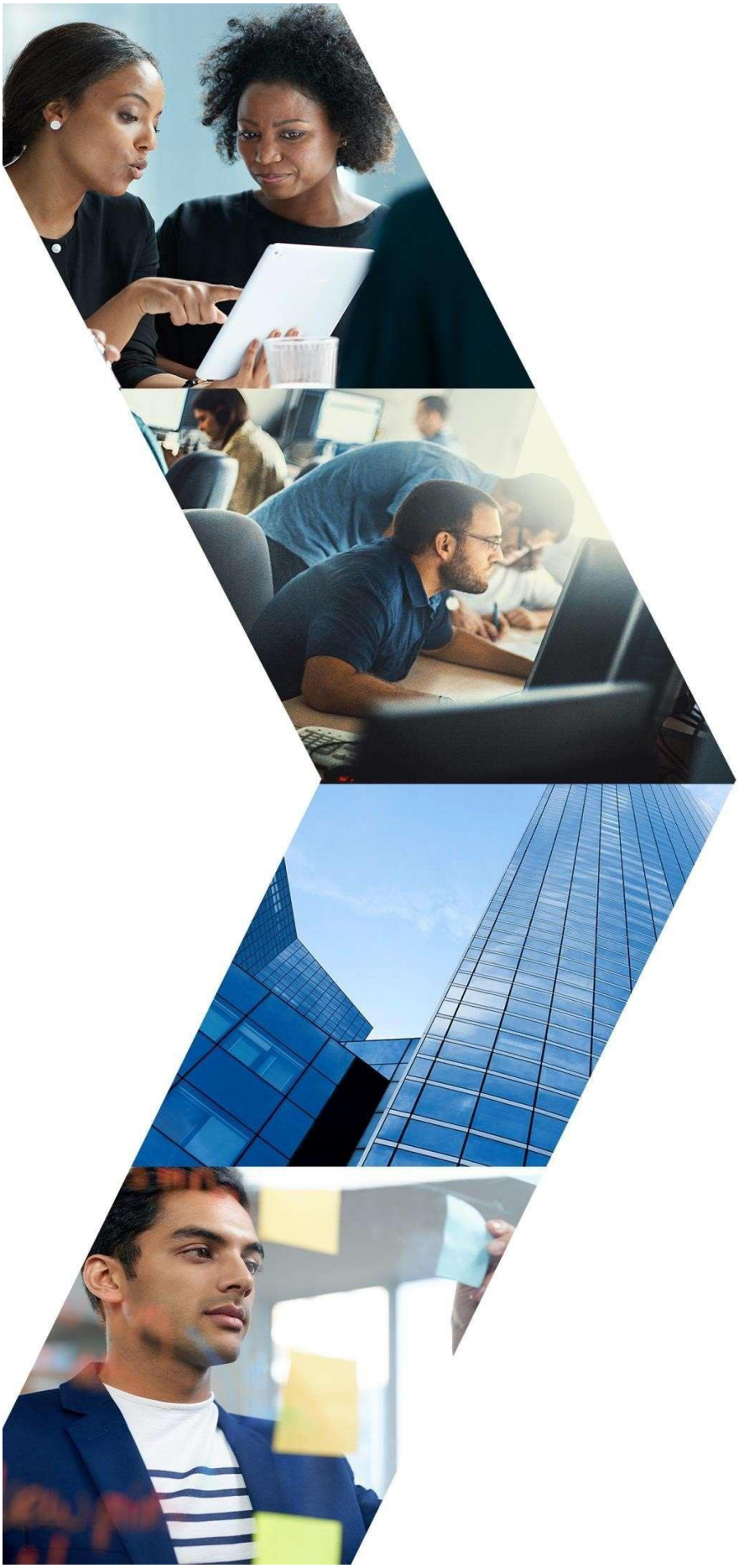
FACTSET ⟩ SEE THE ADVANTAGE



OFDB API

Version 2.0

User Manual & Reference Document

FACTSET SEE THE ADVANTAGE

Contents

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1. Purpose

The Open FactSet Database (OFDB) API allows users to create, modify and view non-portfolio databases. This will result in an efficient way of easy read/write access to clients existing OFDBs & also enhances the creation of new OFDBs from scratch.

A) **Note: What is a non-portfolio database**? – A non-portfolio database should not be registered within Portfolio List Manager. See more below at **Portfolio Exceptions**

2. OFDB API

All APIs are hosted under https://developer.factset.com. Please refer to the manual for authentication https://developer.factset.com/authentication using API keys.

The OFDB API would enable clients to support three major use cases:

1. **Create** OFDB: Gives the ability to create a new OFDB
2. **View** OFDB: Gives the ability to read the contents of an OFDB
3. **Modify** OFDB: Gives the ability to modify the contents of an OFDB

Database Types

The two supported databases are primarily dependent upon the iteration type of the data stored. Below are the supported databases:

- 2D - Non-Time Series/Non-Iterated
- 3D - Time series/Iterated

The settings of the type of data (Iterated/Non-Iterated) are stored at field level. Therefore, a 2D OFDB is one with no 3D fields and is beneficial as a single table of reference data which does not require keeping track of historical changes. It is worth noting that 3D OFDBs also contain a date which will be added automatically.

Portfolio Exception

Portfolio use cases are not supported in this service. Other FactSet offerings should be leveraged to ensure maximum compatibility across all FactSet products.

Portfolio:

1. Contains Shares/Weight field and
2. Registered in PLM as Holdings Portfolio

Non-Portfolio:

1. May or may not Contain Shares/Weight field and
2. Not Registered in PLM as Holdings Portfolio

If an OFDB is registered in PLM as a “Holdings Portfolio”, users will not be able to access it via the OFDB API. Similarly, If an OMS_OFDB is registered in PLM as a trade data portfolio, users will not be able to access via OFDB API

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2.1. General Request Workflow:

Requests within the API will follow either the flow of:

1. Push action/operation, then if **NOT** *long running*, result code. (201… etc)

2. Push action/operation, then if *long running*, job id returned in response, input job id in relevant status endpoint, if executing then repeat until success, if success then input job id into result endpoint.

Status Endpoints

Input:

- **Jobid***: relevant id from long running request.
- **Example:** "id": "4bb5e3e7-d422-41bb-b8ce-a72d02af123a"

Output:
Will print text of “success” or “executing” with jobid.

Result Endpoints

Input:

- **Jobid***: relevant id from status endpoint.
- **Example:** "id": "4bb5e3e7-d422-41bb-b8ce-a72d02af123a"
-

Output:
Relevant to type of request sent (see typical result content for each endpoint below).

2.2. View OFDB

The API user will be able to view/read the data (holdings/transactions (TXN_* fields)) within the databases i.e., OFDB/OMS_OFDB/ECON OFDB

2.2.1. Get Database Fields

GET /v2/database/{path}/fields

Description

This endpoint fetches **all the fields** present within the database.

Request

Input:

- **Path***: Complete database name along with its path.
- **Example:** CLIENT:/EXAMPLE.OFDB

Output:
List of fields present in the database along with its metadata.

Example

Input:

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Database name & path: PERSONAL:/SAMPLE.OFDB
Request URL:

```
https://api.factset.com/analytics/ofdb/v2/database/PERSONAL%3ASAMPLE.OFDB/fields
```

Output:
All fields present in the database with their field properties
Response body:


```
[
  {
    "codePageFlag": "UNKNOWN",
    "description": "SYMBOL",
    "iteration": "2D",
    "name": "SYMBOL",
    "size": 32,
    "splitDirection": "NONE",
    "type": "CHAR"
  },
  {
    "description": "INDUSTRY",
    "iteration": "3D",
    "name": "INDUSTRY",
    "splitDirection": "NONE",
    "type": "FLOAT"
  },
  {
    "description": "PRICE",
    "iteration": "3D",
    "name": "PRICE",
```


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```
    "splitDirection": "NONE",
    "type": "FLOAT"
  },
  {
    "description": "SHARES",
    "iteration": "3D",
    "name": "SHARES",
    "splitDirection": "NONE",
    "type": "FLOAT"
  },
  {
    "description": "WEIGHT",
    "iteration": "3D",
    "name": "WEIGHT",
    "splitDirection": "NONE",
    "type": "FLOAT"
  },
  {
    "codePageFlag": "UNKNOWN",
    "description": "DATE",
    "iteration": "3d",
    "name": "DATE",
    "size": 32,
    "splitDirection": "NONE",
    "type": "INT"
  }
]
```


2.2.2. Get Database Symbols

GET /v2/database/{path}/symbols

Description
This endpoint fetches **all the symbols** present in the database

Request
Input:

- **Path***: Complete database name along with its path
- **startsWith**: Returns list of symbols which starts with mentioned string
- **endsWith**: Returns list of symbols which ends with mentioned string
- **contains**: Returns list of symbols which contains mentioned string
- **equals**: Returns symbol which matches mentioned
- **orderBy**: Returns symbols in the mentioned sorted order, should provide asc or desc (Default - asc)

Output:
List of Symbols present in the database.

Example
Input:
Database name & path: PERSONAL:SAMPLE.OFDB

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startsWith: b
orderBy: asc
Request URL:

```
https://api.factset.com/analytics/ofdb/v2/database/PERSONAL%3ASAMPLE.OFDB/symbols?startsWith=b&orderBy=asc
```

Output:
All symbols present in the database, starting with ‘b’ and ordered in ascending order.
Response body:


```
[
  "B4NB858",
  "B4NB859",
  "B4NB860",
  "B4NB861",
  "B4NB862",
  "B4NB863",
  "B4NB864",
  "B4NB865",
  "B4NB866",
  "B4NB867",
  "B4NB868",
  "B4NB869",
  "B4NB870",
  "B4NB871",
  "B4NB872",
  "B4NB873",
  "B4NB874",
  "B4NB875",
  "B4NB876",
  "B4NB877",
  "B4NB878",
  "B4NB879",
  "B4NB880",
  "B4NB881",
  "B4NB882",
  "B4NB883",
  "B4NB884",
  "B4NB885",
  "B4NB886",
  "B4NB887",
  "B4NB888",
  "B4NB889",
  "B4NB890",
  "B4NB891",
  "B4NB892",
  "B4NB893",
  "B4NB894",
  "B4NB895",
  "B4NB896"
]
```


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2.2.3. Get Database Dates

GET /v2/database/{path}/dates

Description
This endpoint fetches **all the dates** present in the database.

Request
Input:

- **Path***: Complete database name along with its path
- **between**: Returns list of dates which are between [start,end], dates should be in the respective order of start and end
- **equals**: Returns the date which matches given date
- **before**: Returns list of dates which are before mentioned date
- **after**: Returns list of dates which are after mentioned date
- **orderBy**: Returns dates in the mentioned sorted order, should provide asc or desc (Default- asc)

Output:
List of Dates present in the database.

Example
Input:
Database name & path: PERSONAL:SAMPLE.OFDB
before: 20171025
orderBy: desc
Request URL:

```
https://api.factset.com/analytics/ofdb/v2/database/PERSONAL%3ASAMPLE.OFDB/dates?before=20171025&orderBy=desc
```

Output:

```
  20170520,
  20170519,
  20170518,
  20170517
]
```

All dates present in the database before the date (20171025) sorted by descending order.
Response body:

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2.2.4. Get Data by Symbol and/or Date

GET /v2/database/{path}

Description

This endpoint fetches the data in the database for the mentioned Symbol or Date. At least one parameter (Symbol/Date) is required. While requesting data for a range of dates, the symbol parameter is mandatory. In brief, the user can **extract a list of symbols along with its data within a particular date or list of dates along with each symbols data**. The endpoints also allow the user to filter data present within the fields and retrieve the filtered data along with all the fields.

Request

Input:

- **Path***: Complete database name along with its path
- **Symbol***: Returns data for the symbol mentioned. e.g: sym1
- **Date***: Returns data for the specific date or range of dates mentioned. e.g : [date1,date2] For date range, the symbol parameter is necessary.
- **filterfields** : Can specify the fields on which you want to perform field filter operations
  e.g: ["PRICE","SECTOR"]
  - Note, the request will respond with 400 if:
    - fields which are not present on OFDB are given.
    - filterOps or filterValues query parameters are missing when filterFields is present.
    - number of values given for filterOps, filterFields, filterValues are different
    - exactly one of symbol or date query parameter is not provided.
- **filterOps** : Can specify the field filter operations which you want to perform e.g: ["LT", "GTEQ", "CT"] in respective order of values in filterFields query parameter.
  - The available CHAR type field filter operations are:
    - "CT": contains
    - "SW": starts-with
    - "EW": ends-with
    - "EQ": equals
  - The available NUMERIC type field filter operations are:
    - "GT": greater than
    - "GTEQ": greater than or equals
    - "LT": lesser than
    - "LTEQ": lesser than or equals
    - "EQ": equals
  - Note, the request will respond with 400 if:
    - operations other than the above mentioned are provided.
    - numeric operations are given to char type fields instead of char operations.
    - char operations are given to numeric type fields instead of numeric operations.
    - filterFields or filterValues query parameters are missing when filterOps is present.
    - number of values given for filterOps, filterFields, filterValues are different
    - exactly one of symbol or date query parameter is not provided.

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- **filterValues** : Can specify the field filter values of the field filter operations e.g: [100, 20, "AB"] in respective order of values in filterFields and filterOps query parameters.
    - Note, the request will respond with 400 if:
        - char values are given to numeric type fields.
        - filterFields or filterOps query parameters are missing when filterValues is present.
        - number of values given for filterOps, filterFields, filterValues are different
        - exactly one of symbol or date query parameter is not provided.
- **filterDatesOps** : Can specify the date filter operations which you want to perform e.g: ["LT", "GTEQ"].
    - The available date filter operations are:
        - "GT": after
        - "GTEQ": after or equals
        - "LT": before
        - "LTEQ": before or equals
        - "EQ": equals"
    - Note, the request will respond with 400 if:
        - operations other than the above mentioned are given.
        - filterDatesValues query parameter is missing when filterDatesOps is present.
        - number of values given for filterDatesOps and filterDatesValues differ.
        - symbol query parameter is not provided.
        - filterDatesValues : Can specify the date filter values of the date filter operations e.g: [20200505, 20200303] in respective order of values in filterDatesOps query parameter.
- **filterDatesValues** : Can specify the date filter values of the date filter operations e.g: [20200505, 20200303] in respective order of values in filterDatesOps query parameter.
    - Note, the request will respond with 400 if:
        - invalid date values are given
        - filterDatesOps query parameter is missing when filterDatesValues is present.
        - number of values given for filterDatesOps and filterDatesValues differ.
        - symbol query parameter is not provided.
- **filterSymbolsOps** : Can specify the symbol filter operations which you want to perform e.g: ["CT", "SW"].
    - The available symbol filter operations are:
        - "SW": starts-with
        - "EW": ends-with
        - "CT": contains
        - "EQ": equals
    - Note, the request will respond with 400 if:
        - operations other than the above mentioned are given.
        - filterSymbolsValues query parameter is missing when filterSymbolsOps is present.
        - number of values given for filterSymbolsOps and filterSymbolsValues differ.
        - date query parameter is not provided
- **filterSymbolsValues** : Can specify the symbol filter values of the date filter operations e.g: ["ab", "xy"] in respective order of values in filterSymbolsOps query parameter.
    - Note, the request will respond with 400 if:
        - filterSymbolsOps query parameter is missing when filterSymbolsValues is present.
        - number of values given for filterSymbolsOps and filterSymbolsValues differ.

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    - date query parameter is not provided.
- **sortFieldName** : Can specify the name of field with respect to which user wants to sort data
    - Note, the request will respond with 400, if a field which doesn't exist in the OFDB is requested
- **sortFieldOrder** : Can specify the order in which user wants to sort data with respect to sortFieldName query parameter
    - Note, the request will respond with 400, If value other than asc or desc is requested
      Available values: ASC, DESC

Output:
Data within a particular date or data within a particular symbol present in the database.

Example

Input:
Database name & path: PERSONAL:SAMPLE.OFDB
date: 20190510
filterFields : ["PRICE"]
filterOps : ["GT"]
filterValues : ["2"]
sortFieldName : SYMBOL
orderBy: desc
Request URL:

```
https://api.factset.com/analytics/ofdb/v2/database/PERSONAL%3ASAMPLE.OFDB?date=20190510&filt
erFields=%5B%22PRICE%22%5D&filterOps=%5B%22GT%22%5D&filterValues=%5B%222%22%5D&sortFieldName
=SYMBOL&sortFieldOrder=DESC
```

Output:
All symbols along with its data within a particular data (20190510) along with filters where ‘Price’ is greater than ‘2’ and sorted by field ‘Symbol’ in descending order.
Response body:


```
{
  "data": [
    {
      "symbol": "ZAE000269890-JSE",
      "date": 20190510,
      "industry": "NA",
      "price": 10,
      "shares": "NA",
      "weight": "NA"
    },
    {
      "symbol": "ZAE000259701-JSE",
      "date": 20190510,
      "industry": "NA",
      "price": 7,
      "shares": "NA",
      "weight": "NA"
    },
    {
      "symbol": "ZAE000173951-JSE",
```


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```
      "date": 20190510,
      "industry": "NA",
      "price": 8,
      "shares": "NA",
      "weight": "NA"
    },
    {
      "symbol": "ZAE000149902-JSE",
      "date": 20190510,
      "industry": "NA",
      "price": 12,
      "shares": "NA",
      "weight": "NA"
    }
  ]
}
```


2.2.5. Get Stats

GET /v2/database/{path}/stats

Description
This endpoint fetches a summary of the OFDB's data. This will include the total number of symbols, total number of dates, number of total fields, number of iterated fields, and non-iterated fields.

Request
Input:

- **Path***: Complete database name along with its path.
- **Example:** CLIENT:/EXAMPLE.OFDB

Output:
Summary of OFDB's data

Example
Input:
Database name & path: PERSONAL:/SAMPLE.OFDB
Request URL:

```
https://api.factset.com/analytics/ofdb/v2/database/PERSONAL%3ASAMPLE.OFDB/stats
```

2.2.6.

GET /v2/database/{path}/audit

Description
This endpoint fetches a summary of the last 50 times the OFDB listed has been modified.

Request
Input:

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- **Path***: Complete database name along with its path.
- **Example:** CLIENT:/EXAMPLE.OFDB

Output:
Summary of OFDB's last 50 times it has been modified.

Example

Input:
Database name & path: PERSONAL:/SAMPLE.OFDB
Request URL:

```
https://api.factset.com/analytics/ofdb/v2/database/PERSONAL%3ASAMPLE.OFDB/stats
```

2.3. Create OFDB

The API user will be able to create an OFDB and add data.
Note: The Time series database (3D OFDB) request body should at least one iterated field value in the POST request.

2.3.1. Add Symbol with One or More Dates

POST /v2/database/{path}/symbols

Description

This endpoint **creates a new symbol with single/multiple dates for 3D database (**OFDB) It also **creates a symbol for 2D database** (OFDB)

Request

Input:

- **Path***: Complete database name along with its path
- **Request body**: Data for creating a new symbol in the database

3D OFDB

```
{
  "symbol": "FDS",
  "data": [
    {
      "date": 20200202,
      "field": "value"
    }
  ]
}
```

2D OFDB

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```
{
  "symbol": "FDS",
  "data": [
    {
      "field": "value"
    }
  ]
}
```

Output:
Creates a new symbol and returns the symbol id as success response.

Example

Input:
Database name & path: PERSONAL:SAMPLE.OFDB
Request body:

```
{
  "symbol": "FDS",
  "data": [
    {
      "date": 20200202,
      "price": "250"
    },
    {
      "date": 20200203,
      "price": "252"
    }
  ]
}
```

Output:
Create a new symbol (FDS) along with multiple dates (20200202, 20200203) and prices (250 & 252) respectively.
Response body: Returns a symbol id as success response status 201

```
{
  "id": "FDS"
}
```

2.3.2. Add Date with One or More Symbols

POST /v2/database/{path}/dates

Description

This endpoint **creates a new date with single/multiple symbols for a 3D database (**OFDB)

Request

Input:

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- **Path***: Complete database name along with its path
- **Request body**: Data for creating a new date in the database

3D OFDB

```
{
  "date": 20200730,
  "data": [
    {
      "symbol": "FDS",
      "field": "VALUE"
    }
  ]
}
```

Output:
Creates a new date and returns the date id as success response.

Example

Input:
Database name & path: PERSONAL:SAMPLE.OFDB
Request body:

```
{
  "date": 20200730,
  "data": [
    {
      "symbol": "FDS",
      "price": "253"
    },
    {
      "symbol": "AAPL",
      "price": "300"
    }
  ]
}
```

Output:
Creates a new date (20200730) along with multiple symbols (FDS, AAPL) and prices (253 & 300) respectively.
Response body: Returns a date id as success response status 201

```
{
  "id": 20200730
}
```

2.3.3. Add Symbol for Date

POST /v2/database/{path}/dates/{date}/symbols

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Description
This endpoint **creates a new symbol for a given date in 3D database** (OFDB).

Request
Input:

- **Path***: Complete database name along with its path
- **Date***: Date for which the symbol needs to be added in YYYYMMDD format
- **Request body**: Data for creating a new symbol in the database

3D OFDB

```
{
  "symbol": "FDS",
  "data": {
    "field1": "value"
  }
}
```

Output:
Creates a new symbol for a given date and returns the date id as success response.

Example
Input:
Database name & path: PERSONAL:SAMPLE.OFDB
Date: 20200730
Request body:

```
{
  "symbol": "AMZN",
  "data": {
    "price": "254"
  }
}
```

Output:
Create a new symbol (AMZN) for a given date (20200730) along with price (254)
Response body: Returns a symbol id as success response status 201

```
{
  "id": "AMZN"
}
```

2.3.4. Create New Field

POST /v1/database/{path}/fields

Description
This endpoint **creates a new field within an existing 2D or 3D database (**OFDB)

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Request

Input:

- **path***: Complete OFDB name along with its path
- **description**: OFDB description
- **fields**:
  - **description**: Field description
  - **iteration***: 2D, 3D
  - **name***: Name of the field
  - **size**: For TEXT fields
  - **splitdirection**: None. Per Share, # of Shares, # of Shares-Spinoff, Per Share – Spinoff
  - **type***: INT, FLOAT, DOUBLE, CHAR(Deafult:32), LONG_CHAR (Default: 256), DATE
  - **codePageFlag**: ASCII, UNKNOWN (default)

```
{
  "path": "string",
  "description": "string",
  "fields": [
    {
      "description": "string",
      "iteration": "2D",
      "name": "string",
      "size": 0,
      "splitDirection": "string",
      "type": "INT",
      "codePageFlag": "ASCII"
    }
  ]
}
```

Output:

Adds a new field to an existing OFDB with the mentioned characteristics.

Example

Input:

Request body:

```
{
   "path": "PERSONAL:DEMO_TEST.OFDB",
   "description": "TEST",
   "fields": [
      {
         "name": "COST",
         "type": "INT",
         "iteration": "3D"
      },
   ]
  }
```

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Output:
Creates a new field within the OFDB listed (PERSONAL:DEMO_TEST.OFDB) Response body: Returns a OFDB name as success response status 201

```
{
  "path": "PERSONAL:DEMO_TEST.OFDB"
  Fields:
      “name”: “COST”,
      “type”: “INT”,
      “iteration”: “3D”
}
```

2.3.5. Create New Database

POST /v2/database/

Description
This endpoint **creates a new 2D or 3D database (**OFDB)

Request
Input:

- **path***: Complete OFDB name along with its path
- **description**: OFDB description
- **fields**:
  - **description**: Field description
  - **iteration***: 2D, 3D
  - **name***: Name of the field
  - **size**: For TEXT fields
  - **splitdirection**: None. Per Share, # of Shares, # of Shares-Spinoff, Per Share – Spinoff
  - **type***: INT, FLOAT, DOUBLE, CHAR(Deafult:32), LONG_CHAR (Default: 256), DATE
  - **codePageFlag**: ASCII, UNKNOWN (default)

```
{
  "path": "string",
  "description": "string",
  "fields": [
    {
      "description": "string",
      "iteration": "2D",
      "name": "string",
      "size": 0,
      "splitDirection": "string",
      "type": "INT",
      "codePageFlag": "ASCII"
    }
  ]
}
```

Output:
Creates a new OFDB with the mentioned fields in the request body.

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Example

Input:

Request body:

```
{
   "path": "PERSONAL:DEMO_TEST.OFDB",
   "description": "TEST",
   "fields": [
      {
         "name": "COST",
         "type": "INT",
         "iteration": "3D"
      },
      {
         "name": "NAME",
         "type": "CHAR",
         "iteration": "3D"
      }
   ]
  }
```

Output:

Create a new OFDB (PERSONAL:DEMO_TEST.OFDB) along with fields as ‘Cost’ and ‘Name’.
Response body: Returns a OFDB name as success response status 201

```
{
  "path": "PERSONAL:DEMO_TEST.OFDB"
}
```

2.4. Modify OFDB

The API user will be able to modify the data within the 2D & 3D database (OFDB)
Note: The Time series database (3D OFDB) request body should at least contain at least one iterated field value in the PUT request.

2.4.1. Update/Add Symbol(s)

PUT /v2/database/{path}/symbols/{symbol}

Description

This endpoint updates an existing symbol field value for single/multiple dates or adds a new symbol/date within a symbol if not present in 3D database (OFDB). It also updates an existing symbol field value or adds a new symbol if not present in the 2D database (OFDB)

Request

Input:

- **Path***: Complete database name along with its path
- **Symbol***: Symbol that needs to be updated/added
- **Request body**: Data for modifying a symbol in the

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2D OFDB

```
{
  "data": [
    {
    “symbol”: “FDS”,
    “content”: [
        {
          "field": "value"
        }
      ]
    }
  ]
}
```

database 3D OFD**B**

```
{
  "data": [
    {
    “symbol”: “FDS”,
    “content”: [
        {
          "field": "value",
          "date": 20220202
        }
      ]
    }
  ]
}
```

Output:
Updates an existing symbol field value for single(2D)/multiple dates(3D) and/or adds a symbol along with its data if not present. Similarly, updates an existing symbol field value or adds a new symbol along with its data if not present. It returns the symbol id as a success response.

Example

Input:
Database name & path: PERSONAL:DEMO_TEST.OFDB
Symbol: FDS
Request body:

```
{
  "data": [
    {
      “symbol”: “FDS”,
      "content" [
        {
          "date": 20200202,
          "cost": "251",
          "name": "Factset"
        }
      ]
    }
  ]
}
```

Output:
Updates a symbol (FDS) along with multiple dates (20200202) cost (251) and name(Factset) respectively.
Response body: Returns a symbol id as success response status 201

```
{
  "id": "FDS"
}
```

2.4.2. Delete All Data for Symbol

DELETE /v2/database/{path}/symbols/{symbol}

Description

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This endpoint deletes all data specific to the symbol in both 2D and 3D database (OFDB). This includes all the dates related to that symbol in 3D database (OFDB).

Request

Input:

- Path*: Complete database name along with its path
- Symbol*: Symbol that needs to be deleted

Output:

Deletes a symbol along with its underlying data. The response status returned is 204.

Example

Input:

Database name & path: PERSONAL:SAMPLE.OFDB
Symbol: FDS

Output:

Deletes a symbol (FDS).
Response code: 204(Resource is deleted successfully)

2.4.3. Update/Add Date(s)

PUT /v2/database/{path}/dates/{date}

Description

This endpoint updates an existing date field value for single/multiple symbols or adds a new date/symbol within a date if not present in 3D database (OFDB).

Request

Input:

- Path*: Complete database name along with its path
- Date*: Date that needs to be updated/added
- Request body: Data for modifying a date in the database

3D OFDB

```
{
  "data": [
    {
      "date": 20220202,
      "content": [
        {
          "symbol": "FDS",
          "price": 100
        }
      ]
    }
  ]
}
```

Output:

Updates an existing date field value for single/multiple symbols(3D) and/or adds a date along with its data if

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not present. It returns the date id as success response

Example

Input:

Database name & path: PERSONAL:DEMO_TEST.OFDB
Date: 20200203
Request body:

```
{
  "data": [
    {
  "date": 20220203
  "content": [
        {
          "symbol": "FDS",
          "cost": "250",
          "name": "Factset"
        },
        {
          "symbol": "AAPL",
          "cost": "260",
          "name": "Apple"
        }
      ]
    }
  ]
}
```

Output:

Updates a date (20200203) along with multiple symbols (FDS, AAPL), cost (250 & 260) and name(Factset, Apple) respectively.
Response body: Returns a date id as success response status 201

```
{
  "id": 20200203
}
```

2.4.4. Delete Date(s)

DELETE /v2/database/{path}/dates/{date}

Description

This endpoint deletes all data specific to the date in 3D database (OFDB). This includes all the symbols related to that date.

Request

Input:

- Path*: Complete database name along with its path
- Date*: Date that needs to be deleted

Output:

Deletes a date along with its underlying data. The response status returned is 204.

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Example

Input:
Database name & path: PERSONAL:SAMPLE.OFDB
Date: 20200730

Output:
Deletes a date (20200730).
Response code: 204(Resource is deleted successfully)

2.4.5. Delete Bulk

POST /v2/database/{path}/delete

Description

This endpoint deletes a combination of inputs including database fields, symbols, dates, and/or combinations of all three.

Request

Input:

- Path*: Complete database name along with its path
- Date*: Date that needs to be deleted
- Field*: Field that needs to be deleted
- Symbol*: Symbol that needs to be deleted

Output:
Deletes a date along with its underlying data. The response status returned is 204.

Example

Input:
Database name & path: PERSONAL:SAMPLE.OFDB
Date: 20200730

```
{
  "data": [
    {
      "symbol": "FDS"
    },
    {
      "date": 20220202
    },
    {
      "field": "PRICE"
    },
    {
      "symbol": "AAPL",
      "date": 20230303
    },
    {
      "symbol": "TSLA",
      "date": 20240404,
      "field": "SHARES"
    }
  ]
}
```

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Output:
The above request would delete the entire history of the symbol “FDS”. Then it would delete all information for all symbols on the date 20220202. Next it would delete the field “PRICE” from the database. It would then delete the information for the symbol AAPL on 20230303. Finally it would delete the SHARES field information on 20240404 for TSLA.
Response code: 204(Resource is deleted successfully)

2.4.6. Update Symbol or Date

PUT /v2/database/{path}/dates/{date}/symbols/{symbol}

Description
This endpoint updates a symbol/date field value for a given date/symbol of 3D database (OFDB).

Request
Input:

- **Path***: Complete database name along with its path
- **Date***: Date that needs to be updated/added
- **Symbol***: Symbol that needs to be updated/added
- **Request body**: Data for modifying a symbol in the database

Output:
Updates an existing symbol/date field value for single date(2D)/symbol(3D) and/or adds a date/symbol along with its data if not present. It returns the symbol id as success response.

Example
Input:
Database name & path: PERSONAL:DEMO_TEST.OFDB
Date: 20200202
Symbol: FDS
Request body:

```
{
  "data": {
    "cost": "350"
  }
}
```

Output:
Updates a symbol (FDS) cost field value as 350 for that date (20200202).
Response body: Returns a symbol id as success response status 201

```
{
  "id": "FDS"
}
```

2.4.7. Delete All Data for Symbol or Date

DELETE /v2/database/{path}/dates/{date}/symbols/{symbol}

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Description

This endpoint deletes data specific to the symbol and date from a 3D database (OFDB).

Request

Input:

- **Path***: Complete database name along with its path
- **Date***: Date that needs to be deleted
- **Symbol***: Symbol that needs to be deleted

Output:

Deletes a date/symbol associated with a particular symbol/date along with its underlying data. The response status returned is 204.

Example

Input:

Database name & path: PERSONAL:SAMPLE.OFDB
Date: 20200203
Symbol: FDS

Output:

Deletes a particular symbol (FDS) along with its data within a date (20200730).
Response code: 204(Resource is deleted successfully)

3. Limitations

- If the request is not served within 5 seconds, then request will be converted into long running mode.
- For long running, if users don't read their long running data immediately, the data will be stored for one day, after that it will be deleted.
- Once user access their long running data from AWS S3 bucket, the data stored will be removed immediately, further access to same location will result in read error.
- To avoid a technical bottleneck, rate limiting has been implemented. The criteria is set based upon a combination of username and the path parameter given, and is only in effect for "write" routes. The current limit is 10 write requests / day for a given path.
- Users can’t view the result for huge datasets after long running process in Developer Portal as currently the dev portal doesn’t support it. They can hit the resultant URL in browser to view the data.

4. Notable Enhancements with Version 2

- **4 New Endpoints** – examples can be found above
    - POST /v2/database/{path}/fields
    - POST /v2/database/{path}/delete
    - GET/v2/database/{path}/audit
    - GET/v2/database/{path}/stats
- Certain bulk modify routes have been enhanced to **support list formats**, allowing for even more varied requests. You may now wrap the normal JSON object in an outermost "[]" section and repeat it as desired. Enhanced routes consist of: AddSymbols, UpdateSymbols, AddDates, and UpdateDates; list format is required for AddFields.
- Users will now be able to send an **uncapped number of symbols per request** up to 50mb within any JSON request.

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- Users will note that we have support for full long running batch workflows.
- Users may now input **uppercased field names** within any JSON request.
- **NULL** is now a supported value within the JSON body
- Users can now access $$performance OFDBs via the OFDB API through proper CACCESS.
- General performance and stability enhancements.

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