
eoddata-client Documentation

Release 0.3.3

Aleksey

Sep 27, 2017

Table of Contents:

1	Usage	1
2	Client API	3
2.1	Http client	3
2.2	Errors	8
3	Business entities and utils	9
3.1	Business entities	9
3.2	Utils	12
4	Indices and tables	13

CHAPTER 1

Usage

Working with data frames:

```
import os

from eoddata_client import EodDataHttpClient

client = EodDataHttpClient(os.environ['EOD_DATA_LOGIN'],
                           os.environ['EOD_DATA_PASSWORD'])

quotes = client.symbol_history('nasdaq', 'msft', datetime.date(1992, 1, 1))
quotes['Diff'] = quotes['Close'].shift(1) - quotes['Close']
print(quotes.tail())
```

#	Symbol	Open	High	Low	Close	Volume	Diff
# 2017-09-20	MSFT	75.35	75.55	74.31	74.94	21587800	0.50
# 2017-09-21	MSFT	75.11	75.24	74.11	74.21	19186100	0.73
# 2017-09-22	MSFT	73.99	74.51	73.85	74.41	14111300	-0.20
# 2017-09-25	MSFT	74.09	74.25	72.92	73.26	24149100	1.15
# 2017-09-26	MSFT	73.67	73.81	72.99	73.26	18019500	0.00

Working with regular list of objects:

```
import os

from eoddata_client import EodDataHttpClient

client = EodDataHttpClient(os.environ['EOD_DATA_LOGIN'],
                           os.environ['EOD_DATA_PASSWORD'])

quotes = client.symbol_history('nasdaq', 'msft', datetime.date(1992, 1, 1))
print(quotes[:2])
"""
[EodDataQuoteExtended(symbol=MSFT, quote_datetime=1992-01-01 00:00:00, open=2.319,
↪high=2.319, low=2.319, close=2.319, volume=0, open_interest=0, previous=0.0,
↪change=0.0, bid=0.0, ask=0.0, previous_close=0.0, next_open=0.0, modified=0001-01-
↪01 00:00:00, name=Microsoft Corp, description=Microsoft Corp),
```

```
EodDataQuoteExtended(symbol=MSFT, quote_datetime=1992-01-02 00:00:00, open=2.308,  
↪high=2.392, low=2.282, close=2.377, volume=1551300, open_interest=0, previous=0.0,  
↪change=0.0, bid=0.0, ask=0.0, previous_close=0.0, next_open=0.0, modified=2008-12-  
↪27 12:51:50.413000, name=Microsoft Corp, description=Microsoft Corp)]  
"""
```

2.1 Http client

```
class EodDataHttpClient (username, password, base_url='http://ws.eoddata.com/data.asmx',  
                        max_login_retries=3, logger=None)
```

EodData web service client.

Endpoints:

- CountryList - country_list;
- DataClientLatestVersion - data_client_latest_version;
- DataFormats - data_formats;
- ExchangeGet - exchange_detail;
- ExchangeList - exchange_list;
- ExchangeMonths - exchange_months;
- FundamentalList - fundamental_list;
- Login - login;
- NewsList - news_list;
- NewsListBySymbol - news_list_by_symbol;
- QuoteGet - quote_detail;
- QuoteList - quote_list;
- QuoteList2 - quote_list_specific;
- QuoteListByDate - quote_list_by_date;
- QuoteListByDate2 - quote_list_by_date_compact;
- QuoteListByDatePeriod - quote_list_by_date_period;

- QuoteListByDatePeriod2 - quote_list_by_date_period_compact;
- SplitListByExchange;
- SplitListBySymbol;
- SymbolChangesByExchange;
- SymbolChart;
- SymbolGet;
- SymbolHistory - symbol_history;
- SymbolHistoryPeriod - symbol_history_period;
- SymbolHistoryPeriodByDateRange - symbol_history_period;
- SymbolList - symbol_list;
- SymbolList2 - symbol_list_compact;
- TechnicalList;
- Top10Gains;
- Top10Losses;
- UpdateDataFormat;
- ValidateAccess.

country_list ()

Returns a list of available countries.

Returns

[('AF', 'Afghanistan'), ('AL', 'Albania'), ('DZ', 'Algeria'), ('AS', 'American Samoa'), ('AD', 'Andorra'), ('AO', 'Angola')]

Return type List of tuples with country code and country name. For example

data_client_latest_version ()

Returns the latest version information of Data Client.

Returns

String with the latest version of data client in format "MAJOR.MINOR.PATCH.HOTFIX".

data_formats ()

Returns the list of data formats.

exchange_detail (exchange_code)

Get detailed information about an exchange.

Returns EodDataExchange or None

exchange_list (output_format='entity-list')

Get all available exchanges.

Returns EodData exchanges.

Return type list or pandas.DataFrame

exchange_months ()

Returns the number of Months history a user is allowed to download.

fundamental_list ()

Returns a complete list of fundamental data for an entire exchange.

get_params (*additional=None*)

Get dictionary with parameters for a request.

Parameters **additional** (*dict or None*) – Additional parameters for a request.

Returns Dictionary with parameters for a request.

login ()

Login to EODData Financial Information Web Service. Used for Web Authentication.

Returns bool, whether authentication was successful or not.

news_list (*exchange_code*)

Returns a list of News articles for an entire exchange.

news_list_by_symbol (*exchange_code*)

Returns a list of News articles for a given Exchange and Symbol.

process_response (*response*)

Process response from EodData web service. All responses from EodData web service have common format. This method is kind of a wrapper to process all responses.

Parameters **response** (*requests.Response*) – Response that comes from EodData web service.

Returns bool, True - success, False - expired / invalid token

Raises

- InvalidExchangeCode, InvalidSymbolCode, EodDataInternalServerError,
- NoDataAvailableError

quote_detail (*exchange_code, symbol*)

Get an end of day quote for a specific symbol.

Returns EodDataQuoteExtended or None.

quote_list (*exchange_code, output_format='entity-list'*)

Get a complete list of end of day quotes for an entire exchange.

Parameters **exchange_code** (*str*) – Exchange code.

Returns EodData extended quotes.

Return type list or pandas.DataFrame

quote_list_by_date (*exchange_code, date, output_format='entity-list'*)

Get a complete list of end of day quotes for an entire exchange and a specific date.

Parameters

- **exchange_code** – Exchange code.
- **date** (*datetime.date*) – Date.

Returns EodData extended quotes

Return type list or pandas.DataFrame

quote_list_by_date_compact (*exchange_code, date, output_format='entity-list'*)

Get a complete list of end of day quotes for an entire exchange and a specific date (compact format).

Returns EodData compact quotes

Return type list or pandas.DataFrame

quote_list_by_date_period (*exchange_code*, *date*, *period*, *output_format*='entity-list')

Get a complete list of end of day quotes for an entire exchange and a specific date (compact format).

Returns EodData extended quotes

Return type list or pandas.DataFrame

quote_list_by_date_period_compact (*exchange_code*, *date*, *period*, *output_format*='entity-list')

Get a complete list of end of day quotes for an entire exchange and a specific date (compact format).

Parameters

- **exchange_code** (*str*) – Exchange code.
- **date** (*datetime.date*) – Date.
- **period** (*str*) – Period code.

Returns EodData compact quotes.

Return type list or pandas.DataFrame

quote_list_specific (*exchange_code*, *symbol_list*, *output_format*='entity-list')

Get end of day quotes for specific symbols.

Parameters

- **exchange_code** (*str*) – Exchange code.
- **symbol_list** (*list of str*) – Symbol list.

Returns EodData extended quotes.

Return type list or pandas.DataFrame

retry (*func*, **args*, ***kwargs*)

Try to get a new token and call function one more time

Parameters **func** – Function to retry

Returns Result of func() call

retry_limit (*func*)

Decorator to have control over retry count.

Returns Wrapped function.

Raises `ReloginDepthReachedError`

symbol_history (*exchange_code*, *symbol*, *start_date*, *output_format*='entity-list')

Get a list of historical end of day data of a specified symbol and specified start date up to today's date.

Parameters

- **exchange_code** (*str*) – Exchange code.

- **symbol** (*str*) – Symbol.
- **start_date** (*datetime.date*) – Start date.

Returns EodData extended quotes.

Return type list or pandas.DataFrame

symbol_history_period (*exchange_code*, *symbol*, *date*, *period*, *output_format='entity-list'*)

Get a list of historical data of a specified symbol, specified date and specified period.

Parameters

- **exchange_code** (*str*) – Exchange code.
- **symbol** (*str*) – Symbol.
- **date** (*datetime.date*) – Date.
- **period** (*str*) – Period code.

Returns EodData extended quotes.

Return type list or pandas.DataFrame

symbol_history_period_by_range (*exchange_code*, *symbol*, *start_date*, *end_date*, *period*, *output_format='entity-list'*)

Get a list of historical data of a specified symbol, specified date range and specified period.

Parameters

- **exchange_code** (*str*) – Exchange code.
- **symbol** (*str*) – Symbol.
- **start_date** (*datetime.date*) – Period start.
- **end_date** (*datetime.date*) – Period end.
- **period** (*str*) – Period code.

Returns EodData extended quotes.

Return type list or pandas.DataFrame

symbol_list (*exchange_code*, *output_format='entity-list'*)

Get a list of symbols of a specified exchange.

Parameters **exchange_code** (*str*) – Exchange code.

Returns list or pandas.DataFrame

symbol_list_compact (*exchange_code*, *output_format='entity-list'*)

Get a list of symbols (compact format) of a specified exchange.

Parameters **exchange_code** (*str*) – Exchange code.

Returns list or pandas.DataFrame

2.2 Errors

class Error

Base error for this module.

class TestEnvironmentNotSet

Test environment variables not set.

class InvalidTokenError

Request was sent with invalid token.

class InvalidExchangeCodeError

Error trying to get data for unknown exchange.

class InvalidSymbolCodeError

Error trying to get data for unknown symbol.

class InvalidCredentialsError

Error trying to login with invalid credentials.

class NoDataAvailableError

Error trying to access unavailable data

class EodDataInternalServerError

Internal server error occurred when requesting data from EodData wev service.

class ReloginDepthReachedError

Relogin depth reached.

class AccessLimitError

Error trying to access data beyond available subscription.

3.1 Business entities

```
class EodDataExchange (code, name, last_trade_time, country_code, currency, advances, de-  
                        clines, timezone, suffix="", is_intraday=False, intraday_start_date=None,  
                        has_intraday=False)
```

EodData Exchange.

code

str – Exchange code

name

str – Datetime of the last trade

last_trade_time

datetime – Datetime of the last trade

country_code

str – Code of the country where this exchange is situated

currency

str – Exchange currency

advances

int – Advances count

declines

int – Declines count

suffix

str – Exchange suffix

timezone

str – Exchange timezone

is_intraday

bool – Availability of intraday data.

intraday_start_date

datetime or None – Intraday data availability start date.

has_intraday

bool – Indicates if EodData has intraday data for this exchange.

classmethod from_xml (*xml_exchange*)

Get EodDataExchange object from xml element.

Parameters *xml_exchange* – Exchange XML element.

Returns EodDataExchange instance or None.

class EodDataQuoteCompact (*symbol, quote_datetime, open, high, low, close, volume, open_interest, before, after*)

EodData quote.

symbol

str – Symbol.

quote_datetime

datetime – Quote datetime.

open

float – Open price.

high

float – High price.

low

float – Low price.

close

float – Close price.

volume

int – Traded volume.

open_interest

int – Open interest.

before

float

after

float

classmethod from_xml (*xml_quote*)

Get instance from xml.

Returns EodDataQuoteCompact instance or None.

symbol = None

Security symbol

class EodDataQuoteExtended (*symbol, quote_datetime, open, high, low, close, volume, open_interest, previous, change, bid, ask, modified, previous_close=0, next_open=0, name="", description=""*)

EodData extended quote.

symbol

str – Symbol.

quote_datetime

datetime – Quote datetime.

open
float – Open price.

high
float – High price.

low
float – Low price.

close
float – Close price.

volume
int – Traded volume.

open_interest
int – Open interest.

previous
float – Previous close price.

change
float – Change from previous close.

bid
float – Bid price.

ask
float – Ask price.

modified
datetime – Time of the last update for this security.

name
str – Full name of a traded asset.

description
str – Description.

df_columns
tuple of str – Data frame columns (static attribute).

classmethod from_xml (*xml_quote*)
Get EodDataQuoteExtended object from xml element.

Returns EodDataQuoteExtended instance or None.

class EodDataSymbol (*code, name, long_name*)
EodData symbol.

code
str – Symbol code.

name
str – Asset name.

long_name
str – Long name.

classmethod from_xml (*xml_symbol*)
Get EodDataSymbol object from xml element.

Returns EodDataSymbol instance or None.

```
class EodDataSymbolCompact (code, name)
    EodData symbol (compact).

    code
        str – Symbol code.

    name
        str – Asset name.

    classmethod from_xml (xml_symbol)
        Get EodDataSymbolCompact object from xml element.

        Returns EodDataSymbolCompact instance or None.
```

3.2 Utils

```
class ObjectProxy (wrapped)
    Proxy object.

class RecursionDepthManager (func, max_depth=3)
    Decorator to manage recursion depth.

utils.string_to_datetime (iso8601_datetime_string)
    Converts ISO 8601 datetime string to Python datetime

    Parameters iso8601_datetime_string (str) – ISO 8601 datetime string

    Returns datetime.datetime object

    Raises ValueError
```

CHAPTER 4

Indices and tables

- `genindex`
- `modindex`
- `search`

A

AccessLimitError (class in eod-
data_client.eoddata_client), 8
 advances (EodDataExchange attribute), 9
 after (EodDataQuoteCompact attribute), 10
 ask (EodDataQuoteExtended attribute), 11

B

before (EodDataQuoteCompact attribute), 10
 bid (EodDataQuoteExtended attribute), 11

C

change (EodDataQuoteExtended attribute), 11
 close (EodDataQuoteCompact attribute), 10
 close (EodDataQuoteExtended attribute), 11
 code (EodDataExchange attribute), 9
 code (EodDataSymbol attribute), 11
 code (EodDataSymbolCompact attribute), 12
 country_code (EodDataExchange attribute), 9
 country_list() (EodDataHttpClient method), 4
 currency (EodDataExchange attribute), 9

D

data_client_latest_version() (EodDataHttpClient
method), 4
 data_formats() (EodDataHttpClient method), 4
 declines (EodDataExchange attribute), 9
 description (EodDataQuoteExtended attribute), 11
 df_columns (EodDataQuoteExtended attribute), 11

E

EodDataExchange (class in eod-
data_client.business_entities), 9
 EodDataHttpClient (class in eoddata_client), 3
 EodDataInternalServerError (class in
data_client.eoddata_client), 8
 EodDataQuoteCompact (class in eod-
data_client.business_entities), 10

EodDataQuoteExtended (class in eod-
data_client.business_entities), 10
 EodDataSymbol (class in eod-
data_client.business_entities), 11
 EodDataSymbolCompact (class in eod-
data_client.business_entities), 11
 Error (class in eoddata_client.eoddata_client), 8
 exchange_detail() (EodDataHttpClient method), 4
 exchange_list() (EodDataHttpClient method), 4
 exchange_months() (EodDataHttpClient method), 4

F

from_xml() (eoddata_client.business_entities.EodDataExchange
class method), 10
 from_xml() (eoddata_client.business_entities.EodDataQuoteCompact
class method), 10
 from_xml() (eoddata_client.business_entities.EodDataQuoteExtended
class method), 11
 from_xml() (eoddata_client.business_entities.EodDataSymbol
class method), 11
 from_xml() (eoddata_client.business_entities.EodDataSymbolCompact
class method), 12
 fundamental_list() (EodDataHttpClient method), 4

G

get_params() (EodDataHttpClient method), 4

H

has_intraday (EodDataExchange attribute), 10
 high (EodDataQuoteCompact attribute), 10
 high (EodDataQuoteExtended attribute), 11

I

intraday_start_date (EodDataExchange attribute), 9
 InvalidCredentialsError (class in eod-
data_client.eoddata_client), 8
 InvalidExchangeCodeError (class in eod-
data_client.eoddata_client), 8

InvalidSymbolCodeError (class in eoddata_client.eoddata_client), 8
 InvalidTokenError (class in eoddata_client.eoddata_client), 8
 is_intraday (EodDataExchange attribute), 9

L

last_trade_time (EodDataExchange attribute), 9
 login() (EodDataHttpClient method), 5
 long_name (EodDataSymbol attribute), 11
 low (EodDataQuoteCompact attribute), 10
 low (EodDataQuoteExtended attribute), 11

M

modified (EodDataQuoteExtended attribute), 11

N

name (EodDataExchange attribute), 9
 name (EodDataQuoteExtended attribute), 11
 name (EodDataSymbol attribute), 11
 name (EodDataSymbolCompact attribute), 12
 news_list() (EodDataHttpClient method), 5
 news_list_by_symbol() (EodDataHttpClient method), 5
 NoDataAvailableError (class in eoddata_client.eoddata_client), 8

O

ObjectProxy (class in eoddata_client.utils), 12
 open (EodDataQuoteCompact attribute), 10
 open (EodDataQuoteExtended attribute), 10
 open_interest (EodDataQuoteCompact attribute), 10
 open_interest (EodDataQuoteExtended attribute), 11

P

previous (EodDataQuoteExtended attribute), 11
 process_response() (EodDataHttpClient method), 5

Q

quote_datetime (EodDataQuoteCompact attribute), 10
 quote_datetime (EodDataQuoteExtended attribute), 10
 quote_detail() (EodDataHttpClient method), 5
 quote_list() (EodDataHttpClient method), 5
 quote_list_by_date() (EodDataHttpClient method), 5
 quote_list_by_date_compact() (EodDataHttpClient method), 5
 quote_list_by_date_period() (EodDataHttpClient method), 6
 quote_list_by_date_period_compact() (EodDataHttpClient method), 6
 quote_list_specific() (EodDataHttpClient method), 6

R

RecursionDepthManager (class in eoddata_client.utils), 12

ReloginDepthReachedError (class in eoddata_client.eoddata_client), 8
 retry() (EodDataHttpClient method), 6
 retry_limit() (EodDataHttpClient method), 6

S

string_to_datetime() (utils method), 12
 suffix (EodDataExchange attribute), 9
 symbol (EodDataQuoteCompact attribute), 10
 symbol (EodDataQuoteExtended attribute), 10
 symbol_history() (EodDataHttpClient method), 6
 symbol_history_period() (EodDataHttpClient method), 7
 symbol_history_period_by_range() (EodDataHttpClient method), 7
 symbol_list() (EodDataHttpClient method), 7
 symbol_list_compact() (EodDataHttpClient method), 7

T

TestEnvironmentNotSet (class in eoddata_client.eoddata_client), 8
 timezone (EodDataExchange attribute), 9

V

volume (EodDataQuoteCompact attribute), 10
 volume (EodDataQuoteExtended attribute), 11