

FACTSET › SEE THE ADVANTAGE

PUBLISHER API - VERSION 3.0 (BETA)
Developer's Manual and Reference
May 2023



Publisher API – Version 3.0

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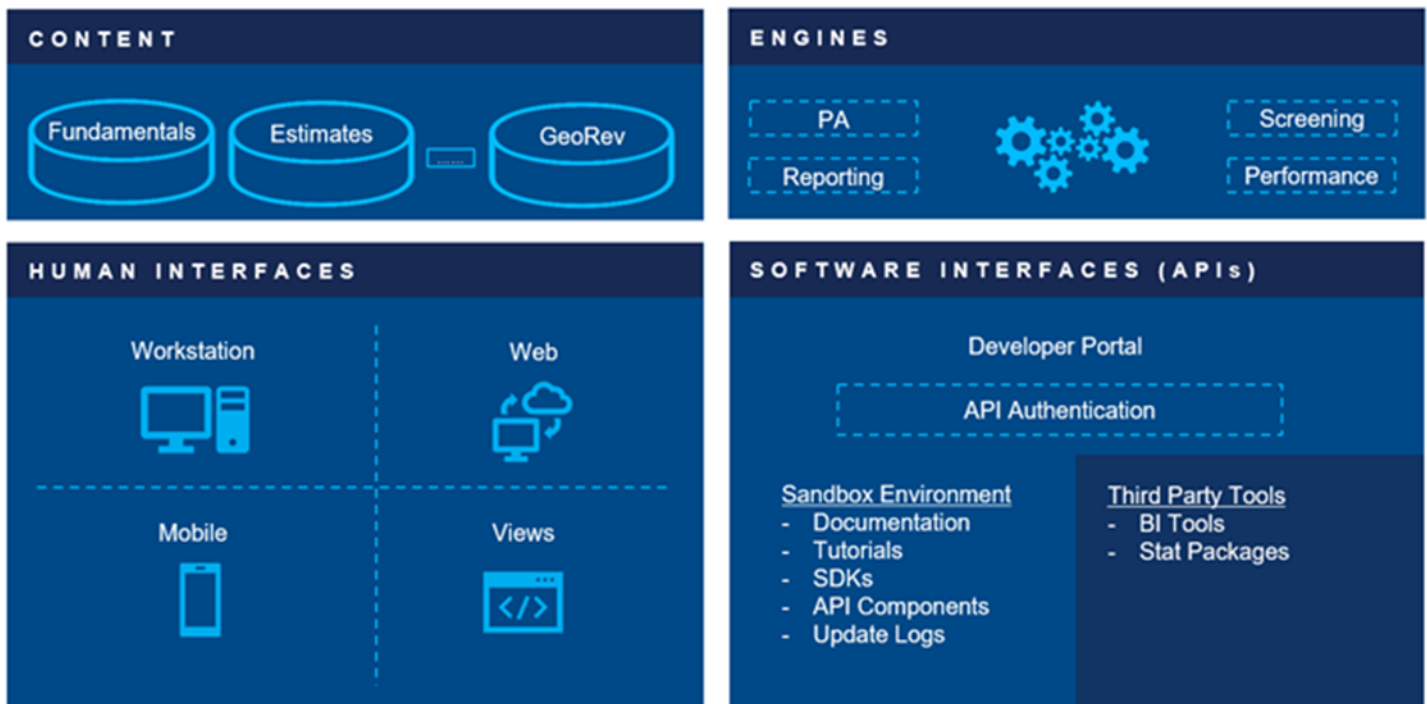
1. Motivation

In 1997, FactSet launched Portfolio Analysis 1.0, which set the foundation for Analytics. Soon after, Portfolio Analysis 2.0 integrated risk analytics from third-party vendors, and then expanded to include Fixed Income in 2004. FactSet now offers a robust suite of multi-asset portfolio analytics products that leads the market in flexibility, analytics, and breadth. Today, clients rely on FactSet for interactive analytics through various products, such as Portfolio Analysis (PA), SPAR, Alpha Testing, Optimizers, and Portfolio Dashboard, as well as the distribution of analytics through Portfolio Batcher, Publisher Flat Files, and Publisher documents.

2. API Program

2.1 Overview

Clients have been moving towards building a custom solution, driven by the need to increase productivity by consolidating information into a single user experience. By exposing analytics, performance, and risk through APIs, it provides you with a sophisticated channel to interact with FactSet’s leading multi-asset analytics. As the market continues to demand more transparency and data, FactSet will provide flexible options to meet those demands. APIs complement the current analytics suite offerings and facilitate partnerships by allowing you to build private experiences, integrate with third-party BI tools like Tableau, third-party stat packages like RStudio, and increase control over internal consumption of analytics from FactSet.



The first stage of exposing Analytics APIs will focus on the portfolio analytics engine. Later, the program will expand to include other analytics engines, products, and APIs from other business units.

The program will provide the following:

- Developer toolkit to build proof of concept

- Uniform feel across all FactSet’s Enterprise scale APIs
- Adherence to industry standards
- Versioned APIs
- Extensive documentation and tutorials on the developer portal

3. Publisher API

Through the Publisher API, you can optimize your reporting workflows by calculating customized, presentation-ready documents that integrate Portfolio Analysis, SPAR, commentary, risk, as well as your firm's proprietary data. Publisher reports are delivered as PDF files styled with your company's logo and color palette.

All APIs are hosted under <https://api.factset.com>. Authentication is handled using API Keys and authorization is handled using FactSet’s in-house subscriptions product. You can find more information about using API Keys at <https://developer.factset.com/authentication>.

HTTP request and response header names should be considered case insensitive as per [HTTP Standard](#). Please do not rely on case sensitive matching of headers in your code.

3.1 Publisher Calculation APIs

3.1.1 Run Multiple Calculations

POST /analytics/engines/pub/v3/calculations

Description

This endpoint runs multiple calculations on Publisher Engine based on parameters specified in the POST body. It must be used first, before checking status or cancelling endpoints. A successful response will contain the URL to check the status of the request.

Request Headers

| Header name | Description |
|--|--|
| Authorization | Standard HTTP header. Value needs to use 'Basic <base64 encoded value>' format. |
| Content-Type | Standard HTTP header. Value needs to specify application/JSON (i.e., caller needs to specify that the body is in JSON format). |
| X-FactSet-Api-Long-Running-Deadline | Long running deadline in seconds when only one unit is passed in the POST body. The endpoint will return calculation results in the response if it completes within the specified amount of time (rather than return the status polling URL) Max value is 20 seconds. |
| Cache-Control | Standard HTTP header that holds caching instructions. max-stale is the only supported directive. It indicates that the client will accept a stale response, the value (in seconds) denotes the upper time limit for the stale response. Note that all results are cached for 12 hours, to override the default cache and trigger a new request, set max-stale=0. Max value is 43200 seconds (12 hours). For more information on caching, see the Caching Remarks section . |

Request Body

| Parameter name | Data type | Required | Description | Format |
|----------------|-----------|----------|---|---|
| data | Array | Yes | List of calculations to compute for each component. | Each calculation represented by an object containing calculation inputs. See below for schema and example values. |
| meta | Object | No | Allows users to specify the response format and stachContentOrganization. | Currently not supported, only Null value is allowed. |

The data accepts a collection of calculation parameters. The parameters are outlined below:

| Parameter name | Data type | Required | Description | Format |
|-----------------|-----------|----------|---|---|
| document | String | Yes | Publisher document to analyze. | Document can be fetched using the Document Lookup . |
| account | Object | Yes | User's FactSet account path OR benchmark. | Account identifier must have .ACCT or .ACTM extension or BENCH: prefix. Holdings mode can be optionally set for the account. Possible values for holdings mode are B&H (Buy and Hold), TBR (Transaction based returns) or OMS. Default holdings mode value is B&H. Please refer https://my.apps.factset.com/oa/pages/21344#create for creating accounts that can be uploaded through nightly parsers or https://developer.factset.com/api-catalog/model-portfolio-api for creating prospective accounts with model holdings. |
| dates | Object | Yes | Date range to run against. Object takes just enddate for document that needs as of date, otherwise it takes both startdate and enddate. | Supported Date Formats . |

Response Headers

| Header name | Description |
|--------------------------------------|--|
| X-DataDirect-Request-Key | FactSet's request key header. |
| X-FactSet-API-Request-Key | Key to uniquely identify an Analytics API request. Only available after successful authentication. |
| Location | Standard HTTP header. Contains URL to check status of the request. |
| X-FactSet-API-RateLimit-Limit | Number of allowed requests for the time window. |

| | |
|--|---|
| X-FactSet-Api-RateLimit-Remaining | Number of requests left for the time window. |
| X-FactSet-Api-RateLimit-Reset | Number of seconds remaining till rate limit resets. |

Returns

| HTTP status code | Description |
|------------------|---|
| 200 | Expected response, if the calculation has one unit and is completed with an error. |
| 201 | Expected response if the calculation has one unit and is completed in a short span, returns JSON in the format specified in the Calculation parameters. |
| 202 | Expected response, contains the poll URL in the Location header. |
| 400 | Invalid calculation parameters. |
| 401 | Missing or invalid authentication. |
| 403 | User is forbidden access with current credentials. |
| 404 | One or more calculation settings were unavailable. |
| 415 | Missing/Invalid Content-Type header. Header needs to be set to application/json. |
| 429 | Rate limit reached. Cancel older requests using Cancel Calculation endpoint or wait for older requests to finish / expire. |
| 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting. |
| 503 | Request timed out. Retry the request in sometime. |

Remarks

- Maximum 50 POST requests allowed in a 5 second window for each API. The same can be verified using the various Rate-Limit headers available in the API response.
 - X-FactSet-Api-RateLimit-Limit - Number of allowed requests for the time window.
 - X-FactSet-Api-RateLimit-Remaining - Number of requests left for the time window.
 - X-FactSet-Api-RateLimit-Reset - Number of seconds remaining till rate limit resets.
- Maximum 1000 units allowed per request and across all simultaneous requests.
- Any settings in POST body will act as a one-time override over the settings saved in the Pub template.
- The stored result 12 hour period is applied to each individual calculation unit after it completes. It is not applied to the entire calculation.

Caching Remarks

- *All results will be cached for 12 hours by default.* This means that by default (without sending any cache-control headers), after the first request successfully completes, all subsequent requests with unchanged request parameters will return the same results for 12 hours.
- Setting the max-stale=<staleness limit in seconds> allows you to fetch pre-calculated results with any subsequent POST requests, as long as they were last calculated within the staleness limit.
 - o Once set, the API will check to see if the stored results are within the staleness limit.

- If they are within the limit, then the request will return the cached results, allowing for a quick response and eliminating unnecessary points accrual.
- If the results are not within the limit, a brand-new calculation request will be triggered to get the latest results.
- To immediately request the latest results, override the cache by setting “max-stale=0” in the Cache-control header parameter.
- Changes made to the underlying Vault document via the workstation will not trigger a results re-calculation. The cache-control parameter should be set to “max-stale=0” to immediately request the latest results
- The max cache-control value is “max-stale=43200” (12 hours)
- The cached result period is applied to each individual calculation unit after it completes. It is not applied to the entire calculation.

Examples

Request:

POST

<https://api.factset.com/analytics/engines/pub/v3/calculations>

Headers:

content-type: application/json

Authorization: Basic RkRTX0RFTU9fVVMt*****

Accept-Encoding: gzip

content-length: 201

Body:

```
{
  "data": {
    "pub1": {
      "document": "Client:/AAPI/As Of Date Tests Daily (copy).Pub_bridge_pdf",
      "account": {
        "id": "Client:DOMESTIC_2.ACCT",
        "holdingsmode": "B&H"
      },
      "dates": {
        "enddate": "20180331"
      }
    },
    "pub2": {
      "document": "Client:/AAPI/Puma Narrative Test.Pub_bridge_pdf",
      "account": {
        "id": "Client:DOMESTIC_2.ACCT",
        "holdingsmode": "B&H"
      },
      "dates": {
        "startdate": "20180101",
        "enddate": "20180331"
      }
    }
  }
}
```

```
}
}
```

Response:

HTTP 202 Accepted

Headers:

location: <https://api.factset.com/analytics/engines/pub/v3/calculations/4da5d21cf67149f3b84247d4c8a92e2b/status>

x-datadirect-request-key: 60df291404b75911

x-factset-api-request-key: 60df2914097817b6

3.1.2 Create or Update Publisher Calculation

PUT /analytics/engines/pub/v3/calculations/{id}

Description

This endpoint can be used to either:

- Create a new PUB calculation(s) with a custom id specified in the id path parameter
- Update calculation parameters and run a pre-existing PUB calculation

Like the POST endpoint, the PUT endpoint must be used first, before checking status or cancelling endpoints. A successful response will contain the URL to check the status of the request. If the **X-FactSet-Api-Long-Running-Deadline** header is passed, then this endpoint will return calculation results in the response if the calculation completes within the specified amount of time.

Request Headers

| Header name | Description |
|--|--|
| Authorization | Standard HTTP header. Value needs to use 'Basic <base64 encoded value>' format. |
| Content-Type | Standard HTTP header. Value needs to specify application/JSON (i.e., caller needs to specify that the body is in JSON format). |
| X-FactSet-Api-Long-Running-Deadline | Long running deadline in seconds when only one unit is passed in the POST body. The endpoint will return calculation results in the response if it completes within the specified amount of time (rather than return the status polling URL) Max value is 20 seconds. |
| Cache-Control | Standard HTTP header that holds caching instructions. max-stale is the only supported directive. It indicates that the client will accept a stale response, the value (in seconds) denotes the upper time limit for the stale response. Note that all results are cached for 12 hours, to override the default cache and trigger a new request, set max-stale=0. Max value is 43200 seconds (12 hours). For more information on caching, see the Caching Remarks section . |

Request Body

| Parameter name | Data type | Required | Description | Format |
|----------------|-----------|----------|---|---|
| data | Array | Yes | List of calculations to compute for each component. | Each calculation represented by an object containing calculation inputs. See below for schema and example values. |
| meta | Object | No | Allows users to specify the response format and stachContentOrganization. | Currently not supported, only Null value is allowed. |

The request body accepts a collection of calculation parameters. The parameters are outlined below:

| Parameter name | Data type | Required | Description | Format |
|-----------------|-----------|----------|---|--|
| document | String | Yes | Publisher document to analyze. | Document can be fetched using the Document Lookup . |
| account | Object | Yes | User's FactSet account path OR benchmark. | Account identifier must have .ACCT or .ACTM extension or BENCH: prefix. Holdings mode can be optionally set for the account. Possible values for holdings mode are B&H (Buy and Hold), TBR (Transaction based returns) or OMS. Default holdings mode value is B&H. Please refer https://my.apps.factset.com/oa/pages/21344#create for creating accounts that can be uploaded through nightly parsers or https://developer.factset.com/api-catalog/model-portfolio-api for creating prospective accounts with model holdings. |
| dates | Object | Yes | Date range to run against. Object takes just enddate for document that needs as of date, otherwise it takes both startdate and enddate. | Supported Date Formats . |

Response Headers

| Header name | Description |
|--|--|
| X-DataDirect-Request-Key | FactSet's request key header. |
| X-FactSet-API-Request-Key | Key to uniquely identify an Analytics API request. Only available after successful authentication. |
| Location | Standard HTTP header. Contains URL to check status of the request. |
| X-FactSet-API-RateLimit-Limit | Number of allowed requests for the time window. |
| X-FactSet-API-RateLimit-Remaining | Number of requests left for the time window. |

| | |
|--------------------------------------|---|
| X-FactSet-Api-RateLimit-Reset | Number of seconds remaining till rate limit resets. |
|--------------------------------------|---|

Returns

| HTTP status code | Description |
|------------------|---|
| 200 | Expected response, if the calculation has one unit and is completed with an error. |
| 201 | Expected response if the calculation has one unit and is completed in a short span, returns JSON in the format specified in the Calculation parameters. |
| 202 | Expected response, contains the poll URL in the Location header. |
| 400 | Invalid calculation parameters. |
| 401 | Missing or invalid authentication. |
| 403 | User is forbidden access with current credentials. |
| 404 | One or more calculation settings were unavailable. |
| 415 | Missing/Invalid Content-Type header. Header needs to be set to application/json. |
| 429 | Rate limit reached. Cancel older requests using Cancel Calculation endpoint or wait for older requests to finish / expire. |
| 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting. |
| 503 | Request timed out. Retry the request in sometime. |

Remarks

- Maximum 1000 units allowed per request and across all simultaneous requests.
- Any settings in POST body will act as a one-time override over the settings saved in the Pub template
- The stored result 12 hour period is applied to each individual calculation unit after it completes. It is not applied to the entire calculation.

Caching Remarks

- *All results will be cached for 12 hours by default.* This means that by default (without sending any cache-control headers), after the first request successfully completes, all subsequent requests with unchanged request parameters will return the same results for 12 hours.
- Setting the max-stale=<staleness limit in seconds> allows you to fetch pre-calculated results with any subsequent POST requests, as long as they were last calculated within the staleness limit.
 - o Once set, the API will check to see if the stored results are within the staleness limit.
 - If they are within the limit, then the request will return the cached results, allowing for a quick response and eliminating unnecessary points accrual.
 - If the results are not within the limit, a brand-new calculation request will be triggered to get the latest results.

- To immediately request the latest results, override the cache by setting “max-stale=0” in the Cache-control header parameter.
- Changes made to the underlying Vault document via the workstation will not trigger a results re-calculation. The cache-control parameter should be set to “max-stale=0” to immediately request the latest results
- The max cache-control value is “max-stale=43200” (12 hours)
- The cached result period is applied to each individual calculation unit after it completes. It is not applied to the entire calculation.

Examples

```

Request:
PUT https://api.factset.com/analytics/engines/pub/v3/calculations/4da5d21cf67149f3b84247d4c8a92e2b

Request Headers:
content-type: application/json
Authorization: Basic RkRTX0RFTU9fVVMt***** Accept-
Encoding: gzip

Body:
{
  "data": {
    "pub1": {
      "document": "Client:/AAPI/As Of Date Tests Daily (copy).Pub_bridge_pdf",
      "account": {
        "id": "Client:DOMESTIC_2.ACCT",
        "holdingsmode": "B&H"
      },
      "dates": {
        "enddate": "20180231"
      }
    },
    "pub2": {
      "document": "Client:/AAPI/Puma Narrative Test.Pub_bridge_pdf",
      "account": {
        "id": "Client:DOMESTIC_2.ACCT",
        "holdingsmode": "B&H"
      },
      "dates": {
        "startdate": "20180101",
        "enddate": "20180331"
      }
    }
  }
}

Response:
HTTP 202 Accepted
{

```

```

"data": {
  "calculationid": "4da5d21cf67149f3b84247d4c8a92e2b",
  "status": "Queued",
  "units": {
    "pub1": {
      "status": "Executing"
    },
    "pub2": {
      "status": "Queued"
    }
  }
}
}
}

```

Response Headers:

x-datadirect-request-key: 60e2a42231d79365
 x-factset-api-request-key: 60e2a4227a4ed116
 location: <https://api.factset.com/analytics/engines/pub/v3/calculations/custom-id/status>

3.1.3 Get Pub Calculation Status By ID

GET /analytics/engines/pub/v3/calculations/{id}/status

Description

This is the endpoint to check on the progress of a previous request that was submitted using [Run Publisher Calculations](#) endpoint. The response body contains status information of the entire request and each individual calculation. If an individual calculation has finished computing, the result parameter in the response body will contain the result URL.

Request Headers

| Header name | Description |
|---------------|---|
| Authorization | Standard HTTP header. Value needs to use 'Basic <base64 encoded value>' format. |

Path Parameters

| Name | Required | Description |
|------|----------|--|
| id | Yes | From url, provided from the location header in the Create and Run PUB calculation endpoint |

Response Headers

| Header name | Description |
|------------------|---|
| Content-Encoding | Standard HTTP header. Header value based on Accept-Encoding Request header. |
| Content-Type | Standard HTTP header. |

| | |
|--|---|
| Transfer-Encoding | Standard HTTP header. Header value will be set to Chunked if Accept-Encoding header is specified. |
| X-DataDirect-Request-Key | FactSet's request key header. |
| X-FactSet-API-Request-Key | Key to uniquely identify an Analytics API request. Only available after successful authentication. |
| 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-RateLimit-Limit | Number of allowed requests for the time window. |
| X-FactSet-API-RateLimit-Remaining | Number of requests left for the time window. |
| X-FactSet-API-RateLimit-Reset | Number of seconds remaining till rate limit resets. |

Returns

| HTTP status code | Description |
|------------------|---|
| 200 | Expected response once calculation is completed. |
| 202 | Expected response returned if the calculation is not yet completed. |
| 400 | Invalid identifier provided. |
| 401 | Missing or invalid authentication. |
| 403 | User is forbidden access with current credentials. |
| 404 | Calculation id not found. |
| 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting. |
| 503 | Request timed out. Retry the request in sometime. |

Examples

```

Request:
GET
https://api.factset.com/analytics/engines/pub/v3/calculations/4da5d21cf67149f3b84247d4c8a92e2b/status

Headers:
Authorization: Basic RkRTX0RFTU9fVVMt*****

Response:
    
```

```

HTTP 200 Success

Headers:
x-datadirect-request-key: 60e2a8fb06265ca9
x-factset-api-request-key: 60e2a8fb746d0464

Body:
{
  "data": {
    "calculationid": "4da5d21cf67149f3b84247d4c8a92e2b",
    "status": "Completed",
    "units": {
      "pub1": {
        "status": "Success",
        "result":
        "https://api.factset.com/analytics/engines/pub/v3/calculations/4da5d21cf67149f3b84247d4c8a92e2b/units/pub1/result",
        "progress": "100"
      },
      "pub2": {
        "status": "Success",
        "result":
        "https://api.factset.com/analytics/engines/pub/v3/calculations/4da5d21cf67149f3b84247d4c8a92e2b/units/pub2/result",
        "progress": "100"
      }
    }
  }
}

```

3.1.4 Get Pub Calculation Result By ID

GET /analytics/engines/pub/v3/calculations/{id}/units/{unitId}/result

Description

This is the endpoint to get the result of a previously requested calculation. If the calculation has finished computing, the body of the response will contain the requested document in the specified format.

Path Parameters

| Name | Required | Description |
|--------|----------|--|
| id | Yes | Calculation id. From url, provided from the location header in the Create and Run PUB calculation endpoint |
| unitId | Yes | Unit id. from url, provided from the location header in the Get PUB calculation status by id endpoint |

Request Headers

| Header name | Description |
|-------------|--|
| Accept | (Optional) Standard HTTP header. Value can be gzip, compress, deflate, br, identity and/or * |

Response Headers

| Header name | Description |
|-----------------------------------|---|
| Content-Encoding | Standard HTTP header. Header value based on Accept-Encoding Request header. |
| Content-Type | Standard HTTP header. |
| Transfer-Encoding | Standard HTTP header. Header value will be set to Chunked if Accept-Encoding header is specified. |
| X-DataDirect-Request-Key | FactSet's request key header. |
| X-FactSet-Api-Request-Key | Key to uniquely identify an Analytics API request. Only available after successful authentication. |
| 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-RateLimit-Limit | Number of allowed requests for the time window. |
| X-FactSet-Api-RateLimit-Remaining | Number of requests left for the time window. |
| X-FactSet-Api-RateLimit-Reset | Number of seconds remaining till rate limit resets. |

Returns

| HTTP status code | Description |
|------------------|---|
| 200 | Expected response once calculation is completed. |
| 202 | Expected response returned if the calculation is not yet completed. |
| 400 | Invalid identifier provided. |
| 401 | Missing or invalid authentication. |
| 403 | User is forbidden access with current credentials. |
| 404 | Calculation id not found. |
| 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting. |
| 503 | Request timed out. Retry the request in sometime. |

Examples

```

Request:
GET
https://api.factset.com/analytics/engines/pub/v3/calculations/4da5d21cf67149f3b84247d4c8a92e2b/units/pub1/result

Headers:
Authorization: Basic RkRTX0RFTU9fVVMt*****

Response:
HTTP 200 Success

Response Headers:
x-datadirect-request-key: 60e2aa26399c005e
x-factset-api-request-key: 60e2aa26180dccb1
    
```

3.1.5 Get Calculation Parameters By ID

GET /analytics/engines/v2/calculations/

Description

This is the endpoint that returns the calculation parameters passed for a calculation.

Path Parameters

| Name | Required | Description |
|------|----------|---|
| id | Yes | Calculation id. From url, provided from the location header in the Create/Update and Run Pub calculation endpoint |

Request Headers

| Header name | Description |
|---------------|---|
| Authorization | Standard HTTP header. Value needs to use 'Basic <base64 encoded value>' format. |
| Accept | (Optional) Standard HTTP header. Value needs to be application/json. |

Response Headers

| Header name | Description |
|-------------------|---|
| Content-Encoding | Standard HTTP header. Header value based on Accept-Encoding Request header. |
| Content-Type | Standard HTTP header. |
| Transfer-Encoding | Standard HTTP header. Header value will be set to Chunked if Accept-Encoding header is specified. |

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

Returns

| HTTP status code | Description |
|------------------|---|
| 200 | Expected response once calculation is completed. |
| 202 | Expected response returned if the calculation is not yet completed. |
| 400 | Invalid identifier provided. |
| 401 | Missing or invalid authentication. |
| 403 | User is forbidden access with current credentials. |
| 404 | Calculation id not found. |
| 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting. |
| 503 | Request timed out. Retry the request in sometime. |

Examples

```

Request:
GET
https://api.factset.com/analytics/engines/pub/v3/calculations/4da5d21cf67149f3b84247d4c8a92e2b

Headers:
Authorization: Basic RkRTX0RFTU9fVVMt*****

Response:
HTTP 200 OK

Response Headers:
    
```

```
x-datadirect-request-key: 60e2a8e133b75432
x-factset-api-request-key: 60e2a8e199fb0801
```

Response Body:

```
{
  "data": {
    "pub1": {
      "document": "client:/aapi/as of date tests daily (copy).pub_bridge_pdf",
      "account": {
        "id": "client:domestic_2.acct",
        "holdingsmode": "b&h"
      },
      "benchmark": null,
      "dates": {
        "startdate": null,
        "enddate": "20180131"
      }
    },
    "pub2": {
      "document": "client:/aapi/puma narrative test.pub_bridge_pdf",
      "account": {
        "id": "client:domestic_2.acct",
        "holdingsmode": "b&h"
      },
      "benchmark": null,
      "dates": {
        "startdate": "20180101",
        "enddate": "20180331"
      }
    }
  },
  "meta": null
}
```

3.1.6 Cancel Pub Calculation by Id

DELETE /analytics/engines/pub/v3/calculations/{id}

Description

This endpoint is used to cancel a previously submitted request. Instead of doing a HTTP GET on the status URL, cancel the request by doing a HTTP DELETE.

Path Parameters

| Name | Required | Description |
|------|----------|---|
| id | Yes | Calculation id. From url, provided from the location header in the Create/Update and Run Pub calculation endpoint |

Request Headers

| Header name | Description |
|---------------|---|
| Authorization | Standard HTTP header. Value needs to use 'Basic <base64 encoded value>' format. |

Response Headers

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

Returns

| HTTP status code | Description |
|------------------|--|
| 204 | Expected response, calculation was cancelled successfully. |
| 400 | Invalid identifier provided. |
| 401 | Missing or invalid authentication. |
| 403 | User is forbidden access with current credentials. |
| 404 | There was no request for the identifier provided, or the request was already canceled for the provided identifier. |
| 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting. |
| 503 | Request timed out. Retry the request in sometime. |

Examples

```

Request:
DELETE
https://api.factset.com/analytics/engines/pub/v3/calculations/4da5d21cf67149f3b84247d4c8a92e2b

Headers:
Authorization: Basic RkRTX0RFTU9fVVMt*****

Response:
HTTP 204 Success
    
```

Headers:
x-datadirect-request-key: 60e2af2f34f08c8a
x-factset-api-request-key: 60e2af2f9cb24d17

3.2 Lookup APIs

3.2.1 Account Lookup

GET /analytics/lookups/v3/accounts/{path}

Description

This endpoint returns a list of account and composite files as well as the directories these files can be found under. Account names from this endpoint can be used in [Run Publisher Calculations](#). If no path is provided, a list of root level directories is returned, which can then be passed again to this endpoint to retrieve accounts and sub-directories.

Request Headers

| Header name | Description |
|---------------|---|
| Authorization | Standard HTTP header. Value needs to use 'Basic <base64 encoded value>' format. |
| Accept | (Optional) Standard HTTP header. Value needs to be application/json. |

Response Headers

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

Returns

| HTTP status code | Description |
|------------------|---|
| 200 | Expected response, returns a list of accounts and directories |
| 400 | Invalid query parameter or value provided. |
| 401 | Missing or invalid authentication. |
| 403 | User is forbidden access with current credentials. |
| 404 | Path not found. |

| | |
|-----|--|
| 406 | Unsupported Accept header. Header needs to be set to application/json. |
| 429 | Rate limit reached. Wait till the time specified in Retry-After header value to make further requests. |
| 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting. |
| 503 | Request timed out. Retry the request in some time |

Examples

```

Request:
GET
https://api.factset.com/analytics/lookups/v3/accounts/

Headers:
Authorization: Basic RkRTX0RFTU9fVVMt*****

Response:
HTTP 200 Success

Headers:
x-datadirect-request-key: 564d5a1d49ffluvj
x-factset-api-request-key: 1gm8zeczlyj3w6bd

Body:
{
  "data": {
    "accounts": [
      "z_codex_test",
      "%.TEST_PLM_JAN19",
      ".ACTM",
      "_publisher"
    ]
  }
}

```

3.2.2 Currency Lookup

GET /analytics/lookups/v3/currencies

Description

This endpoint lists all the currencies that can be applied to any calculation.

Request Headers

| Header name | Description |
|---------------|---|
| Authorization | Standard HTTP header. Value needs to use 'Basic <base64 encoded value>' format. |
| Accept | (Optional) Standard HTTP header. Value needs to be application/json. |

Response Headers

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

Returns

| HTTP status code | Description |
|------------------|--|
| 200 | Expected response, returns a list of accounts and directories |
| 401 | Missing or invalid authentication. |
| 403 | User is forbidden access with current credentials. |
| 406 | Unsupported Accept header. Header needs to be set to application/json. |
| 429 | Rate limit reached. Wait till the time specified in Retry-After header value to make further requests. |
| 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting. |
| 503 | Request timed out. Retry the request in some time |

Examples

Request:
 GET <https://api.factset.com/analytics/lookups/v3/currencies>

Headers:

```

Authorization: Basic
  RKRTX0RFTU9fVVMt*****

Response:
HTTP 200 Success

Headers:
x-datadirect-request-key: 60e2bc742f75fdfa
x-factset-api-request-key: 60e2bb7a050de97e

Body:
{
  "data": {
    "123": {
      "name": "European Composite Unit"
    },
    "GBP": {
      "name": "British Pounds"
    },
    "USD": {
      "name": "U.S. Dollar"
    },
    "DZD": {
      "name": "Algerian Dinar"
    }
  }
}

```

3.2.3 Document Lookup

GET /analytics/engines/pub/v3/documents/{path}

Description

This endpoint looks up all Publisher documents and sub-directories in a given directory. Document names from this endpoint can be used in [Run Publisher Calculations](#). If no path is provided, a list of root level directories is returned, which can then be passed again to this endpoint to retrieve documents and sub-directories.

Request Headers

| Header name | Description |
|---------------|---|
| Authorization | Standard HTTP header. Value needs to use 'Basic <base64 encoded value>' format. |
| Accept | (Optional) Standard HTTP header. Value needs to be application/json. |

Response Headers

| Header name | Description |
|--------------------------|-------------------------------|
| X-DataDirect-Request-Key | FactSet's request key header. |

| | |
|----------------------------------|--|
| X-FactSet-Api-Request-Key | Key to uniquely identify an Analytics API request. Only available after successful authentication. |
| Age | Standard HTTP header. Age of cache in seconds. |

Returns

| HTTP status code | Description |
|------------------|--|
| 200 | Expected response. |
| 400 | Invalid query parameter or value provided. |
| 401 | Missing or invalid authentication. |
| 403 | User is forbidden access with current credentials. |
| 404 | Path not found. |
| 406 | Unsupported Accept header. Header needs to be set to application/json. |
| 429 | Rate limit reached. Wait till the time specified in Retry-After header value to make further requests. |
| 500 | Server error. Log the X-DataDirect-Request-Key header to assist in troubleshooting. |
| 503 | Service unavailable, Retry the request in sometime. |

Examples

```

Request:
GET
https://api.factset.com/analytics/lookups/v2/engines/pub/documents/

Headers:
Authorization: Basic RkRTX0RFTU9fVVMt*****

Response:
200 Success

Headers:
x-datadirect-request-key: 60e2bb7a050de97e
x-factset-api-request-key: 60e2bc742f75fdfa

Body:
{
  "data":{
    "documents":[
      "PUB_TEST"
    ],
    "directories":[
      "test1",

```



```

    "test2"
  ]
}

```

4. Troubleshooting

The following steps are recommended to troubleshoot errors from any of the different APIs:

- Calculation specific endpoints (POST, PUT, GET Status, GET Results, GET All Calculations)
 - Record the below response headers so that FactSet's API support team can analyze your specific request/response:
 - x-factset-api-calculation-instance-id
 - x-factset-api-calculation-id
 - x-datadirect-request-key
 - Record the response body when the response is an error response. All HTTP status codes equal to and greater than 400 are considered error responses.
 - Reach out to your account team with the above information for assistance.
- Lookups endpoints (GET Components, GET Components by id, GET Accounts, GET Groups etc)
 - Record the x-datadirect-request-key response header so that FactSet's API support team can analyze your specific request/response.
 - Record the response body when the response is an error response. All HTTP status codes equal to and greater than 400 are considered error responses.
 - Reach out to your account team with the above information for assistance.

5. Version Upgrade

FactSet will support old API versions for a limited time. The actual support time will depend on the API and the release stage (i.e., beta or production). All breaking changes, functionality additions, and bug fixes across earlier versions will be documented in the changelog.

FactSet's API engineering team will work with the clients to ensure smooth transition to newer versions.

6. Appendix: Supported Date Formats

Absolute Date Formats

| Format | Description | Examples |
|------------|-------------------------|----------------------------------|
| MM/DD/YYYY | A day. | 7/11/2016, 1/1/2015, 3/6/2014. |
| MM/YYYY | A month end. | 6/2016, 4/2015, 11/2014, 5/2013. |
| YYYY/MMF | A fiscal quarter end. | 2016/3F, 2015/2F. |
| YYYY/MMC | A calendar quarter end. | 2016/1C, 2015/3C. |
| YYYY | A fiscal year end. | 2016, 2015. |

Relative Date Formats

| Format | Examples |
|--------|---|
| D | 0D is the most recently completed trading day, -1D is one trading day prior. |
| AW | 0AW is the most recently completed trading day, -1AW is the one actual week (7 days) prior to the most recently completed trading day. |
| W | 0W is the last day of the most recently completed trading week (usually Friday), -1W is the last trading day of the prior week. |
| AM | 0AM is the most recently completed trading day, -1AM is the same day, one actual month prior. |
| M | 0M is the last trading day of the most recent month, -1M is the last trading day of the prior month. |
| Q | 0Q is the last trading day of the company's most recent fiscal quarter, -1Q is the last day of the prior fiscal quarter. |
| CQ | 0CQ is the last trading day of the most recent calendar quarter (March, June, September, or December), -1CQ is the last trading day of the prior calendar quarter. |
| AY | 0AY is the most recently completed trading day, -1AY is one actual year (365 days) prior. |
| Y | 0Y is the last trading day of the company's most recent fiscal year, -1Y is the last trading day of the prior fiscal year. |
| CY | 0CY is the last trading day of the most recent calendar year (the last trading day in December), -1CY is the last trading day of the prior calendar year. |
| M/D/Y | M, D, and Y can be zero, negative, or a positive number. Examples: 0/0/-1 is the day one year ago, 0/-7/0 is the day one week ago, -1/0/0 is the day one month ago, 12/31/-1 is the day at the end of last year. |

Special FactSet Date Identifiers

The user needs to set the following properties in their account (.ACCT/.ACTM file) if they wish to use these identifiers:

| Identifier | Definition |
|--------------------|---|
| INCEPTION | Date the account was created. This typically corresponds to the first day of data in the holdings portfolio. |
| ALTERINCEPTION | Alternative date option to define when the portfolio was created. This is helpful in cases where the inception date isn't the official day the portfolio was created. |
| TERMINATION | Date the account is terminated. |
| END_OF_LAST_FISCAL | End of last fiscal year. |

7. Appendix: Run Multiple Calculations Request Body Scenarios

Below table lists down multiple calculation scenarios to help understand the points breakdown.

| Request Body | Description |
|--|---|
| <pre>{ "data": { "pub1": { "document": "Client:/AAPI/As Of Date Tests Daily (copy).Pub_bridge_pdf", "account": { "id": "Client:DOMESTIC_2.ACCT", "holdingsmode": "B&H" }, "dates": { "enddate": "20180331" } }, "pub2": { "document": "Client:/AAPI/Puma Narrative Test.Pub_bridge_pdf", "account": { "id": "Client:DOMESTIC_2.ACCT", "holdingsmode": "B&H" }, "dates": { "startdate": "20180101", "enddate": "20180331" } } } }</pre> | <p>No. of Calculations: 2</p> <p>Calculation 1 No. of Accounts: 1 No. of Points: 1 x 1 = 1</p> <p>Calculation 2 No. of Accounts: 1 No. of Points: 1 x 1 = 1</p> <p>Total No. of Points: 1 + 1 = 2</p> |