Class

Format

An R6Class generator object

Public fields

startdate character [optional]
enddate character
frequency character

Methods

Public methods:

• PADateParameters$new()
• PADateParameters$toJSON()
• PADateParameters$fromJSON()
• PADateParameters$toJSONString()
• PADateParameters$fromJSONString()
• PADateParameters$clone()

Method new():

Usage:
PADateParameters$new(enddate, frequency, startdate = NULL, ...)

Method toJSON():

Usage:
PADateParameters$toJSON()

Method fromJSON():

Usage:
PADateParameters$fromJSON(PADateParametersJson)

Method toJSONString():

Usage:
PADateParameters$toJSONString()

Method fromJSONString():
Usage:
PADateParameters$fromJSONString(PADateParametersJson)

Method clone(): The objects of this class are cloneable with this method.
Usage:
PADateParameters$clone(deep = FALSE)
Arguments:
deep Whether to make a deep clone.

Description
PAIdentifier Class

Format
An R6Class generator object

Public fields
id character
holdingsmode character [optional]

Methods

Public methods:
- PAIdentifier$new()
- PAIdentifier$toJSON()
- PAIdentifier$fromJSON()
- PAIdentifier$toJSONString()
- PAIdentifier$fromJSONString()
- PAIdentifier$clone()

Method new():
Usage:
PAIdentifier$new(id, holdingsmode = NULL, ...)

Method toJSON():
Usage:
PAIdentifier$toJSON()

Method fromJSON():
Usage:
PAIdentifier$fromJSON(PAIdentifierJson)

Method toJSONString():
Usage:
PAIdentifier$toJSONString()

Method fromJSONString():
Usage:
PAIdentifier$fromJSONString(PAIdentifierJson)

Method clone(): The objects of this class are cloneable with this method.
Usage:
PAIdentifier$clone(deep = FALSE)
Arguments:
deep Whether to make a deep clone.

Description
SPARCalculationParameters Class

Format
An R6Class generator object

Public fields
- componentid character
- accounts list( SPARIdentifier ) [optional]
- benchmark SPARIdentifier [optional]
- dates SPARDateParameters [optional]

Methods
Public methods:
- SPARCalculationParameters$new()
- SPARCalculationParameters$toJSON()
- SPARCalculationParameters$fromJSON()
- SPARCalculationParameters$toJSONString()
- SPARCalculationParameters$fromJSONString()
• SPARCalculationParameters$clone()

**Method new():**

*Usage:*

SPARCalculationParameters$new(
  componentid,
  accounts = NULL,
  benchmark = NULL,
  dates = NULL,
  ...
)

**Method toJSON():**

*Usage:*

SPARCalculationParameters$toJSON()

**Method fromJSON():**

*Usage:*

SPARCalculationParameters$fromJSON(SPARCalculationParametersJson)

**Method toJSONString():**

*Usage:*

SPARCalculationParameters$toJSONString()

**Method fromJSONString():**

*Usage:*

SPARCalculationParameters$fromJSONString(SPARCalculationParametersJson)

**Method clone():** The objects of this class are cloneable with this method.

*Usage:*

SPARCalculationParameters$clone(deep = FALSE)

*Arguments:*

deep  Whether to make a deep clone.

---

**Description**

SPARDateParameters Class

**Format**

An R6Class generator object
SPARDateParameters

Public fields

startdate character
enddate character
frequency character

Methods

Public methods:

• SPARDateParameters$new()
• SPARDateParameters$toJSON()
• SPARDateParameters$fromJSON()
• SPARDateParameters$toJSONString()
• SPARDateParameters$fromJSONString()
• SPARDateParameters$clone()

Method new():

Usage:
SPARDateParameters$new(startdate, enddate, frequency, ...)

Method toJSON():

Usage:
SPARDateParameters$toJSON()

Method fromJSON():

Usage:
SPARDateParameters$fromJSON(SPARDateParametersJson)

Method toJSONString():

Usage:
SPARDateParameters$toJSONString()

Method fromJSONString():

Usage:
SPARDateParameters$fromJSONString(SPARDateParametersJson)

Method clone(): The objects of this class are cloneable with this method.

Usage:
SPARDateParameters$clone(deep = FALSE)

Arguments:

deep Whether to make a deep clone.
Description

SPARIdentifier Class

Format

An R6Class generator object

Public fields

id character
returntype character [optional]
prefix character [optional]

Methods

Public methods:

• SPARIdentifier$new()
• SPARIdentifier$toJSON()
• SPARIdentifier$fromJSON()
• SPARIdentifier$toJSONString()
• SPARIdentifier$fromJSONString()
• SPARIdentifier$clone()

Method new():

Usage:
SPARIdentifier$new(id, returntype = NULL, prefix = NULL, ...)

Method toJSON():

Usage:
SPARIdentifier$toJSON()

Method fromJSON():

Usage:
SPARIdentifier$fromJSON(SPARIdentifierJson)

Method toJSONString():

Usage:
SPARIdentifier$toJSONString()

Method fromJSONString():
Usage:
SPARIdentifier$fromJSONString(SPARIdentifierJson)

Method clone(): The objects of this class are cloneable with this method.

Usage:
SPARIdentifier$clone(deep = FALSE)

Arguments:
deep Whether to make a deep clone.

<table>
<thead>
<tr>
<th>UtilityApi</th>
<th>Utility operations</th>
</tr>
</thead>
</table>

Description

factset.analyticsapi.engines

Format

An R6Class generator object

Methods

**GetByUrl**  *Url of the GET endpoint*  This function can be used to fetch data from any Get endpoint.

```r
@param url character
@returnType raw

• On encountering errors, an error of subclass ApiException will be thrown.
• status code : 200 | Expected response once the request is successful. Response body will contain the data.
• return type : raw
• response headers :
  • status code : 400 | Invalid identifier provided.
  • response headers :

X-FactSet-API-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-DataDirect-Request-Key  FactSet’s request key header.
```

```r
• status code : 401 | Missing or invalid authentication.
• response headers :
```

```r
X-FactSet-API-Request-Key  Key to uniquely identify an Analytics API request. Only available after successful authentication.
X-DataDirect-Request-Key  FactSet’s request key header.
```
Public fields

apiClient  Handles the client-server communication.

Methods

Public methods:

- UtilityApi\$new()
- UtilityApi\$GetByUrl()
- UtilityApi\$GetByUrlWithHttpInfo()
- UtilityApi\$clone()

Method new():

Usage:
UtilityApi$new(apiClient)

**Method** GetByUrl():

*Usage:*
UtilityApi$GetByUrl(url, ...)

**Method** GetByUrlWithHttpInfo():

*Usage:*
UtilityApi$GetByUrlWithHttpInfo(url, ...)

**Method** clone(): The objects of this class are cloneable with this method.

*Usage:*
UtilityApi$clone(deep = FALSE)

*Arguments:*

depth Whether to make a deep clone.

**Examples**

```r
## Not run:

library(factset.analyticsapi.engines)
var.url <- url # character | Url of the GET endpoint

# Get by url
api.instance <- UtilityApi$new()

#Configure HTTP basic authorization: Basic
# provide your username in the user-serial format
api.instance$apiClient$username <- '<user-serial>';
# provide your api key generated using the developer portal
api.instance$apiClient$password <- '<api_key>';

result <- tryCatch(
  api.instance$GetByUrl(url = var.url),
  ApiException = function(ex) ex
)

# In case of error, print the error object
if(!is.null(result$ApiException)) {
  cat(result$ApiException$toString())
} else {
  # deserialized response object
  response.object <- result$content
  # response headers
  response.headers <- result$response$headers
  # response status code
  response.status.code <- result$response$status_code
}

## End(Not run)
```
VaultCalculationParameters

Description

VaultCalculationParameters Class

Format

An R6Class generator object

Public fields

- componentid character
- account VaultIdentifier
- dates VaultDateParameters [optional]
- configid character

Methods

Public methods:

- VaultCalculationParameters$new()
- VaultCalculationParameters$toJSON()
- VaultCalculationParameters$fromJSON()
- VaultCalculationParameters$toJSONString()
- VaultCalculationParameters$fromJSONString()
- VaultCalculationParameters$clone()

Method new():

Usage:

VaultCalculationParameters$new(
  componentid,
  account,
  configid,
  dates = NULL,
  ...
)

Method toJSON():

Usage:

VaultCalculationParameters$toJSON()

Method fromJSON():

Usage:
VaultComponent

VaultCalculationParameters$fromJSON(VaultCalculationParametersJson)

Method toJSONString():
   Usage: VaultCalculationParameters$toJSONString()

Method fromJSONString():
   Usage: VaultCalculationParameters$fromJSONString(VaultCalculationParametersJson)

Method clone(): The objects of this class are cloneable with this method.
   Usage: VaultCalculationParameters$clone(deep = FALSE)
   Arguments:
   deep Whether to make a deep clone.

Description

VaultComponent Class

Format

An R6Class generator object

Public fields

id character [optional]
account VaultIdentifier [optional]
benchmark VaultIdentifier [optional]
currencyisocode character [optional]
dates VaultDateParameters [optional]
snapshot character [optional]
name character [optional]
category character [optional]
Methods

Public methods:

- `VaultComponent$new()`
- `VaultComponent$toJSON()`
- `VaultComponent$fromJson()`
- `VaultComponent$toJSONString()`
- `VaultComponent$fromJsonString()`
- `VaultComponent$clone()`

Method `new()`:

Usage:
```
VaultComponent$new(
  id = NULL,
  account = NULL,
  benchmark = NULL,
  currencyisocode = NULL,
  dates = NULL,
  snapshot = NULL,
  name = NULL,
  category = NULL,
  ...
)
```

Method `toJSON()`:

Usage:
```
VaultComponent$toJSON()
```

Method `fromJson()`:

Usage:
```
VaultComponent$fromJson(VaultComponentJson)
```

Method `toJSONString()`:

Usage:
```
VaultComponent$toJSONString()
```

Method `fromJsonString()`:

Usage:
```
VaultComponent$fromJsonString(VaultComponentJson)
```

Method `clone()`:

The objects of this class are cloneable with this method.

Usage:
```
VaultComponent$clone(deep = FALSE)
```

Arguments:

- `deep` Whether to make a deep clone.
Description

VaultConfiguration Class

Format

An R6Class generator object

Public fields

- name character [optional]
- accounts named list( ConfigurationAccount ) [optional]

Methods

Public methods:

- `VaultConfiguration$new()`
- `VaultConfiguration$toJSON()`
- `VaultConfiguration$fromJSON()`
- `VaultConfiguration$toJSONString()`
- `VaultConfiguration$fromJSONString()`
- `VaultConfiguration$clone()`

Method `new()`:

Usage:

`VaultConfiguration$new(name = NULL, accounts = NULL, ...)`

Method `toJSON()`:

Usage:

`VaultConfiguration$toJSON()`

Method `fromJSON()`:

Usage:

`VaultConfiguration$fromJSON(VaultConfigurationJson)`

Method `toJSONString()`:

Usage:

`VaultConfiguration$toJSONString()`

Method `fromJSONString()`:

Usage:
Method clone(): The objects of this class are cloneable with this method.

Usage:
VaultConfiguration$clone(deep = FALSE)

Arguments:
depth Whether to make a deep clone.

Description

VaultConfigurationSummary Class

Format

An R6Class generator object

Public fields

name character [optional]

Methods

Public methods:
- VaultConfigurationSummary$new()
- VaultConfigurationSummary$toJSON()
- VaultConfigurationSummary$fromJson()
- VaultConfigurationSummary$toJSONString()
- VaultConfigurationSummary$fromJsonString()
- VaultConfigurationSummary$clone()

Method new():

Usage:
VaultConfigurationSummary$new(name = NULL, ...)

Method toJSON():

Usage:
VaultConfigurationSummary$toJSON()

Method fromJSON():

Usage:
VaultConfigurationSummary$fromJson(VaultConfigurationSummaryJson)
Method toJSONString():
Usage:
VaultConfigurationSummary$toJSONString()

Method fromJSONString():
Usage:
VaultConfigurationSummary$fromJSONString(VaultConfigurationSummaryJson)

Method clone(): The objects of this class are cloneable with this method.
Usage:
VaultConfigurationSummary$clone(deep = FALSE)
Arguments:
deept  Whether to make a deep clone.

Description
VaultDateParameters Class

Format
An R6Class generator object

Public fields
startdate character [optional]
enddate character
frequency character

Methods
Public methods:
• VaultDateParameters$new()
• VaultDateParameters$toJSON()
• VaultDateParameters$fromJSON()
• VaultDateParameters$toJSONString()
• VaultDateParameters$fromJSONString()
• VaultDateParameters$clone()

Method new():
Usage:
VaultDateParameters$new(enddate, frequency, startdate = NULL, ...)

VaultDateParameters  VaultDateParameters
**Method** toJSON():

*Usage:*

VaultDateParameters$toJSON()

**Method** fromJSON():

*Usage:*

VaultDateParameters$fromJson(VaultDateParametersJson)

**Method** toJSONString():

*Usage:*

VaultDateParameters$toJSONString()

**Method** fromJSONString():

*Usage:*

VaultDateParameters$fromJsonString(VaultDateParametersJson)

**Method** clone(): The objects of this class are cloneable with this method.

*Usage:*

VaultDateParameters$clone(deep = FALSE)

*Arguments:*

depth Whether to make a deep clone.

---

**VaultIdentifier**

**VaultIdentifier**

**Description**

VaultIdentifier Class

**Format**

An R6Class generator object

**Public fields**

id character
Description

Methods

Public methods:

• VaultIdentifier$new()
• VaultIdentifier$toJSON()
• VaultIdentifier$fromJSON()
• VaultIdentifier$toJSONString()
• VaultIdentifier$fromJSONString()
• VaultIdentifier$clone()

Method new():
Usage:
VaultIdentifier$new(id, ...)

Method toJSON():
Usage:
VaultIdentifier$toJSON()

Method fromJSON():
Usage:
VaultIdentifier$fromJSON(VaultIdentifierJson)

Method toJSONString():
Usage:
VaultIdentifier$toJSONString()

Method fromJSONString():
Usage:
VaultIdentifier$fromJSONString(VaultIdentifierJson)

Method clone(): The objects of this class are cloneable with this method.
Usage:
VaultIdentifier$clone(deep = FALSE)
Arguments:
deep Whether to make a deep clone.
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